

# **Bolin Centre for Climate Research**

A collaboration between Stockholm University, KTH and SMHI

Week 33, 2021

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The Bolin Centre is a multi-disciplinary consortium of over 400 scientists in Sweden that conducts research and graduate education related to the Earth's climate.





## Kebnekaise's south peak continues to melt

On August 14, 2021, the southern peak of Sweden's highest mountain Kebnekaise was measured at 2 094,6 meters above sea level by researchers at Tarfala Research Station. This is the lowest height that has been measured since the measurements started in the 1940s, and almost two meters lower than the corresponding time last year.

Read the article on the Bolin Centre's website »



Tarfala Research Station (TRS) is located at 1135 m asl in the Kebnekaise Mountains, northern Sweden, and is run by Stockholm University. TRS welcomes scientists from all disciplines to conduct research in a unique arcticnaine environment.

You'll find News August 2021 from Tarfala Research Station as an attachment in this e-mail.



### Bolin Centre researcher lead author of IPCC report

There is a stronger connection between climate change and extreme weather than has previously been demonstrated. The ongoing climate changes are faster than expected and we risk reaching 1,5 degrees global warming already in the early 2030s. This is shown in IPCC's first part of the Sixth Assessment Report, Climate Change 2021: The Physical Science Basis. Bolin Centre researcher Thorsten Mauritsen at the Department of Meteorology, Stockholm University, is one of the lead authors.

Read the article on the Bolin Centre's website »



#### **Recent Bolin Centre publications**

On <u>bolin.su.se/publications</u> you'll find a list of scientific journal publications by Bolin Centre scientists. Here are the most recent ones we have published on the website.

- Pinto, L.V., Ferreira, C.S.S., Ferreira, A., Kalantari, Z., Pereira, P., 2021. Green and Blue Infrastructure (GBI) in Urban Areas. In "The Palgrave Encyclopedia of Urban and Regional Futures", R. Brears (ed.). Springer Nature. <a href="https://doi.org/10.1007/978-3-030-51812-7">https://doi.org/10.1007/978-3-030-51812-7</a> 174-1
- Pezzagno, M., Frigione, B.M., Ferreira, C.S.S., 2021. Reading Urban Green Morphology to Enhance Urban Resilience: A Case Study of Six Southern European Cities. Sustainability, 13, 9163. <a href="https://doi.org/10.3390/su13169163">https://doi.org/10.3390/su13169163</a>
- Høgaas, F., Larsson, S.A., Klug, M., Olsen, L., and Wastegård, S., 2021.
  Palaeolake sediment records reveal a mid- to late Younger Dryas ice-sheet maximum in Mid-Norway. Boreas. <a href="https://doi.org/10.1111/bor.12543">https://doi.org/10.1111/bor.12543</a>
- Snoeijs-Leijonmalm, P., Gjøsæter, H., Ingvaldsen, R.B., Knutsen, T., Korneliussen, R., Ona, E., Skjoldal, H.R., Stranne, C., Mayer, L., Jakobsson, M., and, Gårdfeldt, K., 2021. A deep scattering layer under the North Pole pack ice. Progress in Oceanography: 194, 102560. <a href="https://doi.org/10.1016/j.pocean.2021.102560">https://doi.org/10.1016/j.pocean.2021.102560</a>
- Morys, C., Brüchert, V., and, Bradshaw, C., 2021. Impacts of bottom trawling on benthic biogeochemistry in muddy sediments: Removal of surface sediment using an experimental field study. Marine Environmental Research: 169, 105384. https://doi.org/10.1016/j.marenvres.2021.105384
- Burls, N.J., Bradshaw, C.D., De Boer, A.M., Herold, N., Huber, M., Pound, M., Donnadieu, Y., Farnsworth, A., Frigola, A., Gasson, E., von der Heydt, A.S., Hutchinson, D.K., Knorr, G., Lawrence, K.T., Lear, C.H., Li, X., Lohmann, G., Lunt, D.J., Marzocchi, A., Prange, M., Riihimaki, C.A., Sarr, A.-C., Siler, N., and, Zhang Z., 2021. Simulating Miocene Warmth: Insights From an Opportunistic Multi-Model Ensemble (MioMIP1). Paleoceanography and Paleoclimatology: 36, 5, e2020PA004054. https://doi.org/10.1029/2020PA004054
- Ely, J.C., Clark, C.D., Hindmarsh, R.C.A., Hughes, A.L.C., Greenwood, S.L., Bradley, S.L., Gasson, E., Gregoire, L., Gandy, N., Stokes, C.R., and, Small, D., 2021. Recent progress on combining geomorphological and geochronological data with ice sheet modelling, demonstrated using the last British–Irish Ice Sheet. Journal of Quaternary Science: 36, 5. <a href="https://doi.org/10.1002/jqs.3098">https://doi.org/10.1002/jqs.3098</a>
- Piret, L., Bertrand, S., Hawkings, J., Kylander, M.E., Torrejón, F., Amann, B., and, Wadham, J., 2021. High resolution fjord sediment record of areceding glacier with growing intermediateproglacial lake (Steffen Fjord, Chilean Patagonia). Earth Surface Processes and Landforms: 46, 239–251. <a href="https://onlinelibrary.wiley.com/doi/epdf/10.1002/esp.5015">https://onlinelibrary.wiley.com/doi/epdf/10.1002/esp.5015</a>
- Vandekerkhove, E., Bertrand, S., Torrejón, F., Kylander, M.E., Reid, B., and, Saunders, K.M., 2021. Signature of modern glacial lake outburst floods in fjord sediments (Baker River, southern Chile). <a href="https://doi.org/10.1111/sed.12874">https://doi.org/10.1111/sed.12874</a>
- Rocher-Ros, G., Harms, T.K., Sponseller, R.A., Väisänen, M., Mörth, C.-M., Giesler, R., 2021. Metabolism overrides photo-oxidation in CO2 dynamics of Arctic permafrost streams. Limnology and Oceanography. <a href="https://doi.org">https://doi.org</a>

Please send your newly published publication to bolin@su.se »



#### Bolin Centre Seminar on Youtube

Did you miss the last Bolin Centre Seminar in June, organized by Research Area 4? Christian Beer, Heisenberg-Professor for dynamics of soil processes, University of Hamburg, gave a presentation titled "Protection of Permafrost Soils from Thawing by Increasing Herbivore Density".

You can view it on our Youtube-chanel »

Read more about the seminar »

## eScience course for current and prospective PhD students

The course "eScience Tools in Climate Science: Linking Observations with Modelling" will be held in November. **Application deadline: 31st of August.** There will be funding from the Bolin Centre for students to join the course.

Read more on Dep't of Environmental Sciences' website »

26 Aug Baltic Breakfast: Healthy coastal ecosystems are crucial to mitigate climate change

Time: 8.30 am - 9.15 am

Venue: webinar

Read more on Stockholm University Baltic Sea Centre's website »



Webbinarium om IPCC WGI rapport 2021: Den naturvetenskapliga grunden.

Tid: 13.00-16.15.

Det webbsända seminariet är ett samarbete mellan SMHI, Stockholms Universitet (SU) och Svenska Meteorologiska Sällskapet (SMS).

Läs mer på Meteorologiska insitutionens webbsida »

# OFFICE STAFF - BOLIN CENTRE AT CAMPUS

Due to COVID-19, the Bolin Centre Office will be irregular staffed at the University. Like many of you, we work from home. Don't hesitate to get in touch with us via mobile or e-mail.

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The **Bolin Centre Weekly News** provides you with a selection of our current activities and latest news and is sent to all members of the Bolin Centre. If you have suggestions that you would like to include or **research that you would like to share** in coming Weekly News, please contact <a href="mailto:bolin@su.se">bolin@su.se</a>.

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#### Stav updated

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