

Deep-time Arctic climate archives: High-resolution coring of Svalbard's sedimentary record (SVALCLIME)

UNIS, Longyearbyen, 18-21 October 2022 (in-person and online)



Why SVALCLIME?

The near-complete sedimentary succession preserved in high-arctic Svalbard archipelago provides a record of major global environmental changes during the Phanerozoic.

These sedimentary sequences are accessible for continental drilling (Smyrak-Sikora et al., 2021; Smyrak-Sikora et al., 2022). The Deltadalen research drilling campaign in 2014 proved that stratigraphic drilling and full coring can be achieved both cost- and time-effectively (two 100 m deep boreholes coring the Permian-Triassic boundary in less than a week) with minimal environmental impact. In addition, hundreds of industry boreholes have been cored in Svalbard - notably for coal exploration and CO₂ storage characterization.

We will hold a MagellanPlus workshop in Longyearbyen to develop one ICDP proposal, SVALCLIME, for systematic high-resolution drilling onshore Svalbard.

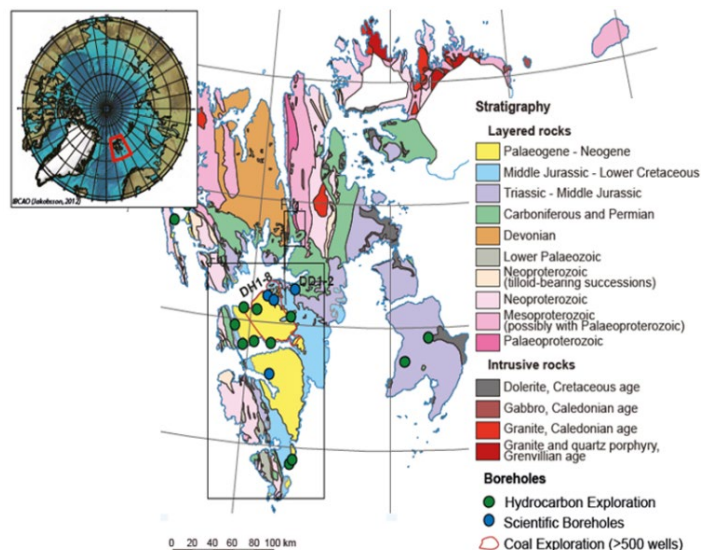
The SVALCLIME project aims to drill five to ten shallow (<250 m depth) stratigraphic boreholes over 2-3 field seasons. The new cores will be integrated with the existing core material and key outcrop sections to generate an Arctic deep-time paleoclimate archive.

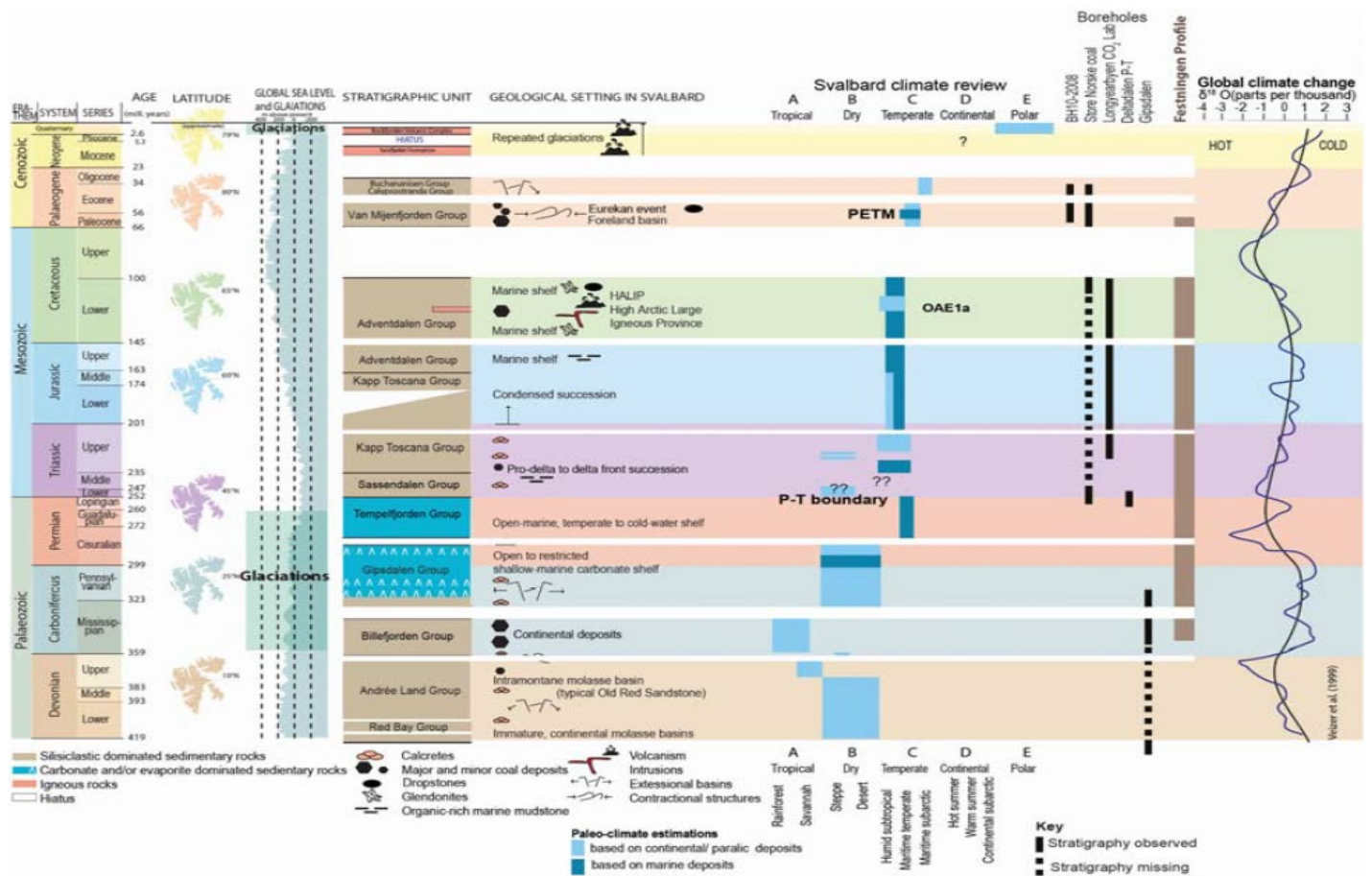
Are you interested in contributing to the workshop and the follow-up work to conduct further scientific drilling in Svalbard? We hereby invite members of the global scientific community to attend the workshop on the 18-21 October 2022 in Longyearbyen and contribute to systematic multi-disciplinary work on Svalbard's deep-time paleoclimate record.

Kim Senger and Aleksandra Smyrak-Sikora (UNIS)
Sverre Planke and Morgan Jones (University of Oslo)
Denise Kulhanek (University of Kiel)
Valentin Zuchuat (RWTH Aachen)

The main objectives of the workshop are to:

- 1) Discuss how and where to obtain high-resolution temporal and spatial core data spanning from the Carboniferous to the Eocene of Arctic Spitsbergen
- 2) Assess drilling logistics and regulations, drilling rig, and environmental implications based on experience from the CO₂ boreholes, Deltadalen Drilling Project, and coal exploration
- 3) Discuss scientific objectives with focus on six themes:
 - Paleogene: PETM and Eocene Hothouse
 - Lower Cretaceous: HALIP and OAE1a
 - Jurassic: TOAE and end-Triassic extinction
 - Triassic: Organic-rich shales and Permian-Triassic extinction
 - Carboniferous
 - Slushball Earth
- 4) Determining 5-10 short (<250 m) drilling sites which complement existing core and outcrop data





Are you interested to join? See the preliminary agenda and make sure to fill in the registration form (please register as early as possible as Svalbard flights fill up quickly)

Deadline: 30th September 2022

https://docs.google.com/forms/d/e/1FAIpQLScZf7VB72rCFWypIFNENWilg73RZPQdKU1D-WBz-nScLkQ/viewform?usp=sf_link



Interested in joining but need financial support? We have some funds especially for Early Career Researchers – please apply for these funds by using the link or QR code below.

Deadline: 31st July 2022

https://docs.google.com/forms/d/e/1FAIpQLSe3tcoUReogXJpfqUYxitWm53fjdd_YabStH69zSNabaH9DzQ/viewform?usp=sf_link



Follow the SVALCLIME project website for details:

<https://www.svalbox.no/svalclime-proposal-deep-time-arctic-climate-archives-high-resolution-coring-of-svalbards-sedimentary-record/>