

which deposited it entered the valley from a centre of dispersion to the eastward, and subsequent to the Lake period, the history of which Jamieson has so well cleared up.

The topography of this obstruction and its material are typical of terminal moraines, and what is most conclusive regarding its western frontage, there is an outwash apron which starts from its western margin and slopes gently away into the lower valley. This outwash plain has been cut away in a gorge subsequently eroded by the River Roy. The plain is, however, perfectly preserved on both sides of the valley, and seen from above as a conspicuous feature in the landscape at the time visited, because of a carpet of green, which contrasted sharply with the brown hue of the less fertile moraine and the valley walls.

It thus seems probable that the waning of the ice in the western mass around Ben Nevis was succeeded by an augmentation of the ice in the more eastern of the near-lying centres of dispersion.

WM. H. HOBBS,
Professor of General and Dynamical Geology.

DEPARTMENT OF GEOLOGY,
UNIVERSITY OF MICHIGAN,
ANN ARBOR, MICHIGAN, U.S.A.
September 26, 1908.

OBITUARY.

CHARLES FREDERICK COCKBURN.

BORN 1830.

DIED OCTOBER 6, 1908.

MAJOR-GENERAL C. F. COCKBURN, R.A., joined the Army on December 19, 1849. He served in Canada, the Crimea (including the siege and fall of Sebastopol), Gibraltar, and Halifax (Nova Scotia). He was at the Royal Small Arms Factory, Solinger, Prussia, from 1859 to 1862, and was Assistant Superintendent at the Birmingham Factory for five years. He was the fifth generation of his family in the Army and the fourth in the Royal Artillery.

General Cockburn was an enthusiastic collector of fossils, especially from the Chalk, and immediately after the fall of Sebastopol employed any spare time he had in making a collection of Danian and other fossils from that region. His collection was described by W. H. Baily in the Quarterly Journal of the Geological Society, vol. xiv, 1858, and the types formerly in the Museum of Practical Geology are now in the British Museum. As this was one of the pioneer collections, its importance was such as to necessitate a visit from Dr. Karakasch only this year, and this geologist had the pleasure of meeting General Cockburn at Dover during his visit. Baily's paper was supplemented by a few pages of stratigraphical notes from the General's pen. During the years he collected, General Cockburn supplied many workers with valuable material from the Chalk, and

among these we may mention Edward Forbes and Thomas Wright, who described several of his specimens in the decades of the Geological Survey. Echinoidea were his greatest love, and those who knew him can well remember the keen pleasure it gave him to handle and describe his treasures, most of which came from Dover. Until the last year or two, when increasing infirmity forbade it, he was constantly under the cliffs patiently collecting material during the summer to be worked at during the winter, and might often be encountered with his pockets bulging with fossils and in a state of chalkiness, at once his pride and the astonishment of his friends. Even after his 75th year he eagerly traced the *Urtacrinus* band along the high ground between Dover and Walmer, visiting every pit and carefully recording on map and notebook his lines and fossils. To know General Cockburn was to love him, and a very great loss has been sustained by all his friends, and especially by those who pen these few words as a tribute to his memory.

A. W. R. & C. D. S.

MISCELLANEOUS.

THRUST AND CRUSH-BRECCIATION IN THE MAGNESIAN LIMESTONE, Co. DURHAM.

Dr. David Woolacott desires to correct an unfortunate error made in a notice of his paper; see *GEOL. MAG.*, October, pp. 469, 470. On line 12 from foot, p. 470, "from 1 ton to 37 tons per square inch" should read "1 ton to 3·7 tons per square inch."—*EDIT. GEOL. MAG.*

PROFESSOR W. BOYD DAWKINS, D.Sc., F.R.S., F.G.S.

The resignation of Professor William Boyd Dawkins, M.A., D.Sc., F.R.S., etc., from the Chair of Geology and Palæontology in the Victoria University of Manchester was announced to take effect in September last, but we now learn that the Chair will not be vacated until September, 1909.

It was in 1870, after serving for a period of eight years on the Geological Survey of Great Britain, that Mr. Dawkins was appointed Curator of the Manchester Museum and Lecturer in Owens College. Four years later he became Professor.

In accepting the resignation the Council expressed the great regret its members felt at Professor Dawkins's retirement from a Chair which he has held with such distinction and with such benefit to the College and the University. It was further stated that Professor Dawkins would retain his association with the Manchester Museum, where he had done such valuable work, and would also continue the popular lectures and special courses of lectures which have become so widely known.
