THECURRENT

Society of Canadian Limnologists / Société canadienne de Limnologie

Issue 5 May 22, 2014

Newsletter of the Society of Canadian Limnologists

This issue:

Right: Lake 261 at the Experimental Lakes Area, which might now see research conducted on it again thanks to the IISD and the hard work of so many limnologists in Canada and world wide. See story on page 2. Photo credit: Mike Rennie

The state of Canadian Aquatic Science in 2014

Jules Blais, President

Despite setbacks for Canadian aquatic science in recent years, there is reason for optimism and much to celebrate in 2014 due in large part to our Society's resilience, our willingness to work hard, and our ability to stand up to adversity in the present Canadian context. Reasons for optimism are many. SCL's membership is the highest it has been in nearly a decade. Our presence on social media has been remarkable (including more than 1,200 twitter followers for @Can_Limnology) and has attracted the attention of Canadian science publishers, among others. SCL is also expanding its horizons by co-hosting the Genomes to Biomes (G2B) meeting in Montreal, in addition to our regular annual meeting with the Canadian Conference for Fisheries Research. The G2B conference has at least 53 SCL members registered, one of our largest attendance records for any conference. By these metrics, things haven't been better for SCL in a long time.

Unfortunately, obstacles continue to surface under a federal government that has shown little regard for environmental science. Seven federal science libraries in Canada were added to the list to those that have been shut down in recent years, including the Eric Marshall Library at the Freshwater Institute, the St. Andrews Biological Station in St. Andrews, NB, and the library at the Northwest Atlantic Fisheries Centre in St. John's. Notwithstanding the government's claim that these closures represent 'value for taxpayers', these closures arrive on the heels of millions of dollars of recent investments in new library infrastructure, such as the St. Andrew's library, which was recently built. Some collections, including the one at the Maurice Lamontagne Institute in Mont-Jolie, Quebec, ended up discarded haphazardly in dumpsters, as shown in photographs published worldwide (see photo, right).

The collection of the Maurice Lamontagne Institute library in Mont Joli, Québec, in a dumpster. For more on this story, visit http://unmuzzledscience.wordpress.com/2013/07/21/consolidating-holdings-libricide-at-dfo/

Although the

Continued on page 2

Continued from page 1

government has assured the public that the collections will be digitized and available for future generations of scientists, I have heard the opposite view from some of those familiar with these collections. One major casualty for science in Canada will be the irreplaceable data archives that were not digitized, including archival wildlife and fisheries data going back to the 19th and early 20th Century. With staffing reductions at DFO, it will be a decade before the remaining collections are moved and properly catalogued and documented in their new locations. An irreplaceable value of these collections was their cataloguing in a single location with ready access to the public. For example, the Eric Marshall library was among the premier libraries in Canada on freshwater aquatic science before it was boxed up and carted away, mainly by consultants with no record of who took what or where it ended up.

On a brighter note, a new agreement with the federal government became effective in April 2014 to officially hand over Canada's world-renowned Experimental Lakes Area (ELA) to its new operator, the International Institute for Sustainable Development (IISD), a Winnipeg based think-tank. Following two years of nail-biting negotiations between the federal government trying to divest itself of the facility, the Province of Ontario, and the IISD, the ELA will now exist as an independent research centre devoted to whole-ecosystem experimentation. SCL maintained its strong support of ELA in an open letter campaign to federal politicians that frequently captured national headlines. The IISD credits Canada's public support of the ELA as the reason the transfer was possible.

ELA's transition is being facilitated by former DFO staff from the Freshwater Institute who are now working full time for the IISD, though only about a half of ELA's original staff remains. At last count, only eight of the original 17 full-time staff remain at ELA, though more positions may appear according to an internal source. SCL is excited for the potential opportunities at ELA and we urge more scientists to get involved in this unique and world-renowned organization.

New positive developments for the communication of science in Canada are also appearing. For example, a recent Trillium Foundation Grant will be used to assist Canadian scientists to communicate more freely to reporters. In April, a $96,000 grant was awarded to Evidence for Democracy, a national organization championing evidence-based decision making in Canada. Executive Director Dr. Katie Gibbs will spend the next year developing a network of experts to speak on issues important to Canadians who would otherwise find their lines of public communication obstructed. SCL remains committed to support efforts to communicate science to Canadians without interference, and will continue to strive for an open scientific dialogue in Canada.

Experimental Lakes Area deal to breathe new life into the world-class facility

Scott Vaughan, President and CEO, IISD

The Experimental Lakes Area (ELA) is a world-class, unique Canadian scientific research facility; the only site in the world where whole lake-experimentation is carried out. Comprised of 58 freshwater lakes, it is located in in northwestern Ontario, and for the last four decades, this outdoor laboratory has been producing whole-ecosystem research on environmental problems, which then provides the world with vital information about fresh water. For example, we have ELA to thank for the phasing-out of harmful phosphorus additives in the cleaning products we use to clean our houses, after ELA research findings were used to prove that they were resulting in unwanted algal blooms in lakes.

This April, it was announced that the ELA will now be operated and managed by the International Institute for Sustainable Development (IISD), headquartered in Winnipeg.

ELA cannot be transferred into safer hands than IISD. The Institute has been at the forefront of policy and research into sustainable development since its foundation in Winnipeg in the early nineties. It has developed policy and focused research on freshwater management, and is dedicated to improving the health of our local lakes.

IISD's work makes a difference in the real world. Not only does it create innovative policy research but it communicates its work directly to those important decision makers in government, business, civil society and other sectors who are in a position to develop and implement policies to improve the health of our water. Now that IISD is managing the ELA directly, it means that the scientists and researchers who conduct research at the facility are in direct contact with IISD's policy researchers, who can use these findings to back-up their work, and directly impact policy-making decision.

There will be many direct benefits for local communities. IISD will procure supplies from surrounding areas (such as food, equipment, machinery and gas) that will equate to hundreds of thousands of dollars per year going straight to local business and economies. In addition, the facility will employ a number of local staff, creating employment opportunities including highly-educated researchers and scientists. IISD has already hired four scientists for the ELA, and hopes to maintain a strong contingent of local former staff to allow their invaluable expertise, experience and institutional knowledge to be carried over.

IISD can now expand the role of ELA to include training, workshops and field courses that will educate and benefit local communities, as well as the greater scientific community. IISD is already in discussion with several universities in Ontario, Manitoba, the rest of Canada and the United States about developing stronger links with ELA.

We live in a country abundant with freshwater lakes. This presents us with a special responsibility and a great opportunity to research and protect freshwater. IISD's operation of ELA will ensure that the position our region holds at the forefront of freshwater research is not only maintained but can flourish, implemented into concrete policy changes that benefit the health and well-being of millions around the world.

Research highlight: NSERC HydroNet: Promoting sustainable hydropower and healthy aquatic ecosystems

Michael Forrest

NSERC HydroNet is a national research network stretching from Newfoundland and Labrador to British Columbia, comprising 15 university scientists, 30 graduate students and post-doctoral fellows in 10 universities and 11 managers and scientists from federal and provincial agencies and hydropower companies. The collaborative five-year research program was initiated in 2010. HydroNet's mission is to reconcile the development of hydropower with the conservation of fisheries' productivity in Canada, now and for future generations.

The focus of HydroNet's research is to provide industry and government with the knowledge and tools that will permit the sustainable development of hydropower and healthy aquatic ecosystems in Canada. Fulfillment of this mission requires that HydroNet's research is directly coupled to the regulatory framework that defines the decision-making process around hydropower developments. A guiding principle of this regulatory framework, the Policy for the Management of Fish Habitat from Fisheries and Oceans Canada, requires that there is "no net loss" of the productive capacity of fish habitats (i.e. maximum fish biomass naturally produced per unit of time) as a consequence of development. According to this principle, assessment of the effect of hydropower on an aquatic ecosystem entails an estimation of the productive capacity of fish habitat within an ecosystem prior to development, the prediction of the productive capacity during the post-development phase, and the continued monitoring post-development to corroborate the validity of those predictions. However, there is neither consensus on the methods or the metrics that should be used to estimate productive capacity of fish habitats on a routine basis, nor on the variables that best predict the effects of hydropower on productive capacity. The development of new knowledge and tools to support the implementation of the principle of "no net loss" of the productive capacity of fish habitats constitutes the central axis of HydroNet's research.

HydroNet researchers Mathias Quiniou and Guillaume Bourque conducting a purse seine trial on the Winnipeg River, August 2012.
Photo credit: Laura Wheeland.

The presence in the Network of specialists in thermodynamics, hydrodynamics, geomorphology, physiology, ecology, and numerical analysis creates a mutually enriching inter-disciplinary environment; one that encourages the training of students who will form a generation of government, industry and university scientists, engineers, and managers that are better prepared to deal with complex issues relating to development that alters aquatic habitat. Science-based practical solutions developed by the combined expertise of the members of HydroNet is expected to provide industry and government managers with new knowledge and tools to assess, mitigate, and minimize the potential effects on the productive capacity of fish habitats, improve the decision-making process associated with hydropower operations, reduce conflict among stakeholders, and hence, promote sustainable hydropower in Canada.

HydroNet's research program is organized around two complementary research themes:

- Ecosystemic analysis of productive capacity of fish habitats in rivers: projects in this theme address the lack of consensus regarding the methods and the metrics that should be used to estimate the Productive Capacity of Fish Habitat (PCFH) on a routine basis, as well as the variables that should be used to predict the effects of hydropower on PCFH with sufficient statistical precision.

- Modeling of fish-habitat interactions in the context of hydropower: this theme aims to develop protocols and models to better estimate the effects of the formation of a reservoir on metrics of the productive capacity of fish habitats and on processes that determine the survival of fish populations.

Full details about the network and research program and our contact details are available on our website (http://www.hydronet.umontreal.ca/index.htm)

FAST FACTS:
WHO? The HydroNET research team.
WHERE? Institutions across Canada.
WHAT? Investigating productive capacity of fish habitat as it relates to Hydropower development.
WHY? To provide a meaningful understanding to the regulatory framework around fish productive capacity and develop metrics that can be used in practice to quantify productive capacity.

Society News

Roberto Quinlan

As of early April, membership in SCL is 124 members, including 36 student members. This is our highest membership since the 2005 meeting in Windsor, which was one of the last years that SCL membership was connected to registration at the SCL/CCFFR annual meeting. Student membership is currently at 29%, which is approximately the 10-year average for student membership in the society. The society has seen a steady increase in membership in the last 3 years, fuelled both by the relative ease of membership dues payment via PayPal, and an increased society presence via our advocacy in support of Canadian freshwater science and the use of social media including Facebook and Twitter. A very recent increase in memberships during the 2014 Genomes to Biomes registration deadline also suggests that membership numbers may increase further with society involvement in supporting scientific conferences.

At the 2014 Annual Meeting in Yellowknife, the first time the SCL/CCFFR annual meeting has been held in the Arctic (in January!), 20 participants identified affiliation with SCL, of whom 30% were students. While this number is relatively low, it is comparable to the lower attendance typical of "non-central" meetings held at either coast.

SCL student update

Jorge Negrin Dastis and Erik Szkokan-Emilson

Your SCL student representatives have been busy over the past few months! After a successful meeting in Yellowknife, we have been part of the organizing committee for the upcoming Genomes to Biomes meeting. We are excited to now be a part of what promises to be a great meeting. As you know, SCL regularly gives travel awards to students, with valuation based on distance of travel and preferentially to students presenting for the first time. Travel awards were given to 6 students to attend Genomes to Biomes. This year the Peter's Award student winner, Dominic Vachon, will be presenting at the Genomes to Biomes meeting. He has written a tribute to his floating CO2 chamber (right). For those of you attending the conference, we are still looking for student volunteers. If you are interested, contact Erik. You will receive some free SCL swag for your efforts!

Be sure to stay in touch with your society! Aside from this newsletter, we also host a student-specific blog (http://sclforum.wordpress.com/) and we are now on twitter (@Can_Limnology) and facebook (/SocietyOfCanadianLimnologists). If you have any questions or concerns about the society or upcoming conferences please do not hesitate to contact us:

Erik Szkokan-Emilson (ex_szkokanemilson@laurentian.ca)

Jorge Negrin-Dastis (negrin_dastis.jorge_octavio@courrier.uqam.ca).

A tribute to the floating chamber

Dominic Vachon, 2014 Peters Award Recipient

Floating chambers are (hand-) made out of rubber containers with some water noodles glued on their sides for flotation. You simply put it on the water and (wait to) let the CO_2 accumulate for 10 minutes…Isn't that exciting? Well that was what Prof. Yves Prairie proposed to me for my master's thesis…I was 24, young(ish) and innocent. So I built 4 or 5 different models and spent two whole summers split between the lab, testing the prototypes, and in the field, deploying chamber after chamber. Over those two summers, like CO_2 in the floating chamber, I felt my life was measured in 10 minutes intervals. But in the end this little rubber piece taught me something that changed my life…doing science! Moreover, working on something that, at first sight seems boring (let's face it!), introduced me to the world of limnology and the aquatic carbon cycle.

Thank you Floating Chamber and more importantly, thank you Yves Prairie for generously and ably sharing your passion for limnology!

Floating chambers used by Peters Award recipient Dominic Vachon to measure CO_2 flux from lakes.

Do YOU have a story to share? Consider contributing to the next issue of *The Current*. Send ideas, photos or contributions to scl@uregina.ca. We look forward to hearing from you!

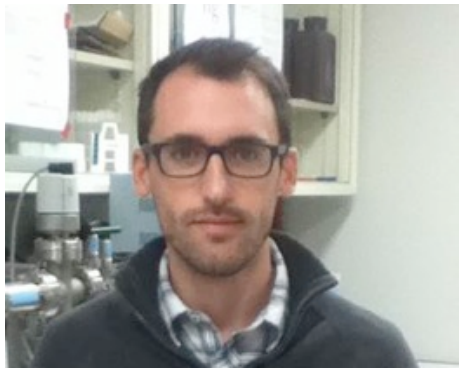
Congratulations to our award recipients for 2013!

Michael Rennie

The Frank Rigler Award was given at the annual meeting in Yellowknife this past January. Frances Pick received the award, which is the highest honour given by the society, recognizing the ground-breaking research she has conducted on toxic algal blooms.

Dominic Vachon was announced as the Rob Peters Award, recognizing the best student paper published in the previous calendar year. Dominic will be recognized for his award at the upcoming Genomes to Biomes meeting in Montreal, as part of the Young Investigators Symposium.

Congratulations to both of our very deserving recipients!



Top: **2014 Rigler Award recipient Frances Pick, Professor, University of Ottawa, being presented with the award by Jules Blais, SCL President. Her talk: "Blooming algae out of whack"**

Bottom: **2014 Peters Award winner, Dominic Vachon, (PhD candidate, Université du Québec à Montréal), for his paper Vachon and Prairie, 2013. The ecosystem size and shape dependence of gas transfer velocity versus wind speed relationships in lakes. Canadian Journal of Fisheries and Aquatic Sciences 70(12): 1757-1764.**

PAGSE update

By Martha Guy, Past-President, SCL

It's been a busy six months since I last updated SCL about the activities of the Partnership Group for Science and Engineering (PAGSE). It continues to be an interesting time in for the science and engineering research community in Canada. As the environmental sciences are suffering, chemical engineering and the geological sciences are thriving. Finding consensus among these groups is an interesting challenge.

We do seem to be getting our message through. We were pleased to see PAGSE's recommendations to the House of Commons Standing Committee on Finance Pre-budget Consultations last July reflected in this year's budget.

The cycle of providing advice has begun early this year. In February, PAGSE submitted comments to Industry Canada's consultations on the Federal Science and Technology strategy. Once passed, this strategy will influence how all science and technology funding is provided, including that provided through the funding agencies. PAGSE's submission emphasised a need for long-term, stable funding for research to support innovation. It also encouraged government to avoid the perception they are downgrading particular branches of science as the research community, writ large, quickly senses a divisive ethos. Excellence, across-the-board, suffers when upstream science or particular areas of science are downgraded, because it is extremely difficult to predict the particular projects conducted today that will yield the benefits of tomorrow. Those interested can read PAGSE's full submission here: www.pagse.org/en/briefs/ICS&Tsub2014e.htm

I'm also pleased to announce that issues specific to limnology are also being promoted through PAGSE. Our March 27th Bacon & Eggheads speaker was Dr. Christiane Hudon from Environment Canada's St. Lawrence Centre in Montreal and the title of her talk was From canoe to container ship: Managing water in the Great Lakes - St Lawrence River system, where she highlighted water issues to MPs and Senators in attendance. Bacon & Eggheads is PAGSE's flagship speakers' series designed to provide unbiased insight into topical scientific issues within a non-partisan forum.

I welcome any inquires and thoughts about PAGSE's activities and how it is representing the limnology community, and can be reached via e-mail at martha_guy@rogers.com.

Meeting in review: Yellowknife 2014

Alison Derry

CCFFR 2014
Canadian Conference For Fisheries Research
January 3rd-5th • Yellowknife NWT

Bruce Hanna and Pete Cott with help from Lorraine Brekke of CCFFR were in charge of local arrangements for the meeting, and provided one of the best CCFFR meetings in many years. Not only was every detail carefully managed but they used the massive sponsorship which they arranged to include smoked Arctic Charr, Pike and Inconnu to the Smoker; an Inuit carver who was doing carvings during the evening; local Tlicho Drummers and an excellent fiddler at the gala dinner, and Bison for dinner. The science program was organized by Allan Curry (lead), Darren Gillis and Chris Taggart. The SCL liason for the science program at the Yellowknife meeting was Alison Derry. There was a total of 81 oral presentations and 19 posters. Plenary talks for the meeting were Jonathan. Moore (Stevenson Lecture), who

Continued on page 6

Continued from page 5

discussed Bi-directional connectivity in river networks and watershed conservation, and Frances Pick (Rigler Award winner), with the engaging talk "Blooming algae out of whack". Special theme sessions at the meeting included Northern Aquatic Ecosystems, Aquatic Sciences for Resource Development, and Northern Science and Management Advances, in addition to general sessions for both CCFFR and SCL. An excellent meeting, and we can't wait to go back!

Upcoming SCL meetings

Alison Derry

Genomes to/aux Biomes 2014, Montreal, QC May 25–29

(meeting hashtag #G2B2014; @GenomesBiomes on Twitter)

The first joint conference of Canadian Society of Ecology & Evolution (CSEE), the Canadian Society of Zoologists (CSZ) and the Society of Canadian Limnologists (SCL) – the largest gathering of Canadian organismal biologists.

This conference will take place May 25 to 29, 2014 and will be held at the Centre Mont-Royal in Montreal. The theme for the conference's first year is "GENOMES TO/AUX BIOMES".

The scientific program is a packed 4-day program with 8 concurrent sessions per day, plus a different special symposium each day. On the Tuesday, there will be a SCL symposium that highlights excellence in research in Canadian aquatic sciences, finishing with a plenary given by Daniel Schindler, University of Washington. The science program is filled with plenary talks, poster sessions, exhibition, and numerous presentations on the latest in ecology, zoology, and limnology. We have over 950 registrants from across Canada and internationally.

The LOC executive is comprised of Alison Derry and Beatrix Beisner of SCL, Andrew Hendry (CSEE), Hans Larson and Chris Cameron (CSZ).

Meeting highlights:

- Opening Mixer at the Coeur des Sciences (UQAM)
- Student pub night at St. Suplice bar
- evening outreach talks
- Catherine Potvin, McGill University
- Paul Nicklen, National Geographic Society
- closing banquet at the Cabane à Sucrerie de la montagne

Special sessions:

- Biodiversity change across spatial scales during the anthropocene (CSEE)
- Effects of community diversity and composition on evolutionary change (CSEE)
- From lakes to coastal zones: integrating aquatic ecosystems at different scales (SCL)
- Crossing boundaries and building bridges: Integrative zoology (CSZ)
- Genomes to Biomes (LOC)
- Young Investigator Symposium to highlight excellence in early career researchers (CSEE, SCL, CSZ) and address by Peter Leavitt, President of Canadian Institute for Ecology and Evolution. Presentation on State of Canadian Biodiversity by the Federal Commissioner on the Environment and Sustainable Development.

Workshops

- SWEEET (Symposium for Women Entering Ecology and Evolution Today)
- Science communication workshops: blogging, social media, podcasts
- Introductory R Workshop (From Zero to Hero!)

Arrive a day earlier to visit 38 Montreal museums for free on Montreal Museums' Day

And tons of special activities such as the Silent Auction, Limericks competition, and many student events.See you there!

CCFFR-SCL 2015: Ottawa, ON January 8-11 2015

CCFFR-SCL is on to Ottawa, Ontario in 2015. The meeting will kick off on Thursday, January 8th with a smoker, and papers will be presented Friday to Sunday, January 9-11, 201. Steve Cooke and John Lark of CCFFR are on local arrangements for this meeting. Dan Heath and Bryan Neff of CCFFR are leading the science program. Alain Patoine is the SCL liason on the science program for the Ottawa 2015 CCFFR-SCL meeting. Make sure to follow the web site for all the developments on the meeting as the arise at: http://www1.uwindsor.ca/glier/ccffr/

Upcoming meetings

(meeting websites hyperlinked where available)

SCL meetings

- **2014** (with CSEE, CSZ) Montreal, QC (May 25–29)
- 2015 with CCFFR, Ottawa ON (Jan 8-11)

Other meetings

- **2014** Joint Aquatic Sciences Meeting (ASLO/SFS/SWS/PSA) May 18-23, Portland, OR
- **2014** Meeting of the International Association of Great Lakes Research, May 26–30, Hamilton, ON
- **2014** American Society of Ichthyologists and Herpetologists, July 30 to Sept 3, Chatanooga, TN
- **2014** 99th Annual Meeting of the ESA, August 10-15, Sacramento, CA
- **2014** 144th Annual Meeting of AFS, Aug. 17–24, Quebec City, QC
- 2014 8th International Shallow Lakes Conference, Oct. 12-17, Antalya, Turkey
- 2014- SETAC North America, Nov. 9-13, Vancouver, BC
- 2015 Aquatic Sciences Meeting (ASLO), Feb. 22-27, Grenada Spain

Recent citings

We like to recognize recent publications (past 6–12 months) by our members in the peer-reviewed literature. To share a publication for the next issue, send it to **scl@uregina.ca**.

Beaulieu M., Pick F., and Gregory-Eaves I. 2014. **Nutrients and water temperature are significant predictors of cyanobacterial biomass in a 1147 lakes data set.** Limnol. Oceanogr., 58(5), 2013, 1736-1746 DOI: 10.4319/lo.2013.58.5.1736

Chiasson-Gould SA, Blais JM and Poulain AJ. 2014. Dissolved Organic Matter Kinetically Controls Mercury Bioavailability to Bacteria. Environ. Sci. Technol. 48, 3153–3161. DOI: dx.doi.org/10.1021/es4038484

French TD, Houben AJ, Desforges JPW, Kimpe LE, Kokelj SV, Poulain AJ, Smol JP, Wang X and Blais JM. 2014. Dissolved Organic Carbon Thresholds Affect Mercury Bioaccumulation in Arctic Lakes. Environ. Sci. Technol. 48, 3162–3168. DOI: dx.doi.org/10.1021/es403849d

Guzzo MM, Rennie MD and Blanchfield PJ. 2014. **Evaluating the relationship between mean catch per unit effort and abundance for littoral cyprinids in small boreal shield lakes.** Fisheries Research 150: 100-108. DOI: 10.1016/j.fishres.2013.10.019

Jeziorski A., Paterson AM, Watson I, Cumming BF and Smol JP. 2014. **The influence of calcium decline and climate change on the cladocerans within low calcium, circumneutral lakes of the Experimental Lakes Area.** Hydrobiologia 722: 129-142.

Lavoie R., Jardine T.D. Chumchall M.M. Kidd K.A. and Campbell L.M. 2013. **Biomagnification of Mercury in Aquatic Food Webs: A Worldwide Meta-Analysis.** Environ. Sci. Technol., 2013, 47 (23), pp 13385–13394. DOI: 10.1021/es403103t

Molot LA, Watson SB, Creed IF, Trick CG, McCabe SK, Verschoor MJ, Sorichetti RJ, Powe, C Venkiteswaran JJ, and Schiff, SL. 2014. **A novel model for cyanobacteria bloom formation: the critical role of anoxia and ferrous iron.** Freshwater Biology 59(6) 1323-1340. DOI: 10.1111/fwb.12334

North, R.L., Khan, N.H., Ahsan, M., Prestie, C., Korber, D.R., Lawrence, J.R., and Hudson, J. 2014. **Relationship between water quality parameters and bacterial indicators in a large prairie reservoir: Lake Diefenbaker, SK, Canada**. Canadian Journal of Microbiology, 2014, 60(4): 243-249. DOI: 10.1139/cjm-2013-0694

North, R.P., North, R.L., Livingstone, D.M., Köster, O., and Kipfer, R. 2014. **Long-term changes in hypoxia in a large temperate lake: consequences of a climate regime shift.** Global Change Biology.20: 811-823. doi: 10.1111/gcb.12371

Saulnier-Talbot E, Gregory-Eaves I, Simpson KG, Efitre J, Nowlan TE, Taranu ZE and Chapman LJ. 2014. **Small Changes in Climate Can Profoundly Alter the Dynamics and Ecosystem Services of Tropical Crater Lakes.** PLoS ONE 9(1): e86561 DOI: 10.1371/journal.pone.0086561

Szkokan-Emilson EJ, Kielstra B, Watmough S and Gunn J. 2013. **Drought-induced release of metals from peatlands in watersheds recovering from historical metal and sulphur deposition.** Biogeochemistry 116: 131-145. DOI: 10.1007/s10533-013-9919-0.

Vinebrooke RD, MacLennan MM, Bartrons M & Zettel JP. 2014. **Missing effects of anthropogenic nutrient deposition on sentinel alpine ecosystems.** Global Change Biology (In press). DOI: 10.1111/gcb.12484

Venkiteswaran JJ, Rosamond MS and Schiff, SL. 2014. **Nonlinear Response of Riverine N_2O Fluxes to Oxygen and Temperature**. Environ. Sci. Technol., 2014, 48 (3) 1566–1573. DOI: 10.1021/es500069j

Recognizing our members

Congratulations to our members for recognition of their efforts!

John Smol, Queen's University received the 2013 Weston Family Prize for Lifetime Achievement in Northern Research.

SCL President **Jules Blais** (University of Ottawa) **John Smol**, have jointly received NSERC's Brockhouse Canada Prize for interdisciplinary research **FIN**

YSI's Professional Plus Series

YSI ProPlus - the new generation in field and lab water quality instruments

- *Accommodates any combination of Pro Series probe, cable, and accessory*
- *DO, pH, Conductivity, ORP, Ammonium, Nitrate, Chloride, Salinity, Total Dissolved Solids, Barometric Pressure*
- *"Quatro" 4-port cable available in 1, 4, 10, 20 and 30 meter cable lengths*
- *Single-event or interval logging capability: 5,000 data-set memory with GLP event logging*
- *Rubber, over-molded IP-67 water proof case*
- *3-year instrument warranty; 2-year cable warranty*

for more information: **www.myhoskin.com/ysi-proplus.pdf**

Hoskin Scientific Ltd. www.hoskin.ca

Onset HOBO DO & Conductivity Loggers

Dissolved Oxygen and Conductivity Loggers for fresh water and salt water measurements

Optical Dissolved Oxygen Logger

- *Optical DO sensor technology*
- *Long-lasting calibration*
- *Less maintenance*
- *DO concentration and percent saturation*
- *0.2 mg/L accuracy*
- *Easy-to-replace sensor cap (lasts six months)*

Conductivity Loggers

- *Two models to choose from for fresh and salt water deployments*
- *Provides easy access to sensor for cleaning and shedding air bubbles*
- *HOBOware Pro software enables start/end-point calibration to compensate for any fouling and provides easy conversion to specific conductance and salinity*

more info: myhoskin.com/u26

more info: myhoskin.com/u24

Hoskin Scientific Ltd. www.hoskin.ca