

area is thoroughly studied the representative of the great limestone belt beneath the shales of Georgia, Vermont, may be determined, and also the overlying *Olenellus* shales and the underlying strata. If so, no one will take greater pleasure in adopting the term Taconic, as equivalent to Cambrian and in place of it, than myself.

§ 146. The following extracts from Dr. Emmons's works, with running comments, are given to define the position of the two divisions of the Taconic System.

§ 147. Dr. Emmons, in proposing the Taconic System, said (Geol. New York, Surv. Second Geol. Dist., 1842, p. 136):

The Taconic System, as its name is intended to indicate, lies along both sides of the Taconic range of mountains, whose direction is nearly north and south, or for a great distance parallel with the boundary line between the States of New York, Connecticut, Massachusetts, and Vermont. The counties through which the Taconic rocks pass are Westchester, Columbia, Rensselaer, and Washington; and, after passing out of the State, they are found stretching through the whole length of Vermont and into Canada as far north as Quebec. It is, however, in Massachusetts, in the county of Berkshire, that we find the most satisfactory exhibition of these rocks. They form a belt whose width is not far from fifteen miles along the whole western border, and which extends clearly to the western base of the Taconic Range. The greatest breadth, therefore, as will be seen by an inspection of any map of this section of country, is wider upon the eastern than upon the western side of this range. In Vermont they range along the upper members of the Champlain Group, and thus become connected with the Second district.

§ 148. In speaking of the "Position and relation of the Taconic System," he said further (p. 137):

In this connection, I may state another result as the consequence of the geographical position of the Taconic System: it is the partial blending of the rocks of the three adjacent systems, the Primary of the Hoosic Ranges upon the east and the New York Transition System on the west with the Taconic, creating thereby many doubts and perplexities as it regards the true limits of either system; and inasmuch as the whole belt itself of the latter rocks is narrow, doubts are thrown over the whole as it regards the views we are to take of them. It will be more clearly seen in the following pages how it is that differences of opinion prevail in relation to these rocks. Where they have been crowded together, and especially where the masses are lithologically similar, it is not at all remarkable that the views and opinions of geologists should differ; besides, under the most favorable circumstances, the lines of demarkation between rocks of different eras are often extremely obscured, and cannot be drawn with that exactitude we wish, in consequence of concealment under the soil or other circumstances equally effective to render their extent and relations indistinct and uncertain.

§ 149. On the following page he again speaks of the difficulty of recognizing the differences between the Taconic series and the formations of the Champlain Group:

Much difficulty is encountered, as has been already hinted, when we attempt to draw the line of demarkation between the shales and slates east of the Hudson River and Lake Champlain and the slates of the Taconic System. So nearly do the latter resemble the former in lithological characters that in specimens of small size the one might be mistaken for the other. But this is a common difficulty, or one common to all rocks of the same lithological characters, and it is not to be considered as a positive objection to the separation which I now propose.