G. caduceus, (*Didymograpsus caduceus*, Salter). Branched; the branches deeply recurved, and toothed on the outside. Long filiform rachis. Fig. 3. Sillery formation; opposite Quebec.

To this section belong also the European forms—*G. Sedgwickii*, Portlock; *G. (Diplograpsus) folium*, etc.

§ 2. *Graptolites with acute or sub-mucronate serratures.*

G. pristis, Hall. (*Diplograpsus pristis*, *Prionotis pristis*, Hisinger). Unbranched. Stipe with central filiform rachis, and teeth on each side; the tips sometimes sub-mucronate. Fig. 4. Trenton limestone, Utica slate, and Hudson River group. *G. amplexicaule* and *G. secalinus*, Hall, are probably varieties.

G. priodon, Bronn. *G. Ludensis*, Murchison: Silurian system. *G. Clintonensis*, Hall). Unbranched; toothed on one side only. Teeth deeply cut, and with recurved tips. Fig. 5. Clinton group. In Europe, in Lower and Upper Silurians.

G. sagittarius, Portlock. Unbranched. Stipe in long narrow pieces, straight or slightly flexuous, with acute teeth on one side only. Fig. 6. Hudson River group.

G. tenuis, Portlock. Unbranched. Stipe in long thread-like pieces, straight or flexuous, obscurely and distantly toothed on one side only. Fig. 7. Hudson River group.

G. serratulus, Hall. Branched: the branches widley divergent, very slender, and with somewhat distant teeth. Fig. 8. Hudson River group, Albany.

G. gracilis, Hall. In delicate, wavy branches. See Pal. New York; vol. 1, p. 274.

G. venosus, Hall. See Pal. New York; vol. 2, p. 40.

§ 3. *Graptolites with obtuse serratures.*

G. bicornis, Hall. Unbranched. Stipe tapering towards the base, and terminating in a short fork. Toothed on each side: teeth obtuse. Central rachis usually well pronounced. Fig. 9. Hudson River group.

G. furcatus, Hall. Branched: the branches near together and converging; bluntly toothed, in general, on both sides. Fig. 10. Hudson River group, Albany.

G. ramosus, Hall. Branched: the branches diverging at a moderate angle, long, and toothed on the outside only. Fig. 11. Hudson River group.

§ 4. *Graptolites with smooth borders.**

G. scalaris. Unbranched. Stipe alternately spotted, or transversely marked on each side, but with smooth margin. Gradually tapering, and terminating in a slight expansion. Fig. 12. Hall. Utica slate and Hudson River group.

This form differs very materially from the *G. scalaris*, described by Geinitz, in Bronn's Jarbuch for 1840 and 1842. It has rather the aspect of a *G. bicornis* flattened in a plane more or less perpendicular to the direction of the teeth.

G. lævis, Hall. Unbranched. Stipe narrow, flexuous, and slightly tapering. Utica slate (A doubtful form).

For more complete descriptions, &c., of the above species, the reader is referred to the standard work on the Palæontology of New York, by Professor James Hall. Our knowledge of the graptolites generally, is likely to receive considerable additions from some of the projected publications of the Geological Survey.

E. J. C.

* Probably a deceptive appearance, produced by flattening in a particular direction.