

CIEE / ICEE

Canadian Institute of Ecology and Evolution /
Institut canadien d'écologie et d'évolution

Newsletter - July 2014

This newsletter is published twice a year by the Canadian Institute of Ecology and Evolution. Its purpose is to disseminate news and information to CIEE members and general audience. All CIEE members are invited to submit articles, news, reports and announcements of upcoming events. Please submit your contribution in either official language by email to: ciee-icee@uregina.ca.

Contents:

1. CIEE activities during the last semester

1.1. The CIEE at the “Genomes to/aux Biomes” Meeting in Montreal

1.2. Thematic Working Group Meeting

2. New products from CIEE Thematic Working Groups

3. The International Synthesis Consortium

4. Membership Drive

5. Upcoming Call for Proposals



Canadian Institute of Ecology and Evolution: Accelerating scientific progress through programs that synthesize current knowledge and develop future leaders.

Peter Leavitt, Director

Greetings for summer 2014 – 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. In addition to the information below, please let us know if we can provide you with more detail – just email us at CIEE-ICEE@uregina.ca

1. CIEE activities during the last semester

Last semester was a busy one for the CIEE, with active participation at the “Genomes to Biomes” meeting in Montreal, provision of funding for a new training workshop, and a successful call for proposals resulting in three new CIEE Working Groups.

1.1. The CIEE at the “CSEE-SCL-CSZ, Genomes to/aux Biomes” meeting in Montreal:

1.1.a. R workshop: CIEE supported a day-long workshop in R statistics, offered in conjunction with the Genomes to/aux Biomes meeting in Montreal on May 25th, 2014. This workshop was organized by Etienne Low-Décarie of McGill University, and the “Montreal R User Group”, and was intended as an introduction to the use of R for Eco-Evo scientists. The workshop consisted of three 2 hours segments; 1) why R and getting started in R, 2) getting data into R, and 3) plotting your data using ggplot2. By the end of the workshop, all users were able to load their data into R, create a project in R-Studio, export data and produce plots.



Fifty-two graduate students and academics from 23 universities and institutions across Canada participated in the R workshop held in Montreal on 25 May, 2014

1.1.b. CIEE Social meeting: Twenty six members of the CIEE Board, the Scientific Advisory Committee, and CIEE representatives met last May 27th at the [Redpath Museum](#) in Montreal. That was a great opportunity to share views and ideas on programming, member services and fundraising. Special thanks to Dr. Rowan Barrett and Andrew Hendry from McGill University who obtained permission for us to have the mixer at the museum.



CIEE/ICEE social meeting at the Redpath museum in Montreal, on 27 May 27, 2014.

1.1.c. The CIEE presence at the meeting: CIEE maintained a strong presence at the CSEE-SCL-CSZ Genomes to/aux Biomes meeting in Montreal with a display table and information for many interested groups. This table was staffed by Assistant Director Diego Steinaker who provided new and important information to attendees concerning the organization, operation and new activities of CIEE. In addition, CIEE was one of the two sponsors at the general Meeting Reception. Finally, CIEE's Director Dr. Peter Leavitt opened the Young Investigator Symposium with a presentation that highlighted the CIEE goals, programing, and upcoming activities.



Strong presence of CIEE at the CSEE-SCL-CSZ Genomes to Biomes meeting in Montreal, on 25-29 May, 2014.

1.2. Thematic Working Groups

1.2.a. Meeting: the “Canada’s phylogenetic diversity in a changing world” working group, led by Jana Vamosi and Jeromy Kerr, met in the CIEE Synthesis Centre at the University of Regina, on 23-26 June, 2014. Participants of the meeting included nine prominent researchers from seven Canadian Universities: Jana Vamosi (U. Calgary), Jeremy Kerr (U. Ottawa), Steven Vamosi (U. Calgary), Felix Sperling (U. Alberta), Arne Mooers (SFU), Jayme Lewthwaite (SFU), Steven Kembel (UQAM), Jonathan Davies (McGill), and Amy Angert (UBC). CIEE provided complete funding and logistic support, including transportation, meeting facilities, accommodations and meals.

During the meeting, the working group assessed predictive species modeling and phylogenetic community ecology with the central goal of understanding how phylogenetic diversity is changing across Canada. This group also tested how evolutionary processes shape species’ range responses to climate change. Overall, the meeting was very productive, with great potential for scientific publications.



First meeting of the working group “Canada’s phylogenetic diversity in a changing world”, in the CIEE Synthesis Centre at the University of Regina, on 23-26 June, 2014.

1.2.b. In addition to the “Canada’s phylogenetic diversity in a changing world” working group, two new thematic working groups will meet in 2014:

“**The terra incognita of community ecology: understanding continental-scale variation of ecological networks**” (awarded grant: \$14,400 CAD), led by Timothée Poisot, Dominique Gravel (Université du Québec à Rimouski) and Daniel Stouffer (University of Canterbury, New Zealand); and,

“**Forecasting groundfish biodiversity change in the Newfoundland shelf**”, led by Andrew Gonzalez, Fred Guichard, Patrick Thompson, and Eric Pedersen from McGill University. This project is co-funded between the CIEE and the Quebec Centre for Biodiversity Science (QCBS). The CIEE fund for this project is \$6,120 CAD.

For more information and details on these working groups, please visit our website: <http://www.ciee-icee.ca/CIEE-ICEE-Research-Programs-and-Events>.

2. New products from CIEE Thematic Working Groups

We are pleased to broadcast two new products from past CIEE Thematic Working groups:

2.1. Vasseur, David A., John P. DeLong, Benjamin Gilbert, Hamish S. Greig, Christopher DG Harley, Kevin S. McCann, Van Savage, Tyler D. Tunney, and Mary I. O'Connor. 2014. Increased temperature variation poses a greater risk to species than climate warming. *Proceedings of the Royal Society B: Biological Sciences* 281 (1779), 20132612.

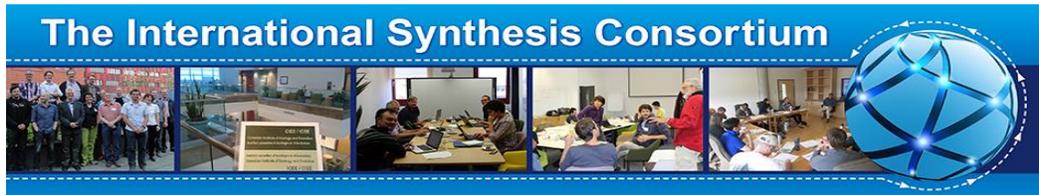
This publication resulted from the CIEE Working Group “Predicting ecological change: multi-scale analysis of plankton diversity and dynamics”. This working group organized by Jeremy Fox (U. Calgary), Andrew Gonzales (McGill Univ.), and Bill Nelson (Queen’s Univ.), collated and analyzed data sets from lakes around the world to investigate the interplay of density-dependent and density-independent processes that cause community fluctuation on timescales ranging from days to decades. In this article, the authors coupled fine-grained climate projections (2050–2059) to thermal performance data from 38 ectothermic invertebrate species. They showed that projections based on mean temperature change alone differed substantially from those which also incorporated changes in climatic and community variability. This work highlighted the importance of using fine-grained temporal data to incorporate the full extent of temperature variation when assessing and projecting performance.

2.2. CFRNET: Coordinating Biological Field Research for the Benefit of Canadians. Carleton University. <http://carleton.ca/mforbes/2013/cfrnet-a-call-for-a-network-of-canadian-field-stations/>

This ‘white paper’ arose from the CIEE workshop “The future of scientific field research stations in Canada”, organized by Mark Forbes (Carleton Univ.); Albrecht Schulte-Hostedde (Laurentian Univ.), and Arthur Weis (Univ. of Toronto). At this workshop, directors of Canada’s 16 environmental research stations organized the Canadian Field Research Network (CFRNet). CFRNet integrates over 50 Canadian field research stations into a ‘hub and spoke’ network model that will enable the ecology and evolution research communities to build, from ready-made components, vehicles for biodiversity monitoring, distributed large-scale experiments, and the stewardship of long-term data sets. CFRNet also facilitates the sharing of best practices to enable cost-effective delivery of research outcomes.

3. The International Synthesis Consortium

During the past 6 months, CIEE/ICEE joined the “The International Synthesis Consortium” (<http://synthesis-consortium.org/>), a global group of thirteen Synthesis Centres in Ecology, Evolution and Environment from North America, Europe, China and Australia.



Scientific synthesis centres have become integral to research efforts in an era of increasingly complex societal and scientific problems, big data, and the knowledge economy. Synthesis centres foster collaborative research by bringing interdisciplinary groups of specialists and experts together for an extended period of time in a collegial setting aimed at stimulating creative thinking, catalysing insight, and facilitating group learning. Other Synthesis Centres in Ecology, Evolution and Environment around the world are: NCEAS - National Center for Ecological Analysis and Synthesis (USA), John Wesley Powell Center for Analysis and Synthesis (USA), NIMBioS - National Institute for Mathematical and Biological Synthesis (USA), NESCent - National Evolutionary Synthesis Center (USA), SESYNC - National Socio-Environmental Synthesis Center (USA), EOS - Environmental ‘Omics Synthesis Centre (UK), Tansley Working Groups (UK), CESAB - Centre for the Synthesis and Analysis of Biodiversity (France), sDiv - The Synthesis Centre for Biodiversity Sciences (Germany), CEES - Centre for Ecological and Evolutionary Synthesis (Norway), CERN - Chinese Ecosystem Research Network (China), and ACEAS - Australian Centre for Ecological Analysis and Synthesis (Australia). CIEE/ICEE is the only one of its kind in Canada.

4. Membership Drive

The CIEE grows by adding partners from across Canada! Because CIEE achieves its mission principally through funding from, and co-operation among, a consortium of Canadian institutions, it is essential that we have representation from all regions and institutions. In this model, 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 in 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 representative at all Canadian universities to act liaisons to local researchers and 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, 3) get priority access to CIEE support, and 4) play a pivotal role in shaping the future of ecology and evolution in Canada. We are always looking for new members, so please, do not hesitate to contact us for additional information.

5. Upcoming Call for Proposals

We are pleased to anticipate a new call for proposals during Fall 2014 for thematic programs (working groups). These new 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). Applicants must define the project scope, meeting agenda, inclusive budget, and plan for publication. CIEE/ICEE provides logistic support and travel expenses. In the past, working groups were awarded grants valued from \$ 6,000 to \$17,000. Programs can be also co-sponsored with other organizations. Working group involve 10 to 20 participants, including graduate students. 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 in the application.

Your input matters

Tell us what you think. We are pleased to receive your questions, comments or concerns about the Canadian Institute of Ecology and Evolution. In particular, please let us know if you have an idea for a new member service or research activity. Thanks!



Email: ciee-icee@uregina.ca; Twitter: @CIEEICEE; Website: www.ciee-icee.ca

Dr. Peter R. Leavitt, Director

Dr. Diego F. Steinaker, Assistant Director

Canadian Institute of Ecology and Evolution, CIEE / ICEE, Institut canadien d'écologie et d'évolution

Many thanks to our sustaining Members for the continuing support



Your current CIEE board members, director and representatives

Management Board:

Sarah Otto (University of British Columbia), Mark Forbes (Carleton University), Donald Jackson (University of Toronto), Elizabeth Elle (Simon Fraser University), Andrew Hendry (McGill University), Christopher Somers (University of Regina), Jill Johnstone (University of Saskatchewan), and Kathleen Smith (Duke University).

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If you recognize the importance of having a national centre for synthesis in ecology and evolution, and are interested in acting as the formal CIEE representative to your Institution, please let us know via our dedicated email address ciee-icee@uregina.ca. We would be delighted to provide you with more information.