

Fig. 3. A fragment of slate showing the extremities of some branchlets partially turned on one side, and having obscure serrations.

Locality and Formation.—Point Lévy; Hudson River Group.

Collectors.—J. Richardson and E. Billings.

GRAPTOLITHUS OCTOBRACHIATUS.

PLATE V. Fig. 1-6, and PLATE VI. Fig. 1-3.

Description.—Fronde composed of eight simple undivided branches, arranged bi-laterally, and proceeding from the two extremities of a short strong vinculum, which is subdivided, and each part again divided near the base, giving origin at each extremity to four equal rays or branchlets. Branchlets strong, linear, not sensibly diminishing in size as they recede from the centre, subangular, flattened upon the outer side, with a depressed line along the centre; obliquely striated; serratures short and strong, twenty in an inch, varying in depth according to the position of the branch; in one or two instances showing a deeper indentation.

This species presents the essential characteristic of eight simple arms or branchlets, which appear to have been sub-quadrangular in its living state, and when compressed laterally are scarcely broader, excepting the serratures, than when vertically compressed.

The branches are formed by the division of the vinculum at each extremity, first into two parts, making four; each of these is again subdivided almost immediately, and often so close as to present an appearance as if the four branchlets on each side originated from the same point. A careful examination however will show a little intervening space, and in one individual in its young state this feature is very characteristic.

The disk is a thick carbonaceous film, much stronger and coarser than in any of the preceding species, and corresponding in this respect to the stronger branches. It is moreover variable in form and extent in different specimens, and does not always appear to be in proportion to the size of the branches.