OVERBERG GEOSCIENTISTS GROUP

OGG Breakfast Meeting & Presentation

Antarctica: Ice, Climate, and Exploration at the End of the Earth

by

Paul Lee (Environmentalist & Climatologist)

Thursday 6th August, 2026 - Onrus Manor Activities Hall

(In-person & Zoom: Coffee 09h30, breakfast 10h00, presentation 11h00)

Zoom Link: https://us02web.zoom.us/j/82172892738?pwd=M1NWUkJFYzhqdTJ2Qk0yZ3BrV2srZz09
Meeting ID: 821 7289 2738; Passcode: Overberg

Paul Lee is an Environmental Scientist and Climatologist Consultant, who completed BSc and BSc Honours degrees in Environmental Science & Climatology at the University of Cape Town.

Antarctica is one of the most remote and scientifically important regions on Earth. The presentation explores the continent's climate, geology, vast ice systems, with insights from fieldwork in the Queen Maud Mountains, geology, meteorites and glacial erratics preserved in the polar landscape.

The talk looks at the history of Antarctic exploration, the role of the Antarctic Treaty in protecting the continent, and the influence of Antarctica's climate on global weather and ocean systems in the context of climate change.

Paul will also touch on the practical realities of working in Antarctica, including environmental monitoring, weather observations for aircraft operations, and assessing the environmental impact of establishing camps for scientists and visitors. Paul is a Consultant to Umvoto, an all-encompassing earth-science consultancy specialising in groundwater services and extraction, time permitting he will make mention of Umvoto's involvement in the Hemel-en-Aarde Valley and Onrus River *Coast to Catchment* programme.

Following his UCT degree studies, Paul spent 15 years working in various aspects of mining in the South African diaspora, which included, exploration and prospecting, environmental management of mines and the international sales of mining material, mainly in Asia where he worked and resided. In 2011 Paul was team leader and senior meteorological office for the

50th South African Antarctic Expedition to Queen Maud Land Base (SANAE IV), South Georgia and the South Sandwich Islands in 2011.

He subsequently spent 13 years at Umvoto, where he was an integral part of the hydrological and aquifer studies, extraction installations and monitoring across the Western Cape. His accomplishments with Umvoto included overseeing the operational and environmental management of the Overstrand Groundwater Wellfield in Hermanus, which is described as the flagship of conjunctive groundwater and surface water usage in the country with exemplary environmental controls and a sophisticated high-tech approach towards wellfield control.

Paul has also assisted mines in Ethiopia with the construction of meteorological recording stations in the Danakil region (adjacent to the Red Sea and 120 meters below sea level), where he was challenged by the hottest climatic conditions on earth, which contrasted with his Antarctic weather recording experiences.

He has a passion for adventure and has undertaken numerous expeditions (some of which he has guided). These include summitting some of Africa's highest mountains in Kenya and Ethiopia, Imja-Tse in the Himalayas adjacent to Mount Everest and has spent considerable time in the European Alps. Paul has also sailed across the Atlantic Ocean and kayaked 800 km along the fjords of southern Chile's Patagonia.

Paul is a registered mountain walking guide for the Mountain Club of South Africa, and played a role in documenting and establishing the *Table Mountain Water Geoheritage Trail,* implemented by the *Umvoto Foundation*.

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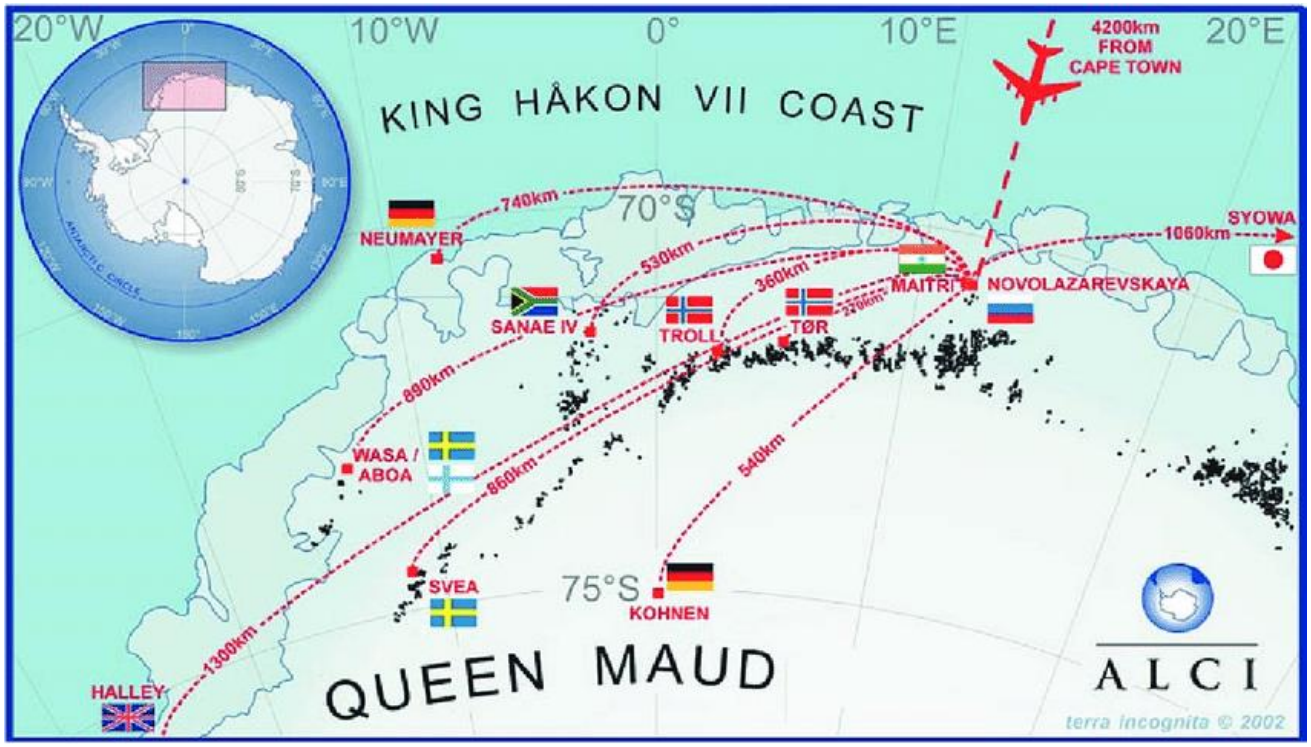
Queen Maud Land: A large region of Antarctica south of Africa, extending from Coats Land (west) to Enderby Land (east), including the Princess Martha, Princess Astrid, Princess Ragnhild, Prince Harold, and Prince Olav coasts.



Overall, the region comprises a barren plateau, covered by an ice sheet up to 2.4 kms thick. A mountainous coastal area with rocky peaks, exceeding 3,600m above sea level, pierce the ice cap.

The "Organ Pipes" in the Gothic Mountains of the Queen Maud Mountains

Paul Lee and colleagues on an Antarctic Ice excursion