Potsdam Sandstone. - In Vermont the Potsdam Sandstone has exactly the same aspect and composition as at Potsilam, in the State of New York. Near Saxe's Mills, a mile east of the Highgate-Springs, it contains two species of Conocephalites, C. Adamsi and C. Vulcanus. Being the capping group of the Taconic in the renversement (overturn) of the strata, it has been broken into pieces and narrow parallel bands, which have rested upon the more inclined strata in a sort of unconformable stratification, very apparent everywhere, squeezing the Lingula-flags and Georgia Slates near the point of contact, and giving them for about two feet depth a sort of agitated structure (structure tourmentée). These narrow bands of Potsdam Sandstone are numerous and well developed west of Mr. Parker's farm at Georgia, and also on the road between St. Albans and Swanton; at first they appear to be interstratified with the Georgia Slates, but they are not so, and may be compared to the steps of a ladder placed over, or even a little wedged into the Georgia Slates and Lingula-flags. This group has been known for a long time in Vermont by the name of Red Sandrock. It is found all the way from Saxe's Mills to Western Georgia. It forms the top and eastern side of Snake Mountain, contrary to the view of Dr. Emmons, who refers these Snake Mountain rocks to the Calciferous Sandstone. All the fossils found until now in the Potsdam Sandstone of Vermont and New York are of primordial form; and there is also a great break and discordance of stratification between this group and the Lower Silurian; and I think the opinion I first expressed one year ago is fully justified by paleontological and stratigraphical evidences.

Below the Potsdam Sandstone lie great masses of slates, four or five thousand feet thick, which for convenience I should divide into three parts. No regular line of division can be traced between these three groups, as the strata pass from one to the other without any well marked difference; it is merely for the fossils, and as a matter of convenience, that I propose the division.

Lingula-flags. — The upper group, or Lingula-flags, is formed of brown, green, and blackish slates, five or six hundred feet thick, with numerous lines of cleavage, cutting the strata in all sorts of directions. In some parts the fossils are very numerous, and I found at Highgate-Springs, where I first saw them, in company with Dr. Hall, a quantity of Lingulæ, Orthis, Orthisina, and Chrondites. The Lingula is new, and the Orthisina is nearly related to, if not identical with, an Orthisina quite common in the Lingula-flags of Wales in Great Britain. Mr. Billings informs me that since my visit there he found at Phillipsburgh some Graptolites, in slates near the shore of the lake, which I consider as of the upper group, or Lingula-flags.

Georgia Slates. — The middle group, or Georgia Slates, is composed