

I.—*Presidential Address : the Cretaceous System in Canada.*

By J. F. WHITEAVES.

(Read May 23, 1893.)

At the last meeting of the Society, my predecessor in this chair selected as the subject of his address the "diffusion and sequence of the faunæ" of the oldest division of the palæozoic rocks, as developed in the maritime provinces. On the present occasion it may not be inappropriate for me to select as my theme some aspects of the present state of our knowledge of the newest division of the mesozoic rocks, or, in other words, of the Cretaceous System, of the western and north-western portions of the Dominion.

Although it has long been known that the coal-fields of Nanaimo and Comox, on Vancouver Island, are of Cretaceous age, and that Cretaceous rocks occur over large areas of country in Manitoba and the North West Territories, it is not quite clear by whom or at what date the existence of these rocks in any part of Canada was first recorded. The literature of the subject, prior to the confederation of the provinces, may thus be briefly epitomized. Isbister, who published a summary of the geology of the northern portion of this continent in the Quarterly Journal of the Geological Society of London for May, 1855, makes no mention of any Cretaceous rocks.

1857. In the fourth volume of the Transactions of the Albany Institute, Mr. F. B. Meek published a paper entitled "Descriptions of new organic remains from the Cretaceous rocks of Vancouver's Island." The date of this paper is given on the authority of Mr. Meek himself, in two subsequent papers descriptive of additional species from the same series of rocks, now known as the Nanaimo group, but the title page of the volume is dated 1858-64. The specimens referred to are stated by Mr. Meek to have been forwarded to him by Dr. J. S. Newberry, then geologist of Lieutenant Williamson's northern Californian and Oregon exploring expedition, to whom they were sent by the Smithsonian Institute from Nanaimo.<sup>1</sup> The collection, Mr. Meek says, is "one of much interest, since it furnishes the first evidence we have had of the occurrence of Cretaceous rocks along the western coast of North America." One of the fossils is referred with doubt to the *Baculites ovatus* of Say, and the following twelve are described as new :—

<i>Nucula Traskana.</i>	<i>Trigonia Evansana.</i>
<i>Arca (Cucullæa) equilateralis.</i>	<i>Thracia (?) occidentalis.</i>
<i>Arca Vancouverensis.</i>	<i>Thracia (?) subtruncata.</i>
<i>Cardium scitulum.</i>	<i>Dentalium Nanaimoensis.</i>
<i>Pholadomya (Goniomya) borealis.</i>	<i>Ammonites (Scaphites) ramosus.</i>
<i>Pholadomya subelongata.</i>	<i>Ammonites Newberryanus.</i>

<sup>1</sup> Dr. Newberry, in his "Notes on the Later Extinct Floras of North America," &c., published in the Ann. Lyc. Nat. Hist. N. York, vol. ix, April, 1868, says that these fossils were collected by Dr. Turner.