

PROGRAMME OF SESSIONS

Monday, 17 August 1998

0900–1000 h

OPENING OF SYMPOSIUM: Norikazu Maeno, President, International Glaciological Society
Per Holmlund, Chairman, Local Organizing Committee

P. Holmlund: Glaciers and glaciological research in the Scandinavian mountains

J. Kleman: Reconstructing past ice masses from geological and geomorphological data: problems and methods as a function of temporal and spatial scale

C. Hättestrand: The 100 000 year glacial landform heritage in northern Sweden

1000–1040 h

CHAIR: Robert A. Bindschadler

SESSION 1: INTERPRETATION OF GLACIATED LANDSCAPES

S. J. Kluiving, L. R. Bartek and F. M. van der Wateren: Importance of multi-scale analyses in recognizing Cenozoic subglacial shear zones and glaciomarine deposits from the Ross Sea continental shelf, Antarctica

1100–1300 h

CHAIR: Johan Ludvig Sollid

SESSION 2: INTERPRETATION OF GLACIATED LANDSCAPES

J. K. Hart: The identification of fast ice flow in the geological record

B. R. Rea, W. B. Whalley, T. S. Dixon and J. E. Gordon: Plateau icefields as contributing areas to valley glaciers and the potential impact on reconstructed ELAs: a case study from the Lyngen Alps, North Norway

R. Greve, K.-H. Wyrwoll and A. Eisenhauer: Deglaciation of the Northern Hemisphere at the onset of the Eemian and of the Holocene

I. S. Evans: Cirque glaciation of Wales: diachronous or simultaneous?

K. F. Rijdsdijk, G. Owen, D. McCarroll, J. J. M. van der Meer and W. P. Warren: Clastic dykes in consolidated tills: evidence for subglacial hydrofracturing in Killiney Bay, Ireland

A. Khatwa, J. K. Hart and A. J. Payne: The genesis of particle size distribution in glacially deformed sediments investigated by the use of fractals

1430–1610 h

CHAIR: Hans Röthlisberger

SESSIONS 3 AND 4: ICE-COVERED LANDSCAPES

I. Brown: The influence of topography on the mass balance of sub-plateau glacial forms in Iceland and elsewhere through snowblow and insolation-shielding mechanisms

D. J. A. Evans and B. R. Rea: The geomorphology and sedimentology of surging glaciers: a landsystems approach

M. Rajagopalan, D. D. Blankenship and D. L. Morse: Imaging a newly discovered subglacial massif with airborne ice-penetrating radar

M. Nakawo, H. Yabuki and A. Sakai: Characteristics of Khumbu Glacier, Nepal Himalayas: recent changes in the debris-covered area

D. L. Morse and D. D. Blankenship: Classification of bed morphology in airborne ice penetrating radar: an application to controls on the dynamics of the West Antarctic ice sheet

Tuesday, 18 August 1998

0900–1040 h

CHAIR: Per Holmlund

SESSION 5: CREATION, RESHAPING AND SURVIVAL OF SUBGLACIAL FORMS

G. S. Boulton, B. Maillot and S. Zatsepin: A theory of ice sheet drainage networks and the origin of esker systems

C. D. Clark: Palimpsest glacial landform systems of the Labrador sector of the Laurentide ice sheet and explanations of generation–preservation

J. Knight, S. G. McCarron and A. M. McCabe: Style and pattern of Rogen (ribbed) moraine modification along an east central Ireland ice stream

J. Shaw: Sedimentary evidence favouring the formation of Rogen landscapes by outburst floods

C. Hättestrand, D. Goodwillie and J. Kleman: Size distribution of two cross-cutting drumlin systems in northern Sweden: a measure of selective erosion and formation time length

1100–1300 h

CHAIR: Per Holmlund

SESSION 6: CREATION, RESHAPING AND SURVIVAL OF SUBGLACIAL FORMS

- J. Rose: Subaerial modification of glacier bedforms immediately following ice wastage
- P. T. Davis, P. R. Bierman, K. A. Marsella, M. W. Caffee and J. R. Southon: Cosmogenic dating of glacial terrains in the Arctic: a test for inherited nuclides and the effectiveness of glacial erosion
- M. Olvmo, K. Lidmar-Bergström and G. Lindberg: Genesis of granite landforms in an area of “glacial scouring”, southwestern Sweden
- M. J. Munro-Stasiuk: Erosional hummocky terrain: evidence for water storage and catastrophic drainage at the base of the Laurentide ice sheet, south-central Alberta, Canada
- C. J. Patterson and T. J. Boerboom: The significance of pre-existing, deep weathering of crystalline rock in interpreting the effects of glaciation on the Canadian Shield, Minnesota
- D. Sugden, M. A. Summerfield, G. Denton and A. Kerr: Glaciers and landscape development in the Royal Society Range, Transantarctic Mountains

1430–1540 h

CHAIR: David E. Sugden

SESSION 7: POSTER INTRODUCTIONS

- W. C. Mahaney, M. W. Milner, J. Voros, V. Kalm, G. Hütt, M. Bezada, R. G. V. Hancock and S. Aufreiter: Stratotype for the Merida Glaciation at Pueblo Llano in the northern Venezuelan Andes
- M. Pecci, L. d’Alessandro, R. Graziani, A. Marino, F. Silvestri and C. Smiraglia: Evolution of the landscape of the Calderone glacier (Gran Sasso d’Italia mountain group) and effects of human and industrial activity
- W. Ziája: Recession of glaciated landscape in Sørkappland and central Nordenskiöldland (Svalbard) during the 20th century
- W. Blake, Jr: Glaciated landscapes along Smith Sound, Ellesmere Island and Greenland
- A. Sakai, M. Nakawo and K. Fujita: Evolution of ice cliffs distributed over debris-covered glaciers, Nepal Himalayas
- H. Kerschner, S. Ivy-Ochs and C. Schlüchter: Paleoclimatic interpretation of the early late-glacial glacier in the Gschnitz valley, Central Alps, Austria
- A. E. Kehew, L. P. Nicks and W. T. Straw: Late Wisconsinan interactions between the Lake Michigan and Saginaw Lobes of the Laurentide ice sheet
- D. Fabel and J. Harbor: Cosmogenic radionuclide techniques in glacial geomorphology and glaciology
- C. R. Stokes and C. D. Clark: Geomorphological criteria for identifying Pleistocene ice streams
- P. Jansson, C. Richardson and S. Jonsson: Assessment of glaciation conditions in high-alpine cirques
- K. A. Brugger and B. Goldstein: Sensitivity of a late Pleistocene ice complex to late glacial climate change
- R. Sailer and H. Kerschner: Equilibrium line altitudes and rock glaciers in the Ferwall-Group (western Tyrol, Austria) during the Younger Dryas cooling event
- M. J. Smith, C. D. Clark and S. Wise: An assessment of the problems in detecting glacial lineaments on satellite images
- J. J. M. van der Meer, G. Hoppe, W. Karlén, J. Lunqvist, B. Ringberg and U. Wråkberg: The De Geer archive in Stockholm, a treasure trove of historic photogrammetric negatives of glaciers in Spitsbergen
- E. Lebesbye and T. O. Vorren: Morphology and morphogenesis of the southwestern Barents Sea; an evaluation of the regional late Cenozoic erosion surface
- K. E. Salt, D. J. A. Evans and C. D. Clark: Implications for regional palaeo-ice sheet dynamics as revealed by Landsat images of ice-flow landforms in SW Scotland
- A. G. Sidenbladh, A. P. Stroeven, K. Wogelius and J. Kleman: Patterns of subglacial erosion and preservation in mountainous terrain: a case study of northwestern Sweden
- I. Borgström: Basal ice temperatures during last-Weichselian deglaciation: a comparison of landform assemblages in west-central Sweden
- M. Pelfini: Dendrogeomorphology as a method for the study of glacier fluctuations in the Italian Alps during the Little Ice Age
- C. Vanuzzo and M. Pelfini: Interpretation of deglaciated areas for assessing the rate of surface and volume retreat of the Val d’Aoste glaciers (Western Alps, Italy)
- C. L. Beaney and J. Shaw: The origin of subglacial landforms in southeast Alberta, Canada
- K. Jansson and J. Kleman: Horned crag-and-tail ridges of the Ungava Bay drumlin swarm, Quebec-Labrador, Canada

Wednesday, 19 August 1998

0900–1040 h

CHAIR: Keith A. Brugger

SESSION 8: VARIATIONS IN THERMAL REGIME OF GLACIERS AND ICE SHEETS

- P. Holmlund, P. Jansson and C. Richardson: Geographical differences in glacier thermal regimes in northern Sweden, and possible future changes due to climate warming
- R. Hodgkins, J. O. Hagen and S.-E. Hamran: Twentieth-century mass balance and thermal regime change at an Arctic glacier
- A. J. Payne and D. J. Baldwin: Thermomechanical modelling of the Scandinavian ice sheet: implications for ice-stream formation
- V. A. Pohjola: Strain heating: how to explain a transition from slow, cold based glaciers, to fast, warm based ice flow

1100–1140 h

CHAIR: Per Holmlund

SESSION 9: WET BASE/COLD BASE FLOW REGIMES OF GLACIERS AND ICE SHEETS

- J. Kleman, C. Hättestrand and A. Clarhäll: Zooming in on frozen bed patches: scale dependent controls on Fennoscandian ice sheet basal thermal zonation
- M. Maisch, W. Haeberli, M. Hoelzle and J. Wenzel: Occurrence of rocky and sedimentary glacier beds in the Swiss Alps as estimated from glacier inventory data

Thursday, 20 August 1998

0900–1040 h

CHAIR: James Rose

SESSION 10: ICE–SUBSTRATE INTERACTION

- R. C. A. Hindmarsh: Influence of slip on coupled ice-till dynamics
- S. J. Fitzsimons, K. J. McManus and R. D. Lorrain: Structure and strength of basal ice and substrate of a dry-based glacier: evidence for substrate deformation at sub-freezing temperatures
- R. D. Lorrain, S. J. Fitzsimons, M. J. Vandergoes and M. Stievenard: Ice composition evidence for the formation of basal ice from lake water beneath a cold-based Antarctic glacier
- U. H. Fischer and B. Hubbard: Subglacial sediment textures: character and evolution at Haut Glacier d'Arolla, Switzerland
- S. L. Ensminger, E. B. Evenson, J. C. Strasser, G. J. Larson, D. E. Lawson and R. B. Alley: Preliminary results of tritium tests: basal fractures and a hydrological origin of laminated, silt-rich debris bands at Matanuska Glacier, Alaska, U.S.A.

1100–1240 h

CHAIR: Geoffrey S. Boulton

SESSION 11: ICE–SUBSTRATE INTERACTION

- D. E. Lawson, L. E. Hunter and R. B. Alley: Glaciologic response to rapid fjord infilling during the marine to terrestrial transition, Muir Glacier, Glacier Bay, Alaska
- M. Skidmore and M. Sharp: Drainage system behaviour of a High Arctic polythermal glacier
- J. J. M. van der Meer, J. Krüger and K. Kjær: Subglacial water escape structures and till structure, Sléttjökull, Iceland
- A. Bouzette and R. Souchez: Katabatic wind influence on meltwater supply to fuel glacier-substrate interactions at grounding line (Terra Nova Bay, Antarctica)
- G. H. Gudmundsson: Measurements of temporal variations in vertical and longitudinal strain rates associated with a mini-surge event on Unteraargletscher, Bernese Alps, Switzerland

1400–1500 h

CHAIR: Daniel E. Lawson

SESSION 12: POSTER INTRODUCTIONS

- N. Takeuchi, S. Kohshima, K. Fujita, A. Sakai and M. Nakawo: Characteristics of supraglacial lakes on a Himalayan debris covered glacier
- I. S. Evans: Glacier aspect and altitude by mountain range in the Alps
- F. Pattyn and H. Declair: Aspects of glacier dynamics in ablation islands of Antarctica
- P. Holmlund, J.-O. Näslund and L. Rodhe: The impact on the landscape of an Early Weichselian ice sheet in northern Sweden
- C. Ó Cofaigh, D. J. A. Evans, D. S. Lemmen and J. Bednarski: Modern and early Holocene glacial landform/sediment assemblages as indicators of thermal regime, Ellesmere and Axel Heiberg Islands, Canadian High Arctic
- A. Clarhäll and J. Kleman: Distribution and glaciological implications of relict surfaces on the Ultevis Plateau, northwest Sweden
- C. Ritz, G. Ramstein and A. Fabre: Modelling the thermal regime of the LGM ice sheets
- A. Biancotti, L. Motta and M. Motta: The inner structure of the Lys glacier nearby the substrate
- A. Bauder, G. H. Gudmundsson and M. Lüthi: Continuous tilt measurements with in-place inclinometers on Unteraargletscher, Bernese Alps, Switzerland
- J. F. Hiemstra, J. J. M. van der Meer, E. W. Domack and P. T. Harris: Micromorphology of sediments from the Antarctic Continental Shelf: selected samples
- R. Hock, A. Iken and A. Wängler: Tracer experiments into moulines and boreholes in the overdeepening of Aletschgletscher, Switzerland
- W. B. Whalley, B. R. Rea, J. Meneely and R. Kalin: Cation and debris concentrations in basal ice from Øksfjordjøkelen, North Norway
- M. A. J. Bakker: Mapping ice-pushed ridges: application of geophysics in delineating their architecture
- L. E. Hunter, D. E. Lawson and R. D. Powell: Behavior of glaciers with tidewater termini, Glacier Bay, Alaska
- A. P. Stroeven, J. J. M. van der Meer, P. Stroeven, D. H. Dalhuisen and J. F. Hiemstra: The orientation of small clasts in Mt Feather Sirius Group tillite as a measure of ice flow strength: a stereological approach
- K. F. Rijdsdijk: Fractures and clastic dykes in tills
- J. Denner, D. E. Lawson, J. C. Strasser, G. J. Larson, R. B. Alley and E. B. Evenson: Seasonal variability in hydrologic system response to intense rain events, Matanuska Glacier, Alaska
- J. Braun, D. Zwartz and J. H. Tomkin: A new surface processes model combining glacial and fluvial erosion: theory and prediction