

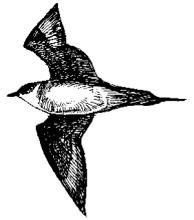
News

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Ny-Ålesund Newsletter



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Workshop on the 'Kongsfjorden System' in March 2008

Svalbard Science Forum plans a workshop in Ny-Ålesund to promote the establishment of a “flagship project” in marine sciences centered around the Kings Bay Marine Laboratory. The main focus will be on Kongsfjorden as a model system in the study of the effects of climate change on the Arctic marine ecosystems.

Flagship project

“Flagship projects” are proposed as a means of strengthening the collaboration between the different research groups working in Ny-Ålesund by adjoining existing activities into a common umbrella project and extending the projects with new ideas and/or research groups. As first flagship project to be developed, the 'Kongsfjorden System' has been chosen. The planned workshop has as the goal to get this flagship project started, i.e. to develop a concrete scientific research plan for the coming years. The idea is to implement ongoing research of the different institutions and research groups, to identify gaps in knowledge/ activities and point out possible new research activities.

28-31 March

The workshop will be held in Ny-Ålesund from 28-31 March and participants will be recruited from the relevant research groups and institutions working in the Kongsfjorden area. The planning group is led by Geir Wing Gabrielsen, NPI and consists of representatives of NPI, AWI, UNIS and the Instytut Oceanologii PAN. For more info contact ssf@npolar.no

New improved version of the RiS database online

The RiS database has been in a trial phase since spring and now a new improved version has been released. The project registration has been simplified and now includes eight steps towards a complete registration. In addition a new powerful search function has been added that enables you to search for projects, persons and references that are registered in the RiS database. You can do a blank search in order to get all registered projects listed and use a drill down menu to specify your search. Alternatively, you can search with keywords or names to limit the output result.

Projects that were registered in the old RiS catalogue in the period between 1991-2003 have been transferred to the current database and are now searchable. If you have registered projects during this period and would like to have access in order to modify them or use them as new templates, you can

send us an email (ssf@npolar.no) containing your User-ID and the name(s) of the relevant projects. You may search the database to find the project titles (use your name as search term).

Kings Bay AS will ask for the RiS-ID from 2008 on

Each registered project has a unique RiS-ID that you can find in the report generated both after completed registration and when conducting a search. Kings Bay AS will from 2008 ask scientists to specify their RiS-ID's when booking a stay in Ny-Ålesund. There will also be a request for the RiS-ID on the registration form for the Marine Laboratory.

You find a direct link to the project registration and the search function on the main page of the SSF-webportal: www.ssf.npolar.no.

Activity on the IPY project COPOL (Contaminants in Polar Regions) in Kongsfjorden, 2007

Anders Ruus, Anita Evensen, Katrine Borgå og Geir Wing Gabrielsen

Researchers and students affiliated with the International Polar Year (IPY) project COPOL (Contaminants in Polar Regions) have been busy in Kongsfjorden through the year 2008.

The main objective of COPOL is to understand the range of man-made contaminants in marine ecosystems of Polar Regions, in order to better predict how possible future climatic change imposed alterations of the marine food webs will be reflected in levels and effects at higher trophic levels. This aim will be addressed by 4 integrated work packages (WPs) covering the scopes of 1) food web contaminant exposure and flux, 2) transfer to higher trophic levels and potential effects, 3) chemical analyses and screening, 4) synthesis and integration.

The COPOL project is an initiative from the Polar Environmental Centre (POMI) and Oslo Multidisciplinary Centre of Environmental and social Science (CIENS). Institutions involved are the Norwegian Polar Institute, the Norwegian Institute for water research (NIVA), Akvaplan-niva, the Norwegian Institute for Air Research (NILU), the Norwegian University of Science and Technology (NTNU) and the Norwegian Institute for Nature Research (NINA). The COPOL project is coupled to the Norwegian Research Council-funded (NORKLIMA) project MariClim, which focuses on marine ecosystem consequences of climate induced changes in the water masses of West-Spitsbergen. Joint efforts between researchers from COPOL and MariClim resulted in successful cruises, thus many samples and much data were collected. Furthermore, COPOL is also linked to a project funded by Conoco-Phillips, in which the focus will be on pelagic component of the food webs. A PhD-student is affiliated with this project.

In 2008, three field campaigns have been carried out to collect samples to be analysed for anthropogenic contaminants. The cruises were conducted in May, July and October. The COPOL project focuses on the Arctic region, and the main effort is concentrated in Kongsfjorden. This fjord has been identified as particularly suitable as a study site of contaminants processes and for influences of climatic changes, due to the documented relation between Atlantic water influx and the climatic index North Atlantic Oscillation (NAO). Variable Atlantic water influx will not only influence abiotic contaminant exposure, but also food web structure, food quality and energy pathways, as different water masses carry different phyto- and zooplankton assemblages. This may affect

the flux of contaminants through the food web to high trophic level predators such as seabirds and seals, due to altered food quality and energy pathways.

The COPOL field work was very diverse (collection of many organisms from planktonic and benthic invertebrates, to fish and sea birds), thus many of the facilities in Ny-Ålesund were appreciated. Besides working from RV Lance and RV Jan Mayen, COPOL personnel made use of *inter alia* Kings Bay's new vessel "Teisten" and the Ny-Ålesund Marine Laboratory. New field campaigns are scheduled in July 2008 and 2009.

More information about the COPOL project can be found at www.copol.net.

Pictures and information about our field work in Kongsfjorden can be viewed at our field diary: <http://feltdagbok.copol.net>.

Cinderella Science

"On-the-ground monitoring is unglamorous work, seldom rewarded by funding agencies or the science community. But we neglect it at our peril, warns Euan Nisbet."

Read more in Nisbet's well written and thought-provoking commentary about the status of air monitoring in Nature.

E. Nisbet, Nature vol 450, 6 December 2007.

The MariClim project in Kongsfjorden, Svalbard

Geir Wing Gabrielsen

For the MariClim project (Marine ecosystem consequences of climate induced changes in water masses of West-Spitsbergen) 2007 has been the final year with regard to collection of data in Kongsfjorden. Participants from the MariClim project have been involved in six cruises collecting hydrographic and biological data from the shelf area towards the inner part of Kongsfjorden. In addition there has been field work in the little auk and kittiwake colony in the Feiring- and Krykkjefjellet.

The winter of 2006/2007 was warm, and no water temperature below 0°C was recorded in the fjord. This continues the warm winter scenario from 2005/2006 presented in the paper by Cottier et al. in 2007. This paper reported on how the unusual wind conditions promoted up-welling of Atlantic Water at the shelf edge causing a large influx of warm water, which explains the changes in biological communities and lack of sea ice. As for the previous season, there was less fast ice than usual in Kongsfjorden in the winter of 2006/2007. The ice situation did not allow a regular thickness

monitoring on identical locations. However, sea ice investigations were conducted, following up also NPI's longterm fast ice monitoring programme (Gerland and Renner 2007), and CTD work was done from a small boat. Zooplankton has been collected during cruises May, July and October in 2007, along a transect from the shelf to the inner part of Kongsfjorden. Preliminary results from 2006 and 2007 indicate high abundances of krill (up to 1000 individual m⁻²) signifying that these organisms are important components in Kongsfjorden. MariClim divers have also collected hard-bottom benthos for stable isotopes and clams for study of the growth patterns related to climate variability. Acoustic surveys with additional sampling of fish and zooplankton have been conducted in May and July in 2007 to complete the seasonal study of polar cod which started in 2006. The aim is to enhance our understanding of flow of energy through the system at different climate scenarios. Data has been collected on the at-sea distribution and abundance of Little auks in Kongsfjorden as well as on the foraging behaviour and breeding performance of Black-legged kittiwakes and Little auks. Data collection on energy expenditure, food availability, stress hormone level and adult survival in Kittiwakes and Little auks was continued. Radio-transmitters as well as time-temperature-depth recorders were applied to Little auks to get more detailed information on the feeding ecology of these birds.

More information about the MariClim project;
www.npolar.no/MariClim

Project manager: Geir Wing Gabrielsen,
geir.wing.gabrielsen@npolar.no, Norwegian Polar Institute, Tromsø.

References: Cottier F, Nilsen F, Inall ME, Gerland S, Tverberg V and Svendsen H (2007). Wintertime warming of an Arctic shelf in response to large scale atmospheric circulation. *Geophysical Research Letters* 34(L10607), 1-5.

Gerland, S, and Renner AHH (2007). Sea ice mass balance in an Arctic fjord. *Annals of Glaciology* 46, pp. 435-442.

“NY-ÅLESUND AND IPY” - NySMAC Seminar took place 16 – 17 October 2007

A Ny-Ålesund seminar hosted by the Natural Environment Research Council (NERC) and the British Antarctic Survey (BAS) was held in Cambridge, UK, almost a quarter of the way through the International Polar Year 2007 – 2009.

Seventy-five delegates from twelve nations attended the multi-discipline science seminar. The opening session by Prof Kim Holmen “An Arctic Earth Observing System; Creating an IPY Legacy in Svalbard” stimulated thought and set the tone for the next two days.

The scientific results and knowledge shared during the thirty-four presentations and eleven posters were a testimony to the important research carried out at Ny-Ålesund. The seminar also exemplified the international friendship at Ny-Ålesund as well as the fruits of research carried out by the unique international polar research community.

News from ARCFAC V project

ARCFAC has moved into the 2nd phase. The User Selection Panel had a project evaluating meeting in Stirling, Scotland in early December 2007. As a result of the decisions made during the meeting, we expect 13 new projects to take place in Ny-Ålesund and its neighbourhood. We also congratulate the leaders of the successful projects and we wish them all a very fruitful fieldwork season!

The list of proposals accepted by ARCFAC V in 2008 and the Summary and Field Reports from ARCFAC projects funded in 2007 are available at the ARCFAC website: www.arcfac.npolar.no

Call for Proposals:

European Centre for Arctic Environmental Research Ny-Ålesund RI, Svalbard, Norway

European research teams are offered free access (including travel) to the Ny-Ålesund Research Infrastructure in Svalbard, Norway. This is a Research Infrastructures Action of the European Community FP6, Specific Programme for Structuring the European Research Area.

We invite scientific research proposals within all fields of Arctic environmental research, specifically within the following disciplines:

- ✓ Marine and terrestrial biology
- ✓ Climate research in the troposphere and stratosphere
- ✓ Surface phenomena, snow and ice
- ✓ Space geodesy
- ✓ Air quality research and arctic pollution
- ✓ Multidisciplinary environmental sciences

Please go to the programme's website at: <http://arcfac.npolar.no> for details (eligibility criteria, application forms, deadlines, content of scientific project proposals, terms of access and funding etc.). Proposals should be submitted directly via the website (preferable) or by e-mail (arcfac@npolar.no).

The proposal submission deadlines are the same each year: **31 March and 30 September** (until 31 March 2010)

Calendar of Arctic Meetings

28th NySMAC meeting
4-5 March 2008 in Oslo (Kjeller), Norway

For a comprehensive list of published meetings related to the Arctic, look at **Arctic Calendar of Events** on the IASC home page <http://www.iasc.se> or <http://calendar.arcus.org/>

Staff News

New staff since last summer:

Kings Bay AS

Bendik Eithun Halgunset, research adviser
Rickard Walter, chef manager
Karin Taraldsen, cook
Elin Austerheim, marin lab manager
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