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ICE, SNOW AND WATER IN A WARMING WORLD

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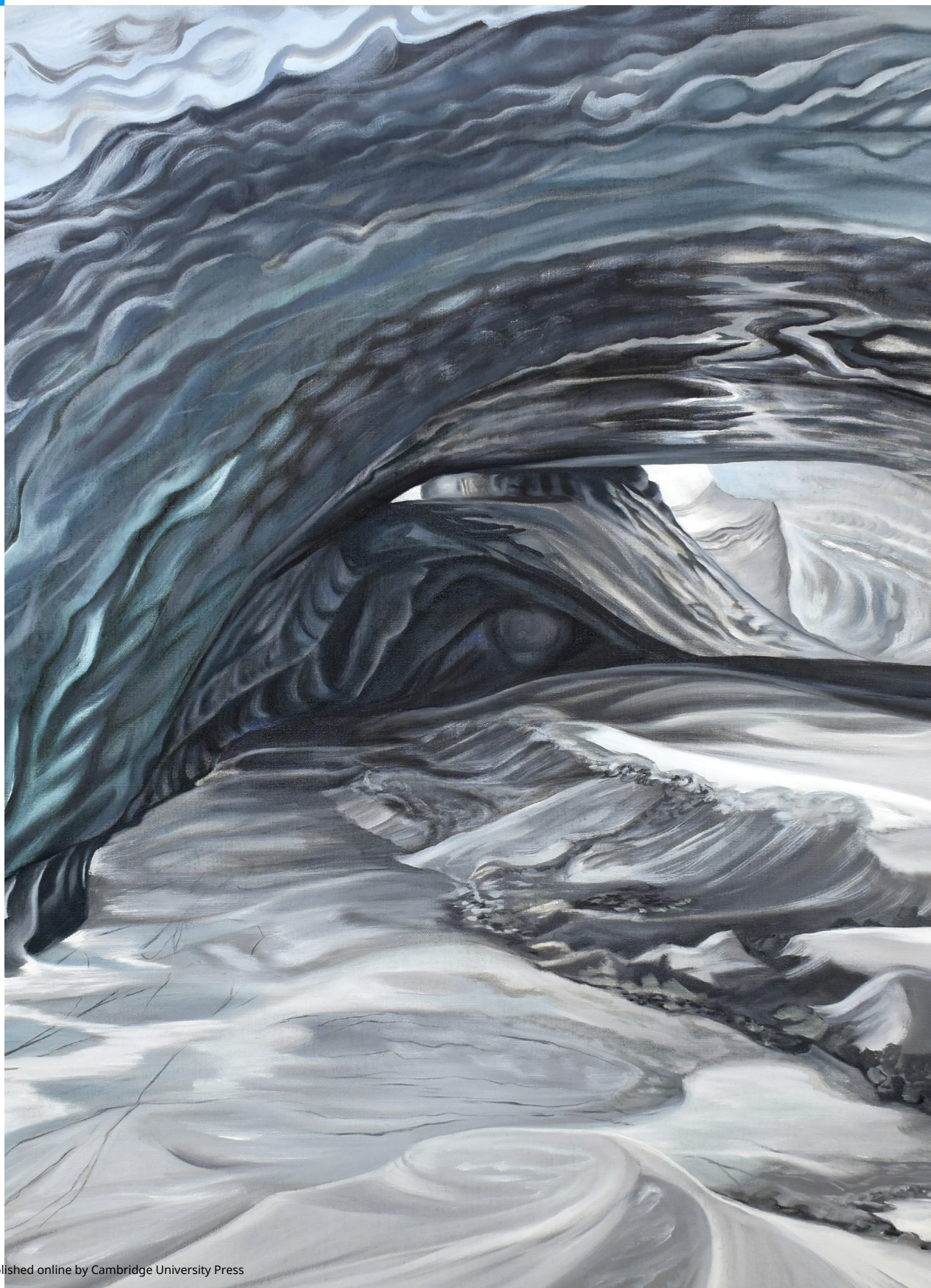

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PREFACE

This thematic issue of the *Annals of Glaciology* on *Ice, Snow and Water in a Warming World* is the result of an initial solicitation to the scientific community by the International Glaciological Society (IGS) in 2018. Also, on 21-26 August 2022, after a two-year postponement due to the COVID-19 pandemic, the Icelandic Meteorological Office (IMO), in collaboration with the IGS, held the symposium "Cryosphere 2022" on the same theme, in Reykjavík, Iceland. The week-long symposium brought together over 300 scientists and others interested in ice and snow from around the world, and was co-sponsored by various major bodies coordinating research and monitoring of snow, ice and hydrology worldwide, including IGS, IMO, WMO, IASC, IACS, IAHS, SCAR, TPE and UNESCO. Both the participants of this symposium and glaciologists worldwide, through an open call, were encouraged to submit manuscripts to this *Annals of Glaciology* issue.

The theme of this *Annals of Glaciology* issue, *Ice, Snow and Water in a Warming World,* is a loosely recurring one, with previous issues on *The Cryosphere in a Changing Climate* published in 2017 and *Changes in Glaciers and Ice Sheets* in 2014. As a result of global atmospheric warming, all components of Earth's cryosphere are now changing at a dramatic pace. More than a quarter of the planet's land surface receives snow precipitation each year and declining snow cover in many parts of the world is changing conditions for irrigation, hydropower production and many other societally important activities, and causing concern for the future of wintertime recreation activities. Mass loss continues from glaciers and ice fields in all mountainous regions of the world and from Arctic and Sub-Arctic ice caps. The two large ice sheets in Greenland and Antarctica are major contributors to rising sea level and may have begun to show signs of irreversible mass loss. Arctic sea-ice cover continues to decline, and the resulting albedo changes are now believed to affect winter weather patterns in North America and Eurasia. Increasing attention is being given to hazards due to thinning of outlet glaciers and lake- and river-ice cover and permafrost degradation, including slope failure and glacier outburst floods. The 25 accepted papers published in this *Annals* issue cover many of these changes in the Earth's Cryosphere, and include seasonal to centennial changes in glaciers, ice caps and sea ice, iceberg discharge and dissolution rates, proglacial lake formation, firn-melt processes, changes in mass balance and thermal regime, rain-on-snow events, and various measurement techniques and inventory methods.

The *Annals of Glaciology* is a peer-reviewed, thematic journal published by Cambridge University Press (CUP) on behalf of the IGS. We thank the authors for submitting their manuscripts, and the nine Scientific Editors: Karen Alley, Luke Copland, Christophe Cudennec, Isabelle Gärtner-Roer, Mats Granskog, Jeffrey Key, Douglas MacAyeal, David Rounce, and Lauren Vargo, who each applied their expertise to assessing the manuscripts submitted to this issue. We are also grateful to all of the reviewers. We thank Regine Hock, the original Associate Chief Editor of this issue, for the organisation of the editorial board and the initial handling of papers. Regine could not continue past the first weeks of submissions due to long-Covid-related illness so the undersigned Associate Chief Editor team, Tómas Jóhannesson and Hester Jiskoot, took over and brought this *Annals* issue of 25 papers to completion. We are also grateful to visual artist Klara Maisch, who provided the cover painting of this third and final *Annals* issue of the year 2023.

This *Annals of Glaciology* Volume 64 Issue 92 is also the final issue for which a paper copy will be issued. *Annals of Glaciology* has been issued in print since 1980, with issues since 1999 digitized and available online through the IGS website and Ingenta between 2011–15, and since 2016 all issues fully Gold Open Access available through CUP. Starting in 2024, the IGS and CUP have now moved to only having online journal issues. All 91 previously printed *Annals of Glaciology* issues, the current issue 92, and all issues henceforth, can be found on the Cambridge Core site (https://www.cambridge.org/core/journals/annals-of-glaciology). We acknowledge the production staff and editors going back to the inception of the IGS journals. Of these, Lynsey Rowland and Craig Baxter are thanked for assistance during the review and production phases of the *Annals of Glaciology* over the past decades, up to and including the issue now before you.

Tómas Jóhannesson and Hester Jiskoot

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