

THE GEOLOGICAL SOCIETY OF GLASGOW

February 2003 Newsletter

Lecture Programme

9th Febuary 2023 at 7:30pm Lecture Theatre A407 Boyd Orr Building *Dr Maarten Krabbendam, British Geological Survey* "A new stratigraphic framework for the early Neoproterozoic successions of Scotland (Moine Supergroup no more)"



The advent of modern dating techniques has, in recent decades, provided much better timing constraints on the deposition of Neoproterozoic sequences in Scotland, in Greenland and Svalbard. This has shown that the Neoproterozoic evolution of this north Atlantic province is dominated by three tectonic episodes: the Grenville-

Sveconorwegian orogeny, the Renlandian orogeny and the rifting and formation of the lapetus Ocean. In Greenland and Svalbard, Neoproterozoic sedimentary rocks can be divided into three 'megasequences', constrained by the three major tectonic episodes. In northern Scotland, however, the classic subdivision of Torridonian and Moine is at odds with these megasequences: a new stratigraphic framework is thus necessary.

The oldest megasequence in Scotland is the newly named Wester Ross Supergroup, comprising the Iona, Sleat, Torridon and Morar groups of the Scottish mainland and Inner Hebrides, and the Westing, Sand Voe and Yell Sound groups in Shetland. These units were deposited c. 1000–950 Ma within a foreland basin to the Grenville Orogen.

The second megasequence is the newly named Loch Ness Supergroup consisting of the Glenfinnan, Loch Eil and Badenoch groups of the Scottish mainland. These units were deposited after the Renlandian orogeny between c. 900–870 Ma and record Knoydartian orogenesis c. 820–740 Ma.

The Dalradian Supergroup in the Grampian Highlands and Shetland belongs to megasequence 3; it was deposited c. ?800-480 Ma and records the opening of the lapetus Ocean, ultimately leading to deposition of the passive margin Cambrian–Ordovician Ardvreck and Durness groups in the NW Highlands.



Maarten studied Geology at University of Utrecht in the Netherlands, then worked in the Grampian Highlands with the Universities of Aberdeen & Belfast. He then undertook a PhD at the University of Oxford, on the structural geology of eclogites in West Norway; followed by a

post-doc at Monash University, Melbourne, Australia, working on the link between metal ore formation and mountain building. He is now a senior geologist at the British Geological Survey in Edinburgh; major projects include mapping in NW & Grampian Highlands; helping to set up NW Highlands Geopark and working on links between glacial erosion and bedrock structure, relevant for integrity of nuclear waste repositories.

Geonatter



Come to Kelvin Hall to look at some rocks & fossils, maybe get your rocks and fossil identified, chat informally to others or ask questions about geology and find out what's happening locally.

1.30-3.30pm on the following dates in 2023

Date	Торіс
18 Jan	Fossil Shrimp
1 Feb	Coprolites
15 Feb	Fossil Crinoids
1 Mar	Ammonites
15 Mar	Agates
29 Mar	Geology Quiz

HUNTERIAN





Earth Heritage Magazine.



The latest edition # 58 (and back issues) can be downloaded from <u>https://www.earthheritage.org.uk/</u>.

The new edition Includes the following:

- Festival of National Nature Reserves
- International Geodiversity Day 2022
- A Proposal for Siccar Point to be designated as a UNESCO World Heritage Site
- The National Trust for Scotland's geodiversity policy
- Discovering more trackways at Ardley
- Understanding and trying to manage soil erosion within the iconic Trotternish landscape
- Four UK sites included in the IUGS 'First 100 Geological Heritage Sites'

Down to Earth

Latest edition here

Hugh Miller Podcast

You might find this interesting ...

https://anchor.fm/kathryn-rudy/episodes/E4--Hugh-Miller-and-Scotlands-Geological-Storye1cths6/a-a77to94

Some interesting online links to articles

https://www.newscientist.com/article/2354559-2022-tonga-eruption-means-we-may-hit-1-5c-of-global-warming-earlier/?

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David Webster Hon. Secretary sec@gsocg.org Geological Society of Glasagow Registered Scottish Charity No. SC007013 President: Dr. Simon Cuthbert pres@gsocg.org Hon. Secretary: David Webster sec@gsocg.org http://www.geologyglasgow.org.uk

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