Of course, I accept implicitly all Mr. Wheeler's own observations; but, as I demur to the aforesaid six hypotheses, I am unable to accept his explanations. A. R. HUNT.

Southwood, Torquay. July 17, 1902.

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## LAKES OF SNOWDONIA.

SIR,—In the GEOLOGICAL MAGAZINE for 1900 (Dec. IV, Vol. VII, p. 58) Mr. Dakyns criticizes a paper published in a previous volume of the Magazine, in which Mr. Adie and I treat of the Lakes of Snowdonia. Mr. Dakyns has convicted me of two mistakes, one in a matter of observation, the other in the manner of expression of a statement. For each of these mistakes I am alone responsible.

I had hoped to accept Mr. Dakyns' polite invitation to go over the ground with him, but various circumstances have prevented me from doing so, and I have therefore awaited the publication of Mr. Jehu's paper upon the Lakes of Snowdonia (Trans. Roy. Soc. Edinb., vol. ix, p. 419) before making my confession of error.

Mr. Jehu informs me that I undoubtedly mistook an artificial diversion of the stream issuing from Glaslyn for a natural one. As he has not corrected this serious error in a prominent manner in his paper, I feel bound to do so. I can only plead in mitigation of my offence that the outlet was examined towards dusk on a sunny day in the Easter vacation; nevertheless, as our paper was partly occupied with criticism of the views of others, I feel that I ought to have revisited the lake before making my statement.

The other matter refers to the bed of the Colwyn, which I said "runs over drift." I should have said that drift extends along the lower part of the valley beneath or near the bed of the river.

Concerning other parts of Mr. Dakyns' paper I may have something to say in the future, but I feel that no further time should be allowed to elapse before acknowledging mistakes to which attention has been drawn in so straightforward a manner. JOHN E. MARB.

CAMBRIDGE, August, 1902.

## OBITUARY.

## PHILIP JAMES RUFFORD, F.G.S.,

## OF THE HASTINGS AND ST. LEONARDS MUSEUM ASSOCIATION.

BORN JANUARY 26, 1852.

DIED JUNE 19, 1902.

It is with deep regret we record the death of Mr. Philip Rufford, F.G.S., of 37, Magdalen Road, St. Leonards-on-Sea, a most ardent geologist and enthusiastic naturalist, who had for some years devoted himself very earnestly to the advancement of the Hastings and St. Leonards Museum forming a part of the Brassey Institute, Hastings, in which he spent a considerable portion of his time.

Philip James Rufford, the only son of the late Rev. Philip Rufford, M.A., Rector of Thorne-Coffin, Somerset, was born at Great Alne,

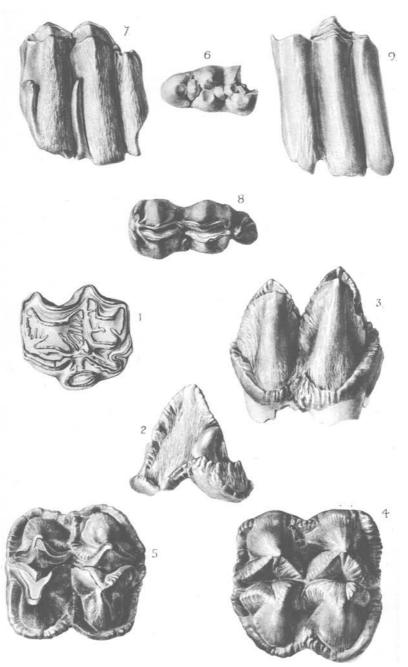


Ruffordia Goepperti (Seward), a new fossil fern from the Wealden Formation, Ecclesbourne, Hastings, discovered by Mr. Philip J. Rufford, F.G.S.

[See Mr. A. C. Seward's Catalogue of Wealden Plants in the British Museum (Nat. Hist.), Part I, pp. 75–86, pl. iv, 1894.]

Warwickshire, January 26th, 1852. He was brought up as a Civil Engineer, but early in his career his health broke down and he was compelled to abandon his profession, and about the year 1888 he settled with his mother in The Croft at Hastings. Having by careful study and observation previously acquired a very considerable knowledge of geology, on coming to reside in Hastings he devoted all his time and attention to collecting fossils from the Wealden strata of the neighbourhood, especially at Ecclesbourne and Fairlight. Mr. Rufford's favourite collecting-ground was along the sea-shore from Rock-a-Nore to Cliffs End. He was fortunate in obtaining a very fine collection of Wealden plants, which he disposed of at a nominal valuation to the British Museum (Natural History), Cromwell Road, only stipulating that they should, as soon as possible, be figured and described by the Museum. This task was ably undertaken by Mr. A. C. Seward, M.A., F.R.S., in 1893-4 and 5. In the preface to vol. i the Keeper of Geology writes: "We are fortunate in possessing many of Mantell's original specimens of Wealden plants, but, although historically of great interest, they are largely superseded by those recently obtained by Mr. P. Rufford, whose fine collection has lately been acquired for the National Museum" (p. vi op. cit.). In the same volume Mr. Seward describes 147 specimens, mostly PTERIDOPHYTA, from Mr. Rufford's collection. Amongst these is a new genus of ferns dedicated to the discoverer, by Mr. A. C. Seward, as *Ruffordia*, gen. nov. (p. 75, pl. iv), having a finely divided form of frond, not unlike Asplenium fragrans, Sby., in habit. In vol. ii Mr. Seward illustrates the Cycadites and Zamites (with their fruits and stems), and the Coniferze, and refers to no fewer than 196 specimens from Mr. Rufford's collection, many of which he describes and figures. This interesting series of Wealden plants is now all well arranged and exhibited in Gallery No. X, Department of Geology, British Museum (Natural History). The ferns and zamia-leaves from Ecclesbourne are very beautiful, and form a most attractive part of the collection.

The Museum of the Brassey Institute commenced to assume an organized and definite shape in 1891, when the Committee purchased a part of the Beckles Collection of Wealden and other fossils. Mr. Rufford, who was then a member of its Committee, took upon himself the arduous task of selecting, naming, and arranging these objects with his own hands, adding largely to the geological section of the Museum from his own private cabinet. He also contributed a series of Recent marine, land, and fresh-water Mollusca, Recent Sponges, Hydroids, Echinoderms, Polyzoa, etc. Owing to ill-health he last year visited Italy and stayed the winter in Rome. Early in the spring he spent some weeks in Naples, where he was much gratified by the kindness he received from Dr. Anton Dohrn. Director of the Marine Zoological Station, and from his assistants, in his efforts to gain some knowledge of the living sea fauna for furthering his studies at Hastings. His loss to the Museum will long be felt by all his colleagues who served with him on the Committee.



G. M. Woodward, del.