and the author thinks that probably masses of Cambrian rocks were forced by disturbances into the Cambro-Silurians, and then the whole were metamorphosed together.

N.E. Wexford. The area commences on the east coast near Courtown Harbour, extends S. to and beyond Wexford, and then S.W. to the coast near Bannow Bay. The rocks are generally submetamorphic, with many large protrusions of quartz-rock, generally changed by metapepsis into quartzite. Rooney's Rocks, S. of Poulshore, consist of two protrusions of quartz-rock, between and N. of which are green and purplish Cambrian shales, in which *Oldhamia antiqua* has been found, as also in a green bed further south at Cahore. On the coast of Haggard and Bannow the Cambrian and Cambro-Silurian rocks are mixed up very irregularly by means of numerous faults. At Bannow *Oldhamia* is not uncommon. The most continuous sections are seen in this area in the valley of the river Slaney, where the rocks generally dip to the N. at angles of 10°–60° or 80°, and are going from N. to S. :—

| | Feet |
|---|---|
| 1. Massive grits with some shaly beds, underlain by more or less altered grits and shales; average dip 30°, giving a thickness of about..... | 3000 |
| 2. Schists with quartzites (metamorphosed grits), dip 50°; about..... | 4000 |
| 3. Schists with masses of quartzite (altered quartz rock), dip 40°; about | 4000 |
| Total about..... | 11,000 |

but the numerous faults under the numbers uncertain.

S.E. Wexford. The rocks are more or less metamorphosed, graduating from schist through gneiss into granite near Carnsore.

## CORRESPONDENCE.

### THE RED CLAY OF THE DEEP-SEA AND THE GAULT DEPOSITS.

Sir,—In the May number of the Monthly Microscopical Journal, a portion of the address to the Royal Society in November last has been printed, in which the President mentioned the endeavour of Mr. Sorby, to determine the nature of the Red Clays of the ocean-bottom, and stated that Mr. Sorby had informed him that many specimens of the Red Clay are so entirely analogous to what the Gault must originally have been, that those specimens might almost be looked upon as being as truly modern Gault as the *Globigerina*-ooze is modern Chalk. This opinion it appears is derived from the similarity of the Gault deposits to those of the Red Clays of the ocean-bottom; but this passage of the address as reported is somewhat obscure. We can hardly, however, suppose that it is intended to convey that the Gault was deposited under conditions at all similar to those in which the Red Clay is now being deposited, as the former, especially as shown in its earlier beds, was a littoral and shallow-water deposit. This is abundantly shown by the common occurrence of wood, twigs, and cones of Sequoia and Pinus, by turtles' eggs, and by its mollusca, many of which belong to genera now confined to shallow water. The Gault in all parts of Europe has been proved to have been deposited in a sinking area, its fossil

https://doi.org/10.1017/S001675680014960X Published online by Cambridge University Press

fauna showing the change to deeper-water conditions. Near Folkestone the change to the deeper water of the Grey-chalk sea is very plain, and is seen to have been a gradual one. The discovery of these Red Clays is of exceeding interest, but it is misleading to speak of them as analogous to the Gault. J. S. GARDNER.

PARK HOUSE, ST. JOHN'S WOOD PARK, N.W.
*May 17th*, 1877.

## DR. WILLIAM SMITH'S GEOLOGICAL MAPS.

SIR,—At a recent sale the copper-plates of William Smith's original folio atlas of geologically coloured maps of England, sixteen in number, including the index, published in 1821, came into the possession of Mr. Edward Stanford, of Charing Cross, who is willing to sell them at, as he writes to me, a trifling cost (for sixteen large coppers), if purchased for the Geological Society. It would not pay now-a-days to reprint maps only of historical interest; but I venture to think that the maps of the father of English Geology are worthy of being preserved from the melting-pot, the doom of superannuated copper-plates, and entrusted to the safe keeping of some chartered society. I write this, therefore, to obtain the opinion of geologists on the matter, and shall be glad to receive the names of gentlemen who will subscribe for their purchase, as I propose, for presentation to the Geological Society, which already possesses the original manuscript maps. G. S. BOULGER, F.L.S., F.G.S.

SCIENTIFIC CLUB, 7, SAVILE ROW,
*July* 12, 1877.

## PREMATURE CONCLUSIONS.

SIR,—The practice of the Geological Society, of publishing "abstracts" of papers read at the meetings, before the papers themselves are published, is sometimes of great service both to the authors and to the public; but it has this serious drawback, that the public generally found their conclusions regarding the value of the paper—and the correctness of the author's views—*not on the paper*, but on the "abstract," which necessarily contains but an imperfect statement of the data upon which the author has rested his arguments; and the probabilities are, that when the paper itself appears *in extenso* some months afterwards, the men who have based their conclusions upon the statements of the "abstract" will not care to make themselves acquainted with the details and arguments of the paper.

This drawback has come with great force to my mind (as no doubt it has done in the case of others) from the manner in which the paper I had the opportunity of bringing before the Society has been received and criticized in several quarters. One geologist, for whose opinion I entertain a high respect, wrote at once to intimate that he could not accept my conclusions; and when I naturally replied that he had not had an opportunity of reading the details upon which they had been founded, he replied that, "having seen the 'abstract,' he knew already quite enough to satisfy his own mind on the subject;" and I greatly fear my friend, who on a former

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