Société canadienne d'écologie et d'évolution

Canadian Society for Ecology and Evolution

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Table of Contents

President's Report 2
Secretary's Report 3
Outreach Committee Report 3
Treasurer's Report 4
Biodiversity & Conservation Committee 5
Students & Postdocs 6
Canadian Council on Animal Care 8
Report on 2014 Montreal, "Genomes to/aux Biomes" 8
2014 CSEE Presidential Address 9
Awards and Recognition Committee 10
CSEE Symposium Summaries from Montreal 2014 12
Communications Workshop 14
SWEEET 2014 15
CSEE 2015, Saskatoon! 16
PAGSE Report 16
2014 NSERC Report 17
CIEE/ICEE Report 20
Canada's Liber Ero Fellowship Program 21
Winning (i.e. least bad) limericks from the G2B banquet 22
Current CSEE Council 22

The bulletin is published twice per year by the Canadian Society for Ecology and Evolution. Its purpose is to disseminate news and information to members of the Society. All members are invited to submit articles, news, reports and announcements of upcoming events. Short summaries of new research initiatives are also welcome. Submissions can be in either language (translation: Mélissa Lieutenant-Gosselin, Université Laval). Please submit your contribution by email to the Editor.

Andrew Simons, Editor

Carleton U (andrew_simons@carleton.ca)

President's Report

Judy Myers, UBC

The annual meeting of CSEE in May in Montreal was a great success. I thank the organizers; in particular Andrew Hendry (CSEE), Alison Derry (SCL) and Hans Larsson (CSZ) for the work that they put into making the meeting great fun and highly interesting. Several things happened at the meeting that will be highlighted in this bulletin – two successful symposia, two early career award presentations, voting on the new by-laws which have been submitted and approved by the government, and acceptance of the proposed new standing rules.

A change included in the new standing rules is the creation of an Honorary Lifetime Membership category to recognize eminent Canadian ecologists or evolutionary biologists who have demonstrated a lifetime of research and contributions to ecology or evolution. Three nominees were put forward at the AGM and were elected.

Chris (Evelyn Chrystalla) Pielou is recognized for her excellence and distinguished service in the fields of mathematical ecology and ecological diversity. She wrote six books in the area of Mathematical Ecology and Ecological Diversity between 1969 and 1984. After her retirement, she continued to write popular books on ecosystems and environmental topics. In journal articles she developed a mathematical measure of associations among groups of species, which serves as a measure of the "structure" of multi-species communities. She was also interested in inter-relationships among ecology, biogeography, and their paleo-equivalents.

C.S. (Buzz) Holling is best known for two scientific advances: the functional responses of predators to prey and the concept of the resilience of social-ecological systems. These ideas have become cornerstones to contemporary ecosystem management and research into sustainability and conservation. Dr. Holling has made, and continues to make, important contributions to ecology and evolution. He has profoundly influenced students, researchers through his research and teaching.

Harold H. Harvey was instrumental in identifying the acidification of North American aquatic ecosystems, and the impact this change had on the ecosystems. He devoted a great amount of his time to raise the consciousness of the Canadian and American public and policy makers to acidification problems. His numerous critical contributions eventually led to both countries imposing strict controls on emissions. His research and its impact on the public and policy makers ultimately minimized further degradation of hundreds of thousands of lakes and streams in North America thereby allowing their chemical and ecological recovery.

Congratulations to the inaugural Honorary Lifetime members. Nominations of other deserving candidates are welcome and can be made by any society member or members by writing to the chair of the Awards Committee, Locke Rowe by March 1 2015.

Secretary's Report

Miriam Richards, Brock U

It's only July, but 2014 has been very busy at CSEE. My main business as Secretary has been shepherding CSEE's new By-laws and Standing Rules to a successful vote of acceptance at the Annual General Membership Meeting in Montreal. The By-laws have now been submitted to Industry Canada, and I hope will be accepted without further ado. Completion of these tasks leaves me with a couple more items that had been relegated to the back burner. One of these is creation of a new membership database to be linked to the CSEE website.

At each annual conference of the Society, the CSEE meets for a marathon, all-day meeting to discuss society business. Here are some highlights of our May meeting:

1. CSEE currently has 712 paid up members, including 33 Lifetime members,

270 Regular members, and 410 Student/Postdoc members.

2. We considered and then approved a proposal for the final 2014 budget, which was then ratified by the membership at the Annual General Meeting (AGM).

3. We considered and approved three nominations for Honourary Fellows, which were then ratified by the membership at the Annual General Meeting (AGM). The nominees were Harold Harvey, C.S. Holling, and E.C. Pielou .

4. We discussed ways that CSEE could help to increase acknowledgement of the valuable work of taxonomists.

5. We received reports and communications from a variety of organisations with which CSEE is associated, including the Partnership Group for Science and Engineering (PAGSE, www.pagse.org), the Canadian Council on *Animal Care* (*CCAC,* www.ccac.ca), and *Canadian Institute of Ecology and Evolution* / Institut canadien d'écologie et d'évolution (*CIEE* / ICEE, www.ciee-icee.com). Each of these organizations has a CSEE representative who regularly updates CSEE Council.

6. Locations for the next two annual conferences of CSEE are Saskatoon in 2015 and St. John's in 2016. Mark your calendars!

Hope everyone is having a fulfilling and enjoyable summer, whether relaxation or work!

Outreach Committee Report

Fanie Pelletier, U Sherbrooke

Outreach activities of this year's "G2B" meeting in Montréal were organized by the Local Organizing Committee, and included two public lectures—one by Dr. Catherine Potvin (on halting deforestation), and the second, CSEE's outreach lecture, was delivered by Paul Nicklen (http://paulnicklen.com/), a celebrated photographer with National Geographic who, through his lens, "interprets and translates" what scientists say. The evening was a great success! Paul gave an excellent tour of the polar regions and their wildlife while entertaining the audience with field anecdotes and other stories. The public lecture

Paul Nicklen's outreach talk

attracted 700 attendees, including over 100 registered members of the public.

Plans for 2015

In collaboration with the local organizing committee in Saskatoon, we have begun planning a public lecture for the 2015 CSEE meetings. More details on this event will be available on the CSEE website over the winter. We also hope to host a children's outreach day in 2015, as these events have proven to be a great success in the past. More later!

Call for Outreach proposals

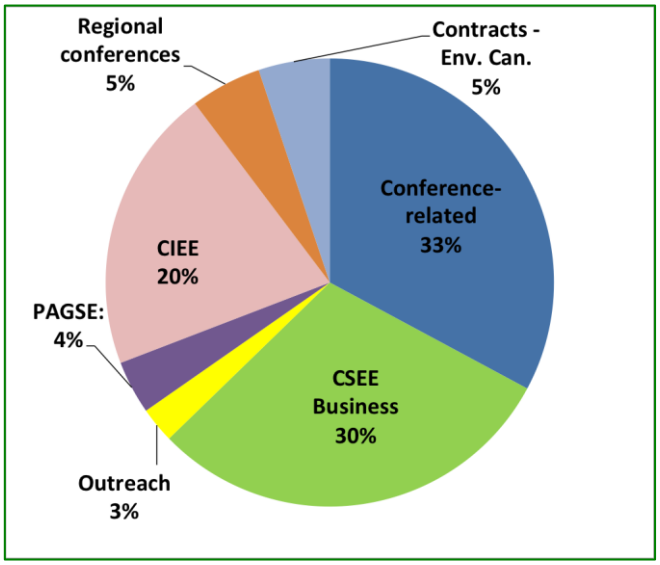
In an effort to expand outreach initiatives, the CSEE considers outreach proposals. Applications for funding will be considered for initiatives that promote education in ecology, evolution or conservation, public outreach seminars, public exhibitions, etc. Proposals should include the title, location, a brief description of the activity, expected participation and/or size of the audience, proposed date and the names of the main organizers. A brief justification of the funding requested should also be included. Preference will be given to innovative proposals that fulfill a clear need for outreach and have the potential for renewal or could be reused in other areas of Canada. Please email your proposals to Fanie Pelletier (fanie.pelletier@usherbrooke.ca).

The guidelines and deadlines for proposal submissions have been clarified and updated on the web page (see: http://csee-scee.ca/?page_id=424). There are now **two deadlines** per year for submission of outreach proposals: **31 May and 31 October.**

Treasurer's Report

Julie Turgeon, U Laval

In 2013, the principal sources of CSEE revenues ($50 121) were membership dues (50%), surpluses from the annual 2013 meeting in Kelowna (19%), and an unexpected but very welcome tax return from the 2012 Ottawa meeting (29%, thanks, Andrew Simons!). Expenses related to activities conducted in 2013 totalled $38 907. As is shown in the figure, a third of the expenses were related to the 2013 meeting in Kelowna (symposium, president and student awards, student travel grants). Another 30% was devoted to running the society (translation, website improvement, student representative travel expenses to council meetings, mandatory auditing process, etc.). The rest was accounted for by the CSEE support to CIEE, PAGSE, regional conferences, outreach, etc. Comments from members on which expenses should be prioritized are always welcome.



In 2013, the Society made a substantial profit (11 214$) that was entirely due to the unexpected tax return from the Ottawa meeting. This type of revenue will not be recurrent and a structural deficit (but not debt) could re-occur in the future as it often happened in the past. To better our chances at balancing revenues with expenses, Council will now vote on an interim budget for the following year at its December meeting, and then, as usual, adopt the final budget at the May meeting.

The Financial Statements of the CSEE for 2103, prepared by a professional accountant firm as required by law, is available upon request to the Treasurer (julie.turgeon@bio.ulaval.ca).

Biodiversity & Conservation Committee

Heather Proctor, U Alberta

Should Journals Give Taxonomists More Respect?

The current high rate of biodiversity loss (potentially at the level of a sixth mass extinction) includes both well known and poorly understood species. Decisions about allocation of conservation funds are dependent upon good assessments of species boundaries and species richness of areas targeted for protection. These, together with the creation of tools for identification of species and higher taxa (e.g., keys, field guides) are among the roles of taxonomists. Taxonomic expertise has been widely and repeatedly assessed as being in decline. One potential causal factor in this decline is that for those employed under merit-based advancement systems (e.g., universities), there is a lack of published recognition for taxonomists' work that administrators can easily assess – you won't have much of an H-index if no one cites you. Lack of citations also implies that knowledge of taxonomic identities drops fully formed into the author's head rather than being the result of other people's efforts.

It is at least as important for replicability of studies to indicate how taxa were identified as it is to indicate what GenBank sequences or statistical packages were used. A small survey of instructions to authors from several Canadian, and a few prominent international journals confirmed that most lack an overt policy on full citation of a species' description or on citation of taxonomic keys, identification guides, etc. (see table below). The CSEE Biodiversity & Conservation Committee plans to contact chief editors of journals with a high content of ecology, evolution and systematics to ask that they might consider modifying the Instructions to Authors (and/or Instructions to Referees) to be sure that they require:

a. citation in References of original taxon description when it is strongly relevant to the content of the paper (e.g., a paper on discriminating between two spp. of mosses should include these references; a list of the 100 spp. of mosses located in a park need not);

b. citation of taxonomic reference works used to identify taxa, including primary descriptive literature, keys, and field guides. This may not be needed if the taxa in a paper are well-known to the author (e.g., most North Americans would not use a key to identify *Turdus migratorius*), but for surveys of plant or invertebrate diversity it would be rare for a researcher NOT to refer to literature to help with identification

c. acknowledgement of assistance of taxonomic experts who identified specimens AND include the literature that these experts used.

In the absence of a citation policy, journals will be indirectly contributing to the decline in taxonomic capacity. Acknowledging the contributions of taxonomists would help to support researchers with such expertise; and by indicating that the ability to identify taxa is valued and respected, may encourage young scientists to include training in taxonomy among their skills.

Request to CSEE membership: the selection of tabulated journals (below) may have been biased because of my own arthropod-oriented interests. If you know of journals with explicit instructions to authors or reviewers that touch on any of the three points above, I would greatly appreciate your telling me about them (hproctor@ualberta.ca). This will help the Biodiversity & Conservation Committee formulate a strong letter that includes examples of wording in Instructions to Authors/Reviewers that other chief editors could potentially follow.

Table: For each journal, is there a statement in "Instructions to Authors" to provide guidelines on…

Journal	...what taxa require authorities?	...citing taxon descriptions?	...citing literature used for taxonomic identification?
The Canadian Entomologist	species and genus	no mention	no mention
Canadian Journal of Arthropod Identification	species and genus	no mention	no mention
Botany (formerly *Canadian Journal of Botany)*	species	no mention	no mention
Canadian Journal of Zoology	species and genus	no mention	no mention
Canadian Journal of Fisheries & Aquatic Sciences	no mention	no mention	no mention
Journal of Crustacean Biology	species	cite species descriptions in Refs	no mention
Zootaxa	species	no mention	no mention
ZooKeys	species	for revisionary work, cite species descriptions in Refs	no mention
Science	no mention	no mention	no mention
Nature	no mention	no mention	no mention
Evolution	no mention	no mention	no mention
Ecology	no mention	no mention	no mention
American Naturalist	no mention	no mention	no mention
Evolutionary Ecology Research	no mention	no mention	no mention

B & C Committee Note on Online Census

The Biological Survey of Canada is proposing an ambitious project to create an online census of named species found in Canada. A description of the proposal including a link to a survey can be found at http://www.biology.ualberta.ca/bsc/biota_canada/Biota%20of%20Canada%20Vision%20Document.pdf"

Students & Postdocs

Anne Dalziel, U Laval, Student/Postdoc Council Rep

Genomes to Biomes (G2B) – Joint CSEE, CSZ & SCL Meeting

Our first joint meeting with the Canadian Society of Zoologists (CSZ) and the Society of Canadian Limnologists (SCL) was held in Montréal on May 25th – 29th. Here is a quick wrap up of student-related news from this event:

Student Workshop & Mixer: We collaborated with student representatives from CSZ, SCL and the local organizing committee (LOC) to run a joint student workshop this year. Instead of a single topic, we organized ten different discussion groups that students could choose from. Students were able to move from topic to topic during the evening following a "speed-dating/lab-exam" format. This year our topics included: Maintaining work-life balance, Academic job applications, Managing a research budget, Picking your PhD or PDF, Using research to travel the world, Raising kids while in

an academic career, Writing scholarship applications, Careers outside of academia, Forging collaborations, Effective change through science policy, Women in science, and Networking with research 'giants'. Did we miss a topic that you would love to hear more about? Would you prefer to attend a multi-topic workshop next year in Saskatoon or a single-topic workshop? Please contact me (cseestudent@gmail.com) with feedback for next year's workshop in Saskatoon and let me know if you would like to get involved!

Student Survival Guide: We also collaborated with CSZ, SCL, and LOC student representatives to produce a "Student survival guide". This guide includes information on student-focused events at G2B and also a number of tips for presenting. Although the conference is over, the hints for preparing your next talk or poster are still worth checking out!

Student Travel Grants: The CSEE provided student travel grants ($500 each) to 20 randomly chosen student members travelling more than 500 km, from 17 different universities, to present at G2B.

CSEE Student Presentation Awards: I would like to extend my congratulations to the winners of our student presentation awards and those receiving an honorable mention (listed on page 11). We had over 180 oral and 90 poster presentations from our CSEE student members, so competition was tough! I would also like to extend my thanks to our 70 hard-working judges who volunteered their time to help evaluate all 270 student presentations.

Elections – Two Student Councillor Positions Available For 2015!

The addition of a second student councillor position was unanimously approved by our members at our Annual General Meeting during G2B in Montreal. Thus, there will be two positions available in spring 2015; one for a student and another for a student or post-doctoral member. If you are interested in running for this position, be sure to complete the nomination process (see CSEE website). Feel free to contact me if you would like to discuss what this position entails.

NSERC – Recent Changes to Master's and Post-doctoral Fellow Applications

As many of you are aware, NSERC has recently changed their application procedures for Master's and Post-Doctoral scholarships. In particular, Master's candidates must now indicate where they propose to hold their award (up to five different universities) via the Research Portal when they apply to NSERC. Qualifying Canadian universities receive a CGS M allocation for the number of scholarships they can give, and winners are selected by the Universities themselves (for application information go to: http://www.nserc-crsng.gc.ca/Students-Etudiants/PG-CS/CGSM-BESCM_eng.asp). This is a change to the application procedure for the now discontinued PGS M, in which students applied directly to NSERC. As well, in 2012 NSERC changed their application rules for post-doctoral (PDF) awards, so that applicants can only apply once for an NSERC PDF (prior to 2012 applicants could apply twice).

Many CSEE student and faculty members have expressed their concern that these new procedures may prevent deserving students/post-docs from receiving awards. As well, there is a great deal of concern about how the CGS M awards will be allocated to universities. We were able to voice these concerns to the NSERC representative presenting information about "NSERC scholarships and fellowships" at G2B 2014. I will remain in contact with NSERC about scholarship/fellowship issues, so please contact me with further feedback, or any questions, at cseestudent@gmail.com.

CSEE on Social Media:

If you have not already done so, be sure to follow CSEE on Facebook (https://www.facebook.com/groups/58815627374/) and twitter (@CSEE_SCEE) to keep up to date with society news.

As always, please feel free to contact me if you have any questions or ideas for new initiatives at CSEEstudent@gmail.com.

Canadian Council on Animal Care

Albrecht Schulte-Hostedde, Laurentian U

The Canadian Council on Animal Care (ccac.ca) is the national peer review organization responsible for setting and maintaining standards for care and ethical use of animals in research, teaching, and testing in Canada. Many members of the CSEE use vertebrates in their research, and thus interact with the CCAC and local Animal Care Committees. Participation by the CSEE in the CCAC is thus of particular importance.

In the face of a changing funding structure imposed by CIHR/NSERC, the CCAC was forced to develop a new funding model for its activities. These included cost recovery of all assessment activities (assessments occur when CCAC staff visit institutions to evaluate the animal care program), which required financial contributions from participating institutions. This was a controversial development especially among the U15 group of universities, but after consultation with all stakeholders (including universities, charities that support animal-based research and others) a plan was developed by CCAC and endorsed by CIHR/NSERC. The details will be released shortly, but updates can be found at http://www.ccac.ca/en_/latest-news-on-ccacs-transition.

With the changes in financial plan, the CCAC also embarked in a transformation in governance that is aligned with the new Not For Profit Corporations Act. At its last council meeting (May 2014), the CCAC approved a change that will result in the removal of the cap on the number of member organizations, the removal of the "limited term" class of membership, and opening up membership to the CCAC to interested organizations that are not otherwise represented.

Finally, with the end of the last two years of change, the current Executive Director Norm Willis has declined to renew his contract. Louise Desjardins has been appointed to a 5-year term as Executive Director starting June 23, 2014.

My term on the Board of the CCAC continues for another two years. If any members of CSEE council or individual members of CSEE have any questions about CCAC issues, please contact me at aschultehostedde@laurentian.ca.

Report on 2014 Montreal, "Genomes to/aux Biomes"

Andrew Hendry, McGill U

Montreal May 25-30 was the setting for GENOMES TO/AUX BIOMES, the first ever joint meeting the Canadian Society of Ecology and Evolution (CSEE), the Canadian Society of Zoologists (CSZ), and the Society of Canadian Limnologist (SCL). If you attended, please take a moment to fill out a survey: https://www.surveymonkey.com/s/9CCYL7Y Not surprisingly, it became the largest-ever gathering of Canadian organismal biologists, with 936 attendees (54% CSEE) and 792 presentations (599 oral). Students made up 56% percent of the attendees, followed by professors/scientists (33%) and postdocs (11%). Program highlights included exceptional plenary talks by Jeff Hutchings (CSEE), Glen Van Der Kraak (CSZ), and Daniel Schindler (SCL); excellent symposia by each society and by the local organizing committee; a "young investigator" session that combined all three societies; and three busy poster sessions. Social highlights included a student organized "Strategies to Succeed" mixer and pub night, a pub night (the Canadiens won a barn burner


Paul Nicklen tells of his Polar Obsession

that night!), a Redpath Museum reception, and a rip-roaring banquet at a Sugar Shack with a vigorous and long-lasting dance party. Particularly successful events were the public outreach talks by McGill Professor Catherine Potvin and National Geographic Society Photographer Paul Nicklen. Both were well attended and Paul Nicklen's talk had an audience of 700, including more than 100 registered members of the public. The societies are talking of another GENOMES TO/AUX BIOMES meeting in a few years. See you there.

2014 CSEE Presidential Address

Jeffrey Hutchings, Dalhousie U

From Tangled Banks to Tangled Priorities: Ecology, Evolution, and the Communication of Science

Science plays an integral role in responsible governance and decision-making, as acknowledged by government policy and enlightened countries worldwide. Evidence suggests, however, that this role has been fundamentally altered in Canada. Examples include dismissal of the national science advisor, weakening of science-based legislation, dismantling of science capacity, censorship of government scientists, and increasingly infrequent solicitation of expert advice from within the public service.

Questionable or selective use of science advice by decision-makers is not new. The discomfort and unease that science sometimes poses to decision-makers has been evident for decades. That said, the discomfort eased somewhat in the late 1990s and early 2000s, a period that bore witness to important milestones in the communication of science in Canada.

There was the attainment of full maturity of the Canadian Science Advisory Secretariat within Fisheries and Oceans Canada, a commendable model for how science can be quite effectively and transparently communicated by the public service to government. Passage of the *Species at Risk Act (2002)* resulted in legal establishment of the Committee on the Status of Endangered Wildlife in Canada (COSEWIC). This national advisory body to the federal Minister of Environment is perhaps the only example (in Canada) of how the work and advice of independent scientists triggers legal actions by decision-makers.

Concomitantly, after several years of discussion, federal policy on science advice was finalized in 2002. Entitled *A Framework for Science and Technology Advice: Principles and Guidelines for the Effective Use of Science and Technology Advice in Government Decision Making* (http://publications.gc.ca/site/archivee-archived.html?url=http://publications.gc.ca/collections/Collection/C2-500-2000E.pdf), this framework makes the case for an effective science advisory process to ensure that:

1. Ministers can be confident that science advice is based on a rigorous and objective assessment of all available science;

2. Credible science advice is considered by decision makers; and

3. The public and parliamentarians are confident that government is using science in the best interests of society.

What is required for scientists (in or outside government) to effectively communicate science advice to decision-makers? I suggest that there needs to be: (i) a clear link between science and government policy; (ii) an objective, peer-review process for collating and evaluating the best available science, as it relates to policy; and (iii) an appropriate mechanism for communicating objective, peer-reviewed science advice to

decision-makers. In my view, although COSEWIC fulfils these criteria, new science-advisory initiatives are required.

To elaborate further upon these points in my presentation, I drew upon examples of how research in ecology and evolution can inform, and has informed, policy. One dealt with alternative reproductive strategies in male fish, and how this bears on factors affecting the persistence and viability of endangered Atlantic salmon. Another concerned the use of peer-reviewed literature to establish guidelines for interpreting federal statute and identifying units for species-at-risk assessments. I also discussed generic means by which population dynamical models can be used to inform questions related to targets, timing, and uncertainty of recovery in depleted species.

The not-uncommon refrain from decision-makers that science is simply 'one of the voices at the table' (i.e., another lobbyist) is an unfortunate perception that unhelpfully diminishes the value of objective advice from individuals (ideally) lacking vested interests. To some extent, however, scientists need to be aware of their own, potentially inadvertent, contributions to this perception. This is particularly true of scientists who might, at times, offer a 'filtered' perspective in hopes of favouring a particular outcome.

Scientists can be invaluable advocates for the clear and unfettered communication of science. Scientists can also serve as advocates for particular perspectives or decisions. But advocating for clear communication of science differs from advocating for a particular perspective, even if the latter is science-based.

To take one example, scientists might advise decision-makers on the potential outcomes of various policy options or management strategies. The provision of objective advice can be especially useful to public servants and politicians. But by advocating for a specific decision, rather than advising on the likelihood of various outcomes being realised (or, put another way, of advising on the strengths and weakness of various outcomes, based on a scientist's personal or collective expertise), scientists are no longer providing science advice. They are providing a science-based opinion. The distinction is an important one that can significantly influence, and not always in a positive fashion, the perception and utility of science advice as objectively proffered information.

To provide a Darwinian bookend to the title of this presentation, there can be grandeur in a decision-maker's view of the value of science advice. As articulated by Gro Harlem Brundtland, thrice Prime Minister of Norway and Chair of the 1987 Brundtland Commission on Environment and Development (Brundtland. 1997. *Science* 277: 477):

> "Politics that disregard science and knowledge will not stand the test of time…Science must underpin our policies. If we compromise on scientific facts and evidence, repairing nature will be enormously costly – if possible at all."

Awards and Recognition Committee

Locke Rowe, U Toronto

2013 Early Career Awards

Drs. Rowan Barrett and Jennifer Sunday—CSEE's Early Career Award winners—delivered research talks during the Young Investigator Symposium at the Montreal

Rowan Barrett (L) and Jennifer Sunday (R) are presented with Early Career Awards by CSEE President, Judy Myers.

G2B meetings. Rowan did his dissertation research at UBC and currently holds an Assistant Professorship at McGill. Jennifer did her dissertation research at SFU and currently holds a Biodiversity Post Doctoral Fellowship at UBC. Congratulations to both of them!

2014 Student Presentation Awards

Students are a central part of the present and future of ecology and evolution research in Canada, and the CSEE annual meeting is a great opportunity to emphasize their contributions. This year in Montréal, the quality of student presentations was extremely high. We are pleased to announce the following award winners.

Three prizes were awarded for each of the best oral and poster presentations. In each category, the first prize is $500, second prize $300, and third prize $200. As well, the $500 New Phytologist Prize is offered by the New Phytologist Trust for an outstanding student presentation in botany. Oral and poster presentations were judged together for this award.

Award winners:

CSEE Talk 1st prize (tie) & New Phytologist Prize: **Anna Hargreaves** - Queen's University, "What range-edge population dynamics reveal about current and future range limits"

CSEE Talk 1st prize (tie): **Sarah Neima** - Mount Allison University, "Radiotelemetry of migrating Semipalmated Sandpipers (*Calidris pusilla*) reveals new information on movement patterns, duration of stay and habitat use in the upper Bay of Fundy"

CSEE Talk 2rd prize: **Gina Conte** - University of British Columbia, "How predictable are the genetics of adaptation?"

CSEE Talk 3rd prize: **Brock Harpur** - York University, "Recognizing the signs of balancing selection in the honey bee genome"

CSEE Poster 1st prize: **Josée-Anne Otis** - Trent

University, "Ecological niche differentiation along the genetic gradient by hybridization of eastern wolf and coyote in Northeastern America"

CSEE Poster 2nd prize: Sarah Loboda - McGill University, "Ecological and evolutionary responses of arctic flies to recent climate change at Zackenberg, Greenland"

CSEE Poster 3rd prize: Gareth Hopkins - Utah State University, "Tidal newts: evolution in a stressful environment"

Honorable mentions – Oral presentations:

- **Nathan Upham** - Field Museum of Natural History, University of Chicago, "Testing for adaptive radiation and ecological constraint in a major lineage of rodents (Hystricomorpha, Caviomorpha)"
- **Elsa Anderson** - DePaul University, "Nest site selection of Red-headed Woodpeckers across three spatial scales in an urban environment"
- **Gabriel Pigeon** - Université de Sherbrooke, "Importance des effets cohorte chez une population d'ongulés alpins"
- **Marius Roesti** - University of Basel, "The genomic signature of parallel adaptation from shared genetic variation"
- **Catherine Dieleman** - University of Western Ontario, "Climate change drives a shift in peatland ecosystem plant communities: implications for ecosystem function and stability"

Honorable mentions - Poster presentations:

- **Lily Hou** - University of Toronto, “Automated tracking of wild hummingbird mass and energetics over multiple time scales using radio frequency identification technology”
- **Haydee Peralta** -University of Calgary, "Symbiotic communities across the expanding range of the mountain pine beetle"

- **Meredith Doellman** -University of Notre Dame, "Genomic consequences of adaptation to a novel host in the seed beetle, *Callosobruchus maculatus*"
- **Julie Gibelli** -Université de Montréal, "Slow learners exhibit more plasticity in their level of boldness in male but not female zebra finches"
- **Brittany Cole** -University of Prince Edward Island, "A comparison of beach and dune habitat on a common coastal plant"

I would like to thank the *New Phytologist* for their contributions of prizes, the many CSEE members who volunteered to help judge presentations, and members of the CSEE Awards and Recognition Committee and the Local Organizing Committee.

CSEE Symposium Summaries from Montreal 2014

1—Effects of community diversity and composition on evolutionary change

Co-organized by Elizabeth Kleynhans, Mark Vellend and Sarah Otto

Understanding how species adapt to abiotic environmental change (e.g., increasing temperature or CO_2) is critically important yet most of our current knowledge on this topic is based on experimental studies that investigate evolutionary adaptation on single species in isolation. This is problematic because species do not live in isolation – they live in complex communities where they interact with many other species. Species interactions such as competition and predation can directly influence population size, direction of selection and fitness components. Consequently, in different community contexts, species and populations experiencing abiotic environmental change may evolve along different evolutionary trajectories. The aim of this symposium was to highlight the importance of community context to adaptation and to explore this topic more thoroughly in a range of different systems and at a variety of scales.

Mark Urban (University of Connecticut) explored the impact of trophic diversity on evolution. He demonstrated that adaptation of pond-breeding spotted salamanders to a gape-limited predator alters the abundance, composition, and diversity of other pond dwelling species resulting in an eco-evolutionary feedback. Mark also discussed some new work on the evolution of salamanders to the presence or absence of disease in ponds. Overall Mark showed that wherever he looks there is clear adaptive differentiation of populations to local-scale variation in biotic factors. **Martin Turcotte** (University of Toronto) presented work on the evolution of peach tree aphids to the presence or absence of natural communities of interacting insects. He found that evolution (changes in clonal abundance) was fastest in aphids exposed to the natural community. These differences in evolutionary rates he attributed to changes in aphid abundances and competitive abilities. Martin also presented some new results on the evolution of aphids to plant domestication and plant traits. **Sinead Collins** (University of Edinburgh) took us into the ocean and spoke about some mesocosm experiments testing for evolutionary responses of microbial communities to ocean acidification. She also discussed a previously puzzling result of why algae species that grow fastest in the lab when adapting to elevated CO_2 do not win when adapting to elevated CO_2 in a community setting. Sinead found that growing fast seems to result in higher oxidative stress and so over the long term fast growers degrade more quickly than slow growers making them less competitive. Back on land, **Elizabeth Kleynhans** (University of British Columbia) presented work from a long-term ecological field experiment (BioCON). Her results revealed that species diversity alters the fitness landscape within which a plant is adapting. Thus, plants adapted to elevated carbon dioxide in a species poor community do not show adaptation to elevated CO_2 when transferred to a species rich community, and vice versa. Lastly, **Andrew Gonzalez** (McGill University) presented both theoretical and experimental results on community evolutionary rescue. His theoretical work showed

that continued evolution after an environmental change has occurred is critical for allowing the community to be rescued. His laboratory worked focused on the role of migration between pre-adapted and non-adapted communities to an environmental change. With migration, non-adapted communities could be rescued due to the influx of adapted genotypes but in systems without migration non-adapted populations went extinct, as they could not evolve fast enough to the changed environment.

Overall this symposium provided a compelling and very general argument that community context can be expected to have a major impact on how populations adapt to abiotic environmental change.

2—Biodiversity change across spatial scales during the Anthropocene

Co-organized by Isla Myers-Smith and Mark Vellend

To acknowledge the human impact on the earth's ecosystems and climate, many scientists refer to the current era as the Anthropocene. Human impact includes an increase in extinctions and thereby a loss of species from the global species pool. However, at smaller spatial scales, how biodiversity is changing is much less clear. During the G2B meeting in Montreal, we brought together a variety of speakers working on this problem in both marine and terrestrial habitats and from taxa as varied as plants, fish, phytoplankton and insects. Surprisingly, several of the studies in the CSEE symposium reported no change in biodiversity at the local scale over time. In other cases, richness was indeed found to be declining at the local or regional scale, with composition and abundance of particular species often found to be changing in dramatic ways, and evidence of biotic homogenization across large spatial scales. The speakers were agreed that it will be the declines of particular species and changes in overall composition that will have the largest impacts on ecosystem services and functions that we as humans care most about. In summary, this CSEE symposium highlighted that, although there is a net loss of species at the global scale, particular measures of biodiversity such as species richness may not be systematically declining across all spatial scales. The symposium provoked discussion about how we must critically assess the way we present biodiversity change in the ecological literature and media because, even during the Anthropocene—a period of pervasive human impact on earth's ecosystems—all is not loss.

Mark Vellend (Université de Sherbrooke) discussed patterns and consequences of changes in plant biodiversity at local scales, the scale at which plants interact. In a recent analysis of studies that have measured plant biodiversity in plots over time, Vellend *et al*. found no net change, on average, in the number of species of vascular plants over the last century at the plot scale (Vellend *et al*. 2013). This result has implications for how we extrapolate biodiversity functioning experiments to the real world. **Julia Baum** (University of Victoria) explored marine biodiversity changes by looking at shifts in beta diversity among fish communities. She and her coauthors showed homogenization of marine fish communities and dramatic changes in abundances of particular species in response to human activities (e.g., fishing, habitat disturbance), but she found that local biodiversity, measured as richness and evenness, had not changed. **Jeremy Kerr** (University of Ottawa) discussed the human footprint of climate change on rapid shifts in pollinator assemblages in the past century in North America and Europe. Jeremy explored the differences in range shifts among North American butterflies and European bee species. Many butterflies are rapidly expanding their ranges as temperatures warm, whereas European bee species' ranges are stationary. This result indicates that insect taxa in similar ecological environments can show contrasting responses to climate change. **Graham Bell** (McGill University) explored diversity at the microscopic scale by analyzing trends in phytoplankton biodiversity over time. Phytoplankton are mobile with short generation

times leading to large fluctuations in their populations and local-scale species richness over time. Graham illustrated how these fluctuations and in particular the periodic minima can be used to test between models describing species composition. **Mary O'Connor** (University of British Columbia) reported brand new findings from a meta analysis of species diversity changes in coastal marine communities. She and her co-authors report both decreases in species richness in relatively undisturbed marine intertidal communities and no change in species richness in highly disturbed communities. These results highlight that, at local and regional scales, species richness changes can be either negative or show no net change over time. **Brian McGill** (University of Maine) rounded off the symposium by talking about alpha and beta diversity changes and species composition in a global analysis of 100 animal, plant and marine communities over time, recently published in the journal *Science* (Dornelas *et al.* 2014). In this study, Maria Dornelas, Brian McGill and their co-authors found no systematic loss of α diversity, but a change in community composition over time. They attributed their findings to patterns of biotic homogenization in response to global change drivers.

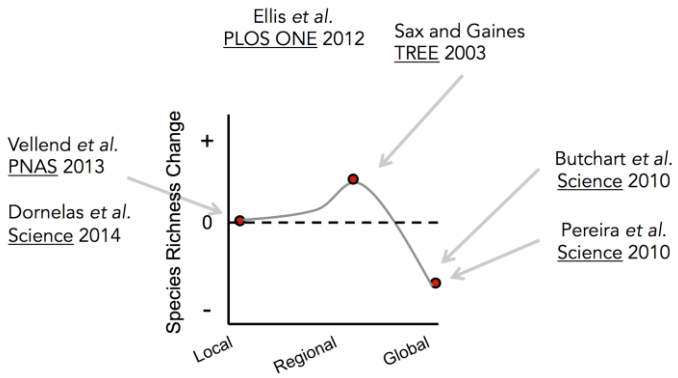


Figure (left). Literature indicating biodiversity change across spatial scales. We are just beginning to build a comprehensive picture of how metrics such as species richness change vary across spatial scales over the Anthropocene.

Communications Workshop

Tanya Stemberger, workshop coordinator, Simon Fraser U (tanyastemberger.com, @TanyaLMS)

Communicating the results and implications of research to audiences outside academia is increasingly important, especially in Canada. However, skills to successfully engage in this kind of discourse are often outside the scope of regular training, making the task intimidating. At this year's joint meeting, GENOMES TO/AUX BIOMES, the CSEE presented a half-day workshop on science communication.

The workshop began with a mini-symposium to explore why science communication is important before bridging into how it's done. A panel discussed some of the concerns shared by many scientists such as how to address uncertainty when disseminating research to the public, and protecting oneself while in the public eye. Following a break, attendees participated in one of two concurrent hands-on, break away groups. The first group covered the challenges of establishing and maintaining a blog. The second group learned how to make a radio show or podcast by diving right into script writing, recording, and editing short audio pieces about their own research.

After an afternoon of laughter, brainstorming, discussion, and pushing the boundaries of their comfort zones, attendees walked away with the skills to keep exploring, learning, and participating in science communication independently. Tied with a better understanding of how these activities help their careers, the public, and the scientific community, we hope they will continue to build and use these toolboxes, and share them amongst their collaborators.

Special thanks to organizing team, group leaders, and symposium speakers: Lianne Manzer, Kiyoko Gotanda, Jesse Rogerson, Carly Ziter, Chris Buddle, Tyler Irving, and Vincent Allaire.

Read posts on Twitter at #G2BSciComm!

SWEEET 2014

Anita Melnyk, Organizing Committee

Symposium for Women Entering Ecology and Evolution Today

http://sweeetecoevo.weebly.com/

The 6th annual SWEEET was held at the Genomes to Biomes conference with the theme of "*Self-Advocacy in Science*." SWEEET 2014 had approximately 60 participants and hosted 3 invited speakers: Dr. Steven Spencer, University of Waterloo, Dr. Catherine Potvin, McGill University and Dr. Yolanda Morbey, University of Western Ontario. Dr. Spencer presented his findings on how stereotype threat can undermine women's performance in a scientific setting. Drs. Potvin and Morbey presented examples where self-advocacy had played a role in their own scientific career trajectories. A Q&A followed on issues ranging from what institutions/individuals can do to alleviate stereotype threat, to what men can do to advocate for more women in science. A key outcome of the discussion was the recognition that stereotype threat is a likely barrier to women achieving their full potential in science.

Photo: SWEEET 2014 organizing committee (left to right): Anita Melnyk (University of Ottawa), Dr. Barbara Frei (McGill University & University of Ottawa), Dr. Aerin Jacob (McGill University & University of Victoria), Dr. Risa Sargent (University of Ottawa) and Dr. Nadia Aubin-Horth (Université Laval).

Participant feedback was positive and there is strong interest in seeing future SWEEET events.

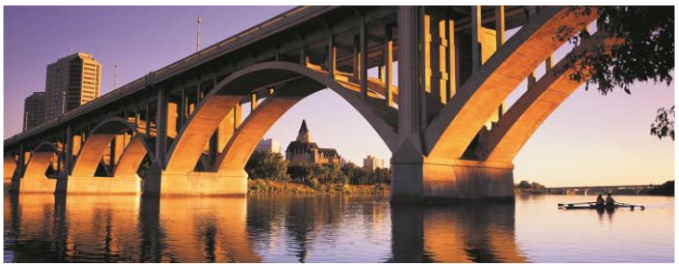
Feedback suggested that future SWEEET symposia should attempt to increase participation from 1) men, to raise more awareness and allow a broader discussion of issues facing women in the scientific workplace, and 2) from administrators, to encourage departments/institutions to implement policies and practices to increase diversity.

Many people and organizations helped make SWEEET 2014 a success. First, we thank our three speakers for sharing their research and experiences. Second, we thank our sponsors for their financial support: McGill University, Simon Fraser University, University of Guelph, Université Laval, University of Ottawa, and University of Toronto. Third, we are very grateful to the CSEE for their ongoing logistical and financial support; in particular, Dr Julie Turgeon. Finally, we thank our participants for continuing to make this symposium such a rewarding experience!

For more information about SWEEET, visit http://sweeetecoevo.weebly.com. We need volunteers to organize SWEEET 2015 (a very rewarding experience!); please email sweeet.ecoevo@gmail.com.

CSEE 2015, Saskatoon!

Eric Lamb, U Saskatchewan



CSEE is coming to the Prairies for the first time in 2015. We invite you to Saskatoon, Saskatchewan on May 22-24 2015 for the 10th annual CSEE meeting, hosted by the University of Saskatchewan. Come and experience the "Paris of the Prairies", and one of Canada's finest Collegiate Gothic style campuses. Saskatoon offers extensive opportunities for naturalists; we will be organizing field trips to a number of destinations. Registration will open in December. For now please check out our website csee2015.usask.ca. We will be issuing a formal call for symposia later this summer. If you are interested in organizing a symposium please contact the organizing committee (eric.lamb@usask.ca). Your local organization committee for CSEE 2015 includes: Eric Lamb (Plant Sciences), Jill Johnstone (Biology), Sina Adl (Soil Science), Megan Horachek (Biology), Mélanie Jean (Biology), Jeff Lane (Biology), Phil McLoughlin (Biology), Diego Steinaker (Canadian Institute for Ecology and Evolution), and Chris Willenborg (Plant Sciences).

PAGSE Report

Jeremy Kerr, U Ottawa

The Partnership Group for Science and Engineering (PAGSE: http://www.pagse.org) is a functionally independent unit of the Royal Society of Canada that brings scientific and engineering voices together to communicate non-partisan views regarding current issues and policies that may be under discussion or development at the federal level. The organization provides four main contribution areas.

1. Regular meeting and guest speaker presentations

These meetings provide opportunities to hear the perspectives of a cross section of Canadian science leaders and to pose questions in response. Because PAGSE hears from many government or quasi-government speakers in delicate positions, discussions vary in terms of the detail they include. With the long-awaited announcement of NSERC's next President, Professor Mario Pinto, PAGSE will surely seek to include a meeting with him as soon as schedules permit.

2. SciencePages

PAGSE prepares periodic briefing notes on issues and concepts that might be relevant for policy. The key to these is to make them scientifically excellent but readable by non-technical audiences. These reports are also intended to have policy relevance but to avoid attempting to prescribe policy. This balancing act is difficult but is central to this form of communication and to PAGSE in general (see: http://sciencepages.ca & http://sciencepages.ca/fr/)

3. Bacon and Eggheads breakfasts

These events are held for Parliamentarians, staffers, and policymakers. Speakers often include ecologists and evolutionary biologists known for seminal contributions. Recent members of the CSEE community to speak at this event include Professor Sally Aitken in February, 2014, who discussed evolutionary perspectives on forest conservation and management in a time of rapid, human-caused climate change. All presentations are reviewed to ensure that this form of PAGSE

presentation avoids advocacy. This means, for example, that presentations on controversial issues like climate change will include excellent science, as with Sally's talk, but will not comment on government policy or attempt to prescribe what policy should be. Policy relevance is fine, but policy prescription is not.

4. House of Commons Standing Committee of Finance

This year's submission to the committee included a request for a $15 million increase to NSERC in support of basic research. NSERC was allocated this $15 million increase to its Discovery Grants program. Although this amount will not make a huge difference given the size of the program, it is a hopeful sign. Another important recommendation to the committee was to expand the postdoctoral fellowship program. At present, it is not clear how this request fared.

Conclusion

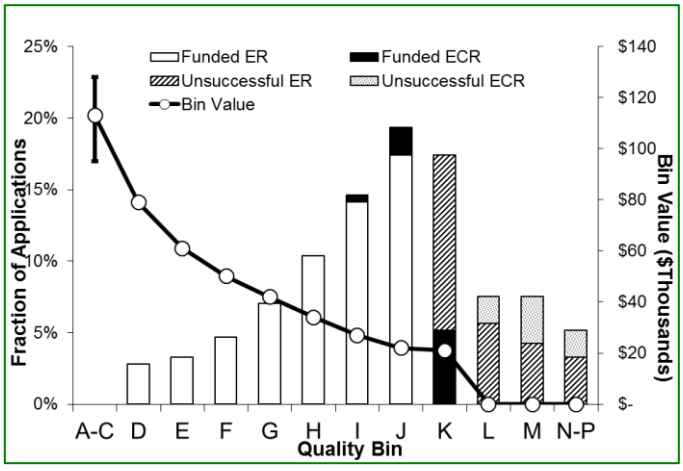
PAGSE seeks to make a difference on issues that affect CSEE members. These include maintaining awareness of trends for policy within government that have tangible impacts on us (e.g. at NSERC or CFI), providing feedback on our concerns (e.g. providing Janet Walden a long list of clear problems with the Canadian Common CV for DG applications), and maintaining a voice for science among Parliamentarians and the public service that is independent of recent, worrying attempts to suppress such communication. Certainly, PAGSE has contributed to some notable successes also, including being part of this year's push to improve DG funding in Canada.

2014 NSERC Report

Hugh MacIsaac, Group Chair, Evolution & Ecology (Evaluation Group 1503)

In 2013-2014, 212 faculty applied for an NSERC Discovery grant. Success rates vary by experience level and prior success. Early career researchers (ECRs; n=31) had a success rate of 52%, down from last year (60%). Faculty renewing NSERC grants (n=120) had a success rate of 79% overall (82% for funded returning experienced faculty, and 65% for 1st renewals (i.e. former ECRs)). The third group of tracked faculty are experienced unfunded. This group had a 53% success rate this year (n=61). Average grant sizes are $26.6K (ECRs), $37.6K (established funded), and $25.9K (established unfunded). Of the three criteria used to assess applications, Excellence of the Researcher scores are highest (as a population), followed by HQP, and then Proposal.

I am concerned that first-time renewals have been lower than those of experienced faculty over the past two years. Having an established lab clearly affects success rate. Canada and the provinces have invested significant funds in success of ECRs, so their comparatively poor performance in renewing their grant the first time is cause for concern. NSERC has indicated that it will begin to monitor this group and why success is lower than their more experienced colleagues. If you presently hold your first Discovery grant as an ECR, I urge you to have experienced colleagues read your proposal before you submit an application for renewal.



Distribution of Ecology and Evolution applicants and corresponding grant sizes, 2014. Source: NSERC.

There also are rather large differences in retention rates for returning faculty, and acquisition rates for ECRs, related to university size. This issue is detailed below.

The overall budget for Discovery grants increased from $316,604,111 in 2012-2013, to $317,598,146 in 2013-2014, while the planned budget for 2014-2015 is $304,252,916 plus

and additional $20,407,284 for Math and Stats (now broken out separately). Northern Supplements increased over the same period from $1,435,770 to $1,675,270 to $1,900,000.

Eleven Discovery Accelerator Supplements (DAS) were awarded to Ecology and Evolution faculty (7.7% of funded grantees). Recipients were from eight universities. Assessment was based on minimum 'Very Strong' for applicant and 'Very Strong' for Proposal, and the applicant must have been nominated by an assessment committee member (5 persons). After a nomination, an open vote of the panel was taken to garner overall support. All applicants who were nominated and supported by five votes (i.e. the entire assessment committee) were recommended for DAS. Separation of tied applicants (4 votes each) was based on 'innovative and risky research'. This procedure will be changed next year, with each member of the assessment committee using a blind scoring system to rate the nominated applicant on a 1 to 5 scale (5 minimum, 25 maximum total score). This will serve to prevent ties.

NSERC equipment grant (RTI) budget was cut from $24,689,706 (all grant selection committees) in 2012-2013 to $17,553,947 in 2013-2014 due to the federal government prohibition on transfer of unspent CRC funds to NSERC. The RTI budget typically begins very small, but grows as year-end approaches due to these transfers between agencies. As well, to reduce administration, NSERC implemented a new system this year in which every university was given an allocation of applications that could be submitted. In Ecology and Evolution there were 64 applications, of which 20 were funded (31.3%). The total budget for Ecology and Evolution RTIs was $2,065,276.

Postgraduate scholarship funding decreased from $28,556,013 in 2012-2013 to $24,765,812 in 2013-2014, with a projected budget of $23,080,000 in 2014-2015. Canada graduate scholarships for the same period are $42,093,428, $42,134,376, and $42,100,000. Vanier Canada Graduate scholarships for these years are $8,225,092, $8,275,000, and $8,350,000. Postdoctoral funding for the same years was $10,619,737, $9,437,414, and $9,500,000. While it appears that the number of graduate and PDF fellowships have declined sharply, budget from each of these programs was used to fund the CREATE program. CREATE currently supports 105 programs, with 17 new ones planned for this year (down from an original expected 20). Unfortunately, NSERC does not track the total number of graduate students supported by CREATE, so it is currently impossible to compare the overall number of students and postdoctoral students supported when these programs are combined. NSERC has promised to look into this in future. The CREATE program is currently undergoing external review. As a member of the Committee on Grants and Fellowships (COGS), I have asked for a formal comparison of input and output characteristics (e.g. GPA, publications, post-program employment) of supported students and postdocs in CREATE and the traditional scholarship/fellowship programs.

The Discovery Frontiers program will be accepting new applications this year. Frontiers grants are initiatives that identify and capitalize on emerging opportunities where Canada can benefit from its world-class capacity to take a leadership role in key areas of research and innovation. One area pertinent to Ecology and Evolution will likely be included in the 2014 call for proposals. This topic (if approved) is likely to be called "*Future of biodiversity: approaches, models, experiments and solutions*". Please refer to NSERC's web site for the RFP.

We had some good news this year. The 2014 federal budget increased funding to NSERC by $15,000,000. At COGS we were asked how this funding should be implemented. There was consensus among group chairs that the money should be dispersed across the five years that grants typically run, which means an infusion of $3,000,000 for this year. The group chairs also thought the best way to allocate funds among the options presented was for NSERC program officers, group co-chairs (2) and group chair to decide on internal GSC funding. If accepted, this means that we would look for an objective way to increase funds in our GSC. The panel rejected the idea of

increasing all grants by a flat amount. It is possible that some funded bins will have their amounts increased. If you look at the graph above, you can see that that some of the lower funded bins (e.g. H, I, J, K) have little separation in award size. If the group chairs' recommendation is accepted by NSERC, we will likely increase separation of some bins. We have not heard back definitively from NSERC on how this new money will be allocated.

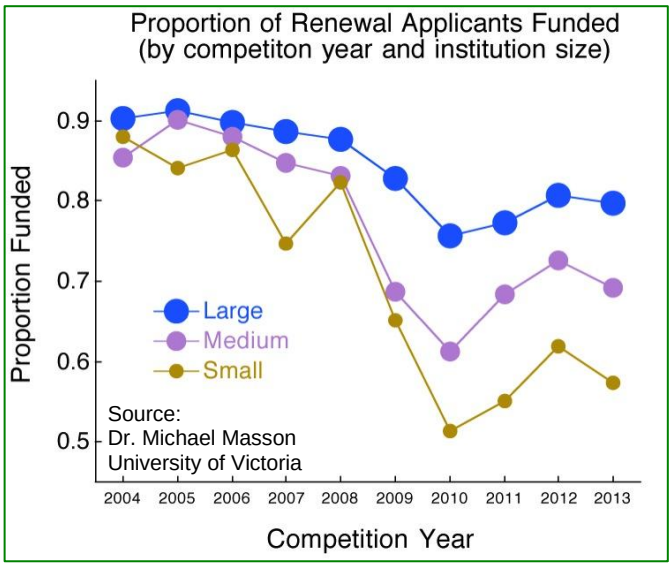
In addition, we have $10,000,000 in new funding for RTI grants. The COGS co-chairs (12 panels) felt it would be appropriate to allocate some of these funds to the competition just conducted – meaning that some grants that were rejected in March will now be accepted – and the balance (majority of funds?) will be used in a bigger competition later this year. We also recommended that NSERC increase university proposal allocations for one year to increase the number of applications reviewed.

There is also new funding for two years for postdoctoral funding. The COGS committee discussed different options, from increasing the amounts to $45,000 to increasing the number of awards. PDF fellowships have not been increased since 2003, and should now be around $50K if adjusted for inflation. We will have to wait to see what NSERC does with this program.

NSERC's implementation of the cccv for Discovery grants was extremely poor. There was unanimous consent among applicants, reviewers, and grant committee members that both the input and output were disastrous and a colossal waste of everybody's time. Together with group co-chairs Robert Reisz and John Reynolds, we informed NSERC beginning in February 2013 that this form was deficient and needed major reforms. A few major changes were made (e.g. 500 character descriptions of every talk and every paper were eliminated, and the five most significant contributions were brought back), but overall we were and are very disappointed in the cccv. We petitioned new VP Dr. Pierre Charest to withdraw the cccv for one year while it was fixed properly, to bring back the PDF100 for the intervening year, and to create a user committee to vet proposed changes to the cccv. The latter point was implemented, but NSERC is going ahead with the cccv, despite overwhelming criticism. They have pledged to fix some of the concerns regarding input and output. Members of the Ecology and Evolution GSC have made numerous suggestions for improvement.

Finally, there is growing concern among Ecology and Evolution GSC members that Discovery grant funding success (1st time applications for ECRs, and retention for experienced applicants) differs widely according to university size, and that the new rating system implemented in 2010 may be responsible. In 2013, Dr. Michael Masson, group chair in Biological Systems and Functions, presented data to COGS showing an increasing gulf in retention for faculty at different sized universities (Figure below).

This graph presents five years of data for the old reviewing system, followed by five years under the new system. Overall success rate declined, but it declined most for faculty at smaller schools. Michael and I have obtained three years of data (2011-2013, all panels) and looked at distributions of scores in the different ratings categories. The most telling difference in scores between large universities and medium and small ones occurs with the Excellence of the Researcher assessment. Currently, a group of Ecology and Evolution faculty are assessing these data more comprehensively. I thank Drs. Doug Morris (Lakehead; former group



chair of 1503), Marc-André Villard (Moncton; former co-chair of 1503), Claude Lavoie (Laval; former panelist on 1503), and Dennis Murray (Trent; former panelist on 1503) for exploring this issue in greater depth.

New group chairs for 2014-2015 are Luc-Alain Giraldeau (Laval) and Mark Johnston (Dalhousie). Out-going chairs Robert Reisz (Toronto) and John Reynolds (Simon Fraser) have served the panel very well, leading the exercise to reform the cccv.

CIEE/ICEE Report

Peter Leavitt and Diego Steinaker, Canadian Institute of Ecology and Evolution

Greetings! We have a number of exciting initiatives to tell you about, including some recent activities, a new call for proposals, and our new membership drive.

1. CIEE activities during the last semester

Last semester was a busy one, in which CIEE provided logistical support for three new CIEE Working Groups, funded a training workshop, and actively participated at the "Genomes to Biomes" meeting in Montreal.

1.1. Working Group Meeting: we provided complete logistical support (meeting facilities, accommodations, meals) to the first meeting of the Working Group, "Canada's phylogenetic diversity in a changing world", led by Dr. Jana Vamosi and Dr. Jeromy Kerr. The meeting took place in the CIEE Synthesis Centre at the University of Regina, on 23-26 June, 2014. Participants of the meeting included prominent researchers from seven Canadian Universities (SFU, UBC, U. Alberta, U. Calgary, U Ottawa, McGill and UQAM).

1.2. The CIEE at the "Genomes to Biomes" 2014 meeting in Montreal (25-29 May, 2014):

R workshop: CIEE supported a full-day workshop in R statistics (photo, right) in conjunction with the G2B Meeting, organized by Etienne Low-Decarie and the Montreal R User Group. Fifty-two graduate students and academics from 23 Universities and Institutions across Canada participated in this successful training workshop.

CIEE Social meeting: Twenty-six members of the CIEE Board, the Scientific Advisory Committee, and CIEE representatives met on May 27th at the Redpath museum in Montreal to share views and ideas on programming, member services and fundraising.

CIEE presence: CIEE maintained a strong presence, with a display table staffed by Associate Director Diego Steinaker who provided new and important information on the organization, operation and new activities of CIEE. In addition, CIEE was one of the two sponsors at the general Meeting Reception. Finally, CIEE Director Dr. Peter Leavitt opened the Young Investigator Symposium with a general presentation that addressed the CIEE goals, programing, and upcoming activities.

2. Membership Drive

The CIEE will grow as it adds partners from coast to coast. CIEE achieves its mission principally through funding from, and co-operation among, a consortium of Canadian institutions. Each member university pays annual membership fees assessed on a sliding scale according to their NSERC Discovery Grant program funding in ecology and evolution. No overhead is charged, so all of the funding obtained from member organizations is used for direct support of CIEE scientific programs, whereas in-kind contributions help maintain staff and synthesis facilities. As a result, the more members we have, the more activities we can support.

To increase our membership, we are seeking CIEE members at all Canadian universities to act as representatives and liaisons to their local administration. Through its membership, your institution will: 1) facilitate

access to CIEE's scientific programs for your faculty and highly qualified personnel, 2) gain a seat on the management board that sets the mandate and direction of the CIEE, and 3) play a pivotal role in shaping the future of ecology and evolution in Canada. We are always looking for new representatives, so please do not hesitate to contact us for additional information.

3. New call for proposals

We are pleased to anticipate a new call for proposals in fall 2014 for thematic programs (working groups). Thematic programs will be staged over the 12 month period from January to December 2015. The proposals should outline a plan to address significant questions in ecology and evolution through synthesis and integration of existing data (e.g., quantitative research synthesis, compilation and meta-analysis of existing data sets). CIEE/ICEE provides logistic support and travel expenses. In the past, working groups were awarded grants valued from $ 10,000 to $17,000. Programs may also be co-sponsored with other organizations. Meetings can be held at any location in Canada; however, preference will be given to meetings hosted at member organizations. In addition, the CIEE offers facilities and logistic support in the Synthesis Centre at the University of Regina. Please visit our website (http://www.ciee-icee.ca/news-and-announcements) for details on the application.

As always, we are pleased to receive your questions, comments or concerns about CIEE. In particular, please let us know if you have an idea for a new member service or research activity. Thank you all for your continued support! Please email us at CIEE-ICEE@uregina.ca.

Canada's Liber Ero Fellowship Program

Sally Otto, Director; Anita Miettunen, Program Coordinator

Launched in 2013, the Liber Ero Fellowship Program is unique in Canada. This post-doctoral program supports exceptional early-career scientists who are addressing some of the most pressing biodiversity challenges and management issues relevant to our country. A key goal of the program is to "change the dial" regarding how applied conservation science is conducted and communicated in Canada. As emerging conservation leaders, Liber Ero Fellows work closely with academic and conservation practitioner mentors. They also participate in group projects and attend biannual retreats that offer networking and training opportunities in leadership, policy and communications.

Our most recent retreat was held in May 2014 at the Gault Nature Reserve (Quebec) and in Montreal. Highlights included communications and media training sessions led by Brian Lin and panel discussions with invited environmental and conservation practitioners. Planning is now underway for Liber Ero's fall retreat, which will be held in Ottawa in November 2014.

The call for proposals for 2015 Fellows will be announced this summer via our website with an application deadline of November 1. Outstanding post-doctoral researchers from any country are eligible to apply; however, research projects should be based at a Canadian institution. For further information, please contact us at info@liberero.ca.

Winning (i.e. least bad) limericks from the G2B banquet

Courtesy of Marco Festa-Bianchet, Limerick Undertaker

Il était une fois une conférence avec beaucoup de poissons,
Où les écologistes végétaux pensaient à l'unisson:
Une présentation sur les fougères,
Ou encore sur les Asters,
Serait meilleure qu'un gros jambon.
-Carissa, Geneviève et Mélanie

While studying cell flagellation
A man used his own cells for investigation
Now pray can you tell
When he plated his cells
Was it science, or just *---------?
*Clue: Not "mastication."
-Brian Zhang, Anna, Delphine, Pascale

An Ode to Pedro
There was a young man from Brazil
Who liked to peddle his D. Phil.
He thought he was a magician
But he was only a theoretician
One day he might work at McGill.
-Anon

Plants are OK if your goal
Is to study biomes as a whole
But for public appeal
You should go find a seal
To swallow your camera whole.
-Anne and Isla

Once a lonely young squirrel
Came to Montréal to meet a girl.
But a truck's faulty air brake
Left him flat as a pancake.
So alas! He's now a ground squirrel.
-Isa and Lisa

There once was a baculum long
'Twas lauded in journal and song
That Albrecht did measure
'Twas his greatest pleasure
For selection on length was quite strong.
-Brandon

Current CSEE Council

- Judith Myers - President (2014 – 2015)
- Jeremy Kerr - Vice-president (2014 – 2015)
- Miriam Richards - Secretary (2012-2015)
- Julie Turgeon - Treasurer (2013-2016)
- Andrew Gonzalez – Councillor (2012 – 2015)
- Fanie Pelletier – Councillor (2012 – 2015)
- Locke Rowe – Councillor (2012 – 2015)
- Andrew Simons - Councillor (2014 – 2017)
- Heather Proctor – Councillor (2014-2017)
- Jill Johnstone - Councillor (2014-2017)
- Anne Dalziel - Student/Post-doc Councillor (2014 – 2015)