

In a letter written to Prof. Jules Marcou, December 28, 1860, Mr. Emmons states "that most if not all those beautiful graptolites referred to the Hudson River Group by Prof. T. Hall belong to the Taconic. There are probably two species in the Trenton and the slates above. No more." (Proc. Amer. Acad. Arts and Sci., new ser., vol. xii, 1885, p. 188.) This proves that Mr. Emmons had not a clear idea of the position of the shales of the Hudson River Valley that contain the graptolites described by Prof. Hall, nor of the shales at Point Levis carrying the graptolitic fauna. Elsewhere in Vermont, Virginia, and Tennessee he did not distinguish between the older rocks and those of the Hudson River Formation. Of this we will speak at another place and time.

Prof. Hall described *Graptolithus Milesi* (Geology of Vermont, vol. i, 1861, p. 372) as from a boulder of Georgia slate picked up in the town of Monkton, Vermont. The species is of the type of those from Point Levis, and as nothing of the kind has yet been found in situ in the Georgia shales, and the boulder was found on the line of the glacial drift from Canada, I do not think it best under the circumstances to admit the species to the Georgia fauna. Prof. Hall thinks that "it is probably of the Quebec Group." (Can. Org. Remains, Dec. II, p. 53.)

On plate i of his American Geology, Prof. Emmons figures two species of graptolites, fig. 11 as *Diplograptus secalinus* and fig. 2 as an undetermined species.

At Swanton Falls, Vermont, a species of graptolite occurs in the shales that is identical with *Climacograptus bicornis* of the Hudson River Formation. Prof. Marcou refers the strata containing the graptolites to the Taconic, and places it below the Potsdam sandstone, but I think without either stratigraphic or paleontologic evidence.

Genus DIPLOGRAPTUS McCoy.

DIPLOGRAPTUS ? SIMPLEX Emmons.

Plate xi, figs. 4, 4a.

Diplograptus simplex Emmons, 1855. Amer. Geol., vol. i, pt. 2, p. 104, pl. i, fig. 11.

Original description.—"Straight; serrations pointed, cells, rather distant oblique to the axis; the serration equal in length to one-sixth or one-seventh of the width of the stem. The upper or young part of the stem is three-eighths of an inch wide and the number of serrations is 24 to an inch. It narrows towards the base, where the serrations are rather obtuse and more distant than those above, and is 10 inches long as exposed upon the slate. It is confined to the Hoosic roofing slate."

Dr. Emmons originally applied the name *Fucoides simplex* (Taconic System, 1844, pl. v, fig. 1; Agric. Rept. N. Y., pt. 5, 1846, pl. xvii, fig. 1) to a species previously named by Prof. Amos Eaton (see Twentieth Rept. N. Y. State Mus. Nat. Hist., 1868, p. 268) as *Fucoides secalinus*. Sub-