sequently he referred the species named by him to Eaton's *F. secalinus*, calling it *Diplograptus secalinus*, gave a description as above, and at the same time figured another species which we have found in the fine argillaceous shales of Parker's ledge. For this I have decided to use Emmons's name *simplex*, the name *D. secalinus* being restricted to the species from the Hudson River Group, as described by Prof. Hall (Pal. N. Y., vol. i, 1847, p. 267).

The specimens from Vermont are completely flattened in the shale, and are small as compared with the stipes described by Dr. Emmons, as the largest one is scarcely 2 inches in length and the small ones have much the same appearance as the compressed frond of a Phyllograptus, but the similarity between the figure given in his American Geology and the central portion of the longer fronds from Vermont is so marked that I think they are identical. Dr. Emmons states that the known locality was in the Hoosic slate, but I suspect, from his having worked to the north in Washington County, New York, he may have procured the specimen figured from some other place, referring the slate to the same geologic age as that at Hoosic; this is the more probable, as a similar confusion of localities is to be detected in other parts of his work. The details of the description are drawn apparently from the small specimen figured, rather than from the distorted specimens usually observed in the Hoosic slate. In several of the Vermont specimens there is a strong, round, central axis, as shown in fig. 4 of plate xi, that appears as though a hollow axis had been filled with sediment in a more or less complete manner, thus preserving the form of the axis, while in other specimens it was compressed and all traces of it lost.

Formation and locality.—Middle Cambrian, Georgia Formation. Parker's quarry, Georgia, Franklin County, Vermont.

Genus CLIMACOGRAPTUS Hall.

CLIMACOGRAPTUS ? ? EMMONSI n. sp.

Plate xi, fig. 5.

The only specimen we have of this species is the upper portion of a single stipe found by Mr. E. Hurlburt in the same band of shale with *Diplograptus ? simplex*, *Mesonacis Vermontana*, *Olenellus Thompsoni*, and *Protocaris Marshi*.

The stipe is elongate, narrow, and with narrow, deep indentations on each side, at right angles to the axis of the stipe, that reach well in towards the center, leaving short, strong pinnula-like projections between them that alternate, with relation to each other, on the opposite sides of the stipe. Where the stipe is 4^{mm} broad, ten indentations occur in a distance of 11^{mm}. The position and character of the cellules are unknown; whether they are in the deep indentations, and the specimen shows the lateral view of a compressed stipe, as in Climacograp-