

## CORRESPONDENCE

### Baker's Life of Pleistocene.

EDITOR OF 'THE AUK':

In the last number of 'The Auk' there appears a note by Dr. R. W. Shufeldt, in reference to my recently published 'Life of the Pleistocene,' which calls for comment on my part. To the main criticisms of Dr. Shufeldt—as to the wisdom of omitting the references to the life of this period from areas outside of the ice sheet,—I take no exception, this being a matter of personal opinion. Dr. Shufeldt thinks I should have included them; I think I should not. The statement to which I object, and I think rightly, is this sentence which closes Dr. Shufeldt's note. "This omission is to be greatly deplored, for in such a formal work as the one here considered, the ignoring of so important a group of vertebrates as Pleistocene birds—the rarest of all fossil vertebrates—casts not a little doubt upon the thoroughness of still other subjects treated in this volume."

Some weeks ago Dr. Shufeldt, in acknowledging a copy sent to him by the author, brought up these points, and some correspondence ensued as to the reasons for omitting this, as well as other groups, from consideration. I then stated the reasons, and I had thought the matter quite well understood between us, and simply a difference of opinion. For the benefit of those who may not have access to the volume I will state my reasons for omitting all (not simply the birds, as Dr. Shufeldt's note would imply) of the records of life from the area indicated by the criticism. The subtitle to the volume reads "*as recorded in the depósitos laid down by the great ice sheets.*" The part of the introduction referring to this limitation has already been stated by Dr. Shufeldt.

This limitation of the field was made advisedly before the final work was undertaken and the omissions were not due to lack of thoroughness, as the criticism would imply. The records cited by Dr. Shufeldt from Texas, North Carolina, Maryland, Nebraska, New Jersey, etc., are outside of drift deposits and cannot be used for the reasons stated.

Many of these, also, are not in Pleistocene deposits but are listed as Pliocene species, and some are from deposits that are quite problematical, and may be late Pliocene. My purpose was to record so far as possible all information available concerning life that had some definite relation to one or more of the continental ice sheets. For this purpose many thousand volumes were consulted and laboriously searched, the index being ignored because many references to life were not indexed in some of these works. It is confidently believed that all important references have been included. The references to the works of Cope, Marsh, Shufeldt, and others, have been omitted, except where they contained records of material from glaciated regions. Four such works of Cope, and a fifth

in connection with another author, are listed in my bibliography on pages 412-413.

On page 373 of my work reference is made to the Vero deposits of Florida, and Dr. Shufeldt criticises the omission of his species of birds. This reference had to do only with Man's presence in the Pleistocene period and only the mammals were listed, because these only can be used to determine the probable age of such deposits. A careful reading of this section will convince any unprejudiced person of this fact.

Objection is made to the absence of records from the Pacific Coast. If a map of the glacial period be consulted it will be seen that the ice sheet extended, in the United States, only into parts of northern Idaho and Washington. To the north it extended through British America and Alaska. A reference to Pacific Coast deposits and life is made on p. 279. So far as the writer is aware little is known concerning Pleistocene life from this territory and some records from Alaska are outside of the glaciated area.

As far as the birds are concerned the writer has found no records of their remains from glacial deposits within the region of the drift sheets, excepting the one listed from Chicago and identified by Dr. Shufeldt. The absence of the remains of this class of vertebrates from the interglacial deposits indicates their rarity in Pleistocene deposits, as suggested by Dr. Shufeldt.

No apology is made by the author for the arbitrary limits set upon the area considered in the volume in question. The vertebrates of the outlying territory have been well listed by Osborn, Matthews, Shufeldt and others, and it seemed that something should be done to bring together the scattered literature relating to the territory immediately affected by the glacial ice sheets. This the author has tried to do to the best of his ability, and he wishes to make it clearly understood that this limit of area was purposely and advisedly made, that it was not due to any omissions or lack of thoroughness in preparing the work, and that as far as he has heard from many of the leading geologists and glaciologists of America, no objections such as Dr. Shufeldt suggests have been received. That there will be differences of opinion regarding interpretations made in the work is to be expected, but the writer believed that the clear statement on page iv of the introduction, in which the reasons for the limitation of the territory were carefully stated, would prevent any misconceptions or criticisms such as Dr. Shufeldt has made. The Doctor's work on fossil birds is well known to me and greatly respected and no thought of slighting or purposely ignoring his splendid work was intended in the Pleistocene volume.

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