

numerous specific names it contains, and the following notes would seem to settle the matter in a fairly satisfactory manner:—

On October 13th, 1849, Edward Forbes wrote to Owen saying he had just heard of the death of Dixon and that his part of the MS. could be finished in two or three days. On February 2nd, 1850, G. B. Holmes wrote to Owen asking how Dixon's work is getting on. On December 30th, 1850, George Landseer, the artist, wrote to Owen saying "what a nice book Mr. Dixon's makes, a very useful one . . . I was looking over it the other day, and it seems carried out with great care." W. H. Fitton, on February 4th, 1852, wrote to Owen as follows: "During some weeks of the last summer made an acquaintance with the widow of your late friend Mr. Dixon. I obtained from her a copy of her husband's book on the fossils of the chalk, etc., at the usual bookseller's price of £3 3s. 0d." Fitton further notes that her agreement with Longman expired in December, 1851, and with his usual kindness suggests that Mrs. Dixon should not be allowed to be at any loss over its production. Further, Messrs. Longman, Green, & Co. have favoured me with a letter dated 10th March, 1908, in which they say that Dixon's Sussex "was published in December, 1850."

I think we may therefore, on this evidence, safely accept the date 1850, as stated on the title-page. C. DAVIES SHERBORN.

THE NOMENCLATORIAL HISTORY OF THE CORAL *CANINIA*.

SIR,—In the April number of the *GEOLOGICAL MAGAZINE*, pp. 158–171, Mr. R. G. Carruthers, in addition to his admirable description of *Caninia* and of its contained species, enters fully into the question of its nomenclature. Since this question has given rise to some controversy, and is by no means easy of settlement, a consensus of opinion on the subject is desirable. If I venture to intrude on a field outside my own special work, it is only as a student of nomenclature and bibliography, and in response to a definite request for my opinion made last November by Dr. Arthur Vaughan.

After looking up the literature with the help of my colleague, Mr. W. D. Lang, I sent Dr. Vaughan a long letter, which came to the same conclusions regarding the interpretation of *Caninia* and of its genotype as those based by Mr. Carruthers on his independent studies, and thus brought Dr. Vaughan round to the same view. Mr. Carruthers has asked me to publish my confirmation of his conclusion, and to add one or two details that had escaped him.

The species *Caninia cornucopiæ* does not date from the Congrès de Turin. The report of that Congress appeared in *Atti riunione scienziati Ital.*, ii, Torino, 1841, pp. 227–228. *Caninia* was there defined as a fossil ally of *Cyathophyllum*, distinguished by infundibuliform tabulæ. No species was mentioned. The name *C. cornucopiæ* therefore dates from the paragraph by Paul Gervais, *Diet. Sci. Nat.* (De Blainville), Suppl. I, p. 485. This paragraph is quoted in full by Mr. Carruthers (p. 166). The life of the Supplement was cut short, and the plate therein referred to was never issued. In subsequent editions of the "Dictionnaire des Sciences naturelles," *Caninia* continues to be quoted by Gervais, with mention of *C. cornucopiæ* as the only species.

The date of the original Supplement is given as 1840, but was more probably 1841, since it must certainly have been published after the Congress was held at Turin, although it may have appeared before the actual publication of the *Atti*.

De Koninck (1841, Descrip. Anim. foss. terr. houiller . . . Belg., p. 22) did not accept *Caninia*, and made *C. cornucopia* a synonym of *Cyathophyllum mitratum* (Schlotheim). Since *C. cornucopia* had not then been published, De Koninck must have obtained his information from Michelin's letters or MS. This is further proved by the fact that De Koninck (loc. cit.) quoted the unpublished *Caninia cornu-bovis* as a synonym of *Cyathophyllum plicatum*. He may have got the name from the legend to the unpublished plate, since he quotes Dict. Sci. Nat., Suppl. II (not I). Anyhow, this citation gave *C. cornu-bovis* no validity.

The date of page 81 of Michelin's "Iconographie Zoophytologique" was probably about 1842. The species *Caninia gigantea* there established is said to be the only species common at Sablé, one of the localities ascribed to *C. cornucopia*, although erroneously, in the paragraph of Gervais.

As Mr. Carruthers points out, Michelin, when establishing *Caninia cornu-bovis*, referred to "Michelin, in P. Gervais, ASTRÉER, Dict. des Sci. nat., Suppl. tome I, p. 485 (pour le genre)." By the last words Michelin seems to imply that the description published in Gervais gives the characters of the genus, but not those of the species *Caninia cornu-bovis*. Mr. Carruthers admits the possibility of an alternative interpretation, namely, "that the generic description in the Supplement should be regarded as a specific description of *C. cornu-bovis*." Such a weakening of his case seems to me quite unwarranted.

The reason for taking *C. cornucopia* as genotype is briefly that this species was definitely selected as "espèce type" in the Supplement (1840 or 1841); and although *C. cornucopia* was not fully described till 1846, no other species was proposed as genotype by Lonsdale or any other intervening writer. In such a case, the rules of the International Zoological Congress leave no room for doubt.

It is hoped that the few notes here given will complete Mr. Carruthers' account, without affecting its main conclusions.

April 7th, 1908.

F. A. BATHER.

CHANGES OF LEVEL AND RAISED BEACHES.

SIR,—In the May number of this Magazine Dr. Jamieson suggests that the elevation of raised beaches is caused through the lightening of land areas by the ordinary denudation constantly going on. That this denudation may be a *vera causa* of elevation to re-establish equilibrium is highly probable. But there must be counteracting agencies at work, because the elevation of the beaches has been followed by a certain amount of depression, as shown by the submerged forests on our coasts. Denudation has been going on all along, and the land is now at its lightest, and consequently ought to be at its highest, yet on the contrary what was lately dry land is now below high water.

O. FISHER.

May 11th, 1908.