Review

Author(s): G. G. C.

Review by: G. G. C.

Source: *The Geographical Journal*, Vol. 21, No. 6 (Jun., 1903), pp. 658-659

Published by: geographicalj

Stable URL: <http://www.jstor.org/stable/1775658>

Accessed: 27-06-2016 04:14 UTC

Your use of the JSTOR archive indicates your acceptance of the Terms & Conditions of Use, available at

<http://about.jstor.org/terms>

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact support@jstor.org.

The Royal Geographical Society (with the Institute of British Geographers), Wiley are collaborating with JSTOR to digitize, preserve and extend access to *The Geographical Journal*

Crozier, which, as already mentioned, was overtaken by a blizzard when not more than 10 miles from the ship during the homeward journey. Hare became separated from the rest of the party, and, becoming exhausted in his fruitless search for the track, fell asleep in the snow. He remained asleep thirty-six hours, being soon buried in a snowdrift; but, strange to say, awoke on the second day little the worse for his hazardous adventure. It was during this same blizzard that the seaman Vince lost his life, the party with which he was having unwittingly approached a precipice, down which, being the foremost, he must have been precipitated, no trace being discovered of the missing man by the search-parties sent out from the ship.

The scientific observations have been carried on throughout with great thoroughness, over twelve months' continuous work being done at the winter quarters, in addition to a considerable amount of magnetic work, soundings, dredging, etc., at sea. Mr. Bernacchi thus describes the work accomplished in the field of terrestrial magnetism. "All the international term-days have been kept. The curves are unique and of a most interesting nature. The very large annual variation in the elements is perhaps the most conspicuous thing, but it is the individual curve that is so interesting. . . . We have something like 400 magneto-grams. . . . The seismograph has been working the whole year, but very few shocks and tremors are recorded. Our largest are on May 25 and September 22, which seems to correspond with your record on April 18. There are some irregularities in the line, which might be due to the Guatemalan earthquake. . . . I have also a year's observations of atmospheric electricity." The lowest temperature recorded during the winter was -60° Fahr., or 92° of frost.

REVIEWS.

EUROPE.

THE COAL-FIELDS OF SCOTLAND.

'The Coal-fields of Scotland.' By Robert W. Dron, A.M.I.C.E. London: Blackie & Son. 1902.

In a volume under this title, extending to upwards of 360 pages, and illustrated with sixteen plates giving geological maps and sections, besides woodcuts in the text, the author deals in succession with the coal-fields of all the coal-producing counties of Scotland. There is also a general chapter on the Carboniferous Formation as developed in Scotland, one on the Lothian Oil Shales, one on Undersea Coal, and one on the Duration of the Scottish Coal-fields. This last contains a variety of historical and statistical matter, the statistics being necessarily to a large extent conjectural. In an elaborate table on pp. 326-398, prepared by the author about 1899, and originally published in the *Transactions of the Institute of Mining Engineers*, vol. xviii., particulars are given as to the estimated quantity of coal originally available in every coal-working district in Scotland, a distinction

being made between what the compiler calls "proven coal" and "reserve coal." Under the head of "proven coal" are included all the known workable seams of 2 feet thick and over, while under that of "reserve coal" the author has reckoned all the seams from 1 foot to 2 feet in thickness and all the seams of the Carboniferous Limestone lying beneath the Millstone Grit. Taking as his basis data contained in the report of the last Royal Commission on coal, he has then calculated the total quantity of that coal that has already been worked, and has arrived at the conclusion that there remain in round numbers 4635 millions of tons of "proven coal at moderate depths" still available, besides 5994 millions of tons of thin and deep seams. In this latter quantity are included one thousand millions of tons under the Firth of Forth, the author taking a different view from Dr. Hull in his book on 'Our Coal Resources,' where the opinion is expressed that coal-mining under the Firth of Forth is impracticable on a large scale on account of the danger from water. Undersea workings are already carried on from Buckhaven, Wemyss, and elsewhere on the Fife shore, and preparations are being made to test the workableness of the undersea coal near Cockenzie in Haddingtonshire, a company having leased from the Crown the coal for 2 miles under the Firth of Forth at that point. Mr. Dron thinks that a fairly safe allowance for the extent of coal that may be worked underneath that inlet is 3 miles from each coast. According to returns which have been collected since 1876, the coal raised in Scotland in the last quarter of last century was produced by the different counties in the following proportions:—

Counties.	Per cent.	Counties.	Per cent.
Lanark	55·90	Clackmannan	1·40
Ayr	14·35	Dumbarton	1·40
Fife and Kinross	11·95	Haddington	1·20
Stirling	6·05	Dumfries and minor producing counties	0·85
Edinburgh	3·75	Renfrew	0·35
Linlithgow	2·80		

The Lanarkshire production is still rapidly progressive, but Mr. Dron thinks that in twelve or fifteen years the most easily wrought seams of that county will be approaching exhaustion, and that the manufacturers of the west of Scotland will thus be compelled to fall back to a greater extent on the Ayrshire coal-field, in which, he estimates, more coal remains to be worked than in Lanarkshire. Fife and Midlothian are also likely to be much more productive in the near future. In Fife numerous deep bores are being made with a view to the development of the deeper seams. In Midlothian production has been kept back, it seems, "by the very conservative policy" of certain landowners, but this policy, we are told, has now been reversed, and steps are being taken by means of which the output of the county should soon be doubled or trebled. As to the time within which all the remaining coal in Scotland will be worked out, Mr. Dron, like other calculators before him, has made estimates on the assumption of a continually increasing production till the coal has all been removed; but he adds the unquestionably just observation "that long before these dates are reached, the continued increase of the output will have received a check, and that just as the output has gradually increased, so also will it gradually diminish." There we may leave the matter, for we have no means of estimating either when this check is likely to take place, or at what rate the diminution will proceed once it has set in.

G. G. C.