

completeness. Thus a record of the Echinoderms which does not include Cotteau's Eocene Échinides (Pal. Franc.), de Loriol's Crinoides Jurassiques, and Échinides crétacés du Portugal, Pomel's Paléontologie de l'Algérie; nor mentions Seune's discoveries in the Pyrenees, White's in Brazil, or de Loriol's additions to the fauna of Angola, cannot be for a moment compared with M. Gauthier's summary of the group. Nevertheless, complete though the work is, there are some few omissions; thus while a paper on the Mauritius Bryozoa, which is solely of zoological interest, is recorded and summarized, the Sarrasins' important work on the Echinothuridæ is not mentioned, though of especial interest to palæontologists. The list of abbreviations, which was quite inadequate in previous volumes, has disappeared entirely from the present, and one is left to guess what is meant by the G.F.F. and the Jahrbuch G.R.A.: the brevity in such cases strikes one as unnecessary in contrast to those in which such words as Rendiconti are printed in full. In many cases there is a lack of uniformity in the abbreviations, and the same work is quoted differently on the same page. Sometimes no reference is given to the place of publication of a paper, as in Sansoni's "Note di mineralogia italiana" (1855). The frequent absence of cross-references in the case of joint authorship is also unfortunate.

In spite of such slips and omissions, it must be admitted that the *Annuaire Géologique Universel* is the most complete and reliable guide to current geological and palæontological literature. J. W. G.

CORRESPONDENCE.

THE CAMBRIAN CONGLOMERATE OF ST. DAVIDS.

SIR,—The statement to which Dr. Hicks objects may be somewhat loosely worded, but if the words used be clearly defined it is not very far from the truth. In speaking of a conglomerate we distinguish "pebbles" and "matrix." When the word "fragment" is used, it is generally supposed to refer to the former; the latter, however, may also contain fragments of smaller size; and with the exception of certain true pebbles from Whitesand Bay and Ramsey Island, all the fragments referred to by Dr. Hicks come under this category. The conglomerate of Ramsey Island is truly "composed" of felsite pebbles, but there is no proof of its age. Elsewhere the conglomerates may *contain* fragments of various rocks, but they are mainly *composed* of quartz pebbles. My statement is a re-echo of the words of Prof. Hughes that "he did not believe that the little particles of felspathic rock in the grit would carry conviction." Indeed in any case it is very extraordinary that though the present beach at Chanter's Seat and elsewhere is strewn with large granite pebbles from the neighbourhood, the older conglomerate is so free from them, and so full of quartz from somewhere else. This fact, which thus stated can scarcely be denied, tends to minimize the interval between the conglomerate and the underlying rocks, and the presence of small fragments of similar rocks which are abundant in Precambrian areas does not do much in the contrary direction.

Sept. 20, 1890.

J. F. BLAKE.