AN OCCURRENCE OF LOWER PALAEOZOIC ROCKS WITHIN THE PRECAMBRIAN TERRAIN NEAR SUKKERTOPPEN

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An occurrence of Lower Palaeozoic rocks within the Precambrian terrain near Sukkertoppen, West Greenland, was discovered in 1965 by Caj Kortman and Jens Gothenborg working under fil. mag. L. Keto for Kryolitselskabet Øresund A/S, Copenhagen. The material was kindly placed at the disposal of the writer for further study.

The locality, which was provisionally named "Fossilik", is situated about 50 km due east of Sukkertoppen between two parallel faults striking 060^{o}.

The outcrop (50 x 100 m) is a breccia with rounded and angular blocks, up to 1 m^3 in diameter, of Precambrian crystalline rocks and a variety of sediments. These include shales, sandstones, limestones, and dolomites. The matrix of the breccia is ferruginous carbonate. The sediments are fossiliferous - containing bryozoans, echinoderms, orthacean brachiopods, a pygidium of an asaphid trilobite, Climacograptus sp., and the conodonts Panderodus? and Belodus? The determinations must be regarded as purely provisional.

Other similar breccias in the Sukkertoppen district have only yielded Precambrian crystalline rocks (L. Keto, oral communication).

Considering the age of the fossils it is conceivable that a fissure was opened towards the close of the Ordovician along a 060^{o} strike which denotes old weakness zones in the Precambrian. This may have happened in connection with Taconian activity in other regions. The fissure was filled with debris washed out from the surrounding Palaeozoic beds and the Precambrian basement. The material was then cemented with carbonate.

Subsequent erosion has later removed all in situ beds, and only the brecc a was preserved to present glimpses of the post-Precambrian history of the Sukkertoppen district.