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# **The geology of Western Shetland (Explanation of one-inch geological sheet Western Shetland; comprising Sheet 127 and parts of 125, 126 and 128)**

By W. Mykura, and J. Newsier, with a contribution by P. A. Sabine

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The Geology of Western Shetland (Explanation of one-inch geological sheet Western Shetland; comprising sheet 127 and parts of 125, 126 and 128)

By W. Mykura, B.Sc., F.R.S.E. and J. Newsier, D.Sc., F.R.S.E. with a contribution by P. A. Sabine, D.Sc., F.R.S.E.

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## **Preface**

The Western Shetland map comprises Sheet 127 of the one-inch-to-one-mile Geological Survey series together with parts of sheets 125, 126 and 128. This means that it has been possible to include the whole of the Walls Peninsula of Shetland and its adjacent islands. The descriptions in the present Memoir, however, exclude that part of the map which lies to the east of the Walls Boundary Fault and which is more properly treated in connexion with the Central Shetland (128) Sheet.

The original survey of the Western Shetland area was carried out between 1931 and 1934 by the late G. V. Wilson, Dr. S. Buchan, the late D. Haldane, Mr. J. Knox and Dr. T. Robertson. While the area was completely covered by field maps on the scale of six-inches-to-one-mile, no one-inch map of the district was published at that time because of the intervention of urgent economic work elsewhere. Following a decision to rectify this lack after a lapse of many years, it was desirable that the original survey should be updated and the re-examination was entrusted to Mr. W. Mykura in 1961. Although his revision was based on the maps of the original surveyors the application of modern techniques of structural mapping and sedimentology necessitated a complete coverage of the Walls area on what was virtually a resurvey. This has resulted in a very considerable re-interpretation of the strata and structures which has an important bearing not only on Shetland geology but on the interpretation of the Scottish Caledonides as a whole.

The memoir was written by Mykura with the exception of Chapters 3, 13 and a large part of 16. These were written by Dr. J. Phemister based on the original survey by Haldane supplemented by his own field studies, particularly in Muckle Roe. Chapter 2 is a summary by Mykura of the relevant part of a paper by Phemister which is in press at the time of writing. The mapping of the ground east of the Walls Boundary Fault is based on work by J. Phemister, Dr. F. May and Dr. P. A. Sabine.

The identification of the Old Red Sandstone fish remains was carried out by Dr. R. S. Miles and the fossil plants were named by Professor W. G. Chaloner. Mr. P. J. Brand collected many of the fossils and compiled the faunal lists. The geological photographs of the area were taken by the late W. Fisher.

The new chemical rock analyses quoted in this memoir are by Messrs. W. H. Evans, J. M. Nunan and C. Park (Laboratory of the Government Chemist) and the isotopic age determinations by Dr. N. J. Snelling. Mr. Mykura was assisted in his petrographical work by advice from Mr. R. W. Elliot and F. May.

The memoir was edited by Mr. G. S. Johnstone with the assistance of Dr. J. D. Peacock.

Kingsley Dunham, Director, Institute of Geological Sciences, Exhibition Road, London SW7 2DE

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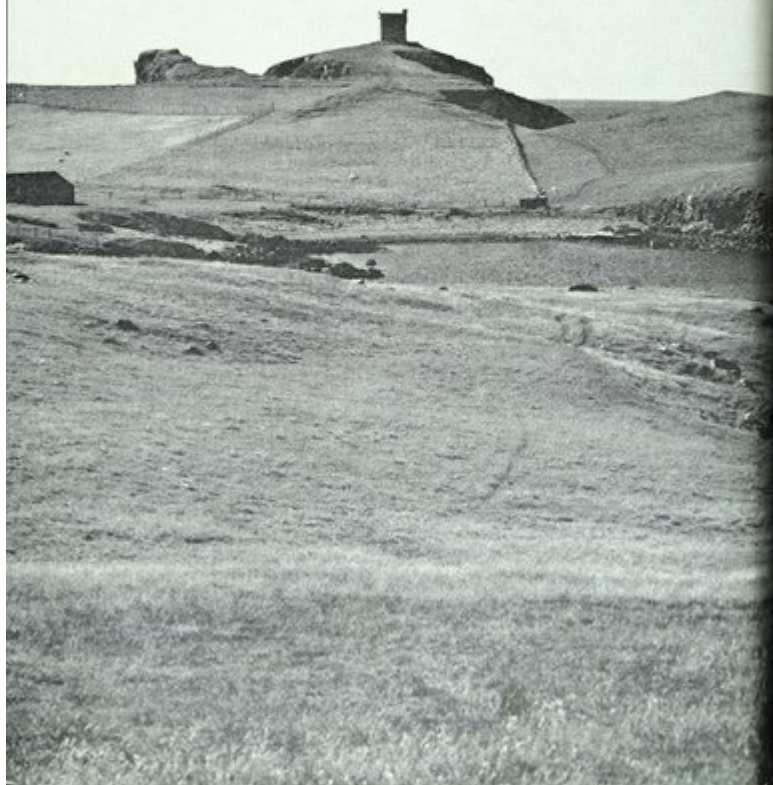
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