

# Geological History of Greenland

## Extended further reading

The list will be updated at intervals when relevant new data have been published

### Overviews of Greenland geology

Escher, A. & Watt, W.S. (eds) 1976: *Geology of Greenland*, 603 pp. Copenhagen: Geological Survey of Greenland.

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Henriksen, N., Higgins, A.K., Kalsbeek, F. & Pulvertaft, T.C.R. 2000: *Greenland from Archaean to Quaternary. Descriptive text to the Geological map of Greenland, 1:2 500 000*. *Geology of Greenland Survey Bulletin* **185**, 93 pp.

### Landscapes

Bonow, J.M. 2005: Re-exposed basement landforms in the Disko region, West Greenland – disregarded data for estimation of glacial erosion and uplift modelling. *Geomorphology* **72**, 106–127.

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Bonow, J.M., Japsen, P., Green, P.F., Wilson, R.W., Chalmers, J.A., Klint, K.E.S., van Gool, J.A.M., Lidmar-Bergström, K. & Pedersen, A.K. 2007: A multi-disciplinary study of Phanerozoic landscape development in West Greenland. *Geological Survey of Denmark and Greenland Bulletin* **13**, 33–36.

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Sugden, D.E. & John, B.S. 1976: *Glaciers and landscape – a geomorphological approach*, 376 pp. London: Hodder Arnold.

### **The crystalline basement**

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Crowley, J.L. 2002: Testing the model of late Archaean terrane accretion in southern West Greenland: a comparison of the timing of geological events across the Qarliit nunaat fault, Buksefjorden region. *Precambrian Research* **116**, 57–80.

Friend, C.R.L. & Nutman, A.P. 2001: Blocks of 2940–2840 Ma crust with different metamorphic histories, Paamiut region, South-West Greenland: implications for the tectonic assembly of gneiss terrains. *Precambrian Research* **105**, 143–164.

Furnes, H., de Wit, M., Staudigel, H., Rosing, M. & Muehlenbachs, K. 2007: A vestige of Earth's oldest ophiolite. *Science* **315**, 1704–1707.

Garde, A.A. & Kalsbeek, F. (eds) 2006: Precambrian crustal evolution and Cretaceous–Palaeogene faulting in West Greenland. *Geological Survey of Denmark and Greenland Bulletin* **11**, 204 pp.

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Kalsbeek, F. (ed.) 1999: Precambrian geology of the Disko Bugt region, West Greenland. *Geology of Greenland Survey Bulletin* **181**, 179 pp.

Kalsbeek, F. & Nutman, A.P. 1996: Anatomy of the Early Proterozoic Nagssugtoqidian orogen, West Greenland, explored by reconnaissance SHRIMP U-Pb dating. *Geology* **24**, 515–518.

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Nutman, A.P., Kalsbeek, F. & Friend, C.R.L. 2008: The Nagssugtoqidian orogen in South-East Greenland: evidence for Paleoproterozoic collision and plate assembly. *American Journal of Science* **308**, 529–572.

## **The Gardar Province**

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Upton, B.G.J. & Emeleus, C.H. 1987: Mid-Proterozoic alkaline magmatism in southern Greenland: the Gardar province. In: Fitton, J.G. & Upton, B.G.J. (eds): Alkaline igneous rocks. Geological Society Special Publication (London) **30**, 449–471.

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### **Basin deposition**

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### **Older sedimentary basins**

Collinson, J.D., Kalsbeek, F., Jepsen, H.F., Pedersen, S.A.S. & Upton, B.F.J. 2008: Paleoproterozoic and Mesoproterozoic sedimentary and volcanic successions in the northern parts of the East Greenland Caledonian orogen and its foreland. In: Higgins, A.K., Gilotti, J.A. & Smith, M.P. (eds): The Greenland Caledonides: evolution of the northeast margin of Laurentia. Geological Society of America Memoir **202**, 73–98.

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- Henriksen, N. 1986: Geological map of Greenland, 1:500 000, Scoresby Sund, Sheet 12. Descriptive text, 27 pp. + map. Copenhagen: Geological Survey of Greenland.
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- Henriksen, N. & Higgins, A.K. 2000: Early Paleozoic basin development of North Greenland – part of the Franklinian Basin. *Polarforschung* **68**, 131–140.
- Higgins, A.K., Ineson, J.R., Peel, J.S., Surlyk, F. & Sønderholm, M. 1991: Cambrian to Silurian basin development and sedimentation, North Greenland. In: Trettin H.P. (ed.): *Geology of the Innuitian Orogen and Arctic Platform of Canada and Greenland. Geology of Canada* **3**, 109–161. Ottawa: Geological Survey of Canada (also *The geology of North America E*, Geological Society of America).
- Higgins, A.K., Smith, M.P., Soper, N.J., Leslie, A.G., Rasmussen, J.A. & Sønderholm, M. 2001: The Neoproterozoic Hekla Sund Basin, eastern North Greenland: a pre-Iapetan extensional sequence thrust across its rift shoulders during the Caledonian orogeny. *Journal of the Geological Society (London)* **158**, 487–499.

Pedersen, S.A.S., Craig, L.E., Upton, B.G.J., Rämö, O.T., Jepsen, H.F. & Kalsbeek, F. 2002: Palaeoproterozoic (1740 Ma) rift-related volcanism in the Hekla Sund region, eastern North Greenland: field occurrence, geochemistry and tectonic setting. *Precambrian Research* **114**, 327–346.

Peel, J.S. & Sønderholm, M. (eds) 1991: Sedimentary basins of North Greenland. *Bulletin Grønlands Geologiske Undersøgelse* **160**, 164 pp.

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### Younger sedimentary basins

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