



Invitation to **Big Black Box** workshop in Tromsø 19 and 20th January

Marine ecological processes during the polar night – what do we know and how to proceed?

UiT The Arctic University of Norway, Campus Tromsø, 19th – 20th January 2015

The extended period of Arctic darkness, known as the polar night, may limit organism survival and reproductive success because of the associated food limitation. Even if the polar night only exist for +/-4 months, depending on latitude, Arctic marine environments may experience complete darkness for up to ten months because of extensive sea ice and snow conditions. A long overwintering period and a brief growing season are likely the main barriers for “temperate/lower latitude” species to keep sustainable populations in the Arctic. The temperate species lack the life history adaptations of high-Arctic species that allow them to cope with such extreme seasonality. However, our knowledge on winter ecology is extremely poor in comparison to ecological processes during the productive summer season. Gathering additional information on polar night ecology and processes is crucial, especially in light of expected impacts of climate change on Arctic marine ecosystems. We therefore invite you to this Big Black Box workshop to convene an international group of experts to

- 1) develop one white paper summarizing existing knowledge on winter ecology in the Arctic
- 2) identify the most critical knowledge-gaps
- 3) discuss a new international initiative/program focusing on polar night ecology

We first of all aim for ecological processes at the base of the marine food web, including the sympagic, pelagic and benthic realms from bacteria, protists, invertebrates to fish, but everybody interested is welcome to sign up for the work shop (see below).

Venue

The workshop will take place at UiT the Arctic University, Tromsø 19 and 20 January 2015. Sign up before 5 January 2015 to Janne E. Søreide, organizing committee (janne.soreide@unis.no). Please provide your preferred “white-paper-topic”: 1) sympagic 2) pelagic and 3) benthic. Last topic: 4) synthesis sympagic-pelagic-benthic couplings we all will contribute to.

Support

Workshop attendance will be free of charge. Travel support (incl. accommodation) for both senior and early career scientists are available (see <http://mare-incognitum.no/index.php/bbb-application-info>) and **any request for travel support must be submitted by Tuesday Dec 16, 2014** to Janne.Soreide@unis.no. This workshop is funded by IASC, NRC, UNIS and UiT. Deadline for signing up for the workshop: Tuesday 6 January.

Organizing committee

Janne E. Søreide, The University Centre in Svalbard: janne.soreide@unis.no

Bodil Bluhm, UiT The Arctic University of Norway: bodil.bluhm@uit.no

Tove M. Gabrielsen, The University Centre in Svalbard: tove.gabrielsen@unis.no

Rolf Gradinger, Institute of Marine Research: rolf.gradinger@imr.no

Tentative work shop schedule:

Monday 19 January

- 09:00 Welcome and a short introduction of all present
- 09:30** Big Black Box background and work shop tasks (Tove M. Gabrielsen & Janne E. Søreide)
- 10:00** The MOSAIC - initiative
- 10:30** Coffee-break
- 11:00** Meet in groups (3 topics: sympagic [1], pelagic [2] and benthic [3])
- 12:30 LUNCH
- 14:00 Continue to work in groups
- 15:30 Coffee-break and discussion
- 17:00 End of Day 1

(17:30-19:30 USA-NOR BBB-project meeting)

Tuesday 20 January

- 09:00 Introduction to work plan on Day 2
- 09:15 Live report from Marine Night field campaign, Ny Ålesund, Jørgen Berge
- 10:30 Coffee break
- 11:00 Presentations/summary of the work on the three topics Day 1
- 12:30 Lunch
- 13:30 Synthesis-work
- 14:30 Coffee break
- 15:00 Synthesis work-continue
- 16:00 Future project plans
- 17:00 End of Day 2

- 20:00 Science ice breaker, Arctic Frontiers
Place: Ølhallen, Tromsø

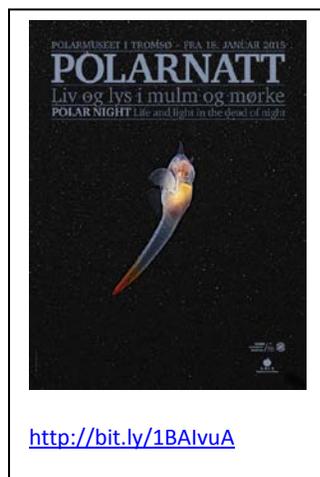
Wednesday 21 January

Polar night exhibition reception

Date: Wednesday 21 January

Venue: Polarmuseet

Time: 18:30



The primary objective of the Polar Nights exhibition is to achieve a basic understanding of Arctic biodiversity and food web structure during the polar night, and how ecological processes from reproduction and growth to trophic interactions and life-history processes during this nearly unstudied time contribute to functioning and Arctic ecosystems.