of fossil skeletons, infer the nature and functions of the muscles by which motion was imparted to each bone.

I shall select from the many fossil species of the Genus Pentacrinite, that, which from the extraordinary number of auxiliary side arms, placed along its column, has been called the *Briarean Pentacrinite*, and of which our figures (Pl. 51. Figs. 1, 2.; Pl. 52. Fig. 3.; and Pl. 53.) will give a more accurate idea than can be conveyed by verbal descriptions.*

* Pl. 51 represents a single specimen of Briarean Pentacrinite, which stands in high relief upon the surface of a slab of Lias, from Lyme Regis, almost entirely made up of a mass of other individuals of the same species. The arms and fingers are considerably expanded towards the position they would assume in searching for food. The side arms remain attached to the upper portion only of the vertebral column.

At Pl. 53. Fig. 1 and 2 represent two other specimens of the same species, rising in beautiful relief from a slab, which is composed of a congeries of fragments of similar individuals. The columns of these specimens, Fig. 2, a, shew the side arms rising in their natural position from the grooves between the angular projections of the Pentagonal stem. At Pl. 52. Fig. 1. $\overline{\overline{F}}^{a}$. $\overline{\overline{F}}^{b}$. are seen the costal plates surrounding the cavity of the body: at H, the Scapulæ, with the arms and fingers proceeding from them to the extremities of the tentacula.

At Pl. 53. Fig. 3. exhibits the side arms rising from the lower part of a vertebral column, and entirely covering it. Fig. 4. is another column, on which, the side arms being removed, we see the grooves wherein they articulated with the alternate vertebræ. Fig. 5. exhibits a portion of another column slightly contorted.