# ATLAS OF SUBMARINE GLACIAL LANDFORMS

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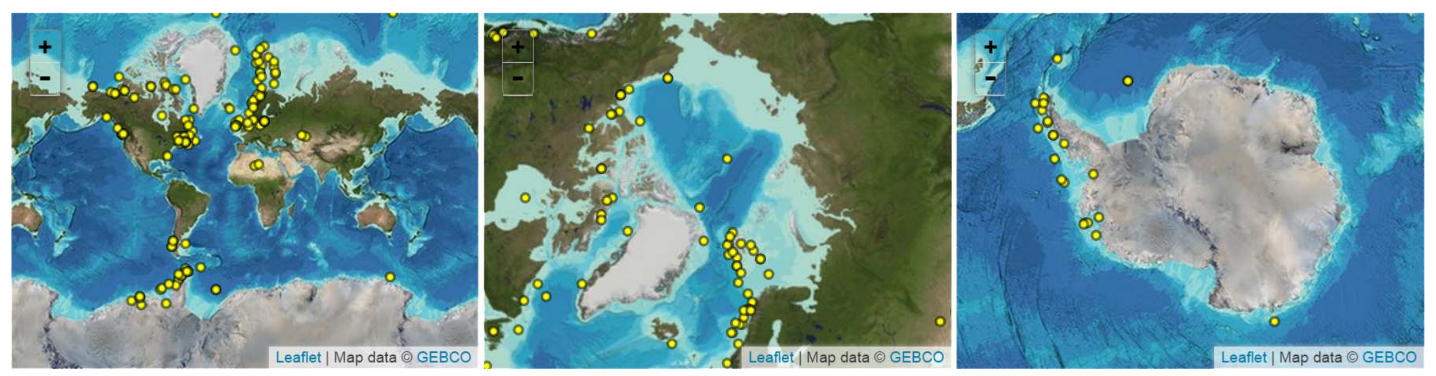
**Edited by J.A. Dowdeswell, M. Canals, M. Jakobsson, B.J.Todd, E.K. Dowdeswell. K.A. Hogan**

Multibeam imagery of drumlins and eskers in the Gulf of Bothnia, Sweden. The data are from a bathymetric survey contracted by the Swedish Maritime Administration. This imagery is shown in the Atlas contribution: "Drumlins in the Gulf of Bothnia", M. JAKOBSSON1, S. L. GREENWOOD1, B. HELL2 & H. ÖIÅS

University of Cambridge · Scott Polar Research Institute, University of Cambridge · Geological Survey of Canada · The Geological Society · Stockholm University · Universitat de Barcelona · British Antarctic Survey, Natural Environment Research Council

## *An Atlas of Submarine Glacial Landforms: Modern, Quaternary and Ancient*

In the past two decades there have been several advances that make the production of an atlas of submarine glacial landforms timely. First is the development of high-resolution imaging technologies: multibeam echo-sounding or swath bathymetry that allows the detailed mapping of the seafloor at water depths of tens to thousands of metres across continental margins, and 3-D seismic methods that enable the visualisation of palaeo-continental shelves in Quaternary sediments and ancient palaeo-glacial rocks (e.g. Late Ordovician of Northern Africa). A second technological development is that of ice-breaking or ice-strengthened ships that can penetrate deep into the ice-infested waters of the Arctic and Antarctic to deploy the multibeam systems. A third component is that of relevance – through both the recognition that the polar regions, and especially the Arctic, are particularly sensitive parts of the global environmental system and that these high-latitude margins (both modern and ancient) are likely to contain significant hydrocarbon resources. An enhanced understanding of the sediments and landforms of these fjord-shelf-slope-rise systems is, therefore, of increasing importance to both academics and industry. We are editing an Atlas of Submarine Glacial Landforms that presents a series of individual contributions that describe, discuss and illustrate features on the high-latitude, glacier-influenced seafloor. Contributions are organised in two ways: first, by position on a continental margin – from fjords, through continental shelves to the continental slope and rise; secondly, by scale – as individual landforms and assemblages of landforms. A final section provides discussion of integrated fjord-shelf-slope-rise systems. Over 100 contributions by scientists from many countries contain descriptions and interpretation of swath-bathymetric data from both Arctic and Antarctic margins and use 3D seismic data to investigate ancient glacial landforms. The Atlas will be published in late 2015 in the Memoir Series of the Geological Society of London.




*Overview maps showing the geographic distribution of some contributions to the Atlas of the Submarine Glacial Landforms*

Additional contributions are welcome. Deadline is January 30, 2015.
Please contact Julian Dowdeswell, jd16@cam.ac.uk

## *Editors*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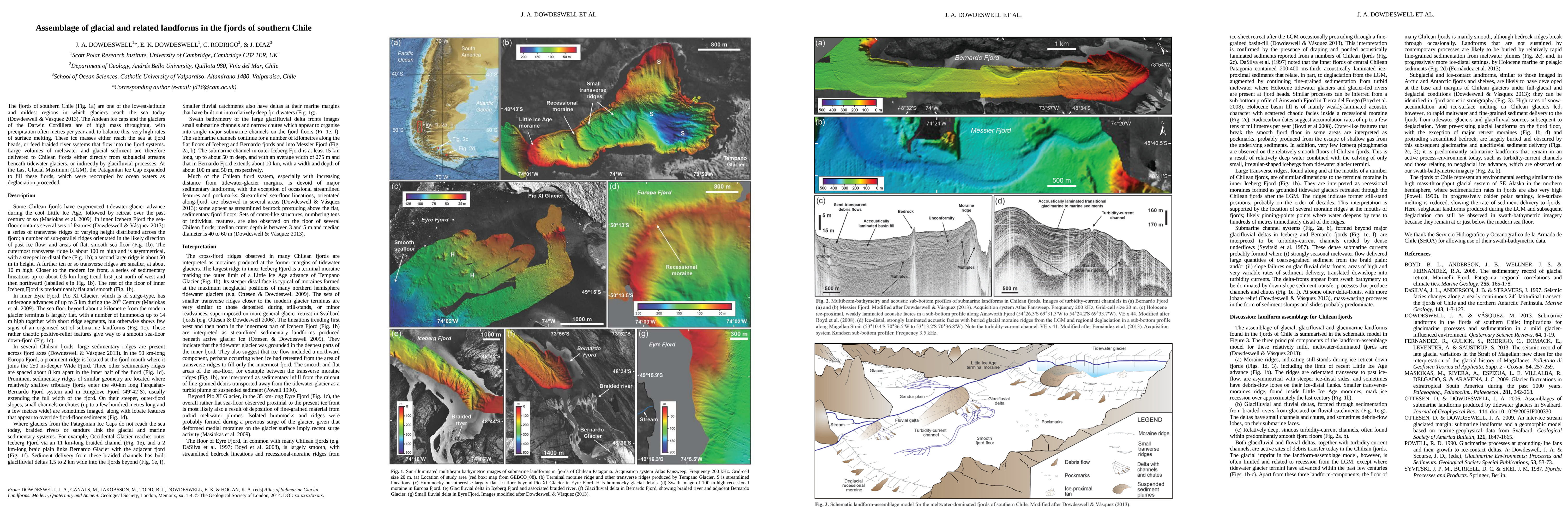
## *Example of a 4-page contribution describing an assemblage of glacial landforms*




## *Examples of 2-page contributions describing glacial landforms*