

# LAURENCE DYKE

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## EDUCATION

*PhD* Palaeoglaciology and Quaternary Science 10.10–11.14  
Glaciology Group, Swansea University, UK  
Thesis: [The late-Quaternary glacial history of southeast Greenland](#), 1–304.

*BSc (1<sup>st</sup> class honours)* Physical Geography 09.05–07.08  
Swansea University, UK  
Thesis: Investigating periglacial trimlines in Snowdonia, North Wales, 1–44. Sir Dudley Stamp prize

## EMPLOYMENT

Expedition guide and lecturer: Oceanwide Expeditions 06.18–present  
Postdoctoral researcher: GEUS, Copenhagen, DK 05.15–10.17  
Postdoctoral researcher: Glaciology Group, Swansea University, UK 02.15–04.15  
PhD student: Glaciology Group, Swansea University, UK 10.10–11.14  
Intern: 196 Productions Ltd., Cardiff, UK 07.10–09.10  
Project assistant: Low Carbon Cornwall, Redruth, UK 05.10–07.10  
Co-owner/co-founder: Trevilla Garden Services, Cornwall, UK 01.09–05.10

## SKILLS AND EXPERIENCE

I am an earth scientist with a strong interest in geography, geology, and the environment. My primary skills include the acquisition, analysis, and presentation of geospatial and environmental data. I am highly adaptable, my scientific research has involved working across numerous disciplines and this has necessitated rapidly synthesising new knowledge and skills.

I have excellent scientific and report writing skills, I have published several first-author scientific articles and have co-authored many more. I am also a skilled communicator, I have presented scientific research at national and international conferences. I also have substantial experience in presenting science to non-technical audiences, this has included: written popular science articles, public presentations, social media engagement, and the production of a variety of science videos.

I have strong IT skills. I am highly-proficient at analysing remote sensing and GIS data; I have specific expertise working with ESRI ArcMap, ArcScene, QGIS, and I am actively developing my competence in Python programming. I also have substantial experience in the visualisation, design, and illustration of scientific data which has included working with Adobe Creative Suite Products including Illustrator, Photoshop, and Premiere Pro. I have a strong background working with the full Microsoft Office suite and  $\LaTeX$  typesetting, and an intermediate proficiency working with HTML and CSS for web design.

I hold a full, clean driving license. I speak fluent English (mother tongue), basic German, and am currently working towards an intermediate level of proficiency in Danish.

## COURSES/TRAINING

*University of Bergen, NO (Disko Island, GL)* 08.14  
Advanced Climate Dynamics Course (4 ECTS) The Dynamics of the Greenland Ice Sheet

*Geological Survey of Denmark and Greenland (GEUS), DK* 04.12–05.12 and 10.12–11.12

Marine sediment core analysis: sedimentology (grain size and X-ray imaging), X-ray fluorescence, <sup>14</sup>C dating, <sup>210</sup>Pb dating, and foraminifera assemblage analysis (supervised by C. S. Andresen and M.-S. Seidenkrantz).

NERC Cosmogenic Isotope Analysis Facility (CIAF), UK

06.11, 04.12, and 09.14

Preparation of rock samples for cosmogenic isotope analysis: magnetic separation, mineral etching, ICP analysis, quartz flotation, and anion/cation chromatography (supervised by D. Gheorgiu and A. Davidson).

Paleoclimate Laboratory, University at Buffalo, USA

03.11–04.11

Preparation of rock samples for cosmogenic isotope analysis: physical processing and chemical separation procedures (supervised by J. P. Briner and N. E. Young).

The University Centre in Svalbard, NO

02.11–03.11

Arctic Geology (Glaciology) 325 (10 ECTS)

Grade: A

## FIELD EXPERIENCE

My research has involved planning and undertaking field campaigns around the margins of Greenland. I hold qualifications in first-aid and sea survival. In the past seven years I have been on multiple science expeditions:

- 07.15–09.15: Petermann Fjord and Nares Strait. Sediment coring and shipboard core analysis, I/B Oden (Oregon State University and Stockholm University: A. C. Mix and M. Jakobsson).
- 08.11–09.11: Bernstorffs Fjord, Gyldenløve Fjord, Sermilik Fjord, Kangerdlugssuaq Fjord, and the continental shelf of SE Greenland (boat-based and self-sufficient hiking). Oceanographic measurements, field mapping, and terrestrial cosmogenic nuclide (TCN) sampling (Swansea University: T. Murray).
- 07.11: Ikertivaq, Køge Bugt (boat-based). Marine sediment coring and TCN sampling (GEUS: C. S. Andresen).
- 06.11: Sermilik Station (helicopter and hiking). Schmidt hammer rock testing, field mapping, and TCN sampling (Swansea University: L. M. Dyke).
- 09.10: Sermilik Fjord and Kangerdlugssuaq Fjord (boat-based). Oceanographic measurements and TCN sampling (Swansea University: T. Murray).
- 06.10: Sermilik Fjord, Kangerdlugssuaq Fjord, and the continental shelf of SE Greenland (boat-based). Oceanographic measurements and TCN sampling (Swansea University: T. Murray).

## TEACHING EXPERIENCE

I have taught as both a postgraduate demonstrator and a guest lecturer in Geography at Swansea University. I have taught components of modules in; Geographical Methods, Climate Science and Policy, Environmental Research Methods, Data Analysis, and Practical Fieldwork.

## PUBLICATIONS

Peer-reviewed publications

- **Dyke, L. M.**, Hughes, A. L. C., Andresen, C. S., Murray, T., Hiemstra, J. F., Bjørk, A. A., and Rodés, Á (2018) [The deglaciation of coastal areas of southeast Greenland](#). *The Holocene* **XX(X)**: 1–10.
- Wangner, D. J., Andresen, C. S., Jennings, A. E., Knudsen, M. F., Vermassen, F., **Dyke, L. M.**, Kjær, K. H., and Hogan, K. (in press) [A 1900-year record of ocean influence on Jakobshavn Isbræ calving activity, based on marine sediment cores](#). *The Holocene* **XX(X)**: X–XX.
- **Dyke, L. M.**, Andresen, C. S., Hughes, A. L. C., Seidenkrantz, M.-S., Hiemstra, J. F., Murray, T., Bjørk, A. A., Sutherland, D. A., and Vermassen, F. (2017) [Minimal Holocene retreat of large tidewater glaciers in Køge Bugt, southeast Greenland](#). *Scientific Reports* **7**(12018): 1–10.
- Andresen, C. S., Kokfelt, U., Sicre, M.-A., Knudsen, M. F., **Dyke, L. M.**, Klein, V., Kaczmar, F., Miles M. W., and Wangner, D. J. (2017) [Exceptional 20<sup>th</sup> century glaciological regime of a major SE Greenland outlet glacier](#). *Scientific Reports* **7**(13626): 1–8.
- Murray, T., Scharrer, K., Selmes, N., Booth, A. D., James, T. D., Bevan, S. L., Bradley, J., Cook, S., Cordero Llana, L., Drocourt, Y., **Dyke, L. M.**, Goldsack, A., Hughes, A. L., Luckman, A. J., and McGovern, J. (2015) [Extensive retreat of Greenland tidewater glaciers 2000–2010](#). *Arctic, Antarctic, and Alpine Research* **47**(3): 427–447.

- **Dyke, L. M.**, Hughes, A. L. C., Murray, T., Hiemstra, J. F., Andresen, C. S., and Rodés, Á. (2014) [Evidence for the asynchronous retreat of large outlet glaciers in southeast Greenland at the end of the last glaciation](#). *Quaternary Science Reviews* **99**: 244–259.
- Andresen, C. S., Schmidt, S., Seidenkrantz, M.-S., Straneo, F., Grycel, A., Kjær, K. H., Nørgaard-Pedersen, N., Hass, C., **Dyke, L. M.**, Olsen, J., and Kuijpers, A. (2014) [A 100-year record of changes in water renewal rate in Sermilik Fjord and its influence on calving of Helheim Glacier, Southeast Greenland](#). *Continental Shelf Research* **85**: 21–29.

#### Monographs

- **Dyke, L. M.** (2014) [The late-Quaternary glacial history of southeast Greenland](#). PhD thesis, *Swansea University*. 1–304.
- **Dyke, L. M.** (2008) Weathering limits and periglacial trimlines in Snowdonia, North Wales. BSc dissertation, *Swansea University*. 1–44.

#### Popular science publications (non-peer-reviewed)

- Andresen, C. S. and **Dyke, L. M.** (2017) [Mud from the Greenlandic seabed reveals a hidden past](#). *ScienceNordic Website*, Copenhagen, DK.
- **Dyke, L. M.** and Murray, T. (2012) [A GLIMPSE of Greenland's future](#). *Planet Earth Magazine*: Winter, NERC, Swindon, UK.
- **Dyke, L. M.** and Murray, T. (2012) [GLIMPSE film première](#). *Momentum*: Issue 5, Swansea University, UK.

#### SELECTED OUTREACH ACTIVITIES

News article: <i>seeker.com</i> (interview) 'An Arctic Heat Wave Is Giving Polar Researchers the Chills'.	03.18 <a href="#">Seeker</a>
Science article: <i>GlacierHub</i> (interview, photos, and graphics) '9,000 Years of History from the Køge Bugt'.	10.17 <a href="#">GlacierHub</a>
Blog post: <i>EGU Cryosphere Division</i> (writing and graphics) 'Image of the Week: Petermann Glacier'.	09.17 <a href="#">EGU Cryosphere Division</a>
Outreach video: <i>Twitter and YouTube</i> (scripting, videography, and production) 'Minimal Holocene retreat of large tidewater glaciers in Køge Bugt, southeast Greenland'.	09.17 <a href="#">Twitter/YouTube</a>
News article: <i>seeker.com</i> (interview and graphics) 'Observations of early sea-ice break-up in Nares Strait and the Lincoln Sea'.	05.17 <a href="#">Seeker</a>
Outreach coordination, <i>Petermann Glacier, Greenland</i> (videography, photography, social media, and blog posts) Documenting and sharing scientific research undertaken on the Petermann 2015 Expedition.	08.15 <a href="#">Website</a>
<i>ACDC summer school, Disko Island, Greenland</i> (videography) ACDC summer school film, University of Bergen.	08.14 <a href="#">Vimeo</a>
Production of six short films (videography, scripting, and editing) Filming and production of short educational films about glaciology in association with 196 Productions.	11–12 <a href="#">YouTube</a>
Radio (interview) 'Good Morning Wales'	11.11 <a href="#">BBC Radio Wales</a>
Documentary film: <i>A GLIMPSE of Greenland</i> (videography, scripting, and editing) Feature-length documentary (w/ 196 Productions). Hon. mention: Blue Ocean Film Festival 2012.	11.11 <a href="#">YouTube</a>

#### REFEREES

Please email me for the contact details of referees.