

**SCENERY AND
GEOLOGY IN COUNTY
ANTRIM. [1895]**

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9780649755264

Scenery and Geology in County Antrim. [1895] by Grenville A. J. Cole

Except for use in any review, the reproduction or utilisation of this work in whole or in part in any form by any electronic, mechanical or other means, now known or hereafter invented, including xerography, photocopying and recording, or in any information storage or retrieval system, is forbidden without the permission of the publisher, Trieste Publishing Pty Ltd, PO Box 1576 Collingwood, Victoria 3066 Australia.

All rights reserved.

Edited by Trieste Publishing Pty Ltd.
Cover @ 2017

This book is sold subject to the condition that it shall not, by way of trade or otherwise, be lent, re-sold, hired out, or otherwise circulated without the publisher's prior consent in any form or binding or cover other than that in which it is published and without a similar condition including this condition being imposed on the subsequent purchaser.

www.triestepublishing.com

GRENVILLE A. J. COLE

**SCENERY AND
GEOLOGY IN COUNTY
ANTRIM. [1895]**

SCENERY AND GEOLOGY

IN

COUNTY ANTRIM.

BY

GRENVILLE A. J. COLE, M.R.I.A., F.G.S.,

Professor of Geology in the Royal College of Science for Ireland.

THE ANTRIM LIBRARY

BELFAST:

or

R. CARSWELL AND SON, PRINTERS, ROYAL AVENUE.

675521

554.141
C689

UNIVERSITY OF TORONTO LIBRARY

SCENERY AND GEOLOGY

IN

COUNTY ANTRIM.

By *GRENVILLE A. J. COLE, M.R.I.A., F.G.S., Professor of
Geology in the Royal College of Science for Ireland.*

WITH the general cheapening of modes of locomotion and the removal of ancient obstacles, a great change has come over the character of civilised man. He has found a new pleasure ; he travels for pure enjoyment ; and, as a rule, the more he travels, the more does he desire to know.

Those early bands of tourists, the nomadic hordes of Asia and Central Europe, travelled under a certain compulsion, having eaten up or outgrown their ancient pasturelands. At length, when a tribe had become agricultural, had settled down, and had built for itself markets and walled cities, other bands of tourists travelled into the area with the object of pillage and spoliation. Travelling of this kind, as practised by the Tartars and the Huns, was exciting, but could hardly be regarded as a healthy recreation for the masses. The great travellers of a more settled time, journeying with the traders' caravans, usually had leanings towards commerce or ultimate annexation. But, in our own day, the demand for greater leisure

has largely arisen on account of the greater means we possess for rational enjoyment ; and travel, whether for ten miles or ten thousand, provides most of us with the keenest form of holiday-relaxation.

As we said at the outset, man now desires to know ; he enquires about the inhabitants of a country, about their history, their antiquities, their art. The fascination of such subjects has led thousands of travellers to Venice, to Florence, and to Rome ; and they have crossed the Alps with scarcely a suspicion that the most wonderful, the most far-reaching history of all lay written in the rocks of that gigantic mountain-chain.

Now, however, the enjoyment of scenery is leading us to ask about the history and the origin of the rocks themselves ; we see hills of a particular type, and wonder what is the cause of their special outlines ; we gather specimens as souvenirs, and find that in them we may read some of the most remarkable changes that the country round us has undergone.

The term "Geology" may alarm some people ; but everyone can be in his way a geological observer. The British Isles, with their remarkable variety of rocks and fossiliferous deposits, form everywhere a tempting field ; but it can be asserted with confidence that no county of the three kingdoms offers so many geological features, displayed with such clearness and picturesqueness, as does the beautiful County of Antrim.

In these few pages we propose to give a sketch of the ancient history of this area, referring especially to those places most freely accessible to the tourist. It is fortunate that Co. Antrim has in Mr. R. Welch an artist who

is himself a keen geological observer, and his photographs form the best possible illustrations of the notes which follow here.

Geologists have divided the long past history of the earth into four great *eras*, and have sub-divided these again into *periods*, marked by the various remains of plants and animals that are found in successive layers of the rocks. It will be convenient at the outset to put the names of these time-divisions in a tabular form, the oldest being at the bottom of the column.

ERAS.	PERIODS.
IV. CAINOZOIC or TERTIARY.	14. Post-Pliocene and Recent, including the present day.
	13. Pliocene.
	12. Miocene.
	11. Oligocene.
	10. Eocene.
III. MESOZOIC or SECONDARY.	9. Cretaceous.
	8. Jurassic.
	7. Triassic.
II. PALÆOZOIC or PRIMARY.	6. Permian.
	5. Carboniferous.
	4. Devonian.
	3. Silurian.
	2. Ordovician (or "Lower Silurian.")
I. ARCHÆAN.	1. Cambrian.
	Not divided into periods, owing to absence of fossil remains.

ARCHÆAN ERA.

The oldest rocks that we know in Co. Antrim are exposed in the north-east only. Doubtless they underlie all the county, covered over by the sandstones and clays, limestones and volcanic masses, of far later periods. They form, in fact, the ancient floor of Ireland, the earliest land of which we have any knowledge in this area, and are older than the first certain traces of life upon the globe. The rocks are what are called *Schists* and *Gneisses*, formed out of others that have been squeezed during long periods of pressure and earth-movement. The schists show surfaces of gleaming mica when broken; the gneisses are coarser and contain knots of quartz and felspar. So folded and crumpled has this ancient land become, that it is difficult to say what was the original condition of its rocks. We call them broadly a "metamorphic series," rocks highly altered by heat and pressure. They come to the surface again to the south-west of Limavady, and form the great rolling highlands of western Derry and Donegal.

Glendun has been cut through this ancient series; on either side, as we go up the winding road from Cushendun, we see the rounded slopes, capped with broad curves of bog-land, contrasted with the steep scarps of the later formations in the south. A wild and picturesque continuation of the coast-road runs high upon the slopes of these schists from Cushendun to Torr. This route, easily accessible in the reverse order from Ballycastle, brings one across steep combs and headlands rivaling those of Devonshire; and at Torr Head the characters of the gneiss, which in great part resembles a crushed grit, can be studied in one of the most charming inlets of the coast. A fine feature of the scene is

the great mass of Kintyre, rising boldly across the channel, where these old rocks are continued northward into the central Scottish highlands.

PALÆOZOIC ERA.

Unless their relics have been crushed up beyond recognition among the old fundamental rocks, we have, with one small exception which we note below, no representatives in Co. Antrim of the long CAMBRIAN, ORDOVICIAN, and SILURIAN periods. The traveller from Dublin will have seen ancient slates and sandstones, possibly Cambrian, in the promontory of Howth; he will have passed over upturned Ordovician strata in the neighbourhood of Skerries and Balbriggan; and he has only to cross from Belfast into Co. Down to find himself in a great Ordovician area. The fringe of these slaty beds comes, indeed, within Co. Antrim, close to Lisburn and Dunmurry; and no doubt Ordovician rocks also underlie many of the newer beds upon the west.

Whatever Co. Antrim was in Archæan and Cambrian times, whether it was dry land, hummocky and mountainous, like the present region of Glendun, it certainly must have been largely submerged during the Ordovician period. These marine muds and sands spread doubtless far across it; and in Silurian times it probably again was uplifted, like so much of eastern Ireland. In the hollows of the continental land thus formed, great lakes began to gather; and this leads us to the next set of rocks displayed in Co. Antrim.

All over the north and centre of the British Isles, the DEVONIAN period is known by freshwater deposits. Few of these are more remarkable than the accumulation of sands and conglomerates extending from Cushendun to Cushendall. These beds form a ridge cutting off the view of the sea.