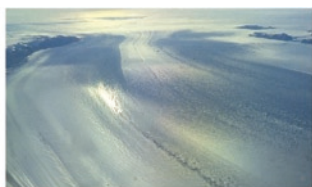




INTERNATIONAL GLACIOLOGICAL SOCIETY

INTERNATIONAL SYMPOSIUM ON
EARTH'S DISAPPEARING ICE:
DRIVERS, RESPONSES
AND IMPACTS

A celebration of the 50th anniversary
of the Byrd Polar Research Center
(formerly the Institute of Polar Studies)



Columbus, Ohio, USA
15–20 August 2010

CO-SPONSORED BY:
Byrd Polar Research Center
Climate, Water & Carbon Program

SECOND CIRCULAR
January 2010



The International Glaciological Society will hold an International Symposium on 'Earth's Disappearing Ice' in 2010. The symposium will be held in Columbus, Ohio, USA, from 15–20 August 2010.

THEME

One of the most visible indicators of climate change is the response of Earth's ice cover. Over the second half of the 20th century alpine glaciers worldwide retreated. Satellite observations over the last two decades reveal rapid changes in many outlet glaciers that drain large sections of the Greenland and Antarctic ice sheets. Ice-shelf disintegration is becoming more frequent with consequences for the discharge of land-based ice to the oceans. The extent of summer sea ice on the Arctic Ocean is declining and the possibility of ice-free summer conditions well before the end of the century is not outside the realm of possibility. This symposium will focus on the drivers for such changes, the potential feedback and responses of the climate system to these changes and the likely impact that might be expected in response to the ongoing large-scale deglaciation of the planet. An additional goal of the conference is to identify major gaps in our scientific understanding, observational databases, modeling approaches and the need for enhanced human capital and fiscal resources to advance our predictive capability.

TOPICS

The suggested topics include:

1. Sea ice extent and thickness changes in the Arctic and Antarctic, focusing on the different driving mechanisms, responses in the Arctic versus the Antarctic, potential impact on the ocean–atmosphere system, regional climate variability, polar ecosystems, human systems and infrastructure.
2. Tidewater glacier dynamics, iceberg calving and sedimentation dynamics, including observations and parameterizations of calving from floating and grounded termini, the role of sedimentation in grounding line stability, and interactions between ice-marginal processes and glacier speed.
3. Ice shelf dynamics, including the preconditioning and eventual mechanisms by which breakup occurs, impacts of breakup on the ocean–atmosphere system and adjacent land-based ice, limitations to ice-shelf break-up suggested by past ice-sheet and ice-shelf configurations, and break-up scenarios under other climate regimes suggested by paleo-oceanographic and glacial geologic inference.
4. Ice streams and outlet glacier dynamics, including observations and modeling to elucidate the key mechanisms controlling flow and discharge with particular emphasis on subglacial processes.





5. Glacier and ice-sheet mass balance, including a global inventory and assessments, atmospheric and oceanic forcing, response to large-scale modes of climate variability, observational methods, modeling approaches and predictions, upscaling, partitioning into climatic and dynamic mass balance components, key unknowns, critical observations and limitations to progress.
6. Alpine glaciers (at all latitudes), including observations, driving mechanisms, modeling, impact on associated watersheds and associated societal impact. Special emphasis on alpine glacier changes in regions where traditional forms of glaciological survey are limited and that may be especially vulnerable to climate change (such as the Himalayas and South American Andes).
7. Records of past glacier changes, including proxy histories that elucidate key drivers, responses and response rates.

SESSIONS

Oral sessions are scheduled on four days from Monday to Friday (except for Wednesday, which is allocated for an excursion). Each oral presentation should last 20 minutes, including 5 minutes for questions and discussion. Poster sessions are planned on Tuesday and Thursday afternoons. The room for the poster sessions will be open from Monday to Thursday and posters may be displayed for approximately two days. Rooms are available during the symposium period for participants who wish to arrange small meetings. Please contact the local organizers (igs@bprc.mps.ohio-state.edu) in advance to book a room for your meeting.

THEMATIC PUBLICATION

The Council of the IGS has decided to dedicate an issue of the *Annals of Glaciology* to the theme 'Earth's Disappearing Ice'. A first call for papers will be made in March 2010. Paper submission is open to anyone provided the topic of the paper is consistent with the theme of the *Annals* issue. Deadline for manuscript submission is 5 July 2010. Papers should be submitted through the IGS system and will be refereed according to the Society's normal standards before a publication decision is made. Every effort will be made to complete the reviews before the symposium so the associate editor and authors can discuss revisions during the symposium week. When submitting abstracts to the symposium, you will be asked to indicate whether you intend to submit a paper for the *Annals* issue, so that reviewers may be sought in advance. Papers submitted for consideration in the *Annals* issue must comply with the normal submission criteria of IGS publications.





ABSTRACTS

Participants who would like to contribute to the Symposium should submit an abstract of their proposed presentation. This abstract must contain sufficient details, scientific merit and relevance to the symposium theme to be evaluated by the Scientific Steering Committee. The abstract should be less than 400 words with no references or illustrations. Please submit your abstract and relevant information online from the IGS or conference website. Authors may indicate a preference for an oral or poster presentation, although the number of oral presentations is limited by time. Those unable to submit their abstract online can send electronic files to the IGS office where a staff member will upload them onto the website. **DEADLINE FOR SUBMISSION OF ABSTRACTS IS 23 APRIL 2010.** Each abstract will be assessed on its scientific quality and relevance to the symposium theme. Corresponding authors will be notified by 21 May 2010 regarding abstract acceptance. Please contact the IGS office if you do not receive the notification by this date. The accepted abstracts will be compiled into a booklet that will be provided to participants upon registration on 15 August 2010.

PARTICIPATION

Online registration through the IGS system is encouraged. A link to the site will be available on the IGS and conference websites once the registration is open. For those who wish to register by post or fax, a registration form is attached to this circular. Registration and the accompanying payment are due on 18 June 2010. There is a surcharge of £50 for later registration. The participant's registration fee includes organization costs, a set of abstracts, the ice breaker, coffee breaks, mid-week excursion, the symposium dinner and an issue of the *Annals of Glaciology*.

REGISTRATION FEES

	\$	£	€
Participant (IGS member)	510	310	350
Participant (non-member)	650	400	440
Student/Retired	255	155	175
Accompanying person (adult)	325	198	223
Accompanying person (no field trip)	75	46	52
Accompanying person (<18)	260	158	179
Accompanying person (<12)		Free	
Late registration fee	85	50	58

Note that all online credit card payments will be in £ sterling (GBP)

REGISTRATION BY MAIL

Though we strongly prefer registration through the website, it can also be done by filling in and returning the back page of this circular. If payment by credit card is not possible, contact the IGS office to arrange for a bank transfer. Payments made after 18 June 2010 must include the additional £50 late-registration fee. When completed, please send the form to Magnús Már Magnússon at the IGS address.

ACCOMPANYING PERSONS

The accompanying person's registration fee (\$325 for 18 and over; \$260 for ages 12–17; under 12 free) includes the icebreaker, the mid-week field trip, and the symposium dinner. Those adult (18 and older) accompanying persons who do not wish to participate in the field trip can attend the icebreaker and banquet for a fee of \$75.



SOCIAL PROGRAMME

An icebreaker reception will be on Sunday evening at the newly renovated William Oxley Thompson Library Campus Reading Room located on the 11th floor at the west end of the OSU Oval. The window-filled room provides a spectacular birds-eye view of the OSU campus, including the often photographed Oval Mall and Orton Hall.

Tuesday evening conference attendees will have the opportunity to visit the Byrd Polar Research Center. Guided tours and video presentations will give conference participants a first hand look at the extensive research that has been conducted by faculty, research scientists, post-docs and students at the Center since 1960.

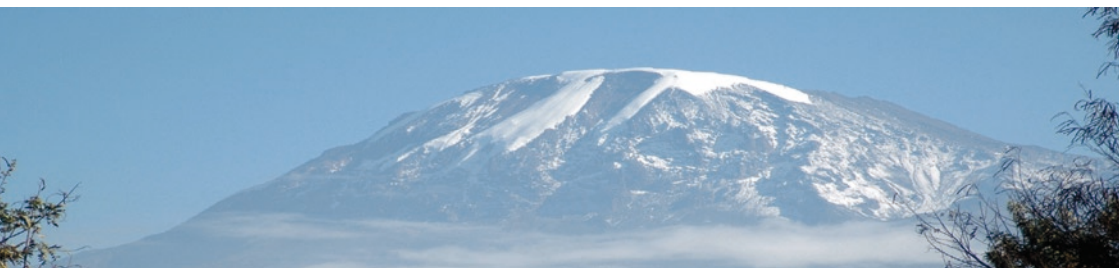
The symposium banquet will be held on Thursday evening at the Ohio State University Faculty Club. The Faculty Club is located on the historic Oval between Mirror Lake and Orton Hall, home to the Geology Library and the Orton Geological Museum. The Faculty Club has been serving the OSU Community since the late 1930s and its quiet ambience makes it an excellent venue for dining and conversation.

VENUE

The symposium will be held at the Ohio State University (OSU), Columbus, Ohio in the New Ohio Union on High Street. OSU is a public research university founded in 1870 as a land-grant university and is currently the second largest university campus in the USA. Columbus is the state capital, located in the heart of Ohio, and the city has numerous historic areas including German Village, the Short North, and Victorian Village. Other attractions include the Arena District, Franklin Park Conservatory, Ohio Historical Society, Columbus Art Museum and the Center of Science and Industry. The city features restaurants of every cuisine including American, Italian, German, Japanese, Korean and Indian, with prices for all budgets. Weather in August can be very hot and humid, reaching 31°C / 88°F, and on occasion even higher. Short sleeves and lightweight clothing are recommended. Be prepared for rain or a cool spell, as in Columbus we say, 'wait five minutes and the weather will change!' More information on OSU is available at <http://www.osu.edu/> and details on Columbus can be found at <http://www.experiencecolumbus.com/>.

FIELD EXCURSION

Wednesday field trip: *Visualizing Changing Landscapes: Disappearance of the Scioto Lobe of the Laurentide Ice Sheet, Ohio* (the trip includes several other points of geologic and cultural interest). Landforms associated with the Scioto Lobe in east-central Ohio during the Last Glacial Maximum (LGM) reveal the processes, materials and environments of the glacier system. We reconstruct the paleogeography and glacial history to provide a model of changes at and near the ice margin on this





glaciated section of the Appalachian Plateaus Province at 40°N. In eastern Licking County, kames, terraces, moraines, ice-marginal lake deposits and reversed drainage systems record the impact of the glacier at and beyond the terminus. Field stops will highlight glacial, glacialfluvial, and glacialacustrine landforms and related materials (e.g. till, outwash gravel, lake sediments and peat deposits) as we seek to improve our understanding and visualization of the glacier system.

As the ice disappeared, landforms continued to evolve and lake basins and kettles accumulated the record of a changing biosphere, one in which northern species of trees gave way to hardwoods and some Ice Age animals disappeared. Research on materials from the Burning Tree mastodon site (1989) in Licking County has provided new insight to the paleoenvironment, the mastodon diet, viability of bacteria, and our understanding of human occupation of Ohio 13,000 years ago. After viewing a timeline of ancient cultures at the Great Circle Earthworks Museum in Heath, participants can explore the adjacent Newark Earthworks, 'the largest set of geometric earthen enclosures in the world'. Built by the prehistoric Hopewell about 2000 years ago, the earthworks had ceremonial, social and astronomical functions. The evening meal will be in the Newark area, possibly overlooking ancient Earthworks, while we reflect on natural and human-induced landscape changes since the Scioto Lobe disappeared and we attempt to visualize future landscapes in response to continuing loss of ice far from here. The trip will conclude in Columbus by 10:00 pm.

TRAVEL TO COLUMBUS

Port Columbus International Airport is located approximately 20 minutes from the OSU campus. The airport is 7 miles (11 km) NE of the city center. Taxis, hotel shuttles and rental cars are available from the airport into the city. Columbus has connections throughout the USA with Washington DC, Chicago, Atlanta, Minneapolis and New York non-stops connecting with many international flights. Delta, United, Northwest and US Airways have daily flights in and out of Columbus with over a dozen airlines serving the area. For more information on Port Columbus please visit their website: <http://www.port-columbus.com/home.asp>.

ACCOMMODATION

Block bookings have been arranged at hotels in Columbus on or near the OSU campus. A large block of individual dorm rooms (single & double accommodation) have been reserved in the OSU North Campus area. Prices range from budget dorms to high-end hotels. For those interested, bed and breakfast offerings near the campus are also listed on the BPRC IGS web page (http://bprc.osu.edu/workshops/igs_2010/). To ensure a room please reserve it by 30 June and mention the OSU-IGS Symposium to get the conference rate. A conference bus will pick up participants at designated locations for transportation to and from the conference site. A list of available accommodation is on the conference website (http://bprc.osu.edu/workshops/igs_2010/) with individual hotel information and booking instructions included.



SYMPOSIUM ORGANIZATION

Magnús Már Magnússon (International Glaciological Society)

SCIENTIFIC STEERING AND EDITORIAL COMMITTEE

Kees van der Veen, Chief Editor (U. Kansas), Gudfinna Adalgeirsdottir (Danish Meteorological Institute), Jason Box (Ohio State U.), Adrian Jenkins (British Antarctic Survey), Ian Joughin (U. Washington), Nina Kirchner (Stockholm U.), Doug MacAyeal (U. Chicago), Ellen Mosley-Thompson (Ohio State U.), Tad Pfeffer (U. Colorado), Stephen Price (Los Alamos National Lab.), Leigh Stearns (U. Kansas), Lonnie Thompson (Ohio State U.), Slawek Tulaczyk (U. California Santa Cruz), Dirk van As (Geological Survey of Denmark and Greenland)

LOCAL ORGANIZING COMMITTEE

Ellen Mosley-Thompson (Chair), Michele Cook, Lynn Everett, David Elliot, Paolo Gabrielli, Ian Howat, Lynn Lay, Garry McKenzie and Lonnie Thompson

CONTACTS FOR FURTHER INFORMATION

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Web: <http://www.igsoc.org/symposia/2010/ohio/>

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Email: igs@bprc.mps.ohio-state.edu

IMPORTANT DATES

Abstract submission deadline:	23 April 2010
Notification of acceptance:	21 May 2010
Pre-registration deadline:	18 June 2010
Paper submission deadline:	5 July 2010
Deadline for refund:	9 July 2010
Registration and Icebreaker:	15 August 2010
Conference begins:	16 August 2010
Final revised papers deadline:	4 October 2010





INTERNATIONAL SYMPOSIUM ON EARTH'S DISAPPEARING ICE COVER
Columbus, Ohio, USA, 15–20 August 2010

REGISTRATION FORM

Register online at <http://www.igsoc.org/symposia/2010/ohio/registration>

Family Name: _____

Given Name: _____

Address: _____

Tel: _____ E-mail: _____

Accompanied by:

Name: _____ Age (if under 18) _____

Name: _____ Age (if under 18) _____

Dietary and other requirements: _____

REGISTRATION FEES	\$	£	€
Participant (IGS member)	510	310	350
Participant (non-member)	650	400	440
Student/Retired	255	155	175
Accompanying person (adult)	325	198	223
Accompanying person (no field trip)	75	46	52
Accompanying person (<18)	260	158	179
Accompanying person (<12)		Free	
Late registration fee (after 18 June)	85	50	58

TOTAL REGISTRATION FEE _____

Payment of registration fee by Access/Eurocard/MasterCard or VISA/Delta

Card number: _____

Expiration (YY/MM): _____

CVV (last 3 numbers on signature strip): _____

Name of card holder as shown on card: _____

Signature: _____

