

and species from the same geological horizon as those previously found on the Continent. A notice of these appears in my paper on "Abnormal Conditions," etc., p. 480 of the *Journal of the Geol. Society* for 1867. Mr. Longe with much liberality presented me with the specimen.

After this I showed it to Dr. Wright, and pointed out to him the zoological position that had been assigned to it by continental geologists, and in reply to his inquiries informed him that the best figures and description would be found in a paper by Dr. Deslongchamps of Caen.

Dr. Wright lost no time in referring to Dr. Deslongchamps' description, for in a note to me on another subject, he remarks: "As I am always on the look out for any new facts to chronicle in relation to my own subject, I sent a short notice of Mr. Longe's discovery to the *GEOLOGICAL MAGAZINE*, and herewith inclose you a separate text." In this he quotes the history of *Cotylederma* as given by Dr. Deslongchamps, but makes no reference to the conversation I had with him respecting it. At this time I had no opportunity of seeing Dr. Deslongchamps' memoir, or comparing the specimen with those in my museum. On my return home I found it belonged to the genus *Plicatocrinus*, and not to *Cotylederma* as I had first supposed. Had I been aware Dr. Wright intended sending a notice of the specimen for publication, I could at once have corrected the error.

From his remark in the last paragraph that "it is the first English specimen of this curious form of the Liassic sea which I have yet seen from our Lias beds," he does not appear to be aware of its previous discovery by myself, though on one occasion, if I mistake not, I called his attention to examples in my museum, where they have been publicly exhibited.

I took with me to the Bristol Meeting a beautiful specimen of the genus *Solanocrinus* I have lately found in Oolitic strata, and now first recorded as a British genus, but withheld a notice of it in order to have drawings prepared of Mr. Longe's *Plicatocrinus*.

BATH, Oct. 25, 1875.

CHARLES MOORE.

OBITUARY.

WILLIAM SANDERS, F.R.S.

Death has removed another of the small band of distinguished geologists that commenced their career when the science they cultivated and elucidated was yet in its infancy. The late Mr. William Sanders, F.R.S., was a native of Bristol, and for upwards of forty years of his life was intimately associated with the most distinguished names that have enriched geological science.

He devoted his life to the study of the physical structure of the Bristol area, and early in his scientific career was the friend and companion of Prof. Phillips in his Geological Survey of North Devon and Cornwall, which occupied some years. His chief labour,

however, and that by which his name will ever be remembered, was the preparation and construction of an elaborate geological map of the area comprised within the Gloucestershire and Somersetshire Coal-field. The scale of this map is four inches to the mile (four times the scale of the Ordnance Map), and the detailed geological structure of the entire area was conscientiously and carefully worked out. The labour devoted to this map by Mr. Sanders extended over fifteen years, and the work occupies nineteen folio sheets geologically coloured, and the physical details added.

Sir Henry de la Beche and Professor Phillips in days long gone by urged upon Mr. Sanders the importance of constructing a map upon such a scale that the complicated structure of the Bristol Coal-Field should be so clearly expressed that its mineral wealth should be better understood and appreciated. It may be truly said that no man single-handed ever constructed such an exact geological map for any area. Associated with this map should be mentioned another original and lasting labour by Mr. Sanders, viz. the measured sections of the extensive cuttings (delineated to scale) of the Bristol and Exeter Railway from Pyle Mill, Bristol, to Uphill on the Mendips, and the line from Bristol to Bath, in both of which the smallest details are laid down, whether of Physical or Palæontological value. Their value remains undiminished, although done thirty-five years ago.

Few there are who can appreciate the patient labour, ability, and mental culture required to carry out and complete so extended a survey over so complicated a region. These labours, however, added to his other acquirements, made his scientific reputation and enriched his native city.

Mr. Sanders rendered great service to Bristol in connection with the water-supply through his intimate knowledge of the water-bearing strata and resources in the Mendip area, and also during the survey of the city with reference to its sanitary condition: facts little known to those outside the world of science, and who have not, like Mr. Sanders, patiently pursued a line of study and research much in advance of their fellow-citizens. He was an ardent student in mineralogy, and few were more accomplished in crystallography. He mastered its mathematical details in the elaborate treatises of Brooke and Miller, Dana, and Naumann.

Mr. Sanders was elected a Fellow of the Royal Society in 1864. For upwards of thirty years he held the office of honorary secretary to the Museum of Natural History attached to the Philosophical Society and Institution of Bristol. He spared neither time, trouble, nor expense to carry out its legitimate objects. Mr. Sanders' labours and researches have contributed in no small degree to the development of geological science, and the sheets of his large map formed the basis upon which the materials accumulated by the Royal Coal Commission relative to the Gloucestershire and Somersetshire Coal-fields were represented. His name will ever be associated with the labours of the great and good in science, and those who knew him best will most deeply mourn his loss.

R. E.