**THE VOLCANIC ROCKS OF THE LAKE DISTRICT:
A GEOLOGICAL GUIDE TO THE CENTRAL FELLS**

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A Geological Guide to the Central Fells

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Preface

With few exceptions the Cumbrian mountains are formed from volcanic rocks that are remnants of a volcano active during the Ordovician Period, 450 million years ago. These rocks account for the steep crags of the central fells between Keswick, Conistone, Ambleside and Haweswater. This is the main tourist area of the Lake District to which many thousands of visitors are attracted each year by the magnificent lake and mountain scenery, a scenery that depends to a great extent on the geology. It is understandable therefore that walkers, climbers and even motorists should be curious about the geological origins of the mountains and the valleys, and it is my firm belief that some knowledge of the geology greatly enhances appreciation of the scenery.

This book is an attempt to explain the geology of this beautiful area so that the rocks can be identified and the nature of the ancient volcano understood. It is intended to appeal to those for whom geology is a hobby: to the walker whose curiosity is aroused by the rocky crags and the valleys, to students who have already been introduced to the subject at school and university, and to their teachers who will be experienced geologists, perhaps with considerable knowledge of the Lake District. In order to cater for such a diverse audience I have attempted to explain the geology in simple terms in the early chapters, and then to go into more detail in the excursion itineraries. There are numerous illustrations that should enable the reader to relate distant views of mountainsides to the geology, and to identify the varieties of rocks encountered along the walking routes across the fells.

I wish to acknowledge continuous encouragement from my wife, and the assistance I have received from the Geological Department drawing office at Birmingham University.

Finally I would apologise for my indiscriminate use of miles, kilometres, metres and feet. My excuse is that we should all be bilingual!