NOTE: This program will not be updated. Please refer to the mobile app for all changes to the official program.

May 13-16, 2018

Palais des congrès de Montréal

Canada
Welcome to the World Conference on Marine Biodiversity! It is a pleasure to host this 4th edition in Canada. The WCMB has become a major focal assembly for sharing research outcomes, management and policy issues, and for discussions of the role of biodiversity and biodiversity conservation in sustaining ocean ecosystems.

Following on from the *Life in a Changing Ocean* theme of the 3rd WCMB, the 4th WCMB theme – *Connecting with the living ocean* – is underlining the need to replace our current exploitation relationship with the ocean’s living resources, with a sustainable connection based on scientific knowledge. Two years before the end of the United Nations Decade on Biodiversity 2011–2020 (Resolution 65/161), this theme is particularly topical. We hope this theme will provide an opportunity to discuss progress towards the Strategic Plan for Biodiversity 2011-2020 and its 20 Aichi Biodiversity Targets.

WCMB continues to evolve and at this meeting we have trialled a new initiative: a mentoring program. This unique and dynamic program aimed at connecting early-career scientists with senior scientists to exchange ideas, collaborate and even identify research priorities for the next decade of marine biodiversity sciences.

We are also proud to inaugurate the Carlo Heip Award in recognition of Carlo Heip’s leadership in marine biodiversity research and founding of the World Conference on Marine Biodiversity.

Connect with Montréal, a vibrant location for international convention delegates. From gastronomic delights for all tastes to a plethora of cultural and sports events, unique architectural styling covering 375 years of history and an exciting nightlife, Montreal invites you to make the most of your time with us.

We hope you enjoy the meeting, are stimulated by the science and take with you good memories of the 4th WCMB.

Let’s together recognize the importance of *Connecting with the living ocean*!

*The 4th WCMB Organizing Committee*
MINISTERIAL MESSAGE

4th World Conference on Marine Biodiversity

On behalf of the Government of Canada, it is my pleasure to welcome you to Montréal, Québec, for the 4th World Conference on Marine Biodiversity.

The health of our oceans is a priority for Canada. The marine environment and its intricate web of marine life offer a multitude of benefits, from fish populations that support productive and sustainable fisheries, to healthy coastal habitats that provide natural defences against erosion and storms, to micro-organisms that keep coastal waters clean and safe.

Canada is committed to the sustainable development of our ocean resources and ensuring that we remain good environmental stewards as our economic activities grow. Our $1.5 billion Oceans Protection Plan is not only restoring sensitive coastal ecosystems, but also creating a world-leading marine safety system to better protect our waters, coasts and the people who use them.

Canada recognizes the value of science in supporting evidence-based decisions and is proud to contribute to this important meeting. As a signatory to the Convention on Biological Diversity, Canada is committed to protecting and conserving 10% of our marine and coastal territories by 2020. We are well on our way, having now protected 7.75% of our oceans. We recognize the importance of the UN Convention on the Law of the Sea as a framework for global oceans governance and we are committed to working closely with our international partners to tackle important global challenges such as climate change and illegal, unreported, and unregulated fishing.

The Government of Canada is honoured to host the G7 Leaders’ Summit this year in Charlevoix, Quebec. Improving the health of the world’s oceans is a key theme for our presidency, and we are proposing that the G7 work together to strengthen national efforts and international collaboration on ocean-related challenges.

During this conference you will have an opportunity to learn about the newest developments in your field, engage in stimulating debates, make new contacts, and foster new collaborations and research ideas.

I offer you my very best wishes for a productive conference!

Sincerely,

The Honourable Dominic LeBlanc, P.C., Q.C., M.P.
Minister of Fisheries, Oceans and the Canadian Coast Guard
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### COMMITTEES

#### Organizing Committee

Philippe Archambault (chair), Université Laval, Canada  
Jihyun Lee (co-chair), United Nations Environment Programme, Secretariat of the Convention on Biological Diversity  
Kim Juniper (co-chair), Ocean Networks Canada, University of Victoria, Canada  
Christopher Cameron, Université de Montréal, Canada  
Frédéric Guichard, McGill University, Canada  
Peter Lawton, Fisheries and Oceans Canada  
Anna Metaxas, Dalhousie University, Canada  
Pierre Pepin, Fisheries and Oceans Canada  
Paul Snelgrove, Memorial University, Canada  
Jean-Éric Tremblay, Université Laval, Canada  
Verena Tunnicliffe, University of Victoria, Canada  
Fred Whoriskey, Dalhousie University, Canada  
David Beauchesne, Université du Québec à Rimouski, Canada  
Elliot Dreujou, Université du Québec à Rimouski, Canada  
Cindy Grant, Université Laval, Canada

#### Scientific Committee

Paul Snelgrove (chair), Network Director, NSERC Canadian Healthy Oceans Network  
Anna Metaxas (co-chair), Dalhousie University, Canada  
Peter Lawton (co-chair), Fisheries and Oceans Canada  
Linda Amaral Zettler, Josephine Bay Paul Center/Brown Geological Sciences, Marine Biological Laboratory, Woods Holes, USA  
Ward Appeltans, UNESCO-IOC, IODE/OBIS & GOOS, Belgium  
Philippe Archambault, Université Laval, Canada  
Mark J. Costello, President International Association of Biological Oceanography (IABO), Institute of Marine Science, University of Auckland, New Zealand  
Isabelle Côté, Simon Fraser University, Canada  
Roberto Danovaro, President, Stazione Zoological Anton Dohrn di Napoli, Italy  
Evan Edinger, Memorial University, Canada  
Kristina M. Gjerde, Senior High Seas Policy Advisor, IUCN, Director, Wycliffe Management  
Jessica Goldsmit, Fisheries and Oceans Canada and Université Laval, Canada  
Patrick Halpin, Director of the Geospatial Ecology Program, Nicholas School of the Environment & Duke Marine Lab, Duke University, USA  
Cornelius Hammer, First Vice President of ICES and President of ICES in 2016-2018, Germany  
Kim Juniper, University of Victoria, Canada  
Linwood Pendleton, Director of the Marine Ecosystem Services Partnership, Ocean and Coastal Policy Program at Duke University’s Nicholas Institute for environmental Policy Solutions and in August 2014 – International Chair of Excellent, AMURE, Institut Universitaire Européen de la Mer, France  
Ellen Kenchington, Bedford Institute, Fisheries and Oceans Canada
Scientific Committee (Continued)

Christopher McKindsey, Institut Maurice Lamontagne, Fisheries and Oceans Canada
David Obura, Director of CORDIO East Africa, Kenya
Pierre Pepin, Fisheries and Oceans Canada
Martin Solan, Co-convenor WCMB II, National Oceanography Centre, University of Southampton, UK
Simon Thrush, Director of the Institute of marine Science, University of Auckland, New Zealand

Student Committee

David Beauchesne, Université du Québec à Rimouski, Canada
Elliot Dreujou, Université du Québec à Rimouski, Canada
Charlotte Whitney, University of Victoria, Canada
Tianna Peller, McGill University, Canada
Kevin C. K. Ma, Université Laval, Canada
Ryan Gasbarro, University of Victoria, Canada
Emily Adamczyk, University of British Columbia, Canada
Remi Daigle, Université Laval, Canada

Conference Secretariat

4th WCMB Conference Secretariat - JPdL International
1555 Peel Street, Suite 500
Montréal, Québec H3A 3L8 Canada
Tel: +1 514 287-9898 Ext. 334
Fax: +1 514 287-1248
wcmb2018secretariat@jpdl.com

We would like to acknowledge and extend our gratitude for the significant contribution of Allison Barter (Canadian Healthy Oceans Network), Matthieu Huot (Université Laval), Kevin Ma (Université Laval), Christian Nozais (Université du Québec à Rimouski), and Brendal Townsend (Dalhousie University).
USEFUL INFORMATION

Badges
Delegates must wear their badge at all times in the Palais des congrès.

Floor Plans
See pages 55 and 57.

Food Services
Coffee breaks and lunches are held in the Exhibition, room 517CD. Coffee stations and food concessions are open for delegates.

Internet Access
Free WiFi is available for the delegates at the Palais des congrès, sponsored by Parks Canada. Wireless Network: WCMB2018 Access Code: BIOMARINE18

Mobile Phones and Devices
Mobile phones must be switched off or muted in the session meeting rooms.

Registration Schedule
Saturday, May 12 15:00 to 19:00
Sunday, May 13 7:30 to 18:00
Monday, May 14 8:00 to 18:00
Tuesday, May 15 8:00 to 18:00
Wednesday, May 16 8:00 to 18:00

Posters
Posters are displayed throughout the conference dates in the Exhibition (517CD). See schedule and details on pages 58-62.

Poster set-up time is on Saturday, May 12 from 16:00 to 19:00, and on Sunday, May 13 from 8:30 and 16:00. Poster must be taken down between 15:00 and 19:00 on Wednesday, May 16.

Speaker Ready Room
Saturday, May 12 15:00 – 19:00
Sunday, May 13 8:00 – 18:00
Monday, May 14 8:00 – 18:00
Tuesday, May 15 8:00 – 18:00
Wednesday, May 16 8:00 – 18:00

We ask all speakers to upload their files at least 3 hours before their presentation, ideally the morning prior or the afternoon of the day before. 30 minutes prior to the beginning of the session all presentation files will be transferred to the individual session rooms.
### MONTRÉAL 2018
#### MAY 13-16

| SATURDAY  
MAY 12   | SUNDAY  
MAY 13 | MONDAY  
May 14 | TUESDAY  
May 15  | WEDNESDAY  
May 16 |
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| 09:30-10:30 | Opening Ceremony | 10:30-12:00 | Plenary session  
Keynote: Linwood Pendleton | 10:30-12:00 | 10:30-12:00 |
| 10:30-12:00 | Topical sessions | 10:30-12:00 | Topical sessions | 10:30-12:00 |
| 12:00-13:30 | Lunch | 12:00-13:30 | Lunch | 12:00-13:30 |
| 13:30-15:00 | 7:30-18:00 Registration | 13:30-15:00 | Topical sessions | 13:30-15:00 |
| 13:00     | 14:00   | 15:00    | 16:00     | 15:00    |
| 14:00     | 15:00   | 16:00    | 17:00     | 15:00    |
| 15:00-17:00 | Topical sessions | 15:00-17:00 | Topical sessions | 15:00-17:00 |
| 17:00-19:00 | Welcome Reception | 17:00-18:00 | Posters and Exhibition | 17:30 |
| 17:00-19:00 | Posters and Exhibition | 17:00-18:00 | Posters and Exhibition | 17:30 |
| 17:30     | 18:00   | 19:00    | 20:00     | 19:00    |
| 18:30     | 19:00   | 20:00    | 21:00     | 20:00    |
| 19:00     | 20:00   | 21:00    | 22:00     | 21:00    |
| 20:30     | 21:00   | 22:00    | 23:00     | 22:00    |
| 21:30     | 22:00   | 23:00    | 00:00     | 23:00    |
| 22:30     | 23:00   | 00:00    | 01:00     | 00:00    |

**MONDAY  
May 14**

- **8:30-10:00** Plenary session  
  Keynote: Linwood Pendleton
- **10:30-12:00** Topical sessions
- **12:00-13:30** Lunch
- **13:30-15:00** Topical sessions
- **15:30-17:00** Topical sessions

**TUESDAY  
May 15**

- **8:30-10:00** Plenary session  
  Keynote: Emma Johnston
- **10:30-12:00** Topical sessions
- **12:00-13:30** Lunch
- **13:30-15:00** Topical sessions
- **15:30-17:00** Final plenary session

**WEDNESDAY  
May 16**

- **8:30-10:00** Plenary session  
  Keynote: Amanda Bates
- **10:30-12:00** Topical sessions
- **12:00-13:30** Lunch
- **13:30-15:00** Topical sessions
- **15:30-17:00** Final plenary session
- **17:00-18:00** Posters and Exhibition

**MONTRÉAL 2018**

- **7:30-18:00** Registration
- **8:00-18:00** Registration
- **8:00-18:00** Registration
- **8:00-18:00** Registration

**MONTRÉAL 2018**

- **Plenary session**
- **Keynote: Linwood Pendleton**
- **Keynote: Emma Johnston**
- **Keynote: Amanda Bates**

**MONTRÉAL 2018**

- **Opening Ceremony**
- **Mentorship Presentations**
- **Coffee break**
- **Coffee break**
- **Coffee break**
- **Coffee break**
- **Coffee break**
- **Coffee break**

**MONTRÉAL 2018**

- **Welcome Reception**
- **Lunch**
- **Lunch**
- **Lunch**
- **Lunch**

**MONTRÉAL 2018**

- **Carlo Heip Award Ceremony**
- **Food trucks available onsite**
- **Award ceremony**
- **Keynote: Carlos Duarte**

**MONTRÉAL 2018**

- **Exhibit Hall**
- **Exhibit Hall**
- **Exhibit Hall**

**MONTRÉAL 2018**

- **Exhibit Hall**
- **Exhibit Hall**
- **Exhibit Hall**

**MONTRÉAL 2018**

- **Closing / Student Awards / 5th WCMB Announcement**

**MONTRÉAL 2018**

- **www.wcmb2018.org**
RETHINKING MARINE CONSERVATION SCIENCE IN THREE ACTS

Dr. Linwood Pendleton (Global Ocean Lead Scientist, World Wildlife Fund for Nature, Washington DC, United States), featuring Robert Hodge (pianist) and Anna Zivian (scientist-poet-conservationist)

Marine conservation science has made great strides in the last few decades, but still we continue to lose marine species and habitat at unprecedented rates. Clearly, incremental advances in marine science will not be sufficient to meet the needs of ocean conservation in the new era of rapid global environmental change. Using philosophy, technology, music, dance, art, and poetry, we explore what’s needed to achieve breakthroughs in marine conservation science and science communication. Act One focuses on the conservative roots of conservation science and why old school thinking can’t keep up with real world change. Act Two examines what is holding us back and highlights new ways of measuring, analysing, visualizing, and modelling the ocean socio-ecosystem. Act Three wraps up by presenting out-of-the-box approaches to communicating science and celebrates recent discoveries from marine conservation scientists.
TIME, TIME, TIME: WHAT HAS BECOME OF YOU? HOW HUMANS ARE SPEEDING UP THE ECOLOGY OF NEARSHORE SYSTEMS AND WHAT IT MEANS FOR BIODIVERSITY

Professor Emma Johnston (Dean of Science, University of New South Wales, Sydney, NSW, Australia)

Professor Johnston will discuss emerging evidence from our changing coasts. From the tropics to the poles, nearshore ecological systems are speeding up. Temperatures are increasing, physical disturbance rates increase, species transfer and introductions are more frequent and systems are increasingly organically enriched. Professor Johnston will discuss recent studies that may help us see into the future of biodiversity for our nearshore systems. She discusses how stressors interact and the development of new molecular and remote sensing tools for detecting structural and functional ecosystem change. Hear how she combines experimental ecology with the observational to inform our predictions of the constantly re-created fringe of the sea.
REBUILDING MARINE BIODIVERSITY IN A SHIFTING FUTURE OCEAN

Professor Carlos M. Duarte (Director of the Red Sea Research Center and Tarek Ahmed Juffali Chair in Red Sea Ecology of King Abdullah University of Science and Technology (KAUST), Thuwal, Saudi Arabia)

Statements that the Biosphere is now undergoing a Sixth Great Extinction, this time driven by human pressure, have been based on global species extinction rates 100 to 1000-fold greater than background. These are expected to continue or be aggravated further by habitat loss, pollution, biological invasions facilitated by human introductions, and climate change, among other human pressures. Yet, these extinction rates refer to land species, with the number of marine extinctions of land species accounting for only 2.6% of the total extinction rate, largely due to hunting in the past (e.g. Stellar’s cow, great Auk, etc.). Indeed, whereas the oceans are experiencing a similar warming rate as land, its 3-D, connectivity and continuity provide more opportunities for species to avoid extinction than species face on the more fragmented habitats on land. Yet, habitat loss has impacted on key marine habitats, such as seagrass, mangroves and coral reefs, where about half of the global habitat has been lost since World War II. We have, therefore, have an opportunity to avoid the 5th Great Extinction from penetrating the oceans, and to rebuild ocean biodiversity as to ensure a bright future for the oceans and, thereby, rebuild a healthy ocean capable of supplying the key resources humanity requires. Here I will outline the current status and decline of marine biodiversity and outline the solutions and actions require to rebuild biodiversity.
THREE “GRAND” CHALLENGES FOR PREDICTING MARINE BIODIVERSITY CHANGE IN THE ANTHROPOCENE ERA

Dr. Amanda Bates (Research Associate Professor, Memorial University of Newfoundland, St. John’s NL, Canada)

Accurate and practical tools that link species and community dynamics across scales and taxa are required to predict biodiversity responses to on-going and future global change. Physiological models are increasingly incorporating complexity, linking individuals to populations. Yet a major challenge is to (1) predict biodiversity change within a real-world setting. Parameterizing model inputs for entire communities using mechanistic approaches must involve simplification, while conducting experiments with many marine species is impractical. At the same time, physical and biological data are expanding, with increased resolution in both space and time. These data provide a resource to develop predictive tools incorporating both environmental exposure and biological sensitivity. Even so, our oceans have already been reshaped by human activities. Thus a (2) lack of historical baselines and (3) dark data may be preventing how we conceptualize and manage trajectories of biodiversity change. Opportunities include trans-disciplinary exchanges of approaches for tackling scientific problems and data sharing, facilitated by global communication tools and collaborative networks.
DETAILED CONFERENCE PROGRAM

SUNDAY, MAY 13 – 9:30-10:30

Opening Ceremony
Room: 517A

SUNDAY, MAY 13 – 10:30-12:00

Theme: Biodiversity discovery and prediction - Polar Frontiers, presented by Arctic Science Journal
Session Moderator: Dieter Piepenburg
Room: 518B

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Title</th>
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<tbody>
<tr>
<td>10:30</td>
<td>Saskia Brix</td>
<td>State of the Art in the IceAGE project: a climatic sensitive region under watch.</td>
</tr>
<tr>
<td>10:45</td>
<td>Steve Widdicombe</td>
<td>Benthic biodiversity along a temperate-polar gradient: Exploring consequences of climate change and sea ice loss.</td>
</tr>
<tr>
<td>11:00</td>
<td>Barbara Oleszczuk</td>
<td>Benthic biodiversity and food web structure in the European sector of the Arctic Ocean during spring time</td>
</tr>
<tr>
<td>11:15</td>
<td>Anni Mäkelä</td>
<td>Diversity and functioning of Arctic benthic macroinfaunal communities and their resilience to climate change mediated alterations in food supply</td>
</tr>
<tr>
<td>11:30</td>
<td>Mario H. Londono-Mesa</td>
<td>Diversity of Antarctic polychaetes</td>
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</table>

Theme: Biodiversity discovery and prediction - Deep-sea Frontiers
Session Moderator: Samuel Bosch
Room: 518C

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<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Title</th>
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<tbody>
<tr>
<td>10:30</td>
<td>Sheryl Murdock</td>
<td>Compositional variability among community assemblages of a hydrothermal vent foundation species – from micro to macro</td>
</tr>
<tr>
<td>10:45</td>
<td>Craig McClain</td>
<td>Energy availability, metabolic niche dynamics, and connectivity alter assembly rules in deep-sea wood falls</td>
</tr>
<tr>
<td>11:00</td>
<td>Abbie Chapman</td>
<td>Functional diversity and biogeography using ‘sFDvent’ - the first global trait database for hydrothermal vent species</td>
</tr>
<tr>
<td>11:15</td>
<td>Nadine Le Bris</td>
<td>Observing transient functional processes at depth: a step forward in the monitoring of deep-sea ecosystem sensitivity to disturbance</td>
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</table>

Theme: Climate change impacts on marine biodiversity
Session Moderator: Jesica Goldsmit
Room: 519B

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<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Title</th>
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<tbody>
<tr>
<td>10:30</td>
<td>Marina Dolbeth</td>
<td>The impact of the Paris Agreement 2°C rise target for global warming on estuarine benthic communities</td>
</tr>
<tr>
<td>10:45</td>
<td>Joanne Ellis</td>
<td>Climate change impacts and multiple stressor effects on coral reef ecosystems in the Red Sea</td>
</tr>
<tr>
<td>11:00</td>
<td>Conor Waldock</td>
<td>Using geographic relationships between abundance and temperature to predict performance change with warming in reef fish assemblages</td>
</tr>
<tr>
<td>11:15</td>
<td>Gil Rilov</td>
<td>Impact of bioinvasions and climate change on benthic biodiversity and ecosystem functions – Lessons from the fast-changing Levant reefs</td>
</tr>
<tr>
<td>11:30</td>
<td>Moritz Sonnewald</td>
<td>The Red Sea Biodiversity Project: Collection, understanding and preservation of the marine fauna of Saudi Arabia</td>
</tr>
</tbody>
</table>
### Theme: Cumulative impacts of human activities
Session Moderator: Simon Thrush
Room: 524A

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<tr>
<th>Time</th>
<th>Name</th>
<th>Title</th>
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<tbody>
<tr>
<td>10:30</td>
<td>Eric Thiébaut</td>
<td>Changes in a benthic system exposed to multiple stressors: A 40 year time-series in the English Channel</td>
</tr>
<tr>
<td>10:45</td>
<td>Ana Jesus</td>
<td>Assessing the health of marine habitats in busy seas</td>
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<tr>
<td>11:00</td>
<td>Grace Murphy</td>
<td>Seagrass fish assemblage change across gradients of human impact in Atlantic Canada</td>
</tr>
<tr>
<td>11:15</td>
<td>Jillian Dunic</td>
<td>Cumulative impacts and global change in seagrass meadows: A quantitative review</td>
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</table>

### Theme: Ocean basin scale research: ATLAS, MERCES and SponGES
Session Moderator: Murray Roberts
Room: 524B

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<thead>
<tr>
<th>Time</th>
<th>Name</th>
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<tbody>
<tr>
<td>10:30</td>
<td>Karen Davison</td>
<td>Transatlantic cooperation within the Atlantic Ocean Research Alliance (AORA)</td>
</tr>
<tr>
<td>10:45</td>
<td>Paul Snelgrove</td>
<td>Overviews (continued)</td>
</tr>
<tr>
<td>11:00</td>
<td>Cristina Gambi</td>
<td>MERCES: Marine Ecosystem Restoration in Changing European Seas</td>
</tr>
<tr>
<td>11:15</td>
<td>Joana R Xavier</td>
<td>Deep-sea sponge grounds of the North Atlantic: State of the knowledge, recent advances and outlook</td>
</tr>
<tr>
<td>11:30</td>
<td>Georgios Kazanidis</td>
<td>Distribution of deep-sea sponges and the role of environmental variability in the Faroe-Shetland Sponge Belt Marine Protected Area</td>
</tr>
<tr>
<td>11:45</td>
<td>Alan Fox</td>
<td>Investigating the impact of larval dispersal strategies in the deep-sea: Understanding the contrasting genetic connectivity of the two main reef building species of cold water corals in the North Atlantic</td>
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### Theme: New technologies for biodiversity assessment
Session Moderator: Kim Juniper
Room: 524C

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<tr>
<th>Time</th>
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<tbody>
<tr>
<td>10:30</td>
<td>Joseph DiBattista</td>
<td>The development of eDNA metabarcoding to assess fish biodiversity in coastal ecosystems and integrating these data into marine monitoring programs</td>
</tr>
<tr>
<td>10:45</td>
<td>Anaïs Lacoursière-Roussel</td>
<td>eDNA metabarcoding as a new approach to evaluate large-scale coastal biodiversity change</td>
</tr>
<tr>
<td>11:00</td>
<td>Ni Kadek Dita Cahyani</td>
<td>Metabarcoding on Autonomous Reef Monitoring Structures (ARMS): A standardized method for monitoring Indonesian marine diversity in the ‘omics era</td>
</tr>
<tr>
<td>11:15</td>
<td>Nicole Fahner</td>
<td>Experimental design considerations for assessing marine biodiversity using environmental DNA</td>
</tr>
<tr>
<td>11:30</td>
<td>Mariagrazia Graziano</td>
<td>Biodiversity and Protected Areas Management Programme – the role of the geospatial information for Marine Protected Areas</td>
</tr>
<tr>
<td>11:45</td>
<td>Christos Arvanitidis</td>
<td>Research Infrastructures offer capacity to address scientific questions never attempted before: Are all taxa equal?</td>
</tr>
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</table>
SUNDAY, MAY 13 – 12:00-13:30

Lunch Break

(Exhibition, Posters)
Room: 517CD

Mentoring Program Workshops*
Theme 1: Room 518A
Theme 2: Room 518B
Theme 3: Room 518C
Theme 4: Room 519A
Theme 5: Room 519B
Theme 6: Room 524A
Theme 8: Room 524B
* Workshops are only open to Mentoring Program participants.

SUNDAY, MAY 13 – 13:30-15:00

Theme: Marine policy and stewardship
Session Moderator: Kristina Gjerde
Room: 518A

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<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
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<tbody>
<tr>
<td>13:30</td>
<td>Matthew Frost</td>
<td>From marine climate change impacts to marine legislation: lessons from the science-policy interface</td>
</tr>
<tr>
<td>13:45</td>
<td>Karen Webb</td>
<td>Risk, politics, and science: a new approach to UK marine biodiversity monitoring</td>
</tr>
<tr>
<td>14:00</td>
<td>Pierre Beaufils</td>
<td>New tool to enhance marine mammal protection at the Saguenay - St. Lawrence Marine Park</td>
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<tr>
<td>14:15</td>
<td>Valériane Thool</td>
<td>Foreign investment law and the protection marine biodiversity: Reconciling two different worlds</td>
</tr>
<tr>
<td>14:30</td>
<td>Maja Vinde Folkersen</td>
<td>The economic value of the deep sea: A systematic review and meta-analysis</td>
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Theme: Biodiversity discovery and prediction - Polar Frontiers, presented by Arctic Science Journal
Session Moderator: Dieter Piepenburg
Room: 518B

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<tr>
<td>13:30</td>
<td>Astrid Tempestini</td>
<td>Genetic diversity across the Arctic waters: Examples from pelagic crustaceans</td>
</tr>
<tr>
<td>13:45</td>
<td>Aude Boivin-Riouxf</td>
<td>Phytoplankton functional types are changing in the North Water Polynya</td>
</tr>
<tr>
<td>14:00</td>
<td>Gérald Darnis</td>
<td>Is the shallow Kitikmeot a marine zoogeographic barrier within the Canadian Arctic Archipelago?</td>
</tr>
<tr>
<td>14:15</td>
<td>Dieter Piepenburg</td>
<td>Arctic benthic diversity research with PANABIO: Scale, sharing, and modelling</td>
</tr>
<tr>
<td>14:30</td>
<td>Maria Kavanaugh</td>
<td>Monitoring and predicting Arctic marine biodiversity across dynamic seascapes</td>
</tr>
</tbody>
</table>
### Theme: Biodiversity discovery and prediction - Deep-sea Frontiers
Session Moderator: Samuel Bosch  
Room: 518C

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Title</th>
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<tbody>
<tr>
<td>13:30</td>
<td>Patricia Ramey-Balci</td>
<td>Biodiversity in soft-sediments of mud volcanoes in the eastern Mediterranean Sea</td>
</tr>
<tr>
<td>13:45</td>
<td>Pauline Chauvet</td>
<td>Characterization of factors regulating megafaunal community dynamics and biodiversity in Barkley canyon, Canada</td>
</tr>
<tr>
<td>14:00</td>
<td>Vonda Wareham Hayes</td>
<td>Cold-water soft corals as hosts for juvenile ophiuroids</td>
</tr>
<tr>
<td>14:15</td>
<td>Neus Campanyà-Llovet</td>
<td>Macroinfaunal communities and food webs from Barkley methane hydrates (British Columbia): The role of food patchiness in space and time</td>
</tr>
<tr>
<td>14:30</td>
<td>Anna Jażdżewska</td>
<td>Integrative taxonomy in marine biodiversity recognition — The deep-sea amphipod case study</td>
</tr>
<tr>
<td>14:45</td>
<td>Javier Cristobol</td>
<td>Sleeping with my enemy: Insights into the symbiotic relationship between the carnivorous sponge Chondrocladia robertballardi and the annelid Neopolynoe africana</td>
</tr>
</tbody>
</table>

### Theme: Biodiversity discovery and prediction - Tropical Frontiers
Session Moderator: Eduardo Klein  
Room: 519A

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>13:30</td>
<td>Beginner Subhan</td>
<td>Phylogeography of Clavularia inflata (Soft Coral: Stolonifera) in coral triangle area</td>
</tr>
<tr>
<td>13:45</td>
<td>Ronaldo Christofoletti</td>
<td>Intertidal rocky shore biodiversity in the subtropical southwest Atlantic: Disentangling the influence of natural and anthropogenic drivers</td>
</tr>
<tr>
<td>14:00</td>
<td>João Cúrdia</td>
<td>Unraveling biodiversity patterns in soft-sediments of the highly saline and warm Red Sea</td>
</tr>
<tr>
<td>14:15</td>
<td>Daniel Pech</td>
<td>Soft bottom benthic diversity trends from the Yucatán continental Shelf-Gulf of Mexico: From 10 to 200 m depth.</td>
</tr>
<tr>
<td>14:30</td>
<td>Karla Jaramillo</td>
<td>Specialized metabolites as biomarkers in Zoantharian taxonomy, a case study in the Tropical Eastern Pacific.</td>
</tr>
</tbody>
</table>

### Theme: Climate change impacts on marine biodiversity
Session Moderator: Jesica Goldsmit  
Room: 519B

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>13:30</td>
<td>Arnaud Auber</td>
<td>How could functional redundancy of the North Sea fish community change during the 21st century?</td>
</tr>
<tr>
<td>13:45</td>
<td>Matthew McLean</td>
<td>A functional inversion of marine ecosystems related to climate oscillations and warming</td>
</tr>
<tr>
<td>14:00</td>
<td>Christopher Lynam</td>
<td>Fishing for food in a warm and acidic ocean requires adaptive management targets</td>
</tr>
<tr>
<td>14:15</td>
<td>Heather Hunt</td>
<td>Cobble-filled bio-collectors: a tool for detecting changes in biodiversity in a difficult-to-sample habitat</td>
</tr>
<tr>
<td>14:30</td>
<td>Stephanie Allen</td>
<td>The response of North Atlantic phytoplankton composition and size structure to the copepod community and environmental pressures</td>
</tr>
</tbody>
</table>
### Theme: Cumulative impacts of human activities
Session Moderator: Simon Thrush  
Room: 524A

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
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<tbody>
<tr>
<td>13:30</td>
<td>Danielle Denley</td>
<td>Climate change intensifies negative impacts of an invasive bryozoan on kelp bed ecosystems in the northwest Atlantic</td>
</tr>
<tr>
<td>13:45</td>
<td>David Beauchesne</td>
<td>Meta-networks - using network theory to structure and evaluate cumulative impacts</td>
</tr>
<tr>
<td>14:00</td>
<td>Julie Carrière</td>
<td>Implementation of an environmental observatory in the Sept-Îles industrial port zone</td>
</tr>
<tr>
<td>14:15</td>
<td>Elliot Dreujou</td>
<td>Marine benthic communities and anthropogenic activities in Sept-Îles (Canada): A peaceful coexistence?</td>
</tr>
<tr>
<td>14:30</td>
<td>Gert Van Hoey</td>
<td>Assessing the impact degree and areal degradation extent of the benthic ecosystem caused by different human activities</td>
</tr>
</tbody>
</table>

### Theme: Ocean basin scale research: ATLAS, MERCES and SponGES
Session Moderator: Roberto Danovaro  
Room: 524B

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<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>13:30</td>
<td>Anthony Grehan</td>
<td>MERCES: State of degradation and recovery potential of six key European marine habitats</td>
</tr>
<tr>
<td>13:45</td>
<td>Jana Verdura</td>
<td>Drastic effects of climate change on Mediterranean forests</td>
</tr>
<tr>
<td>14:00</td>
<td>Emma Cebrian</td>
<td>Regional environmental history drive the tolerance of marine macroalgae forests to future warning</td>
</tr>
<tr>
<td>14:15</td>
<td>Francisco Javier Murillo</td>
<td>Effects of Bottom-Contact Fishing on Benthic Biodiversity</td>
</tr>
<tr>
<td>14:30</td>
<td>Marina Carreiro-Silva</td>
<td>The Azores deep marine ecosystem: An open window into North Atlantic deep-sea environments</td>
</tr>
</tbody>
</table>

### Theme: New technologies for biodiversity assessment
Session Moderator: Kim Juniper  
Room: 524C

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
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<tbody>
<tr>
<td>13:30</td>
<td>Xavier Mouy</td>
<td>Acoustic estimation of the biodiversity of fish and invertebrates</td>
</tr>
<tr>
<td>13:45</td>
<td>Alex Nunes</td>
<td>Innovative management of accelerometry, inertial, acoustic, and satellite data using netCDF and Postgres</td>
</tr>
<tr>
<td>14:00</td>
<td>Marc Skinner</td>
<td>Eelgrass remote sensing triple-threat – assessment of simultaneously collected satellite, LiDAR, and sonar data.”</td>
</tr>
<tr>
<td>14:15</td>
<td>Francis Letendre</td>
<td>The mechanics of oil droplet capture by filter feeding animals in the marine environment: theory, observations, and petrochemical dispersants</td>
</tr>
</tbody>
</table>

### SUNDAY, MAY 13 – 15:00-15:30

**Coffee Break**  
*(Exhibition, Posters)*  
Room: 517CD
### SUNDAY, MAY 13 – 15:30-17:00

#### Theme: Marine policy and stewardship
**Session Moderator:** Lucie Beaulieu  
**Room:** 518A

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>15:30</td>
<td>Lisa Speer</td>
<td>Conserving marine biodiversity in the ocean beyond national jurisdiction; whither half the planet?</td>
</tr>
<tr>
<td>15:45</td>
<td>Seth Sykora-Bodie</td>
<td>Collaborative Governance in the Southern Oceans: The Ross Sea MPA</td>
</tr>
<tr>
<td>16:00</td>
<td>Natalie Ban</td>
<td>Indigenous governance and conservation of marine ecosystems</td>
</tr>
<tr>
<td>16:15</td>
<td>Liberty Espectato</td>
<td>Evaluating stakeholders’ perception on the impact of the closed season policy for sardines in Visayan Sea, Philippines using gender lens</td>
</tr>
<tr>
<td>16:30</td>
<td>Harold Monteclaro</td>
<td>Gender perceptions in the management of the tuna industry in General Santos City, Philippines</td>
</tr>
</tbody>
</table>

#### Theme: Biodiversity discovery and prediction - Polar Frontiers, presented by Arctic Science Journal
**Session Moderator:** Frithjof Kuepper  
**Room:** 518B

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>15:30</td>
<td>Claire Goodwin</td>
<td>Sponges of the Southern Ocean: How can we close this gap in our Antarctic Biodiversity knowledge?</td>
</tr>
<tr>
<td>15:45</td>
<td>Curtis Dinn</td>
<td>Expanding known sponge (Porifera) species diversity in the Eastern Canadian Arctic</td>
</tr>
<tr>
<td>16:00</td>
<td>Chantal Vis</td>
<td>Marine baseline study in Ukkusiksalik National Park, Nunavut</td>
</tr>
<tr>
<td>16:15</td>
<td>Frithjof Christian Küpper</td>
<td>Exploration of Arctic and Antarctic seaweed biodiversity in the context of polar climate change</td>
</tr>
<tr>
<td>16:30</td>
<td>Ignacio Garrido</td>
<td>Macrofaunal diversity gradients in Antarctic rocky benthic communities: Effects of glaciers and depth</td>
</tr>
</tbody>
</table>

#### Theme: Biodiversity discovery and prediction - Deep-sea Frontiers
**Session Moderator:** Angelika Brandt  
**Room:** 518C

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>15:30</td>
<td>Tina Molodtsova</td>
<td>Sponge and coral communities of potential mineral resources in the deep-sea: an overview</td>
</tr>
<tr>
<td>15:45</td>
<td>Telmo Morato</td>
<td>Utility of habitat suitability modelling tools for evaluating changes in VME distribution under future climate scenarios</td>
</tr>
<tr>
<td>16:00</td>
<td>Ursula Witte</td>
<td>The variable influence of dispersant on oil degradation at low temperatures in the deep ocean</td>
</tr>
<tr>
<td>16:15</td>
<td>Lisa Levin</td>
<td>Looking forward into the deep: The confluence of climate change, global change and biodiversity in the deep sea</td>
</tr>
</tbody>
</table>
### Theme: Biodiversity discovery and prediction - Tropical Frontiers
Session Moderator: Eduardo Klein
Room: 519A

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>15:30</td>
<td>Diede Maas</td>
<td>Evolution-mediated priority effects shape divergence of mussels in insular environments</td>
</tr>
<tr>
<td>15:45</td>
<td>Claire Golléty</td>
<td>Mangrove as habitat provider for macrofauna community: Abiotic versus biotic forcings</td>
</tr>
<tr>
<td>16:00</td>
<td>Frederic Sinniger</td>
<td>Overlapping coral diversity between shallow and mesophotic ecosystems: Perspectives on the Deep Reef Refugia Hypothesis in the North-West Pacific</td>
</tr>
<tr>
<td>16:15</td>
<td>Susana Carvalho</td>
<td>Exploring the unknown: Biodiversity patterns of Red Sea cryptic fauna across multiple spatial scales</td>
</tr>
<tr>
<td>16:30</td>
<td>James Reimer</td>
<td>Utilization of eDNA metabarcoding to assess coral reef health in Okinawa, Japan</td>
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</tbody>
</table>

### Theme: Climate change impacts on marine biodiversity
Session Moderator: Piero Calosi
Room: 519B

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<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
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</tr>
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<tbody>
<tr>
<td>15:30</td>
<td>Diana Madeira</td>
<td>Molecular Biodiversity under Ocean Warming: Proteomics and Fitness Data Provide Clues for a Better Understanding of Thermal Tolerance in Fish</td>
</tr>
<tr>
<td>15:45</td>
<td>Coleen Suckling</td>
<td>Metabolic responses of two species of brachyuran crustaceans to multiple-stressors</td>
</tr>
<tr>
<td>16:00</td>
<td>Coleen Suckling</td>
<td>A slow growing perspective on multi-generational responses to future change.</td>
</tr>
<tr>
<td>16:15</td>
<td>Susan G. Heaslip</td>
<td>Predicted climate driven shift in distribution of loggerhead sea turtles in Canadian waters</td>
</tr>
</tbody>
</table>

### Theme: Cumulative impacts of human activities
Session Moderator: Joanne Ellis
Room: 524A

<table>
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<tr>
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<tbody>
<tr>
<td>15:30</td>
<td>Clement Garcia</td>
<td>Predicting changes in the biologically-mediated seabed processes in response to chronic trawling disturbance</td>
</tr>
<tr>
<td>15:45</td>
<td>Dario Fiorentino</td>
<td>Multiscale spatial distribution of macrofauna response to fishery pressure</td>
</tr>
<tr>
<td>16:00</td>
<td>Nathan Grant</td>
<td>Species specific behavioural responses of glass sponges to suspended sediments</td>
</tr>
<tr>
<td>16:15</td>
<td>Simon Thrush</td>
<td>Detecting the potential for tipping points in marine sediments</td>
</tr>
</tbody>
</table>
**Theme: Ocean basin scale research: ATLAS, MERCES and SponGES**
Session Moderator: Ellen Kenchington
Room: 524B

<table>
<thead>
<tr>
<th>Time</th>
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<tbody>
<tr>
<td>15:30</td>
<td>Emyr 'Martyn' Roberts</td>
<td>Oceanographic setting and short-timescale environmental variability sustains an Arctic seamount sponge ground?</td>
</tr>
<tr>
<td>15:45</td>
<td>Lea-Anne Henry</td>
<td>Vulnerable marine ecosystems at the Tropic Seamount in the High Seas (NE Atlantic)</td>
</tr>
<tr>
<td>16:00</td>
<td>Ellen Kenchington</td>
<td>Biodiversity of epibenthic megafauna associated with sponge grounds formed by the glass sponge Vazella pourtalesi in Emerald Basin, Nova Scotia, Canada</td>
</tr>
<tr>
<td>16:15</td>
<td>Francisca C Carvalho</td>
<td>Rock sponges from the deep North Atlantic: diversity, distribution and evolution</td>
</tr>
<tr>
<td>16:30</td>
<td>Martina Milanese</td>
<td>Restoring Biodiversity in the Mediterranean Coralligenous: The MERCES Project</td>
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</tbody>
</table>

**Theme: Big vs smart data in ocean observation: Making the most of what's available**
Session Moderator: Mathieu Cusson
Room: 524C

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<tr>
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<tbody>
<tr>
<td>15:30</td>
<td>Nicolas Bailly</td>
<td>FishBase, SeaLifeBase, WoRMS in a cooperative framework: Towards an integrated network of marine biodiversity information systems for people and environment</td>
</tr>
<tr>
<td>15:45</td>
<td>Filippo Ferrario</td>
<td>Adding the “where” to the “who and what”. Considering the seascape can help the study of biodiversity and ecosystem functioning.</td>
</tr>
<tr>
<td>16:00</td>
<td>Lauren V. Weatherdon</td>
<td>Tracking shifting baselines on known marine and coastal habitat extents globally</td>
</tr>
<tr>
<td>16:15</td>
<td>Samuel Bosch</td>
<td>Fit for purpose? Identifying and resolving quality issues with marine biodiversity datasets in R</td>
</tr>
<tr>
<td>16:30</td>
<td>Miriam Brandt</td>
<td>Metabarcoding on the deep seafloor: Optimizing multigene approaches and sampling methods for large scale biodiversity assessments.</td>
</tr>
<tr>
<td>16:45</td>
<td>Adriana E. Radulovici</td>
<td>Integrating databases for molecular marine biodiversity assessments</td>
</tr>
</tbody>
</table>

**SUNDAY, MAY 13 – 17:00-19:00**

**Welcome Reception**
Poster Session, presented by Sentinelle Nord/Sentinel North and Polar Knowledge Canada (see pages 58-59)
Room: 517CD (Exhibition)
MONDAY, MAY 14 – 8:30-10:00

Plenary Session
Room: 517A

8:30
Linwood Pendleton
Keynote Speaker, featuring Robert Hodge (pianist), Anna Zivian (scientist-poet-conservationist)

Rethinking marine conservation science in three acts

MONDAY, MAY 14 – 10:00-10:30

Coffee Break
(Exhibition, Posters)
Room: 517CD

MONDAY, MAY 14 – 10:30-12:00

Theme: Ecologically & biologically significant areas
Session Moderator: Peter Lawton
Room: 518A

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Topic</th>
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<tbody>
<tr>
<td>10:30</td>
<td>Nadine Wells</td>
<td>Experiences in identifying, describing and modifying Ecologically and Biologically Significant Areas in Canada</td>
</tr>
<tr>
<td>10:45</td>
<td>Jose H Muelbert</td>
<td>Characterizing ecologically significant areas to evaluate marine conservation efforts in the South Brazilian Continental Shelf</td>
</tr>
<tr>
<td>11:00</td>
<td>Cherisse Du Preez</td>
<td>Working towards Canada’s largest MPA: Assessing the diverse EBSAs within the Pacific offshore</td>
</tr>
<tr>
<td>11:15</td>
<td>Travis Aten</td>
<td>Gaps in sectoral cooperation to protect high seas biodiversity: Case Studies from the Northwest Atlantic</td>
</tr>
<tr>
<td>11:30</td>
<td>Paul Somerfield</td>
<td>Solutions for ecosystem-level protection of oceans under climate change</td>
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Theme: Biodiversity discovery and prediction - Polar Frontiers, presented by Arctic Science Journal
Session Moderator: Evan Edinger
Room: 518B

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<tbody>
<tr>
<td>10:30</td>
<td>Valérie Cypihot</td>
<td>Evaluating structure and functions of benthic coastal habitats in Churchill, Manitoba</td>
</tr>
<tr>
<td>10:45</td>
<td>Marie Pierrejean</td>
<td>Biogenic structures in the Arctic: An ecosystem functioning hotspot?</td>
</tr>
<tr>
<td>11:00</td>
<td>Katarzyna Grzelak</td>
<td>The impact of sea ice regime on meiobenthic structure and function north of Svalbard</td>
</tr>
<tr>
<td>11:15</td>
<td>Jacqueline Grebmeier</td>
<td>Time series trends in benthic macrofaunal populations and coincident environmental drivers in the Pacific Arctic</td>
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</table>
### Theme: Biodiversity discovery and prediction - Deep-sea Frontiers
Session Moderator: Angelika Brandt  
Room: 518C

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<tbody>
<tr>
<td>10:30</td>
<td>Hronn Egilsdottir</td>
<td>Comparing diversity of bivalves and gastropods north and south of the Greenland-Iceland-Faroe ridge</td>
</tr>
<tr>
<td>10:45</td>
<td>Torben Riehl</td>
<td>Abyssal biodiversity – new data and ideas about the evolutionary origins</td>
</tr>
<tr>
<td>11:00</td>
<td>Lidia Lins</td>
<td>Do physical barriers hamper dispersal in the deep sea?</td>
</tr>
<tr>
<td>11:15</td>
<td>Hanieh Saeedi</td>
<td>Latitudinal and bathymetrical species richness gradients and its driving factors in the NW Pacific</td>
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### Theme: Climate change impacts on marine biodiversity
Session Moderator: Piero Calosi  
Room: 519B

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<tbody>
<tr>
<td>10:30</td>
<td>Antoine Dispas</td>
<td>Non-indigenous species in Canadian Arctic ports: Establishing baseline biodiversity of mesozooplankton in view of increased shipping and global warming</td>
</tr>
<tr>
<td>10:45</td>
<td>Marta Ronowicz</td>
<td>Varying feedback of different taxa to warming fjord</td>
</tr>
<tr>
<td>11:00</td>
<td>Dan Smale</td>
<td>Rapid climate-driven changes in the structure and functioning of global kelp forest ecosystems</td>
</tr>
<tr>
<td>11:15</td>
<td>Pippa Moore</td>
<td>Climate driven shifts in habitat-forming kelp abundances may result in disruption of an important facilitation cascade, impacting local biodiversity patterns</td>
</tr>
</tbody>
</table>

### Theme: Cumulative impacts of human activities
Session Moderator: Judi Hewitt  
Room: 524A

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<tbody>
<tr>
<td>10:30</td>
<td>Judi Hewitt</td>
<td>Monitoring to detect tipping points in marine biodiversity</td>
</tr>
<tr>
<td>10:45</td>
<td>Sarah Dudas</td>
<td>Do anthropogenically modified habitats support the same biodiversity?</td>
</tr>
<tr>
<td>11:00</td>
<td>Luiz Fernando Loureiro Fernandes</td>
<td>Impact on the copepod community structure in a coastal region after a mining dam disaster in the Southwestern Atlantic Ocean</td>
</tr>
<tr>
<td>11:15</td>
<td>Dibyendu Rakshit</td>
<td>An approach to analyzing spatial patterns of planktonic protist (tintinnid) in marine ecosystems: Environmental drivers and indicator of ecosystem changes</td>
</tr>
</tbody>
</table>

### Theme: Conservation strategies to protect species to ecosystems
Session Moderator: Kristina Gjerde  
Room: 524B

<table>
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<tr>
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<tbody>
<tr>
<td>10:30</td>
<td>Georgina O'Farrill</td>
<td>Supporting sustainable trade in sharks in North America</td>
</tr>
<tr>
<td>10:45</td>
<td>Lance Morgan</td>
<td>The Global Ocean Refuge System (GLORES) to improve MPA quality and safeguard marine biodiversity</td>
</tr>
<tr>
<td>11:00</td>
<td>Linda Nowlan</td>
<td>Linking science and law: Minimum protection standards for Canada's marine protected areas</td>
</tr>
<tr>
<td>11:15</td>
<td>Ross Jameson</td>
<td>Establishing Marine Protected Areas To Protect Canada’s Biodiversity: Successes, Challenges and Recommendations</td>
</tr>
<tr>
<td>11:30</td>
<td>Bill Wareham</td>
<td>Marine biodiversity conservation on Canada's Pacific Coast - what's working, what's needed in a changing ocean</td>
</tr>
<tr>
<td>11:45</td>
<td>Stephen Ban</td>
<td>From paper parks to real parks: Challenges in marine park governance</td>
</tr>
</tbody>
</table>
MONDAY, MAY 14 – 10:30-12:00 (CONTINUED)

Theme: Ecological insights from beta-diversity  
Session Moderator: Pierre Legendre  
Room: 524C

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Topic</th>
</tr>
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<tbody>
<tr>
<td>10:30</td>
<td>Lissette Victorero</td>
<td>Species replacement dominates megabenthos beta diversity in a remote</td>
</tr>
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<td>seamount setting</td>
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<tr>
<td>10:45</td>
<td>Clifton Nunnally</td>
<td>Patch dynamics of beta diversity across multiple spatial scales in the</td>
</tr>
<tr>
<td></td>
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<td>deep Gulf of Mexico macrofauna communities</td>
</tr>
<tr>
<td>11:00</td>
<td>Neil Maginnis</td>
<td>Dispersal limitation and environment structure coral assemblages</td>
</tr>
<tr>
<td>11:15</td>
<td>Tim Spaanheden Dencker</td>
<td>Beta-diversity along Pacific and Atlantic latitudinal gradients –</td>
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<tr>
<td></td>
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<td>using traits and taxonomy to detect community heterogeneity and</td>
</tr>
<tr>
<td></td>
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<td>ecotones</td>
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<tr>
<td>11:30</td>
<td>Noémie Leduc</td>
<td>Assessing the efficiency of eDNA metabarcoding for documenting</td>
</tr>
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<td></td>
<td>patterns of metazoan communities in the Arctic.</td>
</tr>
<tr>
<td>11:45</td>
<td>Ricardo Scrosati</td>
<td>Ecological determinants of intertidal recruitment and metacommunity</td>
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<tr>
<td></td>
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<td>structure on the Atlantic coast of Nova Scotia</td>
</tr>
</tbody>
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MONDAY, MAY 14 – 12:00-13:30

Lunch Break

(Exhibition, Posters)  
Room: 517CD

Mentoring Program Panel Discussions and Presentations*  
Room: 517CD  
12:00-12:30: Theme 1  
12:30-13:00: Theme 2  
13:00-13:30: Theme 3  
* Participation in panel discussions is reserved for Mentoring Program members; however, all conference delegates are welcome to attend.

MONDAY, MAY 14 – 13:30-15:00

Theme: Ecologically & biologically significant areas  
Session Moderator: Peter Lawton  
Room: 518A

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>13:30</td>
<td>Gavin Rishworth</td>
<td>Precambrian relics along South Africa’s coastline: Exploring the</td>
</tr>
<tr>
<td></td>
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<td>unique biota within living peritidal stromatolites</td>
</tr>
<tr>
<td>13:45</td>
<td>Stephanie Butera</td>
<td>Population dynamic between vulnerable coastal jaguars (panthera onca)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>and endangered green sea turtles (chelonia mydas) in Tortuguero</td>
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<tr>
<td></td>
<td></td>
<td>National Park, Costa Rica.</td>
</tr>
<tr>
<td>14:00</td>
<td>Emily Rubidge</td>
<td>Mapping biodiversity hotspots for marine conservation planning in</td>
</tr>
<tr>
<td></td>
<td></td>
<td>British Columbia, Canada.</td>
</tr>
<tr>
<td>14:15</td>
<td>Irawan Asaad</td>
<td>Geographic prioritization of marine biodiversity conservation in the</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Coral Triangle</td>
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</tbody>
</table>
### Theme: Sustained coastal and ocean observing systems
Session Moderators: Patricia Miloslavich or Eduardo Klein  
Room: 518C

<table>
<thead>
<tr>
<th>Time</th>
<th>Presenter</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>13:30</td>
<td>Frank Muller-Karger</td>
<td>Implementation of biological Essential Ocean Variables in a globally coordinated, multidisciplinary observing system</td>
</tr>
<tr>
<td>13:45</td>
<td>Paul G. Thomson</td>
<td>Trends in the abundance of picophytoplankton due to changes in boundary currents and marine heat waves in Australian coastal waters from IMOS National Reference Stations</td>
</tr>
<tr>
<td>14:00</td>
<td>Stace Beaulieu</td>
<td>Developing a Marine Biodiversity Virtual Laboratory to address challenges in integrating and analyzing data for plankton diversity</td>
</tr>
<tr>
<td>14:15</td>
<td>Frederick Whoriskey</td>
<td>Use of electronic telemetry for the conservation of aquatic organisms: Examples from the Ocean Tracking Network</td>
</tr>
<tr>
<td>14:30</td>
<td>Jose Muelbert</td>
<td>Long-term changes in diversity in a subtropical estuary in southern Brazil.</td>
</tr>
<tr>
<td>14:45</td>
<td>Rick Stuart-Smith</td>
<td>Extending capacity to monitor the world’s shallow marine biodiversity without sacrificing detail: Targeted participation citizen science</td>
</tr>
</tbody>
</table>

### Theme: Biodiversity indicators
Session Moderator: Henning von Nordheim  
Room: 519A

<table>
<thead>
<tr>
<th>Time</th>
<th>Presenter</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>13:30</td>
<td>Emma John</td>
<td>Sensitivity of global primary productivity to climate variability</td>
</tr>
<tr>
<td>13:45</td>
<td>Lucie Labbouz</td>
<td>Improving long-term coral reef monitoring in the Wider Caribbean region: Global Coral Reef Monitoring Network - Caribbean accomplishments</td>
</tr>
<tr>
<td>14:00</td>
<td>Oscar Bos</td>
<td>Biodiversity assessment of the greater North Sea</td>
</tr>
<tr>
<td>14:15</td>
<td>Alberto Serrano</td>
<td>Determining benthic habitats condition and impacts using a &quot;typical&quot; species composition indicator</td>
</tr>
<tr>
<td>14:30</td>
<td>Henrik Gislason</td>
<td>Macrobenthos biodiversity indicators and bottom trawling - individual density and species density revisited</td>
</tr>
</tbody>
</table>

### Theme: Climate change impacts on marine biodiversity
Session Moderator: Rémi Daigle  
Room: 519B

<table>
<thead>
<tr>
<th>Time</th>
<th>Presenter</th>
<th>Title</th>
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<tbody>
<tr>
<td>13:30</td>
<td>Lisa Mertens</td>
<td>From a natural laboratory: Comparing genetic patterns and thermal tolerance characterises marine species response to climate change</td>
</tr>
<tr>
<td>13:45</td>
<td>Ridouan Bani</td>
<td>Marine Metapopulations: traits-dependent effects of heterogeneity in dispersal</td>
</tr>
<tr>
<td>14:00</td>
<td>Pierre Legendre</td>
<td>Temporal beta diversity partitioning</td>
</tr>
<tr>
<td>14:15</td>
<td>Gloria Massamba N'Siala</td>
<td>Rare vs common species’ thermal niche: A test for the fate of marine benthic species in a warming ocean</td>
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</tbody>
</table>
MONDAY, MAY 14 – 13:30-15:00 (CONTINUED)

Theme: Cumulative impacts of human activities
Session Moderator: Joanne Ellis
Room: 524A

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Title</th>
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<tbody>
<tr>
<td>13:30</td>
<td>Stephanie Cimon</td>
<td>Site dependent effects of fragmentation and complexity on epifaunal communities within eelgrass beds</td>
</tr>
<tr>
<td>13:45</td>
<td>Francesca Rossi</td>
<td>Habitat degradation of an eelgrass bed variably affects epifaunal biodiversity</td>
</tr>
<tr>
<td>14:00</td>
<td>Lauren Yeager</td>
<td>Humans drive functional homogenization and weaken environmental control of reef fish faunas</td>
</tr>
<tr>
<td>14:15</td>
<td>Patricia Cardoso</td>
<td>Interactive effects of increased temperature, pCO2 and synthetic progestin levonorgestrel on the fitness and breeding of the amphipod Gammarus locusta</td>
</tr>
</tbody>
</table>

Theme: Conservation strategies to protect species to ecosystems
Session Moderator: Kit Kovacs
Room: 524B

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<tr>
<th>Time</th>
<th>Speaker</th>
<th>Title</th>
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<tbody>
<tr>
<td>13:30</td>
<td>Marco Andrello</td>
<td>Global mismatch between fishing dependency and larval supply from marine reserves</td>
</tr>
<tr>
<td>13:45</td>
<td>Sarah Friesen</td>
<td>A practical approach to incorporating potential connectivity of adult movement into marine protected area design with limited data</td>
</tr>
<tr>
<td>14:00</td>
<td>Arieanna Balbar</td>
<td>The use of connectivity in the design of networks of marine protected areas</td>
</tr>
<tr>
<td>14:15</td>
<td>Tianna Peller</td>
<td>Integrating ecosystem connectivity into the design of marine protected area networks</td>
</tr>
<tr>
<td>14:30</td>
<td>John Cristiani</td>
<td>Prioritizing seagrass meadows for biodiversity conservation based on landscape connectivity</td>
</tr>
<tr>
<td>14:45</td>
<td>Nicholas Jeffery</td>
<td>Integrating patterns of gene flow and least-cost pathways to evaluate corridors of connectivity in five marine species in the Northwest Atlantic</td>
</tr>
</tbody>
</table>

Theme: Analytical approaches in marine biodiversity science
Session Moderator: Pierre Pepin
Room: 524C

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<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>13:30</td>
<td>Edlin Guerra-Castro</td>
<td>An alternative protocol to estimate sample size at different spatial scales in studies of ecological communities</td>
</tr>
<tr>
<td>13:45</td>
<td>Aaron Hartmann</td>
<td>Metabolomic diversity and diversification on topical coral reefs</td>
</tr>
<tr>
<td>14:00</td>
<td>Shaun Wilkinson</td>
<td>Taxonomic identification of environmental DNA with informatic sequence classification trees</td>
</tr>
<tr>
<td>14:15</td>
<td>Alun Jones</td>
<td>Unstructured data for marine biodiversity monitoring: Temporal trends in the genus Conus from occupancy modelling</td>
</tr>
</tbody>
</table>

MONDAY, MAY 14 – 15:00-15:30

Coffee Break
(Exhibition, Posters)
Room: 517CD
### MONDAY, MAY 14 – 15:30-17:00

#### Theme: Ecologically & biologically significant areas
Session Moderator: Paul Somerfield  
Room: 518A

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>15:30</td>
<td>Denisse Fierro Arcos</td>
<td>Fish assemblages in Galapagos mangroves: Comparing composition between bioregions</td>
</tr>
<tr>
<td>15:45</td>
<td>Callum Mireault</td>
<td>Environmental characterization of two biogenic habitat species in the coastal waters of New Brunswick, Canada</td>
</tr>
<tr>
<td>16:00</td>
<td>Lars-Henrik Larsen</td>
<td>Safeguarding marine biodiversity in Norway: Use of citizen science and scientific mapping in a marine sanctuary candidate area</td>
</tr>
<tr>
<td>16:15</td>
<td>Stephanie K. Archer</td>
<td>Improving monitoring by understanding the patterns and drivers of biodiversity on Canada’s Glass Sponge Reefs</td>
</tr>
<tr>
<td>16:30</td>
<td>Joanna Strzelecki</td>
<td>Kimberley seabed biodiversity</td>
</tr>
</tbody>
</table>

#### Theme: Sustained coastal and ocean observing systems
Session Moderators: Patricia Miloslavich or Eduardo Klein  
Room: 518C

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>15:30</td>
<td>Nuno Simoes</td>
<td>BDMY Group: 10 years inventorying marine species diversity in remote coral reefs of the Campeche Bank, Yucatán, Gulf of Mexico</td>
</tr>
<tr>
<td>15:45</td>
<td>Lélis Carlos-Júnior</td>
<td>Assessing health status of corals at a tropical marginal reef site through bleaching and decadal change in population parameters</td>
</tr>
<tr>
<td>16:00</td>
<td>Hilmar Hinz</td>
<td>Sustaining long-term observations using citizen science to detect coral reef community changes in remote areas</td>
</tr>
<tr>
<td>16:15</td>
<td>Patricia Miloslavich</td>
<td>Roadmap for strengthening and coordinating global coral reef monitoring</td>
</tr>
<tr>
<td>16:30</td>
<td>Enrique Montes</td>
<td>Pole-to-Pole Marine Biodiversity Observation Network (MBON) of the Americas: Building a community</td>
</tr>
<tr>
<td>16:45</td>
<td>Sky Bristol</td>
<td>Integrating long term global biological datasets to assess status and trends in marine biodiversity</td>
</tr>
</tbody>
</table>

#### Theme: Biodiversity indicators
Session Moderator: Henning von Nordheim  
Room: 519A

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Title</th>
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<tbody>
<tr>
<td>15:30</td>
<td>Ewa Siwicka</td>
<td>How good are species at multitasking if we disturb them? Multifunctionality and ecosystem services in the benthic ecosystems of New Zealand.</td>
</tr>
<tr>
<td>15:45</td>
<td>Loubna Boutahar</td>
<td>The use of benthic macroinvertebrates to evaluate the environmental quality of Oualidia lagoon, Morocco</td>
</tr>
<tr>
<td>16:00</td>
<td>P. Laxmilatha</td>
<td>Integrative taxonomy reveals that all the phenotype variations are not underpinned by genome in Conidae (Gastropoda, Mollusca)</td>
</tr>
<tr>
<td>16:15</td>
<td>Natleen Govender</td>
<td>Genetic diversity of the mysid Mesopodopsis africana along the KwaZulu-Natal coast, South Africa using microsatellite markers</td>
</tr>
<tr>
<td>16:30</td>
<td>Andy Davies</td>
<td>Unravelling the ‘virtual’ ecology of the last great wilderness on earth</td>
</tr>
<tr>
<td>16:45</td>
<td>Lyne Morissette</td>
<td>Assessing the trophic role of sharks in models and marine ecosystems</td>
</tr>
</tbody>
</table>
### Theme: Approaches to integrated assessments for fisheries & ecosystem
**Session Moderator:** Nils Hammer  
**Room:** 524A

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<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Title</th>
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<tbody>
<tr>
<td>15:30</td>
<td>Valerie Allain</td>
<td>Ecosystem approach to monitoring pelagic fisheries in the western and central Pacific Ocean</td>
</tr>
<tr>
<td>15:45</td>
<td>Charlotte Moritz</td>
<td>Signatures of the collapse and incipient recovery of an overexploited marine ecosystem.</td>
</tr>
<tr>
<td>16:00</td>
<td>Nabeel Alikunhi</td>
<td>Trap fisheries in Saudi Arabian Red Sea: Stock, bycatch and ecosystem impact assessments</td>
</tr>
<tr>
<td>16:15</td>
<td>Maria Lourdes Palomares</td>
<td>Building bridges between biodiversity information systems and ecosystem simulation models</td>
</tr>
<tr>
<td>16:30</td>
<td>Jessika Woroniak</td>
<td>Trends in Global Fishing Effort (1950-2014): The impact of small-scale fisheries</td>
</tr>
</tbody>
</table>

### Theme: Conservation strategies to protect species to ecosystems
**Session Moderator:** Ellen Kenchington  
**Room:** 524B

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<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Title</th>
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<tbody>
<tr>
<td>15:30</td>
<td>Vanessa Arranz-Martinez</td>
<td>Connectivity among marine communities: A multi-species approach using New Zealand coastal species</td>
</tr>
<tr>
<td>15:45</td>
<td>Marília Bueno</td>
<td>Colonization of new habitats is affected by age and lifestyle in amphipods</td>
</tr>
<tr>
<td>16:00</td>
<td>Déborah Benkort</td>
<td>Modelled emergent productivity areas on dominant krill species depending on their physiology and swimming behaviour in Gulf of St. Lawrence</td>
</tr>
<tr>
<td>16:15</td>
<td>Beatrice Proudfoot</td>
<td>Beyond representativity: Integrating benthoscape structure, connectivity and representativity into marine protected area design</td>
</tr>
<tr>
<td>16:30</td>
<td>Myriam Lacharite</td>
<td>Monitoring biodiversity in offshore marine protected areas: A habitat mapping approach</td>
</tr>
<tr>
<td>16:45</td>
<td>Sabine Jessen</td>
<td>Protecting Canada’s Sea of Glass: Using science and policy to protect Canada’s ancient and unique glass sponge reefs</td>
</tr>
</tbody>
</table>

### Theme: Reconciling observations in space & time
**Session Moderators:** Elise Lacoste and/or Anaïs Lacousière-Roussel  
**Room:** 524C

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<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Title</th>
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<tbody>
<tr>
<td>15:30</td>
<td>Aurélie Foveau</td>
<td>10 years of monitoring in the context of the EU Water Framework Directive (English Channel and Atlantic water bodies)</td>
</tr>
<tr>
<td>15:45</td>
<td>Jorge Cortés</td>
<td>BioMar-ACG: A successful partnership to explore marine biodiversity</td>
</tr>
<tr>
<td>16:00</td>
<td>Matthew Whalen</td>
<td>The 2017 Hakai-MarineGEO BioBlitz: A new gold standard approach to inventorying and understanding marine biodiversity</td>
</tr>
<tr>
<td>16:15</td>
<td>Donna Gibbs</td>
<td>Cataloguing and monitoring changes in Arctic marine biodiversity through scuba diving</td>
</tr>
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</table>
MONDAY, MAY 14 – 15:30-17:30

Theme: State of the Arctic Marine Biodiversity Report
Session Moderators: Sara Logan
Room: 518B

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Topic</th>
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<tbody>
<tr>
<td>15:30</td>
<td>Sara Longan</td>
<td>Introduction to the State of the Arctic Marine Biodiversity Report (SAMBR) and summary findings</td>
</tr>
<tr>
<td>15:45</td>
<td>Haakon Hop</td>
<td>Sea ice biota: Excerpts from the State of the Arctic Marine Biodiversity Report by the Sea Ice Biota Expert Network/CBMP</td>
</tr>
<tr>
<td>16:00</td>
<td>Russell R. Hopcroft</td>
<td>Plankton Expert Network: Findings and recommendations from the Circumpolar Biodiversity Monitoring Program’s State of the Arctic Marine Biodiversity Report</td>
</tr>
<tr>
<td>16:30</td>
<td>Kevin J. Hedges</td>
<td>Fishes Expert Network: Findings and recommendations from the Circumpolar Biodiversity Monitoring Program’s State of the Arctic Marine Biodiversity Report</td>
</tr>
<tr>
<td>16:45</td>
<td>Grant Gilchrist</td>
<td>Seabird Expert Network (CBird): Findings and recommendations from the Circumpolar Biodiversity Monitoring Program’s State of the Arctic Marine Biodiversity Report</td>
</tr>
<tr>
<td>17:00</td>
<td>Kit M. Kovacs</td>
<td>Circumpolar Biodiversity Monitoring Program’s State of the Arctic Marine Biodiversity Report - Findings and recommendations regarding marine mammals</td>
</tr>
</tbody>
</table>

Theme: Deep-Ocean Stewardship Initiative
Session Moderator: Elva Escobar
Room: 519B

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<thead>
<tr>
<th>Time</th>
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<th>Topic</th>
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<tbody>
<tr>
<td>15:30</td>
<td>Torsten Thiele</td>
<td>Innovative finance to deliver adequate marine biodiversity knowledge for high seas and deep ocean governance beyond national jurisdiction</td>
</tr>
<tr>
<td>15:45</td>
<td>Steven Auscavitch</td>
<td>What is being protected in the Phoenix Islands Protected Area? Conserving deep-sea biodiversity, habitat, and cultural resources in the remote Pacific Ocean</td>
</tr>
<tr>
<td>16:00</td>
<td>Kristina Gjerde</td>
<td>Mining the deep sea: The multiple roles of science, economics and international law</td>
</tr>
<tr>
<td>16:15</td>
<td>Amber Cobley</td>
<td>Deep-sea mining: Developments in regulations and environmental management issues in the Area</td>
</tr>
<tr>
<td>16:30</td>
<td>Elisabetta Menini</td>
<td>Marine Genetic Resources in Area Beyond National Jurisdiction (ABNJ): Policy review and analysis of area-based tools in relation to Bioprospecting</td>
</tr>
<tr>
<td>16:45</td>
<td>Sabine Zajderman</td>
<td>Marine genetic resources, the Nagoya Protocol and the Law of the Sea</td>
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</tbody>
</table>

MONDAY, MAY 14 – 17:00-19:00

Poster Session, presented by Sentinelle Nord/Sentinel North and Polar Knowledge Canada
(see pages 59-61)
Room: 517CD (Exhibition)
**TUESDAY, MAY 15 – 8:30-10:00**

**Plenary Session**  
Room: 517A

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Title</th>
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<tbody>
<tr>
<td>8:30</td>
<td>Emma Johnston</td>
<td>Time, Time, Time: what has become of you? How humans are speeding up</td>
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<td></td>
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<td>the ecology of nearshore systems and what it means for biodiversity</td>
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</tbody>
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**TUESDAY, MAY 15 – 8:30-10:00**

**Coffee Break**  
(Exhibition, Posters)  
Room: 517CD

**TUESDAY, MAY 15 – 10:30-12:00**

**Theme: Biodiversity & ecosystem function in the real world**  
Session Moderator: Lyne Morrisette  
Room: 518B

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Title</th>
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<tbody>
<tr>
<td>10:30</td>
<td>Alf Norkko</td>
<td>Quantifying the role of benthic fauna for coastal nutrient cycling: a</td>
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<td>cross-system comparison of real-world B-EF relationships</td>
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<tr>
<td>10:45</td>
<td>J. Emmett Duffy</td>
<td>Ocean Bitemap: A global, collaborative analysis linking biodiversity</td>
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<td>and marine predation intensity using standardized methods</td>
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<tr>
<td>11:00</td>
<td>Aurore Maureaud</td>
<td>Understanding the existence and shape of the biodiversity-ecosystem</td>
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<td>functioning using large-scale observational data across marine</td>
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<tr>
<td>11:15</td>
<td>Jonathan Lefcheck</td>
<td>High species richness enhances cover of a critical coastal habitat:</td>
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<tr>
<td></td>
<td></td>
<td>Insight and mechanisms from 30 years of monitoring in Chesapeake Bay</td>
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<tr>
<td>11:30</td>
<td>Marta Gluchowska</td>
<td>Taxonomical and functional diversity in zooplankton communities from</td>
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<tr>
<td></td>
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<td>boreal to arctic waters</td>
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**Theme: Ecological traits & ecosystem function**  
Session Moderator: Jasmin Godbold  
Room: 518C

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Title</th>
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<tbody>
<tr>
<td>10:30</td>
<td>Rebecca Gladstone-Gallagher</td>
<td>Linking functional redundancy to spatio-temporal variability in</td>
</tr>
<tr>
<td></td>
<td></td>
<td>communities: Multiple scales of biological organisation confer resilience</td>
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<tr>
<td>10:45</td>
<td>Aurélien Boyé</td>
<td>Drivers of polychaetes functional α- and β-diversity at regional</td>
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<td></td>
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<td>scale: Disentangling the role of biogenic habitats and environmental</td>
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<td>variability</td>
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<tr>
<td>11:00</td>
<td>Rachel Hale</td>
<td>Role of spatial and temporal heterogeneity in moderating temperate</td>
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<tr>
<td></td>
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<td>shelf sea carbon and macronutrient stocks</td>
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<tr>
<td>11:15</td>
<td>Lise Bacouillard</td>
<td>Long-term changes in the species and functional diversity of a fine</td>
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<tr>
<td></td>
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<td>sand macrobenthic community in the English Channel</td>
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<tr>
<td>11:30</td>
<td>Lauren Sutton</td>
<td>A comparison in benthic functional diversity of two Alaskan Arctic</td>
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<td></td>
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<td>shelf systems</td>
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TUESDAY, MAY 15 – 10:30-12:00 (CONTINUED)

Theme: Invasions & the Anthropocene 'natural'
Session Moderator: Gil Rilov
Room: 519A

<table>
<thead>
<tr>
<th>Time</th>
<th>Name</th>
<th>Topic</th>
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</thead>
<tbody>
<tr>
<td>10:30</td>
<td>Jean-Philippe Pezy</td>
<td>Non-native species: A biodiversity increase</td>
</tr>
<tr>
<td>10:45</td>
<td>Jesica Goldsmit</td>
<td>What and where? Identifying high-risk aquatic invasive species and hotspots of suitable habitat in the Arctic</td>
</tr>
<tr>
<td>11:00</td>
<td>Anthony Sardain</td>
<td>A changing world: The emerging global shipping network, climate change, and the future of biological invasions</td>
</tr>
<tr>
<td>11:15</td>
<td>Paul Czechowski</td>
<td>Advancing global monitoring of ship borne invasive species through streamlined metabarcoding</td>
</tr>
</tbody>
</table>

Theme: Plastic marine debris in the Anthropocene
Session Moderator: Chris Cameron
Room: 519B

<table>
<thead>
<tr>
<th>Time</th>
<th>Name</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:30</td>
<td>Julian von Borries</td>
<td>A novel, highly efficient method for the separation of plastic particles in sediments of aquatic environments</td>
</tr>
<tr>
<td>10:45</td>
<td>Lauren M. Howell</td>
<td>Are Arctic zooplankton ingesting microplastics?</td>
</tr>
<tr>
<td>11:00</td>
<td>Xiaoxia Sun</td>
<td>Retention of microplastics in zooplankton from the East China Sea</td>
</tr>
<tr>
<td>11:15</td>
<td>Kevin Mindiola</td>
<td>Spatial distribution, volume and abundance of small plastic debris on inter and sub-tidal sandy environments of Galapagos Islands (Ecuador)</td>
</tr>
</tbody>
</table>

Theme: High tech systems for marine conservation strategies
Session Moderator: Christos Arvanitidis
Room: 524C

<table>
<thead>
<tr>
<th>Time</th>
<th>Name</th>
<th>Topic</th>
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</thead>
<tbody>
<tr>
<td>10:30</td>
<td>Rachel Przeslawski</td>
<td>Applying geoscience to biodiversity monitoring: Case studies from an Australian marine park</td>
</tr>
<tr>
<td>10:45</td>
<td>Francis Juanes</td>
<td>The use of visual and acoustic sensors for early detection of invasions</td>
</tr>
<tr>
<td>11:00</td>
<td>Olivia Caretti</td>
<td>Using passive acoustics for long-term, continuous measurements of fish biodiversity in estuarine systems</td>
</tr>
<tr>
<td>11:15</td>
<td>Kayelyn Simmons</td>
<td>Evaluating the efficacy of Florida Keys management zones: Integrating underwater soundscapes &amp; photogrammetric surveys to characterize reef fish biodiversity and habitat complexity</td>
</tr>
<tr>
<td>11:30</td>
<td>John Moloney</td>
<td>Mitigation strategies for marine mammals during Dublin Port’s Alexandria Basin Redevelopment Project, using a novel real-time acoustic monitoring system</td>
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<tr>
<td>11:45</td>
<td>Ulrike Pfreundt</td>
<td>How to harness Blockchain technology for marine conservation</td>
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</table>

TUESDAY, MAY 15 – 12:00-13:30

Lunch Break

(Exhibition, Posters)
Room: 517CD
Mentoring Program Panel Discussions and Presentations*
Room: 517CD
12:00-12:30: Theme 4
12:30-13:00: Theme 5
13:00-13:30: Theme 6
* Participation in panel discussions is reserved for Mentoring Program members; however, all conference delegates are welcome to attend.

Theme: Biodiversity restoration strategies for conservation
Session Moderator: Cristina Gambi
Room: 518A

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
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<tbody>
<tr>
<td>13:30</td>
<td>Cristina Gambi</td>
<td>Restoration actions in marine ecosystems: a global analysis</td>
</tr>
<tr>
<td>13:45</td>
<td>J. Anne Shaffer</td>
<td>Nearshore functional diversity shifts from large-scale dam removals</td>
</tr>
<tr>
<td>14:00</td>
<td>Emily Higgins</td>
<td>Colonization of sessile benthic invertebrates on tropical artificial reefs</td>
</tr>
<tr>
<td>14:15</td>
<td>Teri O'Meara</td>
<td>Mussels versus mud: Using mussels to restore ecosystem function across turbidity gradients</td>
</tr>
<tr>
<td>14:30</td>
<td>Alice E Lown</td>
<td>Seasonal and density dependent associations between the European flat oyster and estuarine biodiversity in the Southern North sea</td>
</tr>
<tr>
<td>14:45</td>
<td>Henning von Nordheim</td>
<td>Native oyster restoration in the German Bight, North Sea: Oyster beds and reefs and its biodiversity</td>
</tr>
</tbody>
</table>

Theme: Biodiversity & ecosystem function in the real world
Session Moderator: Adriana Radulovici
Room: 518B

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Title of Presentation</th>
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</thead>
<tbody>
<tr>
<td>13:30</td>
<td>Peter Schmidmayer</td>
<td>The role of habitat-forming species on intertidal communities across a gradient of multiple environmental stressors</td>
</tr>
<tr>
<td>13:45</td>
<td>Johanna Gammal</td>
<td>Environmental context mediates biodiversity-ecosystem functioning relationships in coastal soft-sediment habitats</td>
</tr>
<tr>
<td>14:00</td>
<td>Tarn Drylie</td>
<td>Does calcium carbonate alter the functional resilience of coastal sediments to eutrophication-induced acidification?</td>
</tr>
<tr>
<td>14:15</td>
<td>Rénauld Belley</td>
<td>Roles of biodiversity and environment in seafloor ecosystem functioning</td>
</tr>
<tr>
<td>14:30</td>
<td>Conrad Pilditch</td>
<td>Macrofaunal functional diversity provides resilience to nutrient enrichment in coastal sediments</td>
</tr>
</tbody>
</table>
### Theme: Ecological traits & ecosystem function
Session Moderator: Jasmin Godbold
Room: 518C

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
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<tbody>
<tr>
<td>13:30</td>
<td>Renate Degen</td>
<td>The Arctic Traits Database</td>
</tr>
<tr>
<td>13:45</td>
<td>Olivier Gauthier</td>
<td>Biological traits for benthic community ecology: Impact of trait definition and coding.</td>
</tr>
<tr>
<td>14:00</td>
<td>Thomas Trott</td>
<td>Traits matter: When rarity means more than abundance to functional diversity</td>
</tr>
<tr>
<td>14:15</td>
<td>Esther Beukhof</td>
<td>Using ecological traits of marine fish to detect responses to environmental change: Which traits to choose?</td>
</tr>
<tr>
<td>14:30</td>
<td>Maria Włodarska-Kowalczuk</td>
<td>Is trophic diversity decoupled from taxonomic and functional diversity? Isotope niche traits in Arctic benthic consumers</td>
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</tbody>
</table>

### Theme: Invasions & the Anthropocene 'natural'
Session Moderator: Gil Rilov
Room: 519A

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<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
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<tbody>
<tr>
<td>13:30</td>
<td>Heather Hawk</td>
<td>Beta-diversity and the spread of invasive species: Determining relevant spatial scales for measuring the impact of harbors on nearshore biodiversity</td>
</tr>
<tr>
<td>13:45</td>
<td>Tasman Crowe</td>
<td>Optimising regimes of multiple stressors to control invasive tunicates Didemnum vexillum</td>
</tr>
<tr>
<td>14:00</td>
<td>Jan Steger</td>
<td>Lessepsian invaders reshape soft substrate assemblages on the Israeli Mediterranean shelf</td>
</tr>
<tr>
<td>14:15</td>
<td>Paolo G. Albano</td>
<td>Historical ecology of the invasion of the bivalve Anadara transversa in the northern Adriatic Sea</td>
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</tbody>
</table>

### Theme: Plastic marine debris in the Anthropocene
Session Moderator: Chris Cameron
Room: 519B

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<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Title</th>
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<tbody>
<tr>
<td>13:30</td>
<td>Ruth Barnich</td>
<td>Microplastic adhering to marine invertebrates - First observations and discussion of potential effects</td>
</tr>
<tr>
<td>13:45</td>
<td>Suchana Chavanich</td>
<td>Plastic marine debris in the upper Gulf of Thailand: Impact and management</td>
</tr>
<tr>
<td>14:00</td>
<td>Jessica Merrett</td>
<td>Are beach amphipods “hopping mad” about butts on beaches in Sydney?</td>
</tr>
<tr>
<td>14:15</td>
<td>Kaisar Akhir</td>
<td>Sustainostic Nusantara: Managing Marine Plastic Debris for Sustainable Tourism in the ‘New Bali’ of Indonesia</td>
</tr>
</tbody>
</table>
### Theme: Approaches to integrated assessments for fisheries & ecosystem
Session Moderator: Pierre Pepin
Room: 524A

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<tr>
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<tbody>
<tr>
<td>13:30</td>
<td>Myriam Khalfallah</td>
<td>Making the most of what is available in data-poor countries: Catch Reconstruction, biodiversity and impacts of anthropogenic activities</td>
</tr>
<tr>
<td>13:45</td>
<td>Frank Muller-Karger</td>
<td>Patterns and drivers of Demersal Reef Fish biodiversity in the Florida Keys National Marine Sanctuary from 1999-2016</td>
</tr>
<tr>
<td>14:00</td>
<td>Song Sun</td>
<td>Ecosystem based fishery management</td>
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<tr>
<td>14:15</td>
<td>Nicolas Le Corre</td>
<td>Assessing connectivity patterns within Newfoundland and Labrador shrimp population</td>
</tr>
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<td>14:30</td>
<td>Paul Somerfield</td>
<td>Data, models and ecosystem services: The Marine Ecosystems Research Programme</td>
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### Theme: Conservation strategies to protect species to ecosystems
Session Moderator: Mark Costello
Room: 524B

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<tbody>
<tr>
<td>13:30</td>
<td>Michael Melnychuk</td>
<td>Worldwide trends in abundance of fished species relative to fishery management objectives</td>
</tr>
<tr>
<td>13:45</td>
<td>Susanna Fuller</td>
<td>Building the SafetyNet: Recovering Atlantic Canada's fisheries in the context of climate change and an ecosystem approach</td>
</tr>
<tr>
<td>14:00</td>
<td>George Shillinger</td>
<td>Development of a dynamic management tool to aid in the bycatch reduction and recovery of the critically endangered Eastern Pacific leatherback turtle</td>
</tr>
<tr>
<td>14:15</td>
<td>Piero Calosi</td>
<td>Assisted Evolution as a tool to promote conservation in a changing ocean</td>
</tr>
<tr>
<td>14:30</td>
<td>Elena Couce</td>
<td>Benthic diversity in the North Sea: evidence for shifting baselines?</td>
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### Theme: A tribute to Dick Haedrich’s lifetime contributions on ocean life, biodiversity and conservation (1)
Session Moderators: Paul Snelgrove and Evan Edinger (convenors)
Room: 524C

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<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
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<tbody>
<tr>
<td>13:30</td>
<td>Haedrich Family</td>
<td>A Greeting from the Haedrich Family</td>
</tr>
<tr>
<td>13:45</td>
<td>Verena Tunniccliffe</td>
<td>Predicting biodiversity hotspots at hydrothermal vents in the context of mining</td>
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<tr>
<td>14:00</td>
<td>Gilbert Rowe</td>
<td>Productivity controls macrofauna diversity in the deep northern Gulf of Mexico</td>
</tr>
<tr>
<td>14:15</td>
<td>Evan Edinger</td>
<td>Biodiversity, biogeography and conservation of cold-water corals and their associated biota in waters of Newfoundland, Labrador, and the Eastern Canadian Arctic.</td>
</tr>
<tr>
<td>14:30</td>
<td>Mathieu Cusson</td>
<td>Canada’s Three Oceans of Seafloor Biodiversity: patterns, hotspots, and potential drivers</td>
</tr>
<tr>
<td>14:45</td>
<td>Krista Baker</td>
<td>Cephalopod diversity and abundance off Newfoundland and Labrador: Changing patterns and future research priorities</td>
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</tbody>
</table>
**TUESDAY, MAY 15 – 15:00-15:30**

Coffee Break
(Exhibition, Posters)
Room: 517CD

**TUESDAY, MAY 15 – 15:30-17:00**

**Theme: Biodiversity restoration strategies for conservation**
Session Moderator: Cristina Gambi
Room: 518A

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<tbody>
<tr>
<td>15:30</td>
<td>Wing Yan Chan</td>
<td>Enhancing coral climate resilience via interspecific hybridization: fitness, microbial community composition and gene regulation of hybrid versus purebred acroporid corals</td>
</tr>
<tr>
<td>15:45</td>
<td>Minlee Yap</td>
<td>Coral reef restoration using sexual reproduction in North Sulawesi, Indonesia</td>
</tr>
<tr>
<td>16:00</td>
<td>Mark Botton</td>
<td>Horseshoe crabs as a flagship species for the conservation and restoration of estuarine, beach and mangrove Habitats</td>
</tr>
<tr>
<td>16:15</td>
<td>Kathleen MacGregor</td>
<td>Kelp bed restoration in the Gulf of Saint Lawrence: No easy task!</td>
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</table>

**Theme: Biodiversity & ecosystem function in the real world**
Session Moderator: Lyne Morrisette
Room: 518B

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<thead>
<tr>
<th>Time</th>
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<tbody>
<tr>
<td>15:30</td>
<td>Charlotte Angove</td>
<td>Single versus joint effects of aquatic plants and filamentous drift algae on macroinvertebrate communities</td>
</tr>
<tr>
<td>15:45</td>
<td>Douglas Rasher</td>
<td>Biodiversity enhances herbivory on Caribbean coral reefs through multiple mechanisms</td>
</tr>
<tr>
<td>16:00</td>
<td>Jean-Claude Dauvin</td>
<td>High diversified benthic habitats in a tidal Mediterranean sub-tropical environment: the case of the Gulf of Gabès (Tunisia)</td>
</tr>
<tr>
<td>16:15</td>
<td>Henrike Andresen</td>
<td>Relating productivity patterns to functional diversity of North Sea macrofauna – knowledge increase by functional focus?</td>
</tr>
<tr>
<td>16:30</td>
<td>Kazuaki Tadokoro</td>
<td>Biodiversity and hot spot of diatom (bacillariophyceae) community in the western North Pacific Ocean</td>
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</tbody>
</table>

**Theme: Ecological traits & ecosystem function**
Session Moderator: Ellen Kenchington
Room: 518C

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<tr>
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<tbody>
<tr>
<td>15:30</td>
<td>Clara F. Rodrigues</td>
<td>Active or not? What microbial assemblages say about pockmarks located at Estremadura Spur (NE Atlantic)</td>
</tr>
<tr>
<td>15:45</td>
<td>Phillip Turner</td>
<td>Contribution of rare taxa to the functional diversity of Manus Basin hydrothermal vents</td>
</tr>
<tr>
<td>16:00</td>
<td>Camilla Cassidy</td>
<td>Community context shapes intraspecific trait expression, variation and ecosystem function</td>
</tr>
<tr>
<td>16:15</td>
<td>Gert Van Hoey</td>
<td>Diversity and biological trait analysis of soft-bottom macrobenthic communities in the Belgian part of the North Sea</td>
</tr>
</tbody>
</table>
### TUESDAY, MAY 15 – 15:30-17:00 (CONTINUED)

**Theme: Invasions & the Anthropocene 'natural'**  
Session Moderator: Chris McKindsey  
Room: 519A

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<thead>
<tr>
<th>Time</th>
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<tbody>
<tr>
<td>15:30</td>
<td>Sarah Joy Bittick</td>
<td>Mechanisms of increased biomass accumulation and community impacts of a brown macroalga on a South Pacific coral reef</td>
</tr>
<tr>
<td>15:45</td>
<td>Isabelle M Cote</td>
<td>The sound of silence: Dual demographic impact of invasive lionfish on native Caribbean reef fishes</td>
</tr>
<tr>
<td>16:00</td>
<td>Hawis Madduppa</td>
<td>Revealing the outbreak of invasive species of sponge and ascidian on Indonesian coral reefs using genetic approach</td>
</tr>
<tr>
<td>16:15</td>
<td>Jorge Santamaria</td>
<td>A little can be enough. Native fish from the Western Mediterranean Sea can act as a control agent for the invasive alga Caulerpa cylindracea</td>
</tr>
</tbody>
</table>

**Theme: Approaches to integrated assessments for fisheries & ecosystem**  
Session Moderator: Pierre Pepin  
Room: 524A

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<tr>
<td>15:30</td>
<td>Ciaran McLaverty</td>
<td>The effect of trawling intensity on taxonomic and functional diversity in benthic communities: Does size matter?</td>
</tr>
<tr>
<td>15:45</td>
<td>Gert van Hoey</td>
<td>Integrative, regional assessment of bottom trawling impact on benthic habitats in the east Atlantic.</td>
</tr>
<tr>
<td>16:00</td>
<td>Élise Lacoste</td>
<td>Linking benthic diversity and ecosystem functioning in sediment enriched by different levels of mussel biodeposition</td>
</tr>
<tr>
<td>16:15</td>
<td>Hilmar Hinz</td>
<td>Benthic vulnerability to trawling and its consequences for ecosystem functions: A traits based approach</td>
</tr>
<tr>
<td>16:30</td>
<td>Aurore Raoux</td>
<td>Ecological network analysis with benthic indices to assess ecological and functional status of soft-bottom subtidal habitat in the English Channel</td>
</tr>
</tbody>
</table>

**Theme: Conservation strategies to protect species to ecosystems**  
Session Moderator: Mark Costello  
Room: 524B

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<tr>
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<tbody>
<tr>
<td>15:30</td>
<td>Lyne Morissette</td>
<td>The Great Whales Journey Project: Ocean conservation through whale research and education, from North to South</td>
</tr>
<tr>
<td>15:45</td>
<td>Dinusha Rasanjalee Menike Jayathilake</td>
<td>Mapping marine biomes of the world</td>
</tr>
<tr>
<td>16:00</td>
<td>Sarah de Mendonça</td>
<td>Incorporating spatial analyses into conservation and monitoring of deep-sea megafauna in Marine Protected Areas (MPAs)</td>
</tr>
<tr>
<td>16:15</td>
<td>Yidan Xu</td>
<td>Saving Endangered Bluefin Tuna from Extinction: The Efforts of CBCGDF</td>
</tr>
<tr>
<td>16:30</td>
<td>Danielle Giroux</td>
<td>Potential Benefits of Marine Protected Areas for Fisheries in Temperate Climate under Climate Change: The Case of Magdalen Islands, Québec</td>
</tr>
<tr>
<td>16:45</td>
<td>Nadia Ménard</td>
<td>Challenges and opportunities for cetacean habitat conservation in a marine protected area: lessons learned from the Saguenay–St. Lawrence Marine Park</td>
</tr>
</tbody>
</table>
TUESDAY, MAY 15 – 15:30-17:30

Theme: The Global Ocean Biodiversity Initiative
Session Moderator: David Johnson
Room: 519B

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<tbody>
<tr>
<td>15:30</td>
<td>David Johnson</td>
<td>The Global Ocean Biodiversity Initiative: Celebrating a decade of science for marine biodiversity conservation</td>
</tr>
<tr>
<td>15:45</td>
<td>Jihyun Lee</td>
<td>The Global Ocean Biodiversity Initiative</td>
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<tr>
<td>16:00</td>
<td>Henning von Nordheim</td>
<td>The Global Ocean Biodiversity Initiative</td>
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<tr>
<td>16:15</td>
<td>Lyle Glowka</td>
<td>The Global Ocean Biodiversity Initiative</td>
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<tr>
<td>16:30</td>
<td>Kristina Gjerde</td>
<td>The Global Ocean Biodiversity Initiative</td>
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<tr>
<td>16:45</td>
<td>Giuseppe Notarbartolo di Sciara</td>
<td>Supporting marine conservation through the identification of Important Marine Mammal Areas (IMMAs).</td>
</tr>
<tr>
<td>17:00</td>
<td>Daniel Dunn</td>
<td>Towards a system to describe Migratory Connectivity in the Ocean (MiCO)</td>
</tr>
<tr>
<td>17:15</td>
<td>Cindy Van Dover</td>
<td>Connectivity and the design of networks of no-mine areas on the Mid-Atlantic Ridge</td>
</tr>
</tbody>
</table>

Theme: A tribute to Dick Haedrich’s lifetime contributions on ocean life, biodiversity and conservation (2)
Session Moderators: Paul Snelgrove and Evan Edinger (convenors)
Room: 524C

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Title</th>
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<tbody>
<tr>
<td>15:30</td>
<td>Patricia Gallaugher</td>
<td>Linking science with sound policy and outreach for protection of marine biodiversity and conservation</td>
</tr>
<tr>
<td>15:45</td>
<td>Peter Lawton</td>
<td>An Odyssey through Canada’s first Biodiversity Discovery Corridor</td>
</tr>
<tr>
<td>16:00</td>
<td>Paul Snelgrove</td>
<td>Sustaining Marine Biodiversity in Canada and Globally: A Tribute to Dick Haedrich</td>
</tr>
<tr>
<td>16:15</td>
<td>Haedrich Family</td>
<td>Recollections by Colleagues, Family and Friends</td>
</tr>
<tr>
<td>16:30</td>
<td>Haedrich Family</td>
<td>Recollections by Colleagues, Family and Friends</td>
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<td>16:45</td>
<td>Haedrich Family</td>
<td>Recollections by Colleagues, Family and Friends</td>
</tr>
</tbody>
</table>

TUESDAY, MAY 15 – 17:00-18:00

Poster Session, presented by Sentinelle Nord/Sentinel North and Polar Knowledge Canada
(see pages 61-62)
Room: 517CD (Exhibition)

TUESDAY, MAY 15 – 18:30-22:00

Carlo Heip Award Ceremony, presented by PeerJ
Location: Perspective room, Centre des Sciences
18:30-20:00 Food trucks open
19:30-22:00 Ceremony, presentation, discussion
## WEDNESDAY, MAY 16 – 8:30-10:00

**Plenary Session**  
Room: 517A

| 8:30 | Amanda Bates  
Keynote Speaker | Three “grand” challenges for predicting marine biodiversity change in the Anthropocene era |

## WEDNESDAY, MAY 16 – 10:00-10:30

**Coffee Break**  
*(Exhibition, Posters)*  
Room: 517CD

## WEDNESDAY, MAY 16 – 10:30-12:00

**Theme: Transcending the boundary between science & users/management**  
Session Moderator: Nils Hammer  
Room: 518A

| 10:30 | Hannah Carr  
| 10:45 | Laura Robson  
| 11:00 | Rémi M. Daigle  
| 11:15 | Lisa Setterington  
Jessica Mitchell | Applying scientific decision-making in meeting Canada’s marine conservation targets  
| 11:30 | Chantal Vis  
Challenges to establishing effective marine monitoring of large, multi-use marine protected areas: Parks Canada’s National Marine Conservation Areas  

| 10:30 | Kolja Beisiegel  
Diversity patterns of rocky reef assemblages in the Baltic Sea: Interferences between natural and anthropogenic drivers  
| 10:45 | Alexis Catalán  
Interhemispheric consistency of scale-dependent spatial variation in the structure of intertidal rocky-shore communities  
| 11:00 | Christine Stortini  
Island biogeography of perturbed marine ecosystems: Evaluating the utility of species-area and species accumulation curves as indicators of ecological change  
| 11:15 | Molly Timmers  
Cryptofauna coral reef diversity across spatial and environmental gradients in the tropical Pacific  

**Theme: Integrative frameworks: Biogeography, macroecology, richness, and endemicity**  
Session Moderator: Phil Archambault  
Room: 518B
**Theme: Ecological traits & ecosystem function**

Session Moderator: Isabelle Coté  
Room: 518C

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Title</th>
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<tbody>
<tr>
<td>10:30</td>
<td>Jasmin Godbold</td>
<td>Impacts of biotic and abiotic context on functional trait expression and ecosystem functioning in the marine benthos</td>
</tr>
<tr>
<td>10:45</td>
<td>Dana Clark</td>
<td>Multiple stressor effects in marine ecosystems: Responses of estuarine species and functions under stress</td>
</tr>
<tr>
<td>11:00</td>
<td>Grete E. Dinesen</td>
<td>Bottom trawling effects on marine macrobenthos: Changes in ecological functioning interpreted by a biological multiple traits approach</td>
</tr>
<tr>
<td>11:15</td>
<td>Camilla Gustafsson</td>
<td>Exploring the link between functional traits and primary production in diverse aquatic plant communities</td>
</tr>
<tr>
<td>11:30</td>
<td>Bérangère Péquin</td>
<td>Bloom timing explains succession of protistan functional community structure</td>
</tr>
<tr>
<td>11:45</td>
<td>Leena Virta</td>
<td>Variation in diatom community and trait composition in relation to environmental factors, macrofauna and macrovegetation in the Northern Baltic Sea</td>
</tr>
</tbody>
</table>

**Theme: Invasions & the Anthropocene 'natural'**

Session Moderator: Chris McKindsey  
Room: 519A

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>10:30</td>
<td>Graham Epstein</td>
<td>Assessing the ecological impact and management feasibility of the global marine invader Undaria pinnatifida ('Wakame')</td>
</tr>
<tr>
<td>10:45</td>
<td>Rosana Rocha</td>
<td>Monitoring biofouling communities: A bioinvasion study in Paranaguá Bay – South Brazil</td>
</tr>
<tr>
<td>11:00</td>
<td>Andreu Blanco</td>
<td>Effects of Marine Protected Areas on the invasive success of six macroalgae species</td>
</tr>
<tr>
<td>11:15</td>
<td>Paula Tummon Flynn</td>
<td>A marine protected area under attack: The role of an invasive crab in the decline of a unique seaweed-mussel association</td>
</tr>
<tr>
<td>11:30</td>
<td>Ola Mohamed Nour</td>
<td>The invasive crab Hemigrapsus takanoi and its potential impact Baltic Sea mussel populations.</td>
</tr>
</tbody>
</table>

**Theme: Ecosystem stability & biodiversity in the Anthropocene**

Session Moderator: Emmett Duffy  
Room: 519B

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:45</td>
<td>Gert Van Hoey</td>
<td>Long-term natural trends in soft-bottom fauna based on 30 years biodiversity monitoring</td>
</tr>
<tr>
<td>11:00</td>
<td>Jason Kin Chung Yau</td>
<td>Recovery of molluscan community after the implementation of trawling ban in Hong Kong</td>
</tr>
<tr>
<td>11:15</td>
<td>Ryan Gasbarro</td>
<td>Assemblage breakdown under increasing stress: Lessons from hypoxic events in a coastal fjord</td>
</tr>
<tr>
<td>11:30</td>
<td>Stephen Landers</td>
<td>Kinorhynch diversity on the Louisiana continental shelf</td>
</tr>
</tbody>
</table>
Theme: From local to regional scales: Benthic ecosystem connectivity and resilience  
Session Moderator: Gesche Winkler  
Room: 524A

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>10:30</td>
<td>Iván Rodil</td>
<td>Quantifying ecosystem functioning at the scale of seascapes: linking habitat-specific biodiversity with oxygen dynamics using Aquatic Eddy Covariance</td>
</tr>
<tr>
<td>10:45</td>
<td>Guillaume Bridier</td>
<td>Contribution of trophic multimarker approach to study benthic food webs: Example from a high-arctic fjord (Young Sound, NE Greenland).</td>
</tr>
<tr>
<td>11:00</td>
<td>Ludovic Pascal</td>
<td>Parasitism of ecosystem engineer: Subtle effects with broad consequences</td>
</tr>
<tr>
<td>11:15</td>
<td>Gesche Winkler</td>
<td>Genetic diversity and phylogeography of the species complex Astarte spp. in the Arctic</td>
</tr>
</tbody>
</table>

Theme: Blue biotechnology & marine genetic resources  
Session Moderator: Kim Juniper  
Room: 524B

<table>
<thead>
<tr>
<th>Time</th>
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</thead>
<tbody>
<tr>
<td>10:30</td>
<td>Mark Johnson</td>
<td>Marine biodiscovery, is it a ‘team science’ or something more?</td>
</tr>
<tr>
<td>10:45</td>
<td>Claire Laguionie Marchais</td>
<td>A statistical and modeling technique to predict coral species bioactive compound production</td>
</tr>
<tr>
<td>11:00</td>
<td>Giovanna Cristina Varese</td>
<td>Marine Fungi: The missing tile in the Ocean Biodiversity mosaic</td>
</tr>
<tr>
<td>11:15</td>
<td>Irum Perveen</td>
<td>Red coloured compound isolated from a marine microbial population: Synergistic production between one bacterial and one fungal specie</td>
</tr>
<tr>
<td>11:30</td>
<td>Anju Antony</td>
<td>Arasin: A novel antimicrobial peptide from marine organisms retain anticancer activity and antibacterial activity against multidrug-resistant Staphylococcus aureus</td>
</tr>
</tbody>
</table>

Theme: Role of systematics in understanding changing oceans  
Session Moderator: Jean-Marc Gagnon  
Room: 524C

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:30</td>
<td>Gustav Paulay</td>
<td>Mare incognita - how little we know about coastal biodiversity and how to change that</td>
</tr>
<tr>
<td>10:45</td>
<td>Angelika Brandt</td>
<td>Faunistic deep-sea investigations in the Northwest Pacific have increased faunal knowledge at the edge of the changing Arctic Ocean</td>
</tr>
<tr>
<td>11:00</td>
<td>Davin H. E. Setiamarga</td>
<td>Data-bases building for DNA barcoding analyses of shelled marine gastropods in Nada coastal area in Wakayama: A preliminary report</td>
</tr>
<tr>
<td>11:15</td>
<td>Satoko Nakashima</td>
<td>Phylogeography of the Japanese turban snails Lunella coreensis from the intertidal coasts around Kyushu Island, Japan, using the COI gene sequences</td>
</tr>
</tbody>
</table>

Lunch Break  
(Exhibition, Posters)  
Room: 517CD
Mentoring Program Panel Discussions and Presentations*
Room: 517CD
12:30-13:00: Theme 8
* Participation in panel discussions is reserved for Mentoring Program members; however, all conference delegates are welcome to attend.

WEDNESDAY, MAY 16 – 12:00-13:30 (CONTINUED)

Theme: Transcending the boundary between science & users/management
Session Moderator: Nils Hammer
Room: 518A

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>13:30</td>
<td>Piers Dunstan</td>
<td>A marine values framework for East New Britain, PNG</td>
</tr>
<tr>
<td>13:45</td>
<td>Pierre Scemama</td>
<td>Expert consultation to prioritize issues in national ecosystem services assessment in France</td>
</tr>
<tr>
<td>14:00</td>
<td>Prideel Majiedt</td>
<td>Biodiversity science into policy: Lessons learnt from engagement with the South African Marine Mining Sector</td>
</tr>
<tr>
<td>14:30</td>
<td>Nichola Clark</td>
<td>Filling governance gaps: Institutional arrangements for a new, legally binding instrument on biodiversity in areas beyond national jurisdiction</td>
</tr>
</tbody>
</table>

Theme: Integrative frameworks: Biogeography, macroecology, richness, and endemicity
Session Moderator: Phil Archambault
Room: 518B

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
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</thead>
<tbody>
<tr>
<td>13:30</td>
<td>Mark Costello</td>
<td>Mapping marine species richness and endemicity at global scales</td>
</tr>
<tr>
<td>13:45</td>
<td>Gail Ashton</td>
<td>Biogeographical analysis of global deep-sea bottom habitats: Using an abiotic province scheme and metazoan occurrence databases</td>
</tr>
<tr>
<td>14:00</td>
<td>Brandon Genco</td>
<td>Biogeographical analysis of global deep-sea bottom habitats: Using an abiotic province scheme and metazoan occurrence databases</td>
</tr>
<tr>
<td>14:15</td>
<td>Skipton Woolley</td>
<td>Developing statistical model-based bioregions for the Indian Ocean</td>
</tr>
<tr>
<td>14:30</td>
<td>Radhouane Ben-</td>
<td>Spatial and environmental drivers of biodiversity, ecology and biogeography of coral communities in SW of the Arabian/Persian Gulf</td>
</tr>
<tr>
<td></td>
<td>Hamadou</td>
<td></td>
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</tbody>
</table>

Theme: Linking biodiversity, ecosystem function & ecosystem services
Session Moderator: Isabelle Coté
Room: 518C

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>13:30</td>
<td>Mari Joensuu</td>
<td>Interactions between biota and sediment resuspension in coastal areas of the Baltic Sea</td>
</tr>
<tr>
<td>13:45</td>
<td>Jenny Hillman</td>
<td>Habitat heterogeneity influences ecosystem processes in a marine intertidal soft-sediments</td>
</tr>
<tr>
<td>14:00</td>
<td>Emily Adamczyk</td>
<td>Identifying human impacts on eelgrass faunal biodiversity in British Columbia, Canada</td>
</tr>
<tr>
<td>14:15</td>
<td>David Cook</td>
<td>Classifying and valuing ecosystem services sourced from whales</td>
</tr>
<tr>
<td>14:30</td>
<td>Charlène Kermagoret</td>
<td>Exploring and comparing the effect of eutrophication on marine and coastal ecosystem service supply using state-and-transition models</td>
</tr>
</tbody>
</table>
**Theme: Marine biodiversity education & outreach**

Session Moderator: Anaïs Lacoursière-Roussel  
Room: 519A

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Topic</th>
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</thead>
<tbody>
<tr>
<td>13:30</td>
<td>Anna Zivian</td>
<td>The role of subnational governments in addressing ocean health and diversity in a time of global change</td>
</tr>
<tr>
<td>13:45</td>
<td>Louise Hénault-Ethier</td>
<td>Lessons-learned from decades of marine biodiversity outreach in Canada: How to drive evidence based governmental decision making via public engagement</td>
</tr>
<tr>
<td>14:00</td>
<td>Ma Cecilia Colarina</td>
<td>Comparative analysis and regulatory gap analysis of laws on Marine Protected Area (MPA) and Marine Protected Area Network (MPAN) establishment and management</td>
</tr>
<tr>
<td>14:15</td>
<td>Simone S. Oigman-Pszczol</td>
<td>Ecoralis Project: a socioenvironmental strategy for marine biodiversity conservation at a marginal coral reef site</td>
</tr>
<tr>
<td>14:30</td>
<td>Gonzalo Bravo</td>
<td>Dive into the ocean: Discovering the underwater world of your own city</td>
</tr>
<tr>
<td>14:45</td>
<td>Chantal Caron</td>
<td>Lost at sea... a contemporary dance tribute to ocean biodiversity</td>
</tr>
</tbody>
</table>

**Theme: Ecosystem stability & biodiversity in the Anthropocene**

Session Moderator: Ivan Rodil  
Room: 519B

<table>
<thead>
<tr>
<th>Time</th>
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<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>13:30</td>
<td>Aislyn Keyes</td>
<td>Effects of mangrove deforestation on near-shore coral reefs</td>
</tr>
<tr>
<td>13:45</td>
<td>Edgardo Londoño-Cruz</td>
<td>Construction and destruction: The struggle to persist</td>
</tr>
<tr>
<td>14:00</td>
<td>Fernando Zapata</td>
<td>Fish diversity on coral habitats with contrasting architecture in the Tropical Eastern Pacific</td>
</tr>
<tr>
<td>14:15</td>
<td>Rebecca Milne</td>
<td>Changes in Passamaquoddy Bay zooplankton community structure over 50 years: Is biological diversity being protected?</td>
</tr>
<tr>
<td>14:30</td>
<td>Lyne Morissette</td>
<td>Risk and resilience in the great whales</td>
</tr>
</tbody>
</table>

**Theme: From local to regional scales: Benthic ecosystem connectivity and resilience**

Session Moderator: Gesche Winkler  
Room: 524A

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<tbody>
<tr>
<td>13:30</td>
<td>Youenn Jézéquel</td>
<td>Acoustics as a tool in marine ecology to study the behavior of large temperate crustaceans</td>
</tr>
<tr>
<td>13:45</td>
<td>Inês Leal</td>
<td>Barnacle recruitment on contrasting thermal landscapes: Polar Greenland versus tropical Brazil</td>
</tr>
<tr>
<td>14:00</td>
<td>Justine Doré</td>
<td>Retrospective analysis of the ecological changes in the Laurentian ecosystem using sclerochronology</td>
</tr>
<tr>
<td>14:15</td>
<td>Pierre Poitevin</td>
<td>Sclerochronology in Saint-Pierre et Miquelon: From sub-hourly to multidecadal reconstruction</td>
</tr>
<tr>
<td>14:30</td>
<td>Ariane Aspirault</td>
<td>Impact of vessel noise on behavior of bivalve larvae and other zooplanctonic species</td>
</tr>
</tbody>
</table>
WEDNESDAY, MAY 16 – 13:30-15:00 (CONTINUED)

Theme: Blue biotechnology & marine genetic resources
Session Moderator: Kim Juniper
Room: 524B

<table>
<thead>
<tr>
<th>Time</th>
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<tbody>
<tr>
<td>13:30</td>
<td>Karen Mooney</td>
<td>Cultivation of Saccharina latissima for biogas production – is bigger always better?</td>
</tr>
<tr>
<td>13:45</td>
<td>Noer Kasanah</td>
<td>Diversity of Indonesian red seaweeds and their phycocolloid compounds</td>
</tr>
<tr>
<td>14:00</td>
<td>Lucie Beaulieu</td>
<td>Algal proteins: An opportunity for driving the development of new functional ingredients</td>
</tr>
<tr>
<td>14:15</td>
<td>Archana Chugh</td>
<td>Dual use of marine membrane active peptides: Drug delivery vehicles and therapeutics</td>
</tr>
</tbody>
</table>

Theme: Integrative frameworks: Indicators & proxies for biodiversity
Session Moderator: Gert van Hoey
Room: 524C

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<thead>
<tr>
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<th>Title</th>
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</thead>
<tbody>
<tr>
<td>13:30</td>
<td>Tim Edgell</td>
<td>Recovery of local marine biodiversity at an offshore dredge disposal site</td>
</tr>
<tr>
<td>13:45</td>
<td>Ivan Hernandez-Avila</td>
<td>Testing biogeographical hypotheses on a major marine frontier: The case of the Yucatan continental shelf</td>
</tr>
<tr>
<td>14:00</td>
<td>Francisco J. Ramos-Gallego</td>
<td>Multiscale fish diversity partition at a Mesoamerican barrier reef system portion: Relationship with habitat structure, spatial layout, and depth</td>
</tr>
<tr>
<td>14:15</td>
<td>Fernanda Casares</td>
<td>Health assessment of a marginal reef site in Southeastern Brazil: Integrating ecological indicators and anthropogenic pressures to guide management decisions</td>
</tr>
<tr>
<td>14:30</td>
<td>Alice Soccodato</td>
<td>Marine Environmental heterogeneity detected from the sky helps to estimate biodiversity hotspots across the food web.</td>
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</table>

WEDNESDAY, MAY 16 – 15:00-15:30

Coffee Break
(Exhibition, Posters)
Room: 517CD

WEDNESDAY, MAY 16 – 15:30-17:00

Final Plenary Session
Room: 517A

At the close of the conference, a panel of international experts will reflect on the event and myriad topics discussed throughout the conference in light of future priorities. Each panelist has chosen a topic related to the Aichi Biodiversity targets and contemplating the future of our oceans, paralleling our mentoring sessions. Each panelist will give a 5-minute thought piece on their perspective of the selected topic for the future of ocean biodiversity science followed by an open audience discussion.
Final Plenary Session
Room: 517A

International Experts

<table>
<thead>
<tr>
<th>Name</th>
<th>Institution</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sigrid Kuehnemund</td>
<td>WWF Canada</td>
<td>Linking biodiversity to ecosystem function and services (resilience to climate change)</td>
</tr>
<tr>
<td>Gilles Seutin</td>
<td>Parks Canada</td>
<td>Application of Biodiversity Knowledge</td>
</tr>
<tr>
<td>Murray Roberts</td>
<td>The University of Edinburgh and ATLAS</td>
<td>Expanding to Ocean Basin-scale Assessment</td>
</tr>
<tr>
<td>Amanda Bates</td>
<td>Memorial University of Newfoundland, Canada</td>
<td>Engaging Society in Biodiversity Conservation through Positives</td>
</tr>
<tr>
<td>Carlos M. Duarte</td>
<td>Red Sea Research Center and Tarek Ahmed Juffali Chair in Red Sea Ecology of King Abdullah University of Science Technology of the Kingdom of Saudi Arabia</td>
<td>The Ocean is Not Yet Broken: Engaging Society in Biodiversity Conservation through Positives</td>
</tr>
<tr>
<td>Verena Tunnicliffe</td>
<td>University of Victoria, Canada</td>
<td>The more you look, the more you find: Biodiversity Discovery and Prediction</td>
</tr>
<tr>
<td>Peter Lawton</td>
<td>Fisheries and Oceans Canada</td>
<td>Application of Biodiversity Knowledge</td>
</tr>
<tr>
<td>Remi Daigle</td>
<td>Université Laval</td>
<td>Integrative frameworks</td>
</tr>
</tbody>
</table>

WEDNESDAY, MAY 16 – 17:00-18:00

Closing Ceremony/Student Awards/5th WCMB Announcement
Room: 517A
The 4th WCMB acknowledges the support of the Center of Marine Biodiversity in the creation of the scientific program.
The 4th WCMB Committee acknowledges the support of Palais des congrès and Tourisme Montréal
CHONE IS PLEASED TO SUPPORT WCMB 2018!

A warm welcome from CHONE to all participants. We look forward to sharing our research with you!

The NSERC Canadian Healthy Oceans Network (CHONE) is developing new conservation strategies for Canada’s changing oceans by partnering Canadian university researchers and government scientists. CHONE’s national network of partners, governance committees, researchers, and students contribute to the ongoing success of its strategic research program on sustainability strategies and cumulative impacts. This work helps Canada fulfill high-priority national and international commitments on sustainable oceans and advance Canada’s new National Conservation Plan.

Major funding is provided by the Natural Sciences and Engineering Research Council of Canada (NSERC) in partnership with Fisheries and Oceans Canada (DFO) and other government agencies; INREST (representing the Port of Sept-îles and City of Sept-îles); and ENGOS.

Visit the CHONE II website to find out more about our research across Canada and to learn more about our researchers, students, and governance committee members.
LA MER VOUS APPELLE!
THE SEA IS CALLING!

Aires marines nationales de conservation
Discover. Connect. Protect.
National Marine Conservation Areas

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parcscanada.gc.ca
parkscanada.gc.ca
Come visit us at Booth #3

Ocean Networks Canada monitors Canada’s three coasts delivering real-time and time-series data for scientific research that helps communities, government, and industry make informed decisions about our future. Using cabled ocean observatories, mobile and moored sensor platforms, remote control systems, interactive sensors, and big-data management, ONC enables ocean discovery and evidence-based decision-making on ocean management, disaster mitigation, and environmental protection. Learn more at oceannetworks.ca
Sentinelle Nord allows Université Laval to draw on over a half-century of northern and optics/photonics research to develop innovative new technology and improve our understanding of the northern environment and its impact on human beings and their health.

The program offers a transdisciplinary research and training environment unique in Canada, including numerous research and mobility scholarship opportunities.

www.sentinellenord.ulaval.ca

POLAR KNOWLEDGE CANADA
Canadian High Arctic Research Station (CHARS) campus

POLAR is responsible for advancing Canada's knowledge of the Arctic, strengthening Canadian leadership in polar science and technology, and promoting the development and distribution of knowledge of other circumpolar regions, including Antarctica. POLAR will operate the CHARS campus.

SAVOIR POLAIRE CANADA
Le campus de la Station canadienne de recherche dans l'Extrême-Arctique (SCREA)

POLAIRE est responsable de l'avancement des connaissances du Canada sur l'Arctique, du renforcement du leadership canadien en sciences et technologies polaires et de la promotion de l'élaboration et de la diffusion des connaissances sur les autres régions circumpolaires, y compris l'Antarctique. POLAIRE exploite le campus de la SCREA.

FOR MORE INFORMATION...
For more information about the research taking place at the CHARS campus, and about POLAR connect with us:

Twitter: @POLARCanada @POLAIRECanada Facebook: /PolarKnowledge/ /Savoirpolaire

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Robust review process / 25 days to first decision
## EXHIBITORS

### EXHIBITORS LIST

**Room: 517CD (Exhibition)**

<table>
<thead>
<tr>
<th>Booth # 1</th>
<th>Project SponGES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description:</strong> The EU-funded SponGES focuses on vulnerable Deep-sea Sponge Grounds Ecosystems of the North Atlantic, developing an integrated ecosystem-based approach to their preservation and sustainable use.</td>
<td></td>
</tr>
<tr>
<td><strong>Contact Information:</strong></td>
<td>Hans Tore Rapp</td>
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</table>

<table>
<thead>
<tr>
<th>Booth # 2</th>
<th>Project MERCES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description:</strong> The EU-funded MERCES (Marine Ecosystem Restoration in Changing European Seas) develops restoration approaches, studies their effects on ecosystem services, and considers legal, policy and governance implications.</td>
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<tr>
<td><strong>Contact Information:</strong></td>
<td>Roberto Danovaro</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Booth # 3</th>
<th>Ocean Networks Canada</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description:</strong> Ocean Networks Canada monitors the west and east coasts of Canada and the Arctic to continuously deliver data in real-time for scientific research that supports informed decision-making about our future.</td>
<td></td>
</tr>
<tr>
<td><strong>Contact Information:</strong></td>
<td>Leslie Elliott</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Booth # 4</th>
<th>Hydro Bios</th>
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<tbody>
<tr>
<td><strong>Description:</strong> We are North American distributors for Hydro Bios and other manufacturers. Hydro Bios one of the world's leading manufacturers of smart sampling equipment Hydro-Bios offers solutions for all oceanographic and limnic environments. Whether the task is to sample water, plankton or sediments you can get a large variety of instruments. One of our specialties are plankton nets, from small and simple to the well-established, unique Multi Plankton Sampler MultiNet. Furthermore, we supply a wide range of water samplers, from Niskin bottles, Ruttner water sampler to advanced Carousel/Rosette systems in different sizes complete with CTD probe and other sensors. For sediment sampling we offer bottom samplers and single or multiple traps. Reliability and precision are our core intentions when developing and manufacturing our products.</td>
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<tr>
<td><strong>Contact Information:</strong></td>
<td>Nigel Newing</td>
</tr>
<tr>
<td>Booth #</td>
<td>Company Name</td>
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<tr>
<td>5</td>
<td>Royal Society Publishing</td>
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<td>6</td>
<td>Frontiers in Marine Science</td>
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<td>7</td>
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<td>8</td>
<td>The Ocean Tracking Network</td>
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<td>9</td>
<td>SubC Imaging</td>
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<tr>
<td>Booth # 10</td>
<td>NIVA Inc.</td>
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</tr>
<tr>
<td><strong>Description:</strong></td>
<td>NIVA is a company that transforms complex information into messages that have an impact on the audiences that you need to reach. We specialize in transforming technical and scientific concepts into compelling, plain language communication tools. We develop dynamic strategies that get those tools to the right people. And we find ways to help subject-matter experts and decision makers meet on common ground. We are recognized leaders in our field, and passionate about using clear communication to bring value to your organization. Stop by our booth to talk to us about our wide-ranging experience communicating about ocean science, the blue economy, and marine biodiversity!</td>
</tr>
</tbody>
</table>
| **Contact Information:** | Anton Holland  
aholland@Niva.com  
+1 613 737-6000  
www.niva.com |

<table>
<thead>
<tr>
<th>Booth # 11</th>
<th>RQM / IFQM</th>
</tr>
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<tbody>
<tr>
<td><strong>Description:</strong></td>
<td>The Réseau Québec maritime (RQM) aims to position Quebec as a leading international intersectoral network for all issues related to the sustainable development of the maritime sector, while the France-Quebec Institute for scientific cooperation in support of the maritime sector (IFQM) federates the key maritime players in research, innovation and higher education from both sides of the Atlantic.</td>
</tr>
</tbody>
</table>
| **Contact Information:** | Sarah Granier  
sarah@granier@uqar.ca  
+1 418 723-1986 x1045  
www.ifqm.info |

<table>
<thead>
<tr>
<th>Booth # 12</th>
<th>Global Ocean Biodiversity Initiative (GOBI)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description:</strong></td>
<td>The Convention on Biological Diversity (CBD) focuses on the conservation and sustainable use of biodiversity, and the fair and equitable sharing of benefits from the use of genetic resources. The Convention’s work on marine biodiversity includes the coordination of a global scientific process to describe and map ecologically or biologically significant areas in the ocean (EBSAs). This process involves an enormous amount of scientific data and input from experts all over the world. The Global Ocean Biodiversity Initiative (GOBI) is an international partnership of organisations committed to advancing the scientific basis for the conservation and sustainable use of marine biodiversity. In particular, GOBI contributes expertise, knowledge and data to support CBD's efforts to describe EBSAs by assisting a range of organisations to use and develop data, tools and methodologies.</td>
</tr>
</tbody>
</table>
| **Contact Information:** | Vikki Gunn  
secretariat@gobi.org  
+44 1794 367797  
www.gobi.org |

<table>
<thead>
<tr>
<th>Booth # 13</th>
<th>Parks Canada</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description:</strong></td>
<td>Parks Canada manages an extensive system of protected natural and cultural heritage areas for the benefit, enjoyment and education of Canadians and the world.</td>
</tr>
</tbody>
</table>
| **Contact Information:** | Diane Blanchard  
Diane.Blanchard@pc.gc.ca  
+1 819 420-9171  
www.pc.gc.ca |
<table>
<thead>
<tr>
<th>Booth #</th>
<th>Exhibitor</th>
<th>Description</th>
<th>Contact Information</th>
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<tbody>
<tr>
<td>14</td>
<td>Taylor &amp; Francis Group</td>
<td>Taylor &amp; Francis are one of the world's leading publisher of academic journals and books. Come to booth 14 to see the recent additions to our portfolio and meet members of our editorial team.</td>
<td>Ashlynne Merrifield <a href="mailto:enquiries@taylorandfrancis.com">enquiries@taylorandfrancis.com</a> +44 20 7017 6000 <a href="http://www.taylorandfrancis.com">www.taylorandfrancis.com</a></td>
</tr>
<tr>
<td>15</td>
<td>Huntsman Marine Science Centre</td>
<td>Huntsman Marine Science Centre is a not-for-profit research and education facility whose mission is inspiring stewardship through the engagement of the community in the discovery of the oceans. HMSC provides services to government, commercial and academic clients. Research facilities include the Atlantic Reference Centre, a marine research museum and biodiversity information facility which provides taxonomic identification services and expert advice; and the Aquatic Science department which offers services including broodstock, fish-health and toxicology research in its purpose-built husbandry facility. The Fundy Discovery Aquarium and the education department provide tailored education programmes to schools, universities and diverse public groups.</td>
<td>James A. Smith <a href="mailto:huntsman@huntsmanmarine.ca">huntsman@huntsmanmarine.ca</a> +1 506 529-1200 <a href="http://www.huntsmanmarine.ca">http://www.huntsmanmarine.ca</a></td>
</tr>
<tr>
<td>16</td>
<td>Observatoire global du Saint-Laurent / St. Lawrence Global Observatory (OGSL)</td>
<td>The St. Lawrence Global Observatory is an organization that provides integrated access to data and information from a network of partner organizations in support of the sustainable management of the St. Lawrence ecosystem.</td>
<td>Anne-Sophie Ste-Marie <a href="mailto:stemariea@ogsl.ca">stemariea@ogsl.ca</a> +1 418 723-8372 x1194 <a href="http://www.ogsl.ca">www.ogsl.ca</a></td>
</tr>
<tr>
<td>17</td>
<td>Québec-Océan</td>
<td>Québec-Océan brings together scientists and their partners involved in oceanographic research. Six Quebec universities, several ministries and non-governmental organisms collaborate to develop oceanography, including student training and knowledge transfer.</td>
<td>Brigitte Robineau <a href="mailto:quebec-ocean@qo.ulaval.ca">quebec-ocean@qo.ulaval.ca</a> +1 418 656-5917 <a href="http://www.quebec-ocean.ulaval.ca">www.quebec-ocean.ulaval.ca</a></td>
</tr>
<tr>
<td>18</td>
<td>Alpha Mach</td>
<td>Alpha Mach specializes in miniature and low cost archival tags used in fisheries and biology research. Our instruments offer the opportunity to economically tag a large number of animals or monitor rivers, lakes &amp; tributaries. Our newest logger, the Weetag®, are RFID, implantable and have a large capacity memory.</td>
<td>Uranian Valcéan <a href="mailto:info@alphamach.com">info@alphamach.com</a> +1 450 446-3153 <a href="http://www.alphamach.com">www.alphamach.com</a></td>
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<tr>
<td>Booth # 19</td>
<td>Fisheries and Oceans Canada</td>
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<tr>
<td><strong>Description:</strong> Fisheries and Oceans Canada works with partners to support the conservation and protection of marine environments and aquatic biodiversity through habitat protection, solid science, and an ecosystem approach to ocean management.</td>
<td></td>
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<tr>
<td><strong>Contact Information:</strong></td>
<td>Patrice Simon</td>
<td><a href="mailto:Tara.Donaghy@dfo-mpo.gc.ca">Tara.Donaghy@dfo-mpo.gc.ca</a></td>
<td>+1 613 990-0019</td>
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<tr>
<th>Booth # 20</th>
<th>ROMOR Ocean Solutions</th>
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<tbody>
<tr>
<td><strong>Description:</strong> ROMOR with more than 30 years as a Leading provider of geophysical, oceanographic, defense, security, autonomous, and ocean science instrumentation has become a key collaborator. Working with academic, public, private, and international organizations working as a top re-seller, consultant and logistics specialist. ROMOR continues to build its brand on customer satisfaction. Applications include time series measurements, underwater microscope, camera and lighting, acoustic monitoring, underwater positioning, autonomous gliders, current velocity and direction, marine survey.</td>
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<tr>
<td><strong>Contact Information:</strong></td>
<td>Darrin Verge</td>
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### FLOOR PLANS

#### Exhibition and Posters

The exhibition takes place in rooms 517CD, level 5.

#### Exhibition Hours

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<td>08:30 – 19:00</td>
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<td>Monday, May 14</td>
<td>10:00 – 19:00</td>
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<tr>
<td>Tuesday, May 15</td>
<td>10:00 – 18:00</td>
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<td>Wednesday, May 16</td>
<td>10:00 – 15:30</td>
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#### Exhibition Activities

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<tr>
<td>Welcome Reception &amp; Poster Session</td>
<td>Sunday, May 13</td>
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<tr>
<td>Poster Session</td>
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<td>Poster Session</td>
<td>Tuesday, May 15</td>
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FLOOR PLANS

Exhibition and Posters (Continued)

Exhibition and Poster Sessions
POSTER SESSIONS

Poster sessions will be held daily, each featuring specific themes and posters. During these sessions the authors will be beside their posters to answer questions and explain their work.

All posters will be on display throughout the conference dates. Delegates are invited to visit posters during lunch and coffee breaks, as well as the evening poster sessions. A cash bar will be open during each poster session.

The poster sessions are sponsored by Sentinelle Nord/Sentinel North and Polar Knowledge Canada.

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**Theme: Biodiversity discovery & prediction**

<table>
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<td>13</td>
<td>Fiona Davidson: Species distribution modeling of deep sea sponges in the North Pacific Ocean</td>
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<tr>
<td>14</td>
<td>Marta Miatta: Biological and environmental drivers of deep-sea benthic ecosystem functioning in Canada's Laurentian Channel Area Of Interest (AOI)</td>
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<td>15</td>
<td>Mizuho Namba: Multiscale variation in biomass of eelgrass, epiphyte and epifauna in eelgrass (Zostera marina) beds along eastern Hokkaido, Japan</td>
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<tr>
<td>16</td>
<td>Jesus Troncoso: A recount of species in a sandy bottom of an oceanic tropical island: Isla del Coco, Costa Rica</td>
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<td>17</td>
<td>Bhavya Kachiprath: Bacterial communities in Krossfjorden, Arctic: An overview</td>
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<tr>
<td>18</td>
<td>Cindy Grant: Benthos from Baffin Bay Area: A photo catalogue</td>
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<tr>
<td>19</td>
<td>Laure de Montety: Characterization of epibenthic community structure in the Beaufort Sea area.</td>
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<tr>
<td>20</td>
<td>Paulina Brüning: Ecology and molecular approaches to understand the biology in soft corals inhabiting polar regions.</td>
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<tr>
<td>21</td>
<td>Lisa Treau De Coeli: Geometric morphometrics analysis: a complement to the revision of whelk taxonomy in the Arctic</td>
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<tr>
<td>22</td>
<td>Rachelle Dove: Thyasirid bivalves in Arctic and Subarctic regions of Eastern Canada</td>
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<tr>
<td>23</td>
<td>Fatma Dhitfallah: Characterize abundance, richness and diversity of dinoflagellate communities in high risk ports of the Canadian Arctic</td>
</tr>
<tr>
<td>24</td>
<td>Bhavik Vakani: Diversity of true gastropod limpets of mainland coastal India</td>
</tr>
<tr>
<td>25</td>
<td>Akkur Raman: Nearshore benthic communities: Defining diversity under tropical settings, east coast of India</td>
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<tr>
<td>26</td>
<td>Anne Helene Tandberg: Norwegian Marine Amphipods</td>
</tr>
<tr>
<td>27</td>
<td>Junlong Zhang: Progress on Taxonomy Study of Deep-Sea Mollusca at IOCAS</td>
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</table>
### SUNDAY, MAY 13 – 17:00-19:00 (CONTINUED)
**Room: 517CD (Exhibition)**

**Theme: Biodiversity in a changing ocean**

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<th>Name</th>
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<tr>
<td>45</td>
<td>Jean-Philippe Pezy</td>
<td>Chaetopterus variopedatus tubes, a stepping-stone habitat for introduced</td>
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<td></td>
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<td>and tropical-temperate species in the English Channel</td>
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<tr>
<td>46</td>
<td>Hannah Omogoriola</td>
<td>Mangrove biodiversity, distribution and coverage area in Lagos Lagoon</td>
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<tr>
<td>47</td>
<td>Catherine Van Doorn</td>
<td>Lipid characterization of benthic organisms and walruses in climate</td>
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<tr>
<td></td>
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<td>change scenarios in the Nunavik Region of the Canadian Arctic.</td>
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<tr>
<td>48</td>
<td>Said Hashim</td>
<td>Macrobenthic distribution across the oxygen minimum zone in the</td>
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<td>northern benguela upwelling system: Influence of hypoxia on</td>
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<td>macrobenthic distribution</td>
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<td>49</td>
<td>Gustavo Yunda-Guarin</td>
<td>Food web structure of the epibenthic community at the sea ice edge in</td>
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<td></td>
<td></td>
<td>Baffin Bay, Canada</td>
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<tr>
<td>50</td>
<td>Marina Abas</td>
<td>Adaptive capacity of reef-associated fishes to Climate Change</td>
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<td>51</td>
<td>Megan van der Bank</td>
<td>The Delicate Balance of Marine Protected Areas and Coastal</td>
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<td>Livelihoods: The Case of Dwesa-Cwebe MPA, South Africa</td>
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<tr>
<td>52</td>
<td>Joel Creed</td>
<td>An index to integrate stress due to anthropogenic pressures along the</td>
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<td>shoreline and case study of a tourist destination in Brazil</td>
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<tr>
<td>53</td>
<td>Charlotte Carrier-Belleau</td>
<td>Cumulative impacts of anthropogenic drivers on macrobenthic</td>
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<td></td>
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<td>communities at a bay-scale: An experimental approach</td>
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<tr>
<td>54</td>
<td>Fanny Vermandele</td>
<td>Understanding the biological impacts of Global warming on marine</td>
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<td>biodiversity with a Russian doll perspective</td>
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<tr>
<td>55</td>
<td>Amanda E. Bates</td>
<td>Modelling how temperature influences biodiversity from cells to</td>
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<td>ecosystems</td>
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</table>

### MONDAY, MAY 14 – 17:00-19:00
**Room: 517CD (Exhibition)**

**Theme: Biodiversity tools & data**

<table>
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<tr>
<th>Poster #</th>
<th>Name</th>
<th>Poster Title</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Sébastien Villon</td>
<td>A deep learning algorithm for automatic identification of coral reef fish</td>
</tr>
<tr>
<td></td>
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<td>species on images</td>
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<tr>
<td>2</td>
<td>Geneviève Faille</td>
<td>Benthic imagery, a tool to discover the Gulf of St. Lawrence seafloor</td>
</tr>
<tr>
<td>3</td>
<td>Fabio Cabrera De Leo</td>
<td>From coastal temperate, high-arctic to deep-sea habitats: seafloor</td>
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<td>imagery and environmental monitoring using cabled observatories to track</td>
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<td></td>
<td></td>
<td>ecosystem function, biodiversity and bentho-pelagic coupling</td>
</tr>
<tr>
<td>4</td>
<td>Christine Adams</td>
<td>Double down: Maximizing the reuse value of deep-sea video data</td>
</tr>
<tr>
<td>5</td>
<td>Gabriel R. Freitas</td>
<td>Plankton biodiversity, community structure and the physical and chemical</td>
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<td></td>
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<td>environment of Izu-Oshima, Japan: A high resolution and</td>
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<td>multidisciplinary observational approach.</td>
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<tr>
<td>6</td>
<td>Adriana Radulovici</td>
<td>Exon capture phylogenomics recovers closely related species of Chromodoris</td>
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<tr>
<td></td>
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<td>nudibranchs</td>
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</tbody>
</table>
MONDAY, MAY 14 – 17:00-19:00 (CONTINUED)
Room: 517CD (Exhibition)

Theme: Blue biotechnology & marine genetic resources

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<td>Ariane Tremblay</td>
<td>Valorization of snow crab and American lobster cooking effluents for food bioproducts development</td>
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<tr>
<td>29</td>
<td>Farha Kabeer</td>
<td>Diversity and Extracellular Hydrolytic enzyme properties of marine bacteria isolated from Continental Slope of Eastern Arabian Sea</td>
</tr>
<tr>
<td>30</td>
<td>Lysis Sénéchal</td>
<td>Impact of seaweed addition on the dynamic microbial community in Camembert-type cheese during ripening</td>
</tr>
<tr>
<td>31</td>
<td>Rachel Durand</td>
<td>Simultaneous double cationic and anionic molecule separation from herring milt hydrolysate and impact on resulting fraction bioactivities</td>
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Theme: Integrative frameworks to link environmental & biological drivers of biodiversity

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<tr>
<td>78</td>
<td>Diana Ugalde</td>
<td>Diversity of sponge-dwelling caridean shrimps from coral reefs of Southeastern Gulf of Mexico: scales of spatial variability and host specificity</td>
</tr>
<tr>
<td>79</td>
<td>Laurie Isabel</td>
<td>Assessing ecosystem health by the means of epibenthic indicators in Estuary and Gulf of St. Lawrence, Canada</td>
</tr>
<tr>
<td>80</td>
<td>Philippe-Olivier Dumais</td>
<td>Modelling of the diversity hotspots of benthic fauna based on the environmental drivers in the Kitikmeot area (Canadian Archipelago)</td>
</tr>
</tbody>
</table>

Theme: Linking biodiversity to ecosystem function & services

<table>
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<tr>
<td>36</td>
<td>Kina Hayashi</td>
<td>Coexistence mechanism of six species anemonefish in Okinawa, southern Japan</td>
</tr>
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**Theme: The human element**

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The Carlo Heip International Award for Outstanding Accomplishments in Marine Biodiversity Science

The Carlo Heip International Award for outstanding accomplishments in marine biodiversity science was inaugurated in recognition of Carlo Heip’s leadership in marine biodiversity research and founding of the ‘World Conference on Marine Biodiversity’.

The Carlo Heip Award Ceremony is sponsored by PeerJ.

About Carlo Heip

Carlo Heip (1945) studied Biology at Ghent University, where he founded the marine biology research group after he graduated. In 1987, he was appointed director of the Delta Institute in Yerseke, which was incorporated into the Netherlands Institute for Ecology (NIOO) as the Centre for Estuarine and Marine Ecology (CEME) in 1992 and has been a division of NIOZ since 2012. In 2006, Carlo Heip was appointed general director at NIOZ on Texel. He retired in 2011. After that, he stayed on as an advisor at NIOZ and he became the general editor of the Journal of Sea Research. His first research project involved population dynamics, ecology and the ecotoxicology of benthic life. Later, his focus shifted to the link between biodiversity and the functioning of ecosystems.

Carlo Heip has over 150 articles to his name and he has edited several books. He was a source of inspiration for many national and international initiatives in the field of marine research. He played an important part in promoting European research into land-ocean interaction, and into ecological processes in estuaries, in particular. He was responsible for numerous EU projects.
The most important of these EU projects was MARBEF (Marine Biodiversity and Ecosystem Functioning), in which taxonomists and ecologists worked together on a European scale to strengthen our understanding of marine biodiversity and ecosystem function and support the protection of marine biodiversity. This project made a significant contribution to worldwide initiatives to better describe and understand the importance and variety of organisms in the sea.

Carlo Heip was an eminent scientist and a committed intellectual who as a researcher contributed to the better preservation of the marine environment. He was a director and organiser with vision and leadership. We will remember him as a warm and dedicated person.

1st Carlo Heip Award Recipient

Prof. Carlos M. Duarte, Director of the Red Sea Research Center and Tarek Ahmed Juffali Chair in Red Sea Ecology of King Abdullah University of Science Technology of the Kingdom of Saudi Arabia has been elected the first recipient of the Carlo Heip Award. He is a world-wide leading authority on seagrasses and has published on all aspects of seagrass ecology, from population biology to genetics, from depth and geographical distribution patterns to their role in biogeochemical cycles, and from conservation strategies to their sensitivity to climate change. His pioneering work on seagrasses and other vegetated systems eventually led – in collaboration with different UN agencies – to the development of “blue carbon” strategies, which has provided a strong impetus to the conservation of vegetated coastal ecosystems.

Carlos may be the most versatile aquatic ecologist of his generation: he works from the tropics to polar ecosystems, from macrophytes to microbes, from coastal systems to open ocean gyres using all types of approaches. His research is characterized by independence, creativity, serendipity, and interdisciplinary linking of thought-to-be separate fields. Many of his synthesis papers have set the stage for the field, one notable example being that his work initiated the discussion on the heterotrophic nature of oligotrophic systems and identified the role of hypoxia.
thresholds for marine biodiversity. To date, Carlos has over 630 publications cited 42,000 times. As was Carlo Heip before him, Carlos has been listed as one of the most cited scientists by Thomson Reuters.

Recognizing the many gaps in our understanding of the deep-sea pelagic ecosystem, Duarte led the Malaspina Circumnavigation Expedition, involving more than 500 scientists and that sailed the oceans between 2010 and 2011 to provide a global assessment of the deep-sea biodiversity and functioning. Other leadership service roles included editing journals, being a member of numerous international scientific committees, and being President of the American Society of Limnology and Oceanography.

During the last decade, his publications have been instrumental in advancing our understanding of the impact of climate change on marine ecosystems, organisms and biodiversity. He has also contributed original work to science in support of policy and management towards sustainable use of ecosystems.

Finally, Carlos Duarte, together with the late Carlo Heip, initiated the World Marine Biodiversity Conference series and organized and chaired the first of these conferences in Valencia, Spain.

**All WCMB delegates are invited to the Carlo Heip Award ceremony, taking place 18:30-22:00 Tuesday, May 15 in the Perspectives room at the Centre des Sciences in the Old Port.**

Centre des sciences de Montréal
2 Rue de la Commune Ouest
Montréal QC H2Y 4B2
MENTORING PROGRAM

Mentoring Program Schedule

Mentoring Program Workshops*
Theme 1: Room 518A
Theme 2: Room 518B
Theme 3: Room 518C
Theme 4: Room 519A
Theme 5: Room 519B
Theme 6: Room 524A
Theme 8: Room 524B
* Workshops are only open to Mentoring Program participants.

Mentoring Program Panel Discussions and Presentations*
Room: 517CD (Exhibition)
Monday, May 14 – 12:00-12:30: Theme 1
Monday, May 14 – 12:30-13:00: Theme 2
Monday, May 14 – 13:00-13:30: Theme 3
Tuesday, May 15 – 12:00-12:30: Theme 4
Tuesday, May 15 – 12:30-13:00: Theme 5
Tuesday, May 15 – 13:00-13:30: Theme 6
Wednesday, May 16 – 12:30-13:00: Theme 8
* Participation in panel discussions is reserved for Mentoring Program members; however, all conference delegates are welcome to attend.

WCMB 2018 Mentoring Program

Much like a hero’s journey, the mentoring program consists of three acts with their respective challenges. The journey will culminate with the publication of a series of short perspective papers in a special issue of the open access journal Peer J dedicated to the conference and a synopsis paper in a high-profile journal.

The Objective
In contrast to typical conference mentoring programs, we offer a program specifically aimed at bringing senior and early-career scientists together to tackle a specific scientific challenge. This challenge will provide the opportunity to meet and work collaboratively with other scientists who share similar interests from around the world.

The Challenge
In 2010, the Conference of the Parties revised and updated a Strategic Plan for Biodiversity that included the Aichi Biodiversity Targets for the 2011-2020 period. With this strategic plan rapidly coming to a close, the time is ripe to start reflecting on our accomplishments and the next stage of our ocean sciences journey. With this in mind, we challenge mentoring program participants
to reflect on the accomplishments of a decade of work since the establishment of the Aichi Biodiversity Targets and to contemplate perspectives for ocean sciences beyond 2020.

The Themes
Specific themes attributed to groups of mentors and mentees will reflect conference themes and include components explicitly related to upcoming changes that governing bodies will discuss and propose over the following months and years. Theme descriptions should guide but not constrain the breadth of specific subjects tackled in each theme.

1. **Application of biodiversity knowledge**: This theme explores social ecological systems, marine stewardship, education, outreach and participatory programs, marine policy and law and the integration of local communities and traditional knowledge into ocean science, management, and policy.

2. **Biodiversity discovery & prediction**: This theme brings us on a journey into biodiversity discovery in frontier areas (e.g. polar regions, deep sea and tropics), the technologies developed to access them, and areas yet to be explored. It will also consider new methods and approaches to predict multiple facets of biodiversity. Thus, the theme will address the future of biodiversity exploration, both in the field and analytically.

3. **Biodiversity in a changing ocean - Holistic assessments**: This theme addresses the effects of global changes and human impacts (e.g. fishing and nutrients) on biodiversity through the lens of holistic assessments such as cumulative impacts assessments. It also explores the role of systematics in understanding ocean change and the sustained observations of life as an integral component of coastal and ocean observing systems.

4. **Biodiversity tools and data**: This theme explores the new age of open data by focusing on big vs smart data in ocean observation, new technologies for observation, data management, analysis and visualization both in space and time, novel analytical approaches, citizen science, collaborative processes and capacity building.

5. **Marine biodiversity in the Anthropocene - Drivers of change**: This theme focuses on drivers of biodiversity change in an age of rapid oceanic alterations, be it from a stressors perspective (e.g. invasive species and plastics) or a technological and exploitation perspective (e.g. blue biotechnologies and marine genetic resources).

6. **Integrative frameworks**: This theme focuses on holistic and integrative tools and approaches that consider oceans as complex and interconnected 2 systems, and will discuss progress and insights into indicator development, ocean connectivity, and large-scale biogeography.

7. **Linking biodiversity to ecosystem function and services**: This theme explores emerging insights on ecosystem function and services, approaches to integrated assessments, the link between ecological traits and ecosystem functions, ecosystem connectivity and resilience to climate change across spatial scales.

8. **Strategies for conservation of marine biodiversity**: This theme critically examines marine conservation paradigms and technologies aimed at protecting, monitoring and restoring ecosystems, species and genetic diversity and promoting sustainable use, from local to regional to global scales.
The Mentoring Groups
Based on individual expertise and/or interest, mentoring groups of up to 3 mentors will pair with up to 8 early-career scientists in order to tackle theme-specific challenges. These groups will be joined by up to 2 International Leaders during the conference.

The Journey

Act I - Pre-conference
Objective: Receive challenge & begin preparations
To kick things off, mentors and mentees will meet virtually and begin exchanging ideas two months before the conference. These exchanges will build relationships and initiate reflection on theme-specific accomplishments over the last decade. It will also set the stage for Act II of the challenge.

Act II - Conference
Objective: Panel mediation, group workshop & plenary session
Act II of the challenge will take place during the conference. Mentors and mentees for each theme will meet in person and continue preparations begun during Act I. During this stage mentees from each team will moderate a theme-specific panel during the nightly poster sessions. Mentees will give a 5-minute presentation on theme-specific accomplishments over the last decade and moderate discussions on accomplishments and perspectives with conference participants. Mentoring groups will also attend theme-specific oral and poster presentations and use that material as they tackle their own challenge.

Individual team workshops will be scheduled throughout the conference to meet and work, with the opportunity to invite and work with International Leaders. Discussions will focus on the work accomplished so far by each team and on theme-specific perspectives. These exchanges will structure Act III and provide material for a plenary session on the final day, where International Leaders will have the opportunity to present their thoughts on the broad topic of beyond Aichi 2020.

Act III - Post-conference
Objective: Perspective and synopsis papers
Act I and Act II will have seen mentors and mentees learn and share thoughts on their respective themes, reflecting on perspectives for ocean sciences at the close of Aichi 2020. During the last stage of The Challenge, Act III, mentoring groups will write a short theme-specific perspective paper focused on the accomplishments of the last decade and the outlooks for the future of oceans sciences. Papers will be submitted to a special issue dedicated to the conference in Peer J for publication in July 2018. Each perspective piece will go through a peer-review process before publication.
We will invite International Leaders to work on a synopsis paper presenting the conference recommendations and ideas, and summary of the work accomplished through the mentoring program. This paper will be co-authored by all participants in the plenary presentation and mentoring program, and submitted to a high-profile journal (e.g. Nature) aiming for publication to coincide with the G7 ministerial meeting on climate change, oceans and clean energy in October 2018 and the Fourteenth meeting of the Conference of the Parties to the Convention on Biological Diversity (COP-14) in November 2018.

*Now a single question remains: do you accept the challenge?*