

Torben Windirsch-Woiwode

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I am a PhD Student at Alfred Wegener Institute on Potsdam, Germany, working in permafrost research. I investigate the effects of large herbivorous mammals on Arctic ground, with focus on the alteration of soil carbon storage and organic matter decomposition. In addition, I do outreach and science communication with a focus on education.

Publications

- **Windirsch, T.**, Forbes, B. C., Grosse, G., ... , and Strauss, J. (2023, accepted for publication): Impacts of Reindeer on Soil Carbon Storage in the Seasonally Frozen Ground of Northern Finland: a Pilot Study. *Boreal Environment Research*.
- **Windirsch, T.**, Grosse, G., Ulrich, M., ... , and Strauss, J. (2022): Large Herbivores on Permafrost – a Pilot Study of Grazing Impacts on Permafrost Soil Carbon Storage in Northeastern Siberia. *Frontiers in Environmental Science* 10. <https://doi.org/10.3389/fenvs.2022.893478>
- Ulrich, M., Jongejans, L. L., Grosse, G., ... , and Strauss, J. (2021): Geochemistry and weathering indices of Yedoma and alas deposits beneath thermokarst lakes in Central Yakutia. *Frontiers in Earth Science* 9. <https://doi.org/10.3389/feart.2021.704141>
- Jongejans, L. L., Liebner, S., Knoblauch, C., ... , and Strauss, J. (2021): Greenhouse gas production and lipid biomarker distribution in Yedoma and Alas thermokarst lake sediments in Eastern Siberia. *Global Change Biology* 27 (12). <https://doi.org/10.1111/gcb.15566>
- **Windirsch, T.**, Grosse, G., Ulrich, M., ... , and Strauss, J. (2020): Organic carbon characteristics in ice-rich permafrost in alas and Yedoma deposits, central Yakutia, Siberia. *Biogeoscience* 17 (14). <https://doi.org/10.5194/bg-17-3797-2020>

Training

October 2021

Participatory Research in a Globalizing North

Arctic Centre, University of Rovaniemi
1-week workshop

- Research concepts
- Participatory techniques
- Outreach communication

February 2021

How to publish in a peer-reviewed journal

POLMAR, 3-day workshop

- Paper concepts
- Visualisation
- Effective writing

2020 – 2021

Junior Teaching Professionals

Potsdam Graduate School, 1-year program

- Didactic basics
- Testing and advising
- Educational concept
- Body language, voice and conversation skills

October 2020

Understanding peer-reviewed publishing

POLMAR, 1-day workshop

- Wetterich, S., Davidson, T. A., Bobrov, A., ... , and Jeppesen, E. (2019): Stable isotope signatures of Holocene syngenetic permafrost trace seabird presence in the Thule District (NW Greenland). *Biogeoscience* 16 (21). <https://doi.org/10.5194/bg-16-4261-2019>
- Davidson, T. A., Wetterich, S., Johansen, K. L., ... , and Mosbech, A. (2018): The history of seabird colonies and the North Water ecosystem: Contributions from palaeoecological and archaeological evidence. *Ambio* 47. <https://doi.org/10.1007/s13280-018-1031-1>

Work experience

September 2019 – current

PhD student

Alfred Wegener Institute, Potsdam, Germany

- Permafrost research, 3 year grant received from Potsdam Graduate School

October 2022 – March 2023

Teaching assistant

Alfred Wegener Institute, Potsdam, Germany & University of Potsdam

- Lecture in “Permafrost Landscapes” master course
- Preparing and maintaining online course material

June – August 2022

Research assistant

Alfred Wegener Institute, Potsdam, Germany

- Expedition & project add-on, grant received from Geo.X network

October 2021 – March 2022

Teaching assistant

Alfred Wegener Institute, Potsdam, Germany & University of Potsdam

- Lecture in “Permafrost Landscapes” master course
- Preparing and maintaining online course material

July 2021 – June 2023

Affiliate Scholar

IASS Institute for Advanced Sustainability Studies (now RIFS Research Institute For Sustainability)

- Participating in Arctic Gouvernance working group
- Providing perspectives from natural sciences

Grants

- Potsdam Graduate School, PhD Stipend for 3 years
- Geo.X Network, 3 month funding for research project add-on

Education

2016 – 2018

Master of Science

Geoecology, University of Potsdam, Germany

- Thesis: “Organic Matter Characteristics in a Changing Permafrost Environment: Yukechi Alas Landscape, Central Yakutia”

2013 – 2016

Bachelor of Science

Geoecology, University of Potsdam, Germany

- Thesis: “Organic matter composition of polygon-patterned tundra in the Thule area (NW Greenland)”

2004 – 2013

Secondary education

Eckener-Gymnasium Berlin-Tempelhof

2010 – 2011

Secondary education abroad

St. Macartan's College, Monaghan, Co. Monaghan, Republic of Ireland

Computer skills

R, ArcGIS, MS Office, Grapher, Adobe Illustrator, CorelDraw, Inkscape, GIMP

Languages

German: native speaker

English: fluent

Latin: basics

October 2020 – March 2021

Teaching assistant

Alfred Wegener Institute, Potsdam, Germany &
University of Potsdam

- Lecture in “Permafrost Landscapes” master course
- Preparing and maintaining online course material

September 2020

Research assistant

Alfred Wegener Institute, Potsdam, Germany

- Expedition northern Finland

July 2019

Research assistant

Alfred Wegener Institute, Potsdam, Germany

- Expedition Cherskiy, Russia

September – November 2018

Research assistant

Alfred Wegener Institute, Potsdam, Germany

- Publishing scientific paper

June – July 2018

Internship

Abisko Research Station, Sweden, for Umeå University

- Field work: seasonal phenology monitoring

2016 – 2018

Guided research, student assistant

Alfred Wegener Institute, Potsdam, Germany

- Laboratory assistant

Recent presentations

June 2023

Presentation, 6. European Conference on
Permafrost

19. – 22. June, Puigcerdá, Catalonia

November 2022

Presentation, 13. AK Permafrost and PYRN
DACH meeting

24. – 26. November, Kaprun, Austria

October 2021

Poster, Regional Conference on Permafrost

24. – 29. October, online

Interests

- Outdoor sports and camping
- Making music
- Cooking and baking

Volunteer work

2019 – 2020

Doctoral representative

Alfred Wegener Institute, Potsdam,
Germany

Memberships

- Young Academy of the Geo.X
Research Network, 2019 – 2022
- Permafrost Young Researcher
Network (PYRN), since 2019
- Association of Polar Early Career
Scientists (APECS), since 2019
- German Society of Polar Research
(DGP), since 2019

March 2021

Poster, Focus Siberian Permafrost – Terrestrial Cryosphere and Climate Change, International Online Symposium

24. – 25. March, online

September 2019

Poster, International Young Earth Scientist Congress

9. – 13. September, Berlin, Germany

Outreach

Permafrost science communication

- Explore Science Festival, 8. – 10. September 2022, Bremen, Germany
- Public presentation on “Permafrost Carbon” at Planetarium Berlin, August 2022, Berlin, Germany
- Presentations on relevance of permafrost for school classes via the “Offenes Haus” program of AWI, March 2021 – September 2022, online

Interviews

- Interview by high school students for school projects on global climate change, May 2023, online
- Interview for ZDF documentary series “planet.e”, episode titel “Wenn die Kältesteppe taut”, June 2021, Potsdam, Germany
- Interview for ZDF documentary on Pleistocene Park, background information, July 2019, Cherskiy, Russia
- Interview for “Spectrum” science magazine article on the “Pleistocene Park” project

Advising high school students

- Providing knowledge and literature advices on permafrost thaw and associated processes for Abitur presentations, 2020 – 2023, online, 6 students