

CCRP-SCL 2007

**Bienvenue à la 60^{ième}
Conférence Canadienne de la Recherche sur les Pêches**

**et à la rencontre annuelle de la
Société Canadienne de Limnologie**

CCFFR-SCL 2007

**Welcome to the 60th
Canadian Conference For Fisheries Research**

**and the annual meeting of the
Society of Canadian Limnologists**

**Montréal
4-6 janvier 2007**

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CCFFR/SCL 2006/7 Themes/Thèmes

Aquatic conservation/Conservation aquatique; Session Chair: Rick Taylor, Department of Zoology, University of British Columbia, Vancouver (etaylor@zoology.ubc.ca)

Aquatic ecosystem science/Science aquatique écosystémique; Session Chair: Marten Koops, Great Lakes Laboratory for Fisheries and Aquatic Sciences, Fisheries and Oceans Canada, Burlington (koopsm@dfo-mpo.gc.ca)

Aquatic invasive species/Les espèces invasives aquatiques; Session Chair: Tony Ricciardi, Redpath Museum, McGill University, Montreal (tony.ricciardi@mcgill.ca)

Climate change/Les changements climatiques; Session Chair: Kim Hyatt, Pacific Biological Station, Fisheries and Oceans Canada, Nanaimo (hyattk@dfo-mpo.gc.ca)

Cyanobacteria: causes, consequences and toxicity/ Les cyanobactéries: causes, conséquences et toxicité; Session Chairs: David Bird, Département des sciences biologiques, Université du Québec à Montréal, Montréal (bird.david@uqam.ca); Antonia Cattaneo, Département de Sciences biologiques, Université de Montréal, Montréal (antonia.cattaneo@umontreal.ca)

Environmental physiology and genomics//Physiologie environnementale et génomique; Session Chair: Dan Heath, Great Lakes Institute for Environmental Research, University of Windsor, Windsor (dheath@uwindsor.ca)

Habitat-fish mortality linkages/ Les relations habitat-mortalité des poissons; Session Chair: Robert Randall, Great Lakes Laboratory for Fisheries and Aquatic Sciences, Fisheries and Oceans Canada, Burlington (randallr@dfo-mpo.gc.ca)

Hydroelectric power and aquatic ecosystems/ La production hydroélectrique et les écosystèmes aquatiques; Session Chairs: Yves Prairie, Département des sciences biologiques, Université du Québec à Montréal, Montréal (prairie.yves@uqam.ca); Dave Scruton, Science Branch, Fisheries and Oceans Canada, St. John's (scrutond@dfo-mpo.gc.ca)

Land-water interactions: water quality issues and food Web Dynamics/ Les interactions eau-terre : la qualité de l'eau et la dynamique trophique ; Session Chairs: Jérôme Marty, Department of Biology, University of Waterloo, Waterloo (jmarty@scimail.uwaterloo.ca); Anurani Persaud, Watershed Ecosystems Graduate Program, Environmental Science Centre, Trent University, Peterborough (anuranipersaud@trentu.ca)

The St. Lawrence ecosystem/ L'écosystème du Saint-Laurent ; Session Chairs: Pierre Magnan, Département de chimie-biologie, Université du Québec à Trois-Rivières, Trois-Rivières (Pierre.Magnan@uqtr.ca); Jeff Ridal, St. Lawrence River Institute of Environmental Sciences, Cornwall (jridal@riverinstitute.com)

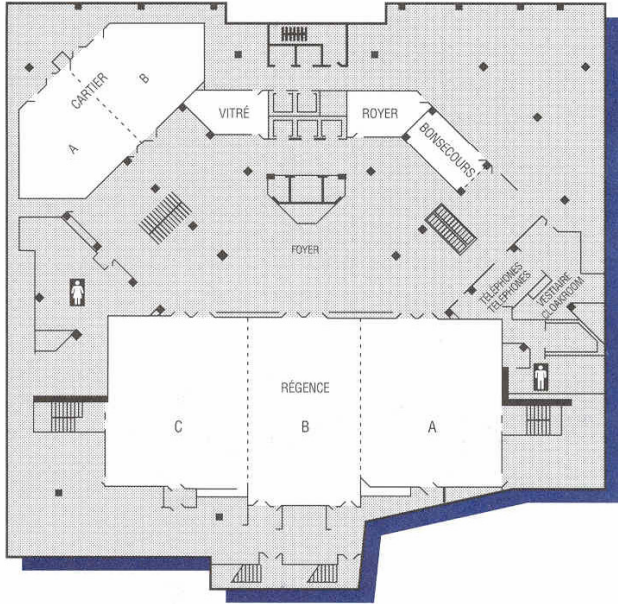
Wetlands/ Les marais; Session Chair: Frances Pick, Biology Department, University of Ottawa, Ottawa (frpick@uottawa.ca)

Emplacement des salles de réception et de réunion

Location of reception and meeting rooms

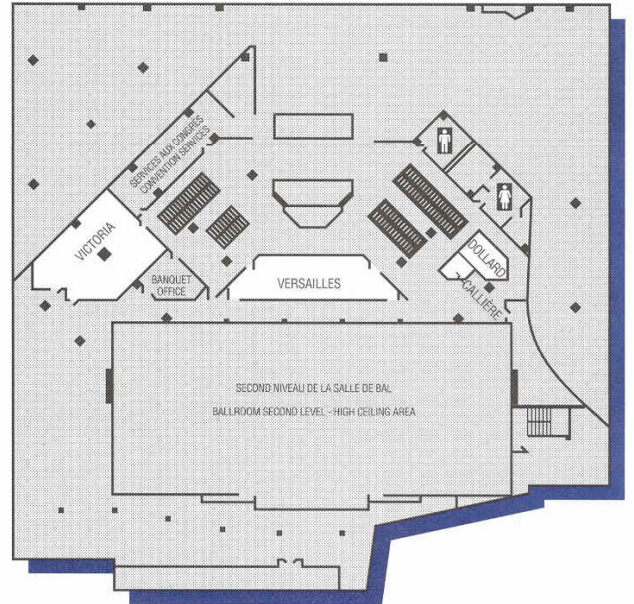
ÉTAGE C / C FLOOR

Deuxième sous-sol / Second floor below lobby



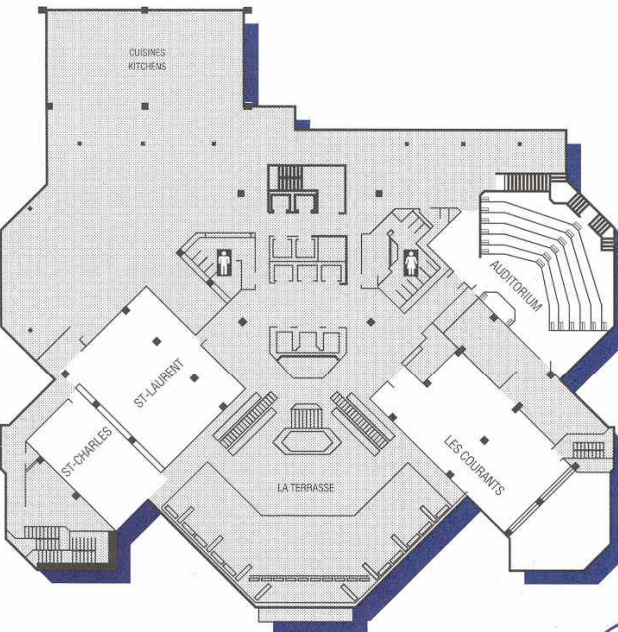
ÉTAGE CI / CI FLOOR

Premier sous-sol / First floor below lobby

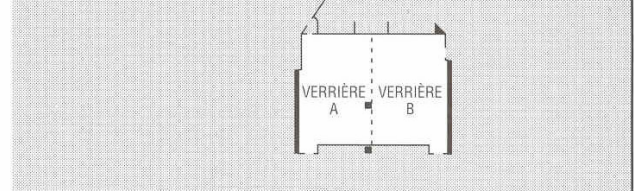


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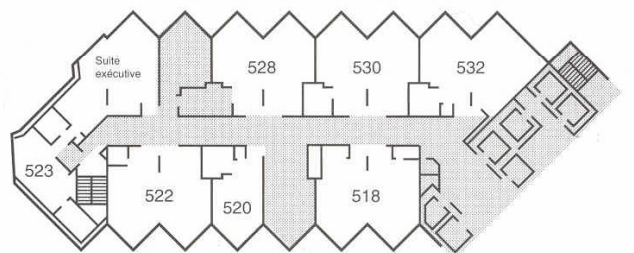
Étage au-dessus du rez-de chaussée / First floor above lobby



REZ-DE CHAUSSÉE / LOBBY LEVEL



LE CINQUIÈME / FIFTH FLOOR



Conference Schedule

THURSDAY JANUARY 4

- 16:00 **Registration (Lobby)**
-21:00
19:00 **Mixer (Foyer)**
-21:00

FRIDAY JANUARY 5

- 08:15 **Opening Remarks (Régence AB)**
08:30 **J.C. Stevenson Memorial Lecture**
Karen Kidd - Responses of a freshwater food web to whole-lake additions of a potent estrogen
09:15 **F.H. Rigler Memorial Award Lecture**
Peter Leavitt - Degradation and destabilization of lake ecosystems by anthropogenic nitrogen: a new paradigm for future lake eutrophication
09:50 **Presentation of the Peters Award**
10:00 **Break**
10:30 Ken Minns - The present status of, and future prospects for, Canada's freshwater ecosystems
11:00 Tony Ricciardi - Can we predict the impacts of exotic species in inland waters?
11:30 Maggie Neff and Don Jackson* - Then and now: an examination of communication and cohesion within aquatic ecology
12:00 **Lunch**
13:20 Concurrent Sessions
15:00 **Break**
15:20 Concurrent Sessions
17:00 Student Workshop: "How to be a successful scientist?" (Victoria Room)
-18:00
17:00 Business Meeting (CCFFR/CCRP Cartier A Room; SCL Cartier B Room)
-18:00
17:30 Poster Session **Pre-banquet Cocktail** (Foyer)
-19:00
19:00 **Banquet**
-21:00

SATURDAY JANUARY 6

- 08:00 Concurrent Sessions
10:00 **Break**
10:20 Concurrent Sessions
12:00 **Lunch**
13:20 Concurrent Sessions
15:00 **Break**
15:20 Concurrent Sessions
17:00 That's all folks! See you next year in Halifax...

Plenary Abstracts

RESPONSES OF A FRESHWATER FOOD WEB TO WHOLE-LAKE ADDITIONS OF A POTENT ESTROGEN

K. A. Kidd. Canadian Rivers Institute and Department of Biology, University of New Brunswick, Saint John, New Brunswick. (kiddk@unbsj.ca)

Considerable evidence now exists that fish are being adversely impacted by estrogens and their mimics in municipal wastewater treatment plant (MWTP) effluents. However, it is not known whether the responses observed at the organism level, such as the production of egg protein precursors (vitellogenin) in male fish downstream of MWTPs, are indicative of problems at the population level. To investigate this unknown and assess the effects of an estrogen on lower-trophic-level biota, an estrogen-addition experiment was conducted at the Experimental Lakes Area (ELA) in northwestern Ontario from 1999-2006. This study examined the effects of whole-lake additions of the synthetic estrogen 17 α -ethynylestradiol (EE2) used in birth control pills on fish, amphibian, zooplankton, benthic-invertebrate, algal, and microbial communities. In the summers of 2001-2003, EE2 was added continuously to the epilimnetic waters of one lake to achieve constant and environmentally-relevant concentrations of this estrogen. In the study and reference systems, population-level data were collected for all trophic levels, and several tissue- and biochemical-level endpoints were examined in lake trout, white sucker, pearl dace and fathead minnow. The experiment was successful at reproducing (no pun intended) the organism-level impacts observed in wild fish downstream of MWTPs; we also observed a population collapse of the shortest-lived fish species in the lake, the fathead minnow, after the second summer of EE2 additions. Results from this study are being used to understand the magnitude of the impacts that hormone mimics have on aquatic organisms, and the risks that environmental estrogens pose to freshwater food webs.

DEGRADATION AND DESTABILIZATION OF LAKE ECOSYSTEMS BY ANTHROPOGENIC NITROGEN: A NEW PARADIGM FOR FUTURE LAKE EUTROPHICATION

P. Leavitt, Limnology Laboratory, University of Regina, Regina, SK, S4S 0A2. Peter.Leavitt@uregina.ca

In this talk, I will propose a new paradigm for future lake eutrophication that integrates research from the fields of molecular biology, cell physiology, limnology, ecosystem experimentation, and paleoecology. Our model proposes that a combination of population growth, agricultural intensification, N fertilization, and shifts in societal preference for N-rich foodstuffs will create conditions in which future lake eutrophication and cyanobacterial abundance are regulated by flux of reduced N, particularly urea. For example, human populations have doubled since 1950, are expected to increase ~50% within 30-50 yr, and will require disproportionate fertilization with N to meet demands for protein-rich crops and livestock. Traditionally, farming practices slowly raise soil P content because P is easily mined and imported to catchments, and because N:P ratios of manure are much lower than many crop requirements. As a result, some agricultural soils are now saturated with P and will remain so for centuries, leading to conditions in which P influx no longer regulates lake production. Unfortunately, 15-fold increases in N fertilization since 1970, combined with shifts from NH₃ to urea (now >50% of N fertilizer in Canada), may now favour E-efficient, but toxic, cyanobacteria, such as seen in Europe and Canada. Further, because toxin production increases with growth rate and N supply, because cyanobacteria prefer urea over other N sources, and because some cyanobacteria can exchange toxin genes, future use of reduced N may promote global outbreaks of toxic and possibly carcinogenic algae. Given that ~1 billion people already lack clean water, I argue that there is significant need to develop a new predictive understanding of the consequences of these changes for humans and freshwaters in Canada and the world.

THE PRESENT STATUS OF, AND FUTURE PROSPECTS FOR, CANADA'S FRESHWATER ECOSYSTEMS

C.K. Minns. Fisheries and Oceans Canada, Burlington, Ontario/Department of Ecology and Evolutionary Biology, University of Toronto, Toronto, Ontario. (ken@minns.ca)

Canada is a country of many lakes (≈ 1.3 million) and rivers, with the largest global share ($\approx 30\%$) of freshwater ecosystems. Lakes $>100 \text{ km}^2$ number over 550 and account for $>40\%$ of the global total. This abundance appears to encourage profligate use of freshwaters. There are seven principal stressors: nutrients, sediments, toxic chemicals, habitat loss and modification, exotics, exploitation, and climate change. These stressors are relentlessly accumulating as a function of Ehrlich's equation: $\text{stress} = \text{population} * \text{activity} * \text{technological intensity}$. The repeated pattern of land use development via extraction and exploitation exemplifies a regime of rising stress. Stressors often interact with negative consequences. Levels of some stressors like nutrients and toxic chemicals have been partially managed while others like climate change and exotics remain largely unchecked. Whilst existing legislation would allow effective control of these stressors, governments have largely abandoned efforts to regulate in favour of hoped-for side-benefits of laissez-faire corporatism. Often governance is distributed to local or sectoral interest groups without strategic oversight or recognition of science-based sustainability limits. Much popular thinking today fails to recognize the nested nature of ecosystems: economy is only possible within society and environment, and society only within environment. Vital ecosystem services of freshwaters are damaged in favour of exploitation of water as a commodity. The future prospects for Canada's freshwaters are dire as reactions to other limitations, e.g., energy, collide with the impacts of current stressors. There is much Canada's scientist must do to help undo past mistakes and to improve prospects for the future.

CAN WE PREDICT THE IMPACTS OF EXOTIC SPECIES IN INLAND WATERS?

A. Ricciardi. Redpath Museum & McGill School of Environment, McGill University, Montreal, Quebec. (tony.ricciardi@mcgill.ca)

Rates of invasion are increasing in inland waters worldwide. Most exotic species appear to have minor ecological effects, but others cause substantial disruptions to food webs. Predictive models of impact are lacking for the vast majority of known invaders, including those species that have demonstrably strong effects. Moreover, few empirical rules governing impact have been proposed and tested, probably due to the context-dependent nature of invasions (e.g. an exotic species may cause the loss of native species in one invaded system, while co-existing with them elsewhere). Consequently, managers lack tools to prioritize aquatic invasion threats. However, a predictive understanding of aquatic invasions might be gained through the synthesis of a burgeoning number of experimental and correlative case studies. Statistical synthesis of data from multiple invaded sites can generate predictive models for species with extensive invasion histories. This is illustrated by a meta-analysis of zebra mussel impacts on benthic invertebrate abundance and diversity, which reveals predictable patterns that are robust across geographic regions. A promising approach toward developing empirical rules is to test hypotheses that incorporate characteristics of both the invader and the invaded system. This approach has found that those invaders that displace native species are more likely to belong to genera not already present in the system, suggesting that risk assessments should consider an invader's taxonomic relationship to resident species in the target community.

THEN AND NOW: AN EXAMINATION OF COMMUNICATION AND COHESION WITHIN AQUATIC ECOLOGY

Neff, M.R. and D.A. Jackson*. Department of Ecology and Evolutionary Biology, University of Toronto, Toronto, Ontario. (jackson@zoo.utoronto.ca)

Research interests in aquatic ecology range from topics in aquatic chemistry through invertebrate community ecology to fisheries management. Nearly 25 years ago Frank Rigler noted that there were substantial differences in the research, resulting theories, and management practices in two particular areas: limnology and fisheries management. He challenged researchers in these fields on the need to enhance communication in order to close these gaps. We follow up on Rigler's challenge through an examination of the literature to determine what the goals and objectives, methodologies, and nature of the various studies across a range of subdisciplines in aquatic ecology have encompassed. We reviewed recent literature from *Canadian Journal of Fisheries and Aquatic Sciences*, *Freshwater Biology*, *Journal of the North American Benthological Society*, *Limnology and Oceanography*, and *Transactions of the American Fisheries Society*, encompassing a range in their emphasis from limnology to benthic invertebrate biology to fisheries, thereby including a broader array of subjects in aquatic ecology. Each article was assessed in several categories, including key subject matter, methods of analysis, location of the research, applicability across all subfields, and scale of study. We used methods commonly used by community ecologists, to identify the range of differences and associations across these fields and research questions, but also how particular research areas and subjects have more clearly bridged some of these gaps identified previously.

**Student Workshop: "How to be a successful scientist?"
Friday January 5, 17:00-18:00, Victoria Room**

Welcome to our first student workshop at the CCFFR-SCL joint meeting. The theme this year is “**How to be a successful scientist?**” We have 4 excellent panellists with different experiences at different stages in their careers ready to share tricks and tips with you. We want the forum to be as interactive as possible, so be prepared to ask questions and engage. Come get inspired by 4 wonderful, successful people who are willing to share their time and experience with you!! Guest speakers are:

Bienvenue au premier atelier étudiant de la conférence annuelle SCL/CCFFR. Le thème de cette année est : « **Comment réussir une carrière scientifique ?** ». Pour débattre de ce sujet, 4 chercheurs viendront partager leurs expériences variées et donner leurs recommandations pour guider les jeunes chercheurs dans leur choix de carrière scientifique. Cette discussion sera interactive et nous vous invitons à venir y participer en grand nombre ! Venez poser vos questions et vous inspirer de la carrière de 4 'top' écologistes aquatiques ! Nos invités sont :

Beatrix Beisner: Associate professor at the Université du Québec à Montréal as an the FQRNT Strategic Professor recipient in Aquatic Biodiversity. Beatrix did her B.Sc. at the University of Guelph, a Master's at University of Calgary, Ph.D. at UBC and a postdoc at the Center for Limnology at Madison-Wisconsin. Beatrix was briefly at the University of Guelph as a professor before coming to UQAM (in 2003) where she was recently and rapidly tenured. Research interests include spatial and temporal organization of communities, changes to food webs and to community structure related to the introduction of exotic species and the role of biodiversity and the functioning and Stability of communities and ecosystems. Beatrix has published on many different topics in top scientific journals, has successful at getting funding throughout her entire research program and even found the time to be the main editor of a recently published book: *Ecological Paradigms Lost: Routes to Theory Change*.

Moira Ferguson: Professor and Chair - Department of Integrative Biology University of Guelph. Research interests are focused on understanding the genetics and evolution of complex traits. This passion was nurtured through B.Sc. and M.Sc. degrees at the University of Guelph where Moira received my first opportunities to investigate the genetics of phenotype in fishes. Her continued fascination with this area prompted her to leave Canada and complete her Ph.D. at the University of Montana. Most recently Moira applies basic information on the genetic architecture of important traits such as body size and age at maturation in Arctic charr, Atlantic salmon and rainbow trout to help solve problems facing the aquaculture industry. She is currently the Senior Editor for CJFAS and formerly a Co-theme for AquaNet, Canada's Networks of Centres of Excellence in Aquaculture. In January 2005, she became the first Chair of the Dept of Integrative Biology. Moira is also a mom, with 2 children a 14 year old daughter and a 10 year old son.

John P. Smol: Professor in the Dept. of Biology at Queen's University, where he also holds the *Canada Research Chair in Environmental Change*. He received his BSc from McGill University, his MSc from Brock University, his PhD from Queen's University and did post doctoral work with the Geological Survey of Canada. John also co-directs the Paleocological Environmental Assessment and Research Lab (PEARL), a group of over 30 students and other scientists dedicated to the study of limnology and paleolimnology. John and his colleagues work on lakes from around the world, but with a special focus on high Arctic environments, as well as applied issues such as lake eutrophication, acidification, and climate. Since 1990, he has received over 25 national and international research and teaching awards and fellowships, including the Rigler Prize from the SCL and 5 teaching awards. In December 2004, he was awarded the NSERC Herzberg Gold Medal, as Canada's top scientist or engineer. John will also be the recipient of this year's *G. Evelyn Hutchinson Award*, the ASLO career achievement award.

Norman Yan: Professor, Department of Biology at York. Norm completed his Master's degree at U of T, his PhD at the U of Guelph and worked as a research scientist at the Ontario Ministry of the Environment (MOE) for 25 years. In 2000, he joined the Biology Department of York University, as a tenured faculty member, and currently splits his time between the MOE's Dorset Environmental Science Centre and York. Norm teaches an upper level applied ecology course, a field course in aquatic restoration ecology, and part of an MSc course in ecology, population genetics, and evolution. Current principal areas of research are determining the individual and joint impacts of non-indigenous species and changes in climate, acidity, base cations, and nutrients on zooplankton, and quantifying the pace, extent and regulators of recovery of plankton from environmental damage. Norm has won many awards including the SCL Rigler award and the Patalas Award for research on the causes of damage, and possibilities for recovery of Sudbury lakes.

Oral Presentations
Afternoon of Friday January 5
(Sessions 1-3 of 6)

	Aquatic Conservation Auditorium (Taylor)	Land-Water Interactions Cartier A (Marty/Persaud)	Hydropower Cartier B (Scruton)
13:20	Hutchings – Influence of reproductive behaviour on fishery-induced evolution	Carignan - Empirical phosphorus models for Québec's Laurentian lakes	Blais - CO ₂ partial pressure and fluxes under-ice in the Robert-Bourassa reservoir (Québec, Canada)
13:40	Adams - Life-history-based population models: predicting population responses to exploitation in recreational fisheries	Palmer - Temporal patterns of lake-water chemical change in south-central Ontario: Local control of regional drivers	Bastien - GHG fluxes (CO ₂ , CH ₄ , N ₂ O) and PCO ₂ monitoring before and during the first flooding year of the Eastmain-1 Reservoir (Quebec, Canada)
14:00	Campana - Research-based conservation of the porbeagle shark population off the eastern coast of Canada	James - Landscape controls of nutrient excretion by stream invertebrates along a gradient of agricultural land use	Weissenberger - Études empiriques et modèle du cycle du carbone du complexe hydroélectrique de la Baie James, Québec
14:20	Archambault - Effect of the commercial fishery on the Iceland scallop (<i>Chlamys islandica</i>) in the St Lawrence estuary: assessment of the impacts on scallops and the benthic community	Chow - Nutrient dynamics in coastal streams of southeastern Vancouver Island: anthropogenic and salmonid influences	Tremblay - Net GHG emissions from a hydroelectric reservoir: Eastmain-1
14:40	Van Poorten - Tracking effort dynamics in small lakes: patterns and evaluations	Wilson - Landscape effects on fish nutrient excretion in temperate streams	Roehm - Pre-flooding assessment of aquatic ecosystem C cycling
15:00	Break		
	Aquatic Conservation Auditorium (Taylor)	Land-Water Interactions Cartier A (Marty/Persaud)	Hydropower Cartier B (Smokorowski)
15:20	Post - Angler numerical response across landscapes, policy options, and the collapse of freshwater fisheries	Legler - Diet analysis of fishes from two distinct water masses in western Lake Erie	St-Hilaire - Development and sensitivity analysis of fuzzy habitat suitability indices for instream flow estimation
15:40	Donaldson - Is recreational fishing a threat to global fish conservation?	Maranger - Fish, food and fertilizer: commercial fish harvest partially balances anthropogenic Nitrogen export from land to sea	Guay - Validation of two biological models of spawning habitat in a large-scale boreal river in Quebec, Canada
16:00	Hardie - The growth consequences of cannibalism in Atlantic cod populations in Arctic Canada	Guy - Investigating nitrogen toxicity and eutrophication in agricultural landscapes	Berube - Assessing fish production in rivers, tributaries and lakes of the Romaine River basin
16:20	Clarke - A review of the habitat associations and distribution of the American eel in Newfoundland	Benoy - Development of environmental performance standards for stream sediments in agricultural regions of Atlantic Canada	Rosenfeld - Hydraulic geometry as a physical template for the River Continuum: application to optimal flows and longitudinal trends in salmonid habitat
16:40	Drake - Environmental factors affecting growth of eastern sand darter	Roy - Methyl mercury exports from beaver dams on the Canadian Shield	Scruton - The 'Natural Flow Paradigm' and Atlantic salmon: moving from concept to practice

Oral Presentations
Afternoon of Friday January 5
(Sessions 4-6 of 6)

	Ecosystem Science Verrière AB (Koops)	Wetlands Saint-Laurent (Vis)	Genomics Saint-Charles (Heath)
13:20	Minns - Science-based aquatic ecosystem management: a progress report	Sinclair - Effects of wetland inundation on hydrologically connected aquatic systems	Davidson - CGRASP: the consortium for genomic research on all salmonids project
13:40	Bundy - Ecosystem research: a review and synthesis of where DFO has been and where we might go	Guillemette - Patterns in short- and long-term bacterial consumption of dissolved organic carbon in freshwater ecosystems	Egbosimba - Creation of an EST database from Chinook salmon cDNA libraries as a resource for fabrication of small, inexpensive microarrays for population-level applications
14:00	Blanchfield - Four decades of whole ecosystem research at the Experimental Lakes Area	Poulin - Mesure de la dénitrification dans un marais côtier	del Giorgio - A large-scale comparative study of direct measurements of bacterial growth efficiency across freshwater, estuarine and marine ecosystems
14:20	Shackell - Status of the Western Scotian Shelf ecosystem	Maltais-Landry - Effects of different macrophyte species and artificial aeration on nitrogen transformations and N ₂ O gas fluxes in constructed wetlands	Johnstone - The nose knows: genomic isolation and characterization of olfactory genes in Atlantic salmon
14:40	Woolnough - Rebound of stream invertebrate communities during urban development	Blanchet - Spatial heterogeneity of the nitrogen content in plants of Lake St-Pierre	Comte - Linking the functional and compositional bacterial plankton successions along the water flow path in a northern watershed
15:00	Break		
	Ecosystem Science Verrière AB (Wissel)	Wetlands Saint-Laurent (Pick)	Genomics Saint-Charles (Davidson)
15:20	Curry - Assessment of larval odonate biodiversity in two tributary watersheds of the Saint John River, New Brunswick	Demarty - Investigating <i>in situ</i> DOC release by submerged macrophytes	Gravel - Predicting post-tournament mortality of smallmouth bass using physical, behavioural and physiological indicators
15:40	McGregor - Walleye vs cormorants: will all the fishes come home to roost?	Classen - Spatial and temporal variability of pond assemblages on whooping crane breeding grounds in Wood Buffalo National Park, Canada	Carreon-Martinez - Molecular genetic identification of stomach contents of yellow perch predators
16:00	Lippert - Effects of colonizing predators on yellow perch (<i>Perca flavescens</i>) populations in lakes recovering from acidification and metal stress	Bouvier - Aquatic connectivity and fish metacommunities in wetlands of the Lower Great Lakes	Cooke - Investigating the early migration behaviour and in-river survival of adult late-run Fraser River Sockeye salmon through multidisciplinary research
16:20	Linley - Effect of vertebrate and macroinvertebrate predation on zooplankton productivity	Bourque - Epizoic algae from freshwater turtles in southwestern Nova Scotia	McDermid - Evolutionary divergence among introduced populations of lake trout
16:40	Valois - Top down effects on zooplankton communities in lakes recovering from acidification and metal contamination	Vis - Effects of nutrients on aquatic plants in streams and rivers: a comparison of sestonic algae, benthic algae and macrophyte biomass-nutrient relationships	Langlois - Using genomics to identify genes associated with upper temperature tolerance in salmonids

Oral Presentations
Morning of Saturday January 6
(Sessions 1-3 of 6)

	Aquatic Conservation Auditorium (Hutchings)	Land-Water Interactions Cartier A (Benoy)	Hydropower Cartier B (Enders)
8:00	Pitre - Ability of the white sucker, <i>Catostomus commersonii</i> , to colonize lakes of the Canadian Shield and impacts on brook charr, <i>Salvelinus fontinalis</i> , populations	Koster - Historical water quality dynamics in naturally eutrophic Albertan boreal plain lakes: does land-use matter?	Peake - Hydroelectric dams are not necessarily bad for fish: ecology of a thriving population of lake sturgeon downstream of a generating station on the Winnipeg River
8:20	Monk - Provincial water classification: linking aquatic research with river management	Borowski - A Holocene record of terrestrial-aquatic dynamics and volcanic influence	Haxton - Water power management and the unprepossessing recovery of lake sturgeon in a large regulated river
8:40	Poos - Comparing the predictive success of species occurrence models for the imperiled species the redbreasted dace (<i>Clinostomus elongatus</i>) and its habitat	Gélinas - Depth selection patterns of crustacean zooplankton biomass in 8 oligo-mesotrophic lakes in the Laurentian region, Québec, Canada	Doka - Potential large scale impacts of changing water regulation at the Moses-Saunders Dam: evaluation of nearshore fishes and fish habitat at the system scale
9:00	Vecsei - Monitoring lake trout and round whitefish at a diamond mine in the Subarctic	Tremblay Rivard - Impact of forest harvesting on brook trout selective foraging in boreal shield lakes	Smokorowski - The effects of ramping and flow on invertebrate drift in a regulated river
9:20	Walker - Bayesian summary statistic selection for aquatic community monitoring	Persaud - Trophic dynamics of macro-invertebrates in lakes of varying dissolved organic carbon concentration	White - The effect of hydroelectric reservoir draw-down on benthic macroinvertebrate communities of stony littoral habitats: an application of the reference condition approach
9:40	Weir - Variance in male reproductive success and correlates of multiple paternity in a naturally spawning Atlantic salmon population	Marty - Surface temperature and taxonomy explain regional $\delta^{15}N$ zooplankton variability in oligotrophic ecosystems	Enders - The effects of horizontally- and vertically-oriented vortices on the swimming performance of upstream migrating brook charr (<i>Salvelinus fontinalis</i>)
10:00	Break		
	Aquatic Conservation Auditorium (Hutchings)	Aquatic Invasive Species Cartier A (Ricciardi)	Climate Cartier B (Hyatt)
10:20	Bentzen - Down but not out? Genetic evidence for the persistence of a striped bass population that had been considered extirpated	Strecker - Regional dispersal of zooplankton may dampen effects of an invasive predator, <i>Bythotrephes</i> , on local communities	Hyatt - Introduction
10:40	Hasselman - Population structure of American shad within and among Canadian rivers	Jokela - Predicting impacts of invasive species: variation in zebra mussel fouling intensity on native mussels	Paul - Diatom-inferred Holocene climate change in two Subarctic lakes
11:00	Hendry - Rapid evolution of fitness in wild guppies	Wilson - Epiphytic macroinvertebrate communities on Eurasian milfoil and native milfoil in eastern North America	Scott - Seasonal variations effects of nutrients and dissolved organic matter on the response of phytoplankton community structure to UV radiation
11:20	Blackie - Population structure of lake trout in Great Bear Lake, NWT: evidence for reproductive isolation among lake trout morphotypes	Tall - Impact of an invasive macrophyte, <i>Trappa natans</i> , on nitrogen transformations in the Hudson River	Vinebrooke - Impacts of recent extreme climate change on alpine lakes of the Canadian Rocky Mountains
11:40	McCusker - Comparative estimates of effective population sizes in three species of wolffishes (<i>Anarhichas</i> spp)	Harper - Water chemistry mediates yellow perch predation on invasive mussels	Thompson - Net impacts of climate warming and nitrogen deposition on plankton in alpine lakes
12:00	Lunch		

Oral Presentations
Morning of Saturday January 6
(Sessions 3-6 of 6)

	Ecosystem Science Verrière AB (MacGregor)	Habitat Saint-Laurent (Randall)	St Lawrence Saint-Charles (Ridal)
8:00	Leduc - Effects of ambient acidity on wild juvenile Atlantic salmon alarm response: a reciprocal transplant experiment		
8:20	Bertrand - Parasites and morphology as indicators of trophic polymorphism in brook charr populations	Coté - Does the presence of air-breathing, depth limited piscivores enhance nursery areas for fish in coastal areas?	Cremona - Inedible predators in littoral food webs: the case of methylmercury transfer
8:40	Danielson - Phenotypic plasticity in the body morphology of <i>Pimphales promelas</i>	Breau - Behaviour at high temperatures: does physiology explain movement of Atlantic salmon (<i>Salmo salar</i>) to cool water?	Gryn - Polychaete biodiversity: does a closer look reveal the hidden structure of the St Lawrence food-web?
9:00	Gibeau - Temporal stability of fish community descriptors in the littoral zone of four Canadian Shield lakes	Patterson - Linking environmental forecasting, habitat change, and fish mortality to the management of Fraser River sockeye salmon	Bourque - Modification of biodiversity of benthic infauna in the St Lawrence estuary during 35 years of increasing hypoxia
9:20	Bédard - The effect of sedimentary links on the distribution patterns of juvenile Atlantic salmon (<i>Salmo salar</i>) and attached algae	Rejwan - Is the presence, timing and intensity of population regulation detectable across 37 wild unstocked rainbow trout (<i>Oncorhynchus mykiss</i>) populations?	Hardy - Epibenthic species assemblage at large spatial scale: benthic biodiversity on buoys (BeBOB) project
9:40	Reyjol - Between- and within-tributary variation in riverine fish assemblages: the role of macrophytes and water transparency	Faulkner - Effects of physical shock from blasting on incubating salmonid eggs	Lemarchand - Distribution of bacterioplankton in the St Lawrence estuary and proportion of high and low nucleic acid content cells during late fall and winter time
10:00	Break		
	Ecosystem Science Verrière AB (Blanchfield)	Habitat Saint-Laurent (Randall)	Contributed Saint-Charles (Cudmore)
10:20	Shead - Limited biological recovery of Killarney Park lakes (Ontario) from historical acid deposition despite chemical recovery: 1971-2005	Askey - Density dependent mechanisms in size-structured populations: whole lake experiments across an environmental gradient	Imre - Density-dependent population regulation in juvenile Atlantic salmon (<i>Salmo salar</i>) in Catamaran Brook, New Brunswick
10:40	Genrich - Using littoral zone fish and benthic macroinvertebrate communities to assess recovery of acid damaged lakes in Sudbury, Ontario	Laplante-Albert - Linking mortality risk in lacustrine fishes to habitat features by means of tethering trials and survival analyses	Brodeur - Dispersion patterns of kin from natural redds in young-of-the-year Atlantic salmon (<i>Salmo salar</i> L) in Catamaran Brook, New Brunswick
11:00	Wissel - Environmental controls of food web structure and energy flow in saline prairie lakes	Hasler - Largemouth bass movement and distribution in relation to dissolved oxygen	Robillard - Movement and habitat use in two ecotypes of brook charr: inferences from body size and stable isotopes
11:20	Cyr - The role of an abundant native unionid mussel, <i>Elliptio complanata</i> , in linking pelagic and benthic foodwebs and in nutrient dynamics	Randall - Links between habitat quality and fish mortality - challenges, approaches, science progress and application	Farwell - Relating individual variation in sensory and physiological measures to divergent field activity in YOY brook charr
11:40	Tank - Bacterial resistance to elevated pH levels in highly productive, macrophyte dominated lakes of the Mackenzie Delta, Northwest Territories		Samways - Does water velocity influence morphological variation and swimming performance in brook charr?
12:00	Lunch		

Oral Presentations
Afternoon of Saturday January 6
(Sessions 1-3 of 6)

	Aquatic Conservation Auditorium (Bentzen)	Aquatic Invasive Species Cartier A (Wilson)	Climate Cartier B (Hyatt)
13:20	Veles-Espino - A quantitative approach to assess allowable harm in species at risk: application to the Laurentian black redbreast (<i>Moxostoma duquesnei</i>)	Taraborelli - The role of the round goby (<i>Neogobius melanostomus</i>) in the Bay of Quinte, Lake Ontario, ecosystem	Milne - A high-resolution fossil diatom record of climate and environmental change in East Africa since the last glacial maximum
13:40	Beneteau - Population structure in Canadian greenside darters: conservation one site at a time	Dufour - Characterizing dispersal and colonization of the invasive round goby (<i>Neogobius melanostomus</i>) in the Great Lakes using novel microsatellite markers	St Jacques - Habitat-specific effects of climate warming on alpine zooplankton
14:00	Cook - Acidification effects on habitat suitability for Atlantic whitefish	Gertzen - Quantifying invasion pathways: propagule pressure from the aquarium trade	Sweetman - Evaluating the response of Cladocera to recent environmental changes in lakes from the central Canadian Arctic treeline region
14:20	Gardner - Use of both geometric morphometrics and Fourier analysis of sagittae otoliths to aid in identifying deepwater ciscoes (Genus: <i>Coregonus</i>) from Lake Superior, Canada	Kaufman - Road access as the vector for two invasives in lake trout lakes of northeastern Ontario: anglers and bass	Ngai - Impact of climate change on the invasion of largemouth bass in Lake Tahoe, California-Nevada
14:40	O'Connor - Distribution of juvenile fish in the coastal zone of Nova Scotia	Bhagat - Assessing morphological differentiation in non-native pumpkinseed sunfish (<i>Lepomis gibbosus</i>) occupying four habitat zones with traditional and geometric morphometric analyses	Bryan - Is climate change placing inner Bay of Fundy salmon populations at risk?
15:00	Break		
	Aquatic Conservation Auditorium (Bentzen)	Aquatic Invasive Species Cartier A (Ricciardi)	Climate Cartier B (Hunter)
15:20	De la Fuentes - Coral reef fish larval retention versus dispersal: measuring connectivity using molecular genetics	Robinson - The ecological consequences of hybridization between native westslope cutthroat trout and introduced rainbow trout in southern Alberta	Plumb - The effect of thermal stratification on lake trout habitat using two limnetically different years
15:40	Theissen - Reef fish genetic population structure and oceanographic patterns along the Mesoamerican barrier reef	Johnston - Prevalence and reproductive status of escapee domestic rainbow trout in spawning tributaries of northern Lake Huron	Selbie - Mid to late Holocene trends in northern Pacific salmon production
16:00	Valles - Temporal and spatial patterns in the recruitment of coral reef fishes on Barbados, West Indies	Shields - Environmental site effects on the performance of native and hybrid blue mussels (<i>Mytilus</i> spp) on the Pacific Coast of Canada	Jones - Oxygen isotope analysis of cod otoliths reconstructs temperature regime during fishery collapse
16:20	Turgeon - Density- and habitat-dependent territory relocation in a coral reef fish: implications for the design of marine protected areas	Clynick - Interactions between the invasive green alga <i>Codium fragile</i> ssp <i>tomentosoides</i> and mussel aquaculture in the Magdalen Islands	
16:40	Menard - Selection of diurnal refuges by the nocturnal squirrelfish <i>Holocentrus rufus</i>	Delaney - To detect or not to detect: have we interpreted our data correctly?	

Oral Presentations
Afternoon of Saturday January 6
(Sessions 4-6 of 6)

	Contributed Verrière AB (Jackson)	Cyanobacteria Saint-Laurent (Cattaneo)	Contributed Saint-Charles (Smokorowski)
13:20	Lévesque - Characterizing the causes of spatial structure in lake zooplankton	Bird - Self-limitation of dominant phytoplankton species and the neutrality of community interactions	Laurel - Comparative habitat associations in juvenile pacific cod and other gadids using seines, baited cameras and laboratory techniques
13:40	Derry - Contemporary evolution of zooplankton following lake acidification and recovery	Deblois Pinard - Accumulation-depuration of microcystin by the Nile Tilapia (<i>Oreochromis niloticus</i>) at a Brazilian fish farm	Clifford - Application of DNA barcodes to the marine fishes of Atlantic Canada
14:00	Wolniewicz - Coherent lake water responses in Nova Scotia to changes in acid deposition	Hudon - Benthic cyanobacteria in the St Lawrence River (Lake Saint-Pierre, Québec)	Melnychuk - Species differences in early marine mortality of juvenile Pacific salmon are largely attributed simply to differences in body length and migratory distance
14:20	Morgan - The role of colonists and invaders in the recovery of Sudbury's acidified lake fish communities		Brown - Dynamic threat-sensitivity in juvenile convict cichlids
14:40	Blanchet - Modelling species communities in rivers: asymmetric eigenvector maps (aem)		McKellar - Causes of sex ratio variation in the Trinidadian guppy, <i>Poecilia reticulata</i>
15:00	Break		
	Contributed Verrière AB (Doka)	Contributed Saint-Laurent (Fox)	Contributed Saint-Charles (Mandrak)
15:20	Purchase - Relationship between fertilization success and the number of milt donors in rainbow smelt (<i>Osmerus mordax</i> Mitchell): implications for population growth rates	Blais - Biologically mediated transport of contaminants to aquatic systems	Staton - Recovering freshwater species at risk in Canada's priority watersheds
15:40	Bradbury - Microevolution of anadromous smelt in Newfoundland: partitioning the influences of dispersal, hitch-hiking selection, and glacial isolation on microsatellite structure	Cunjak - Changes in lipid content and foraging ecology of fishes in an Australian dryland river	O'Connor - Comparison of cisco species spatial and depth distributions along the north shore of Lake Superior
16:00	Coulson - Phylogeography and colonization history of anadromous rainbow smelt (<i>Osmerus mordax</i>): a revised scenario?	Venturelli - Ricker revisited: effects of fishing and females on recruitment dynamics of walleye (<i>Sander vitreus</i>)	Naumann - Review of the life history and ecology of shortjaw cisco (<i>Coregonus zenithicus</i>): a proposed species at risk
16:20	Penton - Is demersal spawning a viable alternate reproductive strategy for capelin (<i>Mallotus villosus</i>) in coastal Newfoundland?	Ward - Whitefish recruitment dynamics spanning the mid-1990s regime shift in Lake Ontario: evaluating long-term stock-dependence, reproductive investment, and environmental drivers	Sharma - Predicting smallmouth bass incidence using climate data across North America
16:40		Dolinsek - Sex-differences in arrival time at breeding sites in relation to mating systems in a Lake Ontario stream fish community	

**Posters at-a-glance
Foyer**

Session: Aquatic Conservation/ Conservation aquatique		
P1	Beharrilall	POPULATION GENETIC DIVERGENCE AMONG DETROIT RIVER BROWN BULLHEAD: POSSIBLE LOCAL ADAPTATION TO ENVIRONMENTAL CONTAMINANTS
P2	Bradbury	DRIFTING INTO THE LIGHT: OPENING THE BLACK BOX ON MARINE LARVAL DISPERSAL
P3	Brassard	LONG-TERM VARIABILITY OF CLADOCERANS IN BOREAL SHIELD LAKES UNDER NATURAL AND HUMAN DISTURBANCES
P4	Coulson	TEMPORAL DIFFERENTIATION: CONTINUOUS VS. DISCONTINUOUS SPAWNING RUNS IN ANADROMOUS RAINBOW SMELT (<i>OSMERUS MORDAX</i>)
P5	Gautreau	ECOLOGY OF THE REDBREAST SUNFISH <i>LEPOMIS AURITUS</i> IN YOHO LAKE, NEW BRUNSWICK
P6	Lester	CALIBRATING QUEBEC AND ONTARIO METHODS OF INDEXING THE ABUNDANCE OF LAKE TROUT (<i>SALVELINUS NAMAYCUSH</i>)
P7	Mochnac	BULL TROUT DISTRIBUTION IN THE NORTHWEST TERRITORIES - POTENTIAL OVERLAP WITH DOLLY VARDEN?
P8	Rowe	PHENOTYPIC AND BEHAVIOURAL CORRELATES OF INDIVIDUAL VARIATION IN ATLANTIC COD REPRODUCTIVE SUCCESS
P9	Ward-Campbell	IMPACTS OF DRAIN MAINTENANCE ON FISH AND BENTHIC INVERTEBRATE ASSEMBLAGES IN AGRICULTURAL DRAINS
Session: Land-Water Interactions/ Intéractions eau-terre		
P10	Bertolo	LOGGING-INDUCED VARIATIONS IN DOC AFFECT YELLOW PERCH RECRUITMENT IN CANADIAN SHIELD LAKES
P11	Chen	TRACKING THE HISTORY OF PACIFIC SALMON POPULATIONS AND RELATED TROPHIC DYNAMICS OVER THE PAST ~5,000YRS USING MULTI-PROXY PALEOLIMNOLOGICAL TECHNIQUES
P12	DeLong	TRACKING FISH TISSUE MERCURY BURDENS: A DATA MINING APPROACH
P13	Gaber	EFFECTS OF LAND-USE AND RIPARIAN BUFFER ZONES ON WATER QUALITY INDICATORS OF A LOTIC ECOSYSTEM WITHIN AN AGRICULTURAL WATERSHED
P14	Kharouba	THE PROCESSES OF NICKEL PARTITIONING IN THE WATER COLUMN OF A RECOVERING LAKE IN THE SUDBURY, ONTARIO REGION
P15	Marchand	FOREST FIRES AND PLANKTONIC RESPIRATION IN BOREAL LAKES
P16	Taranu	TRACKING THE EFFECTS OF CLIMATE AND LAND-USE CHANGES ON WATER QUALITY OF BOREAL AND GRASSLAND LAKES IN ALBERTA
Session: Hydropower/ Hydroélectricité		
P17	Lyons	WATER BUDGET AND WATER QUALITY COMPARISON OF NATURAL LAKES AND HYDROELECTRIC RESERVOIRS
P18	Murchie	FISH RESPONSE TO FLUCTUATING FLOW IN REGULATED RIVERS: RESEARCH METHODS, EFFECTS AND OPPORTUNITIES
Session: Aquatic Ecosystem Science/ Science aquatique écosystémique		
P19	Baulch	EXPLORING THE APPLICATION OF MIMS WHOLE-REACH ESTIMATES OF DENITRIFICATION: FURTHER RESTRICTIONS ON USE
P20	Celis-Salgado	CLADOCERA CULTURING IN THE F.L.A.M.E.S MEDIUM: A NEW SOFT WATER MEDIUM FOR TOXICITY TESTING IN CANADIAN SHIELD WATERS
P21	Edwards	LONG-TERM TEMPORAL CHANGES IN CRAYFISH ABUNDANCES IN SOUTH-CENTRAL ONTARIO LAKES
P22	Hatton	TEMPORAL CHANGES IN MERCURY BIOACCUMULATION OVER 30 YEARS IN SOUTH-CENTRAL ONTARIO LAKES
P23	Koops	COMPARATIVE ECOSYSTEM MODELLING IN THE BAY OF QUINTE AND ONEIDA LAKE
P24	Leisti	ACOUSTICAL ASSESSMENT OF OFFSHORE FISHES IN HAMILTON HARBOUR, 2006

P25	Nguyen-Kowarzyk	BACTERIAL C TRANSFORMATIONS AND C QUALITY IN LAKE ST PIERRE A LARGE FLUVIAL LAKE OF THE ST LAWRENCE RIVER
P26	Norman	EFFECT OF FOOD ELEMENTAL COMPOSITION AND TEMPERATURE ON NUTRIENT EXCRETION IN BLUNTNOSE MINNOW (<i>PIMEPHALES NOTATUS</i>)
P27	Pahani	INFERRING OF PAST FISH ABUNDANCE FROM <i>DAPHNIA</i> EPHIPPIA SIZE IN SOUTH CENTRAL ONTARIO
P28	Plourde	CONTROLS OF THE ELEMENTAL COMPOSITION OF BENTHIC INVERTEBRATES ALONG THE NUTRIENT GRADIENT OF A CENTRAL ONTARIO STREAM
P29	Webster	EFFECTS OF METAL CONTAMINATION AND FISH PREDATION ON THE RECOVERY OF ZOOPLANKTON IN SUDBURY LAKES
P30	Wyn	FACTORS AFFECTING MERCURY CONCENTRATIONS IN FISH FROM ACIDIFIED FOOD WEBS IN KEJIMIKUIK NATIONAL PARK, NOVA SCOTIA
Session: Wetlands/ Marais		
P31	Pink	ENVIRONMENTAL VARIATION AND PREDATOR-PREY INTERACTIONS: BENEFICIARIES OF A CHANGING AQUATIC ENVIRONMENT
Session: Fish Habitat and Mortality/ Habitats et mortalité des poissons		
P32	Dupuch	SHELTER USE IN THE NORTHER REDBELLY DACE (<i>PHOXINUS EOS</i>): EFFECT OF PREDATION RISK AND FISH ASSEMBLAGE?
P33	Laurel	DENSITY-DEPENDENT HABITAT SELECTION IN MARINE FLATFISH: THE DYNAMIC ROLE OF ONTOGENY AND TEMPERATURE
P34	Smedley	EFFECTS OF SEDIMENTS FROM POTATO AGRICULTURE ON FISH POPULATIONS AND COMMUNITY STRUCTURE
Session: St Lawrence/ Fleuve St-Laurent		
P35	Belley	CONSEQUENCES OF THE HYPOXIA PHENOMENA ON MACROBENTHIC BIODIVERSITY AND ON BIOTURBATION RATES IN THE ESTUARY AND GULF OF ST. LAWRENCE
P36	Cleary	AN ASSESSMENT OF STOCKING CONTRIBUTION OF RAINBOW SMELT LARVAE IN THE ST. LAWRENCE MIDDLE ESTUARY AND IN LAKE ST-JEAN
P37	Hamelin	MERCURY ACCUMULATION, METHYLATION AND DEMETHYLATION BY EPIPHYTES : WHAT IS GOING ON?
P38	Lévesque	CHARACTERISATION OF BENTHIC MEGAFUNA INVERTEBRATE POPULATION ASSOCIATED TO ENVIRONMENTAL CONDITIONS AND DEMERSAL FISH ASSEMBLAGE IN THE GULF OF ST-LAWRENCE
P39	Razavi	ROLE OF GAS EVASION FROM CONTAMINATED SEDIMENTS AS A MECHANISM OF MERCURY TRANSFER TO AQUATIC BIOTA
P40	Yanch	MERCURY BIOACCUMULATION IN AQUATIC FOOD WEBS: CASE STUDY - CORNWALL, ON
Session: Aquatic Invasive Species/ Espèces envahissantes		
P41	Brousseau	AQUATIC INVASIVE SPECIES MONITORING IN GREAT LAKES' AREAS OF CONCERN
P42	Cairns	A 300 LAKE BYTHOTREPHES SURVEY: OBJECTIVES, METHODOLOGIES AND NEW INVASION RECORDS
P43	Elliot	THE INTEGRATION OF GEOGRAPHIC INFORMATION SYSTEMS IN LARGE-SCALE SURVEY FOR INVASIVE SPECIES; BYTHOTREPHES
P44	Gillespie	BAITFISH AS AN INVASION PATHWAY: A CASE STUDY OF THE LAKE OF THE WOODS WINTER FISHERY
Session: Climate Change/ Changements Climatiques		
P45	Lorenz	FIRE-CLIMATE RELATIONSHIPS ON THE FOREST-PRAIRIE ECOTONE IN ALBERTA, CANADA
P46	MacPhee	TEMPERATURE EFFECTS ON ZOOPLANKTON DISTRIBUTION WITH POTENTIAL CONSEQUENCES FOR SPECIES INTERACTIONS
P47	Moos	A HOLCENE-LEVEL FOSSIL DIATOM RECORD OF CLIMATE CHANGE AND ARIDITY AT THE EXPERIMENTAL LAKES AREA: NORTHWESTERN ONTARIO
P48	Plumb	A DYNAMIC OPTIMIZATION MODEL TO EVALUATE THE DEPTH, GROWTH, AND SURVIVAL OF LAKE TROUT (<i>SALVELINUS NAMAYCUSH</i>) OVER CHANGING THERMAL CONDITIONS
P49	Quinlan	LONG-TERM PATTERNS IN HYPOLIMNETIC OXYGEN IN SOUTHERN CANADIAN SHIELD LAKES

Session: Cyanobacteria/ Cyanobactéries		
P50	Blin	WATER-SEDIMENT BOUNDARY IMPLICATION IN N ₂ -FIXING CYANOBACTERIAL BLOOMS, BROME LAKE (QC) EXAMPLE
P51	Deblois	PHOTOSYNTHETIC ACTIVITY AND TOXIN PRODUCTION OF A TOXIC AND NON-TOXIC STRAINS OF CYANOBACTERIA EXPOSED TO LIGHT STRESS
P52	Forrester	TOXICITY AND ABUNDANCE OF MICROCYSTIS IN THE BAY OF QUINTE, LAKE ONTARIO
P53	Godde	EFFET DE L'EXTRAIT D'ORGE SUR LA CROISSANCE DES CYANOBACTÉRIES
P54	Gonzalez Rueda	CHARACTERIZATION OF PERIPHYTIC ALGAE FROM THE MACHETA AND PAIPA THERMAL SPRINGS OF COLOMBIA
P55	Li	IRON REGULATION OF BLOOM FORMING CYANOBACTERIA ABUNDANCE
Session: Contributed/ Contribuée		
P56	Boily	RELATIONSHIP BETWEEN NOCTURNAL HYPOXIA AND FISH ABUNDANCE IN FILAMENTOUS ALGAE OF LAKE SAINT-PIERRE, ST. LAWRENCE RIVER (QUÉBEC)
P57	Chueng	SCALED SCHRYSOPHYTES AS PALEOECOLOGICAL INDICATORS OF ENVIRONMENTAL CHANGE IN FOUR ACID-SENSITIVE LAKES IN THE MUSKOKA-HALIBURTIN REGION OF ONTARIO
P58	De Sousa	HOW LAKE RECREATIONAL DEVELOPMENT AFFECTS INVERTEBRATES LIVING ON DIFFERENT NATURAL SUBSTRATA
P59	Diab	SURVIVAL OF RAINBOW SMELT LARVAE IN RELATION TO PREY CONCENTRATION, SALINITY AND TEMPERATURE IN THE SAGUENAY FJORD
P60	Greenaway	DIATOMS AND SCALED CHRYSOPHYTES AS INDICATORS OF RECOVERY FROM ACIDIFICATION IN LAKES NEAR WAWA, ONTARIO
P61	Kim	RISKY HABITATS: THE EFFECTS OF PERCEIVED PREDATION RISK ON POPULATION DENSITIES OF JUVENILE ATLANTIC SALMON IN THE WILD
P62	Moore	QUANTIFYING THE EFFECTS OF GENE FLOW ON ADAPTATION IN PAIRS OF LAKE AND STREAM THREESPINE STICKLEBACK
P63	Morinville	SUCCESSFUL CREATION OF FISH REARING HABITAT AS COMPENSATION FOR LOSS IN THE SUB-ARCTIC
P64	Paradis	WHAT DO THE EMPTY STOMACHS OF NORTHERN PIKE REVEAL? INSIGHTS FROM CARBON ($\delta^{13}\text{C}$) AND NITROGEN ($\delta^{15}\text{N}$) STABLE ISOTOPES
P65	Porter	FROM THE MOUTH TO THE GUT – VARIATION IN YELLOW PERCH FEEDING APPARATUS
P66	Rajaratnam	PALEOECOLOGICAL ASSESSMENT OF WATER QUALITY CHANGES IN URBAN LAKES FROM HALIFAX (NS, CANADA).
P67	St-John	RECOVERY OF BENTHIC INVERTEBRATE COMMUNITIES IN PREVIOUSLY ACIDIFIED LAKES
P68	Vavrek	THE USE OF DISTURBANCE CUES IN CONVICT CICHLIDS AS AN ADDITIONAL SOURCE OF CHEMOSENSORY RISK ASSESSMENT