



January 2017

The Bolin Centre is a multi-disciplinary consortium that conducts research, graduate education and outreach related to the Earth's climate.

Director's corner

- The directors are meeting with all Research Area (RA) leaders, to learn how the Research Areas function, and how well paired leadership works, both within the RAs and in the context of the SAG meetings.
- We follow closely the preparations of a proposal to be submitted to VR in response to its database call. The application is lead by Anders Moberg and Martin Jakobsson.
- Early this month, we attended an information meeting at the Ministry of Foreign Affairs, on the topic of the UN's forthcoming »The Ocean Conference« in New York, 5-9 June 2017, see www.regeringen.se/regeringens-politik/havskonferensen. Please contact us if you want more information.

Research Area 1: Oceans-Atmosphere Dynamics and Climate

- Thomas Spengler, from Bergen University visited the Bolin Centre in January and gave the RA1 Bolin Seminar, the first in the new series.
- Daffydd Gwyn Evans from the National Oceanography Centre, UK visits Stockholm January 23 and 24, and gives a seminar "Seasonal cabbeling enables Southern Ocean overturning", 11:15, 24/1 at MISU (C609).
- Workshop on the Eocene-Oligocene Climate Transition, February 1–3 in the Geoscience Building. The workshop brings together proxy and climate-modelling experts with the aim to give an updated review of the current knowledge and identifying open questions and future research directions. The full program will be announced soon.

Research Area 2: Clouds, Aerosols, Turbulence and Climate

- The co-leadership in RA2 has officially changed, and as of Jan 1 2017, Lars Ahlm, Matt Salter and Frida Bender are co-leaders. Message from the previous RA2 leaders: We [Ilona Riipinen and Annica Ekman] have enjoyed our work tremendously and would like to thank everybody in the Bolin Centre for all the great collaboration during the last ~4.5 years!
- The RA2 funds for 2016 have been spent on various research activities within the Research Area. Scientists in the RA have been able to apply for funds for e.g. workshops, smaller projects, research visits etc., supporting cooperation within the Bolin Centre, or in other ways strengthening the RA2 science. As this has been successful, the RA funds in 2017 are planned to be used in a similar manner. An RA workshop is also planned to take place in the late spring.

Research Area 3: Hydrosphere, Cryosphere and Climate

- The conference As2016 was held in Stockholm in June 2016, and included sessions on the theme arsenic contamination and global environmental change, exploring water-borne spreading (past, present, future) of As originating from natural and anthropogenic sources under conditions of global change.
- The conference book with scientific papers from the conference As2016, which was supported by the Bolin Centre (RA3), is now available from CRC Press (Bhattacharya, P., Vahter, M., Jarsjö, J. et al. (Eds.), 2016. »Arsenic Research and Global Sustainability: Proceedings of the Sixth International Congress on Arsenic in the Environment (As2016)«, CRC Press, The Netherlands, 730 pp, ISBN: 9781138029415.)

Research Area 4: Biogeochemical Cycles and Climate

- A new seminar series "Biogeochemical Cycles and Climate" will be established. The aim is to organize a forum for discussing novel research on biogeochemical cycles, with a focus on carbon cycle, for RA 4 members and

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guests. Seminars will be given 9 times a year.

- Besides the flagship project on carbon use efficiency, a number of smaller projects have been funded end of last year.

Research Area 5: Historical to Millennial Climate Variability

- The last official meeting of PAGES' Euro-Med2k working group was hosted by the Research Area 5 of the Bolin Centre for Climate Research, in collaboration with the Department of Physical Geography, in the Geo-Science building at Stockholm University from 1–2 December 2016. It was organized by Fredrik Charpentier Ljungqvist and Paul J. Krusic. The workshop gathered 15 scientists from Belgium, Germany, Great Britain, Norway, Spain, Sweden, and the United States working towards the common goal of investigating summer temperature and drought co-variability across Europe over the past millennium using instrumental, gridded tree-ring reconstructed and climate model simulation data. Part of the workshop was also devoted to discussing opportunities for a continuation of the Euro-Med2k working group after PAGES' regional working groups are officially closed at the end of 2016. Read more on: www.pages-igbp.org/ini/wg/euro-med2k/meetings/127-pages/1665-euro-med2k-meet-dec-16.
- In connection with the workshop Professor Jürg Luterbacher (Justus Liebig University Giessen) held a public lecture about "The year without a summer: The Tambora eruption in April 1815 and the 'year without a summer' 1816".

Research Area 6: Deep Time Climate Variability

- A workshop on the Eocene-Oligocene climate change transition will be co-hosted with RA1 during February 1-3, 2017. We have invited 12 globally leading experts, half atmospheric and ocean modellers and half marine and terrestrial proxy researchers, to give talks on the progress and present status in their respective fields. In addition, we have at least 19 local researchers attending (representing RA1, RA5, RA5, RA6 and RA8), five of which are giving talks. We anticipate this workshop to be a great success!
- Economy: We realised that we still had a pot of money from the first round of FORMAS funding that needed to be spent in the first half of 2017. We therefore opened a call in December 2016 for funding applications for small projects, generally up to about 30.000 SEK. We had a great response and have reached – and exceeded – the spending goal. The following researchers have been awarded grants:
 - Alexander Lewerentz, IGV: 24.000 SEK. Fieldwork on Islay, Scotland, related to the research question: Has metamorphic fluid infiltration from the Great Glen Fault altered the isotopic signatures of the "Snowball Earth Sequence" on the Garvellachs and in Islay?
 - David Hutchinson, IGV: 19.000 SEK. Request for support for travel and attendance costs at IAPSO conference in Cape Town, South Africa, August 2017.
 - Ian Pittcairn, IGV: 33.000 SEK. Dating of carbonate alteration in the Eastern Desert of Egypt.
 - Jan Backman, IGV: 10.000 SEK. CaCO₃ content and bulk sediment stable isotope (C, O) analyses from 40 IODP Exp 362 Eocene samples. Analyses plus technician salary.
 - Jennifer Newell and Arjan Stroeven, NG: 14.878 SEK. Field equipment necessary for Antarctic fieldwork.
 - Karin Helmens, NG: 15.000 SEK. Finland MIS 2 (LGM) project: 3 x cosmogenic dates + Fieldwork costs for Helmens and field assistant. Continued support on existing RA6-funded project due to additional costs.
 - Linda Löwhagen and Alasdair Skelton, IGV: 30.000 SEK. Stable isotopes of oxygen and hydrogen in meteoric water during Neoproterozoic glaciation.
 - Margret Steinthorsdottir, NRM: 11.000 SEK. Participation in an invited PAGES workshop on Cenozoic CO₂ proxies, March 14-17 at Columbia University, NY, USA.
 - Nina Kirchner and Martin Jakobsson, NG and IGV: 70.000 SEK to co-fund the 5th International Conference on Palaeo-Arctic Spatial and Temporal (PAST) Gateways, May 22-26 2017, at the Lovén



Centre for marine infrastructure, Kristineberg, Sweden.

- Reuben Hansmann, IGV: 31.500 SEK. Laboratory costs for Apatite fission track analysis.
- Robin Blomdin, Natacha Gribenski, Arjen Stroeven, NG: 12.500 SEK. Open access publication costs within the Central Asia Paleoglaciology Project (CAPP).
- Thomas Mörs, NRM: 28.000 SEK. Collaborator visit/seed funding. Palaeoecological interpretation and precipitation estimation (regional climate development) based on Miocene herpetofaunal assemblages from Central Europe. Flights and accommodation for a 2-week collaborator visit.

Research Area 7: Landscape Processes and Climate.

- We are in the midst of planning our kickoff meeting on January 19. More than 40 persons have signed up and we hope for a constructive meeting. We will present the research profile of RA7 and create an environment where we get to know each other through speed talk presentations and open discussions.

Research Area 8: Biodiversity and Climate

- December 16, RA8 had a meeting open to all members. The aim of the meeting was to present the ideas of the research area leaders on how the work in RA8 should be organized, and to get feedback on these ideas. In particular, we discussed the kind of research relevant to RA8 and how decisions about allocation of funding should be taken. About 35 persons attended the meeting.
- The resources that will be available for RA8 during the period 2017–2021 includes two different funding schemes; start up-money to support smaller/pilot projects, workshops, equipment, field work etc, and “Ekoklim”-money that will be devoted to new PhD- and post-doc positions.
- Based on the discussions at the meeting we have now decided on the routines for applications. Application for the smaller project money should be submitted before January 31. Applications for the PhD/Postdoc money should be submitted in two steps. An outline should be submitted before April 1. All submitted applications will then be discussed at the Tovetorp meeting on April 19-20. After the Tovetorp meeting, detailed applications of about three pages should be submitted for final decisions.
- Applications will be evaluated based on the scientific quality of project, the relevance of project to RA8, and the potential of proposed project to lead to establishment of a research field/group that will be able to attract external funding in the future.

Coordination & Communication

- **Members:** A warm welcome to our new members! Please don't forget to drop by the office of Karin Jonsell to pick up a Bolin T-shirt and other nice stuff. The number of members in the Bolin Centre is now 322. The system for registration has caused issues during the autumn and we are currently investigating ways to facilitate for new members. Elisabeth Däcker (IGV) is helping with the registration of members.
- **Merging:** It has been a busy autumn in the Bolin Centre with the merging of the old Bolin Centre and the former SFO environment EkoKlim. We have had four board meetings and three Science Advisory Group meetings to get the things organised. The Open Forum in September with the presentation of the new centre was open for everyone and well attended.
- **Recruitment:** The recruitment process of an additional coordinator and communicator at the Bolin Centre has been going on all autumn. We had 62 applicants to the 50 % permanent position. A recruitment firm interviewed interesting candidates and a committee consisting of Karin Jonsell, Alasdair Skelton, Nina Kirchner, Viktoria Arwinge (Head of Economy and personnel administrator at IGV) and Sören Nylin (Section Dean for Biology) did the evaluation of the final candidates. We are happy to announce that Annika Burström will start as of 1 of March. Annika is currently working at Föreningen för Utvecklingsfrågor, FUF.
- **Science Forum:** A Bolin Centre Science Forum was held in September for Stockholm University Honorary Doctorate Philip Jones, University of East Anglia. The title was »The Reliability of Global Temperature Averages« and Anders Moberg, Erik Engström, Fernando Jaramillo, Juan Acosta Navarro and Frida Bender

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contributed with talks before the debate.

- **Science Seminars:** A very well attended Bolin Centre Seminar was given by Paulo Artaxo from Universidade de Sao Paulo on the topic »Anthropocene – An important scientific, social and economic challenge for our society« in October. Jürg Luterbacher, Justus Liebig University of Giessen, held a seminar in December titled »The year without a summer: The Tambora eruption in April 1815 and the year without a summer 1816«.
- **Bolin Days:** The Bolin Days was greater than ever with the eight Research Areas presenting their science, celebration of Tarfala Research Station 70 year, a special session for the Department of Zoology (due to a clash with another conference), an invited talk about ICOS, opening of a photo exhibition about the SWERUS-C3 expedition and presentation of PhD research financed by the Climate Research School. The Bolin Days also included a poster session preceded by a PICO poster presentation session and booths during the fikas for the Bolin Centre Mentoring Programme, the Database, the modelling coordination and Bolin Centre games and give aways. The dinner was held in the lunchroom at level 4 to accommodate as many as possible. It was well attended and the ceilidh after was great fun!
- **ESAG:** The External Science Advisory Group visited during the Bolin Days, but due to unfortunate circumstances only Johannes Oerlemans and Anders Lindroth could attend.
- **AGU:** Since 2013 the Bolin Centre has a booth at the American Geophysical Unions fall meeting in San Francisco in December. The booth has been a success from start due to a coherent design, great activities, nice give-aways and attentive personnel. The Bolin Centre scientist use the booth as a meeting place and home base at the conference and those who engage in the booth for two hours get their registration fee reimbursed. New for this year was collaboration with the Swedish Polar Research Secretariat as we have overlapping research topics, scientists and target groups at the conference. We shared the booth (2/3 Bolin, 1/3 Polar) and helped each other, but were displayed as different organisations. We intend to continue the fruitful collaboration.
- **Products:** A new batch of Bolin Centre T-shirts arrived during the autumn, but due to a cock-up by the profile products firm we didn't get the new blue bags. However, we could get some emergency bags delivered to AGU in time. New bags will be ordered this spring. New teasing sticks, rollups and leaflets has been delivered and a new climate related »air molecule« game developed. A new CO₂-game is in the pipeline.
- **Bolin Centre Seminars:** The Bolin Centre has launched a new seminar series as of January. The series aims to provide an opportunity to learn about current research topics in the individual research areas of the Bolin Centre and to bring researchers together on a regular basis. We strive to trigger lively discussions and to facilitate both internal and external collaborations. The seminars will be scheduled as follows: Research Area (RA)1 to 5 in January to May, and RA6 to 8 in August to October. In November we have our annual conference the Bolin Days, and in December everyone is too busy anyway. The lectures will be streamed and saved on the Bolin Centre website. Please see the Bolin Centre website for more details.
- **Klimatfestivalen:** The Bolin Centre has run a week with climate related activities for children every spring since 2014. This years week is scheduled to 15–19 May. We are rethinking the concept and want to focus less on »climate change exist and it's scary« and more on »climate change exist and we can do something about it« to give hope. We intend to focus on children in »högstadiet« (13-15 yrs) this year and are currently investigating collaborations with Naturens Hus/Vetenskapens Hus and Stockholm Resilience Centre. If you have ideas and/or would like to participate, please contact Elisabeth Däcker (IGV) or Karin Jonsell.
- **Bert Bolin Climate Lecture:** Dr. Thomas Cronin, U.S. Geological Survey, Eastern Geology & Paleoclimate Science Centre, has been named as the Bert Bolin Climate Lecturer 2017. He will give a public popular lecture 18 May in Aula Magna at 14. At the same day he will give a Bolin Centre Science Seminar in Nordenskiöldsalen at 10.
- **Investigation on outreach activities:** The Bolin Centre would like to know what kind of outreach activities our scientists are engaged in. Therefore Gabrielle Stockmann (IGV) will approach each member with an easy to fill in questionnaire. Please spend 15 minutes on this, as it will help us improve the communication strategy.
- **Conference organisation:** Karin Jonsell will assist Nina Kirchner with the organisation of the conference »Past Gateways« in May, see www.geol.lu.se/pastgateways/meetings.htm





Bolin Centre Database

- Stockholm University has recently taken an initiative to lead a consortium that will submit an application to VR for establishment of a new national "Infrastructure for the integration and accessibility of data for climate-related research". The following consortium members have been invited by our vice-chancellor: Lund University, SMHI, Uppsala University, University of Gothenburg, Swedish University of Agricultural Sciences, KTH Royal Institute of Technology and National Supercomputer Centre at Linköping University. Anders Moberg (NG) and Martin Jakobsson (IGV) coordinate the work. The VR call opens on February 1 and closes on March 7. Information from VR about the call: www.vr.se/nyheterpress/nyheter2016/infrastrukturemasomkansokabidragfranvetenskapsradetvaren2017.5.6b078ee51581835cea2f387c.html
- During 2016, the database (<http://bolin.su.se/data>) increased with 34 datasets having metadata and three new thematic data presentations (about SWERUS-C3, Arctic Summer Cloud-Ocean Study and Land-cover change in south-eastern Sweden during the 20th century). The total number is now 79 datasets having metadata and 8 thematic presentations.
- Early in 2016, the database introduced a new graphical interface and switched from a commercial to an open source software for the database core.
- Representatives in The Database Advisory Group (DAG) have been appointed. They are: Chair: Anders Moberg; NG: Peter Jansson; IGV: Martin Jakobsson; MISU: Jörg Gumbel; ACES: Ilona Riipinen; DEEP: Ayco Tack; Zoologi: Ulf Norberg; SMHI: Klaus Wyser; KTH: Geert Brethouwer
- All RA-leaders are always welcome to encourage their members to contact the database staff at bolindata@su.se and we will help you to add more data. We are happy to help individual scientists and eager to listen to suggestions for improvements.

Bolin Centre Linking Program

- The Bolin Linking Program has now completed the pairing of mentors and mentees signed up at the Bolin Days in November. We currently have thirteen pairs working across four departments and all eight RAs including PhD students, postdocs, lecturers and professors. Many thanks to those mentors who signed up but did not get paired this round. Your participation makes this program a success.