

the same careful observer, who separated these igneous rocks from the Dolerites elsewhere associated with Carboniferous rocks. Allport thus gave a definite hint that the accompanying shales might not really be Carboniferous, as surmised by Jukes, and as demonstrated afterwards by Professor Lapworth who found Cambrian fossils in them.

The *Quarterly Journal* for 1875 contains a paper by J. Clifton Ward (1843-80), read during the previous year at the first meeting of the session, on the 'Comparative Microscopic Structure of some Ancient and Modern Volcanic Rocks;' and this was followed, somewhat later, by observations on the 'Granitic, Granitoid, and associated Metamorphic Rocks of the Lake District.'¹

Sir A. Geikie has told of an interesting meeting in 1877 in Cumberland, when Ramsay summoned him as Director for Scotland, together with B. N. Peach and J. Horne, to meet Bristow, then Director for England and Wales, with Aveline and Ward, in order to settle some questions of classification on the borderland of the two countries.

The party having dined, Ward and I had retired to another room that we might examine under the microscope some of his volcanic rocks, and compare them with the Palæozoic volcanic series of Scotland. We had been engaged on this task for an hour or two when Ramsay joined us. He sat rather impatiently watching us for a while, and then starting up, left the room, after exclaiming, 'I cannot see of what use these slides can be to a field-man. I don't believe in looking at a mountain with a microscope.'²

Ministers of the Church have in many instances become geologists; it is not often that a geologist has entered the ministry. This, however, was the case with James Clifton Ward. He retired from the Geological Survey in 1878, to become curate of St. John's at Keswick, and two years later was appointed vicar of Rydal. There 'where geology and physical geography can be studied under con-

¹ Professor Bonney has contributed the foregoing and some of the later notes on petrographical research.

² 'Memoir of A. C. Ramsay,' 1895, p. 343.