

ART. XVIII.—*Note on the Genus Archeocyathus of Billings*; by
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THE genus *Archeocyathus* was proposed by Mr. E. Billings, in a pamphlet entitled "Geological Survey of Canada: Sir W. E. Logan, Director. 'New Species of Lower Silurian Fossils,' by E. Billings, F.G.S., Paleontologist G.S.C. Montreal, 21st November, 1861."

A copy of this pamphlet was received by Professor Jules Marcou on December 15th, 1861.

In a copy of the pamphlet now before me the genus is described on page 3, and the characters are largely drawn from *A. Atlanticus*, the first species following the generic description on page 4. The second species is *A. Minganensis*, a form referred to the genus, *not* used as its type, and it was not illustrated. In 1865 Mr. Billings proposed the species *Archeocyathus profundus* (Pal. Foss., vol. i, p. 4), and placed it after the description of the genus, without mentioning that the genus was founded on *A. Atlanticus*, and, on p. 355, he gives *A. profundus* as the type, then *A. Minganensis*; and refers to *A. Atlanticus* as the third species of the genus. This has led the paleontologists, who have not seen the pamphlet of 1861, to consider *A. profundus* as the type of the genus *Archeocyathus*.

I found that *A. Atlanticus* belonged to one genus and *A. profundus* to a different and distinct genus; and as Mr. F. B. Meek had proposed the genus *Ethmophyllum* for a species generically identical with *A. profundus*, I referred the latter species to *Ethmophyllum*, as the type of a genus cannot be

taken from a species described four years after the genus is proposed, especially as the original type belongs to a different genus from that of the species taken as the type at a later date. Mr. Billings, in his original comparison of *A. Atlanticus* and *A. Minganensis*, says: "It may be that these two species should be placed in different genera," and repeats the remark in the reprint of 1865; but, in the latter, the name *A. Minganensis* is replaced by *A. profundus*.

In my remarks upon the genus *Ethmophyllum* (Bull. 30, U. S. Geol. Survey, p. 75), I called attention to the publication, in vol. ii of the *Geology of Vermont*, of the genus *Archeocyathus*. At that time I was not aware of the fact of the prior publication of the pamphlet by the Geological Survey of Canada, nor that the *Geology of Vermont* was issued in 1862 and not in 1861—the date on the title-page. I am indebted to Professor Jules Marcou for calling my attention to the existence of the pamphlet of 1861 and to the date of the publication of the *Geology of Vermont*, as 1862. It is noted, in the *Geology of Vermont*, that the descriptions were taken from a pamphlet sent by Mr. Billings, but not being able to obtain any trace of the pamphlet, as a publication at the time, I referred the original description to the *Geology of Vermont*, vol. ii.

I have written the above explanation, owing to having received a letter from a distinguished paleontologist, who questioned the propriety of using the genus *Ethmophyllum* for the generic type, so well illustrated by *Ethmophyllum Whitneyi* and *E. profundum*. I did not feel warranted when describing the genus in Bull. 30, U. S. Geol. Survey, in proposing a new genus for *Archeocyathus Atlanticus*, or in placing *Ethmophyllum* as a synonym of *Archeocyathus*; and since reading the original pamphlet of Mr. Billings, I am disposed to adhere to the views which I then held on this subject.