



CANADIAN OCEAN SCIENCE NEWSLETTER
 LE BULLETIN CANADIEN DES SCIENCES DE L'OCÉAN

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OCEAN SCIENCE NEWS

This section of your newsletter provides an opportunity to highlight your research programs to the Ocean Science Community.

Your are invited to send contributions to David Greenberg, david.greenberg@dfo-mpo.gc.ca

Mettez en valeur vos programmes de recherche en publiant un article dans cette première section de votre bulletin.

Faites parvenir vos contributions à David Greenberg, david.greenberg@dfo-mpo.gc.ca

The 2015 CNC-SCOR Eastern Lecture Tour

CNC-SCOR annually sponsors two speakers to do a tour of oceanographic centres. One speaker is drawn from Eastern Canada to talk to Western centres, the second is drawn from Western Canada and travels to the East.

The 2015 Eastern Lecture tour speaker is Dr. Christopher Harley from the University of British Columbia in Vancouver BC. He will be speaking on *Global warming, ocean acidification, and the importance of shifting species interactions in coastal marine ecosystems.*

The Eastern tour is being held in two stages. In the first stage he will be visiting St. John's NL December 7, Halifax, Bedford Institute of Oceanography (morning) and Dalhousie University (afternoon) December 8 and Rimouski December 9. Your local CMOS chapter will be hosting the talks, so check with them for the time and venue.

In the second stage, Dr Harley will visit Quebec (Laval University) and Ottawa in March. Exact dates and venues are still being arranged.

Le Tour de Conférence 2015 CNC-SCOR Est

CNC-SCOR parraine chaque année deux orateurs pour faire une tournée de centres océanographiques. Un orateur est tirée de l'Est du Canada pour parler à des centres de l'Ouest, un autre est tiré de l'Ouest canadien et se déplace vers l'Est. Dr Christopher Harley de l'Université de la Colombie-Britannique à Vancouver BC est l'orateur pour la tournée Est. Il prendra la parole sur *Global warming, ocean acidification, and the importance of shifting species interactions in coastal marine ecosystems.*

CNC-SCOR

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The Canadian National Committee of the Scientific Committee for Oceanic Research (CNC-SCOR) fosters and facilitates international cooperation. It is a non-governmental body that reflects the multi-disciplinary nature of ocean science and marine technology.

Le Comité national canadien du Comité scientifique de la recherche océanographique (SCOR) favorise et facilite la coopération internationale. Il reflète la nature multidisciplinaire de la science océanique et de la technologie marine.

La tournée de l'Est se tiendra en deux étapes. Dans la première étape, il se rendra à la ville de Saint-Jean TN 7 décembre, Halifax, Institut Océanographique de Bedford (matin) et l'Université Dalhousie (après-midi) le 8 décembre, et Rimouski le 9 décembre. Votre chapitre SCMO locale sera l'hôte des pourparlers, alors consultez les pour l'heure et le lieu.

Dans la deuxième étape, le Dr Harley se rendra à Québec (Université Laval) et à Ottawa en Mars. Dates et lieux exacts ne sont pas encore disponibles. Nous espérons annoncer ceux-ci dans le bulletin de janvier.

Christopher Harley, The 2015 CNC-SCOR Eastern Lecture Tour Speaker/L'orateur du Tour de Conférence 2015 CNC-SCOR Est

Dr Harley studies climate change impacts on rocky coasts. He is interested in how climatic factors, such as temperature, CO₂, and pH, and biological relationships, such as predation and facilitation, interact to create ecological patterns in time and space. Ongoing research projects include: temperature, carbon dioxide, and interspecific interactions; the thermal ecology of a marine symbiosis; simulating global warming on rocky shores; and Darwin's barnacle and the invasion of Argentina. He is the 2015 recipient of the Parsons Medal awarded by Fisheries and Oceans Canada, to a scientist for outstanding lifetime contributions to multidisciplinary facets of ocean sciences or for a recent exceptional achievement while working within a Canadian institution.



For more information on Dr Harley, see:

<http://www.zoology.ubc.ca/person/harley>

https://www.zoology.ubc.ca/~harley/Harley_Lab/Home.html

<http://cmosarchives.ca/Parsons/LoweHarleyFamily2015.html>

Paul Snelgrove, The 2015 CNC-SCOR Western Lecture Tour Speaker/L'orateur du Tour de Conférence 2015 CNC-SCOR Ouest

Dr Snelgrove is a Canada Research Chair in Boreal and Cold Ocean Systems at Memorial University's Ocean Science Centre. His interests include marine community ecology, larval ecology of invertebrates and fish, ecology of benthic invertebrates; hydrodynamic effects on benthic communities and populations, deep-sea ecology, coral reef ecology, biodiversity, disturbance and anthropogenic impacts. He led the group that pulled together the findings of the Census of Marine Life, synthesizing 10 years of data from 540 expeditions and collaborating with 2,700 scientists from 80 countries.



The western tour is planned for late in the first quarter of 2016 . Venues and dates have not yet been chosen - stay tuned.

For more information on Dr Snelgrove, see:

<http://www.mun.ca/osc/psnelgrove/bio.php>

https://www.ted.com/speakers/paul_snelgrove

https://cloud.creat.mun.ca/osc/research/labs/psnelgrove/MBEL_index.html

MEETINGS

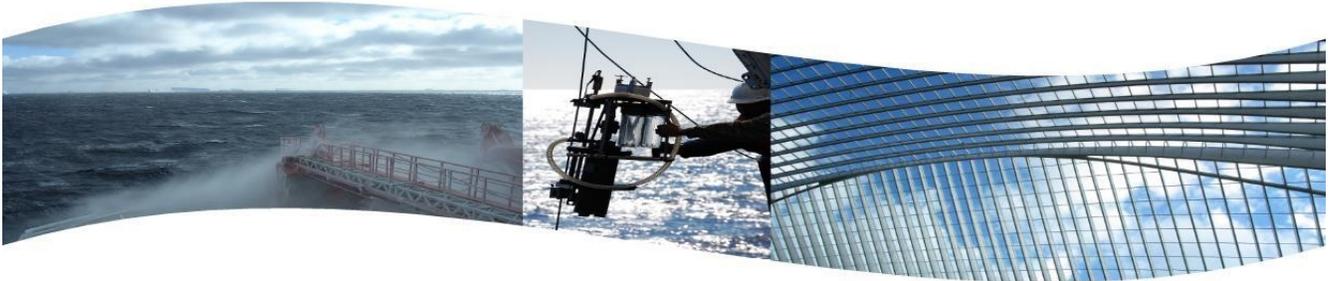
CLIVAR Open Science Conference, 18-25 September 2016, Qingdao, China



The Qingdao National Laboratory for Marine Science and Technology (QNLN) in China is proud to host the World Climate Research Programme (WCRP)'s CLIVAR Open Science Conference "Charting the course for climate and ocean research" in September 2016. QNLN is delighted of the opportunity to convene the international research community for this important event given its strong interest in promoting greater understanding of our climate and the ocean. The Open Science Conference, and the associated Early Career Symposium and Regional Stakeholder Forum, promise to bring together prominent international scientists and the future generation of scientific leaders.

<http://www.clivar2016.org/>

48th International Liege Colloquium on Ocean Dynamics
Submesoscale Processes: Mechanisms, Implications and new Frontiers
Liège Belgium 23-27 May 2016



Deadlines:

24th January 2016: submission of travel support request.

30th January 2016: submission of abstracts (late contributions may still be considered as a poster).

This colloquium aims to advance our collective understanding of submesoscale processes, their mechanistic functioning, relevance, and implications across a range of oceanic disciplines. Discussions will include observational, modeling and theoretical approaches for elucidating submesoscale phenomena. From this colloquium, its oral/poster presentations and scientific interactions, will emerge new cross-cutting themes for future research. <http://modb.oce.ulg.ac.be/colloquium/>

CANADIAN JOBS and TRAINING

**Memorial University of Newfoundland Department of Ocean Sciences
Tier 2 Canada Research Chair in Ocean Biogeochemistry**

The Department of Ocean Sciences of Memorial University (<http://www.mun.ca/osc/>) invites applications for a tenure track Tier 2 Canada Research Chair in Ocean Biogeochemistry. The focus of the Chair will align with the mandate of the Natural Sciences and Engineering Research Council. The ideal candidate should have a strong interdisciplinary background in some combination of biological or chemical oceanography, marine ecology, water column biogeosciences, climate studies and modelling, have a Ph.D, with relevant post doctoral experience and a demonstrated record of, or show the potential for success in obtaining external grant funding.

The deadline for receipt of applications is December 18th, 2015.

http://www.mun.ca/vpacademic/OSC_15_1.pdf

Postdoctoral positions at the Millennium Institute of Oceanography (IMO), University of Concepcion, Chile

At least two full-time postdoctoral positions are available immediately at the Millennium Institute of Oceanography (IMO) to undertake innovative research and to develop questions in any of these research lines and in association with two, or more, of IMO's Associate Researchers. Candidates will have to demonstrate experience and motivation to do research in any of them, using observational, experimental and/or modelling approaches. Independent of the area of preference, candidates will be expected to collaborate from his/her field in any of the other areas.

Applications will be received until November 30th 2015.

<http://imo-chile.cl/posts/2015-10-29-postdoctoral-positions-at-the-millennium-institute-of-oceanography-imo/>

CREATE-TOSST New ocean science PhD fellowships available

The NSERC Collaborative Research and Training Experience (CREATE) program for Transatlantic Ocean System Science & Technology (TOSST) has established new ocean science PhD fellowships. TOSST is a joint, transatlantic graduate research school linking two major centres of ocean research on opposite sides of the Atlantic Ocean, in Maritime Canada (Dalhousie University), and Kiel, northern Germany (University of Kiel). TOSST is closely linked to an equivalent School HOSST (Helmholtz Research School Ocean System Science and Technology) funded from Germany. Applications due by January 11, 2016 for a May 2016 start and by June 10 2016 for a September start. Dalhousie PhD applications have similar deadlines. There are 11 PhD Positions. Each fellowship covers tuition and living expenses for four years. For any questions, please email tosst@dal.ca.

<http://www.tosst.org/>

Looking for work? Try the CMOS site ([click](#))

Vous recherchez un emploi? Visitez le site SCMO ([click](#))

GENERAL

El Niño is back!

Submitted by William W. Hsieh Department of Earth, Ocean and Atmospheric Sciences, University of British Columbia, Vancouver, BC

From CMOS Bulletin SCMO, June 2015, Vol. 43, No. 5, page 161

For researchers interested in the El Niño phenomenon, the world was very exciting in 1997-98, when the biggest warm episode in a century hit. Since then, life has been rather uneventful until 2015, when once again the big one arrived.

Figure 1 shows the the equatorial Pacific monthly sea surface temperature (SST) anomaly (from National Centers for Environmental Prediction [NCEP], National Oceanic and Atmospheric Administration [NOAA]) in the Niño 3.4 region (5°N-5°S and 120°W-170°W) for 2015 and for 1997-98. The warming in 2015 started earlier than in 1997, thanks to an aborted El Niño in 2014.

Around May-June 2014, a major El Niño arriving in 2014 was widely heralded in the news media: e.g.

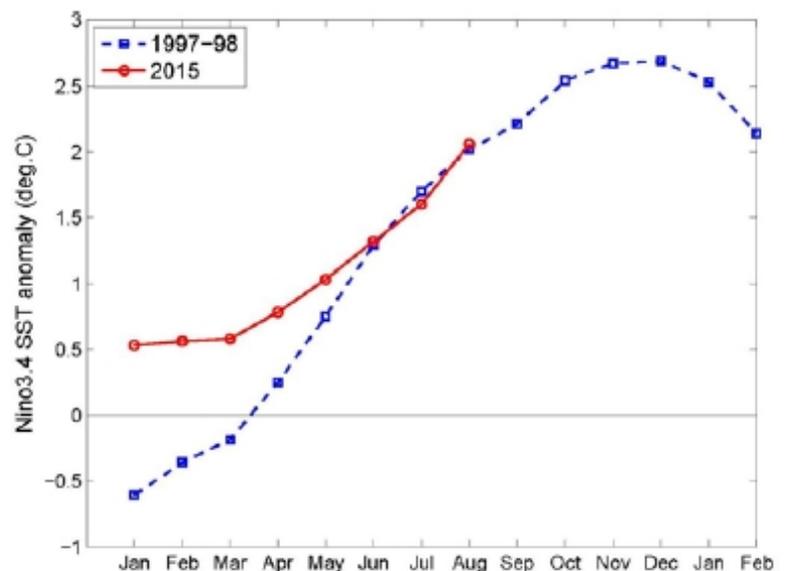
<https://www.newscientist.com/article/mg22229682-400-world-is-unprepared-for-major-el-nino-later-this-year/>

and

<http://www.theguardian.com/environment/2014/jun/11-sp-el-nino-weather-2014>

The SST did rise for a while in 2014, then stopped increasing, hence 2015 started somewhat warm in the Niño 3.4 region. The SST anomaly finally took off in spring 2015, and in August 2015, the Niño 3.4 SST anomaly was 2.06°C, marginally above the August 1997 value (Fig.1).

Figure 1: Niño 3.4 SST Anomaly: 2015 versus 1997-98



Regardless of how the current El Niño will evolve – even if it does not reach the peak value of 2.69°C attained in Dec.1997 – it will be a major El Niño. It will also be in time to influence Canada’s climate during the winter of 2015-16 via atmospheric teleconnection. During the winter of an El Niño, the air temperature tends to be warm over most of Canada, with the greatest warming centred around Manitoba-western Ontario, where a temperature anomaly of up to +3°C can be found (Shabbar and Khandekar, 1996; Hoerling et al.,

1997). Southern Canada also tends to be drier during an El Niño winter (Shabbar et al., 1997) and southern British Columbia tends to receive less snow (Hsieh and Tang, 2001).

The global SST anomaly map (30 Aug.-5 Sep. 2015) from NCEP (Figure 2 shown on next page) clearly shows the El Niño warming in the equatorial Pacific. What is not typical is the presence of large patches of warm water (“blobs”) in the extratropical North Pacific, which developed in late 2013, and has a great impact on the marine food web http://www.nwfsc.noaa.gov/news/features/food_chain/index.cfm. While the warm blobs do not fit the classic pattern of the warm phase of the Pacific Decadal Oscillation (PDO), where warm water is present in the eastern extratropical North Pacific and cool water to the west, they did help to flip the PDO index from negative to positive in Jan. 2014. Hence, we are having a major El Niño on top of a PDO warm phase.

References

Hoerling, M.P., Kumar, A. and Zhong, M. 1997. El Niño, La Niña and the nonlinearity of their teleconnections. *Journal of Climate*, 10: 1769-1786.

Hsieh, W.W. and B. Tang, 2001. Interannual variability of accumulated snow in the Columbia basin, British Columbia. *Water Resources Res.* 37: 1753-1759.

Shabbar, A. And Khandekar, M. 1996. The impact of El Niño-Southern Oscillation on the temperature field over Canada. *Atmosphere-Ocean* 34:401-416.

Shabbar, A., Bonsal, B., and Khandekar, M. 1997. Canadian precipitation patterns associated with the Southern Oscillation. *Journal of Climate*, 10: 3016-3027.

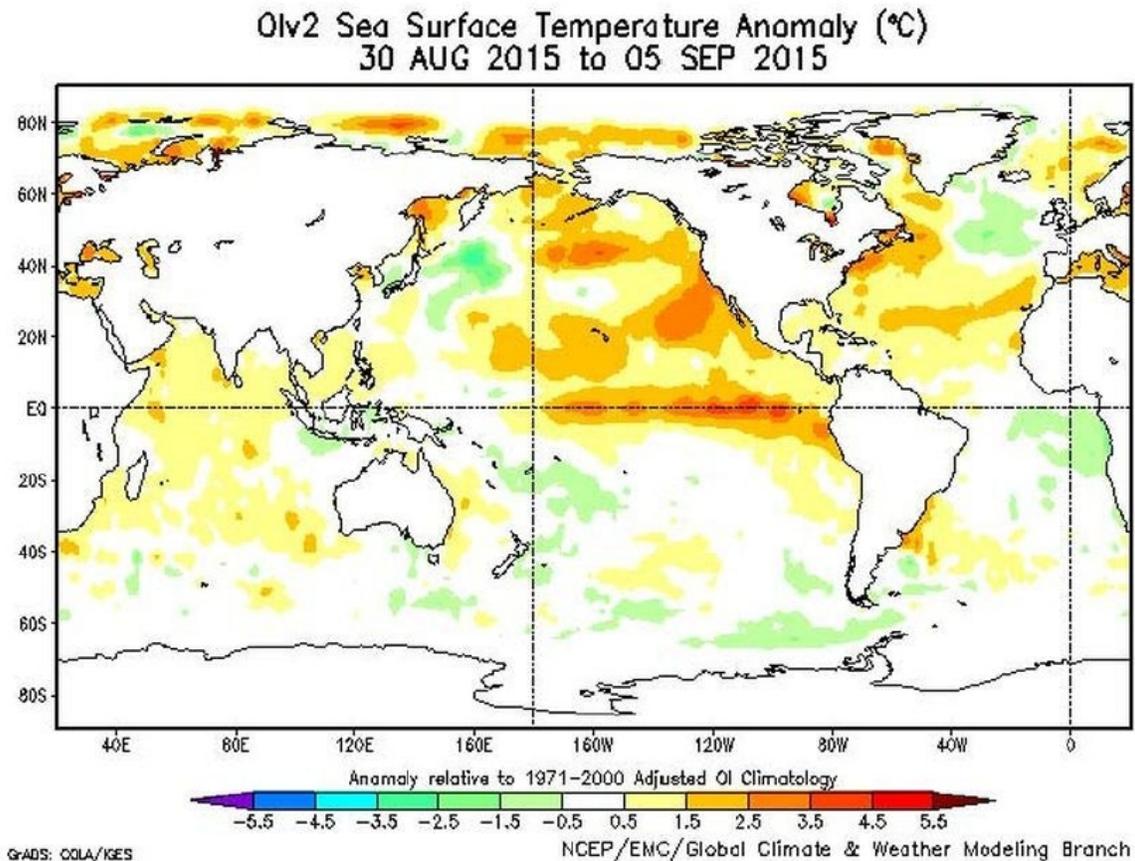


Figure 2: Global Sea Surface Temperature Anomaly during 30 August - 5 September 2015

CMOS AWARDS Nominations Deadline: Feb 15.

February 15th is the deadline for nominations for the CMOS Prizes and Awards. It may seem far away, but it always seems to arrive faster than we thought. Please take a moment to visit <http://www.cmos.ca/site/awards> for a list of the eight awards, for instructions on how to make a nomination and then submit something on behalf of one of your colleagues or students. CMOS has a rich history recognizing deserving persons (members and non-members) through its awards programs. But regrettably, there are many deserving candidates who go unrewarded each year because we were too busy to work up a nomination. Don't wait - do it now!

Note that any inquiries and all nominations are to be forwarded to the CMOS Awards Coordinator (Denis Bourque) at awards-coord@cmos.ca .

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<p>Previous newsletters may be found on the CNC/SCOR web site.</p> <p>Newsletter #86 will be distributed in January 2016. Please send contributions to David Greenberg david.greenberg@dfo-mpo.gc.ca</p> <p>If you wish to subscribe to this newsletter, please send an email to listserv@lists.mcgill.ca with the following message: SUBSCRIBE OCEAN-NEWSLETTER</p> <p>If you wish to cancel your subscription, please send an email to listserv@lists.mcgill.ca with the following message: SIGNOFF OCEAN-NEWSLETTER</p>	<p>Les bulletins antérieurs se retrouvent sur le site web du CNC/SCOR.</p> <p>Le Bulletin #86 sera distribué en janvier 2016. Veuillez faire parvenir vos contributions à David Greenberg, david.greenberg@dfo-mpo.gc.ca</p> <p>Si vous désirez vous abonner à bulletin, veuillez envoyer un courriel à listserv@lists.mcgill.ca avec le message suivant: SUBSCRIBE OCEAN-NEWSLETTER</p> <p>Si vous désirez annuler votre abonnement, veuillez envoyer un courriel à listserv@lists.mcgill.ca avec le message suivant: SIGNOFF OCEAN-NEWSLETTER</p>
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