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### A. Characters of the Genus.

The petaloid sectors on the faces of the stem-joints are bordered by a few large ridges, of which the smaller proximal ones meet those of adjacent sectors in the inter-petaloid spaces, while the large distal ridges reach the outer edge of the joint. The supranodal joints are scarcely modified for the cirrus-sockets, and the articular facets rarely reach the upper edges of the nodal joints.<sup>1</sup> The cirri consist of from twenty to fifty joints, and vary considerably both in length and in appearance.

The basals may be very small knobs, or form a complete ring, and have but a slight tendency to downward extensions of their lower angles. There are never more than three radials, none of which bear pinnules.

The rays may divide five times, but rarely more than thrice; and their subdivisions are equal in value or nearly so. The basal joints of the lower pinnules are usually rather broad and flattened laterally, with sharp dorsal edges.

*Remarks.*—The genus *Pentacrinus* is generally, and with good reason, attributed to Miller. But a few authors have associated with it the name of von Schlotheim.<sup>2</sup> It is true that this able palæontologist used *Pentacrinites* as a generic name a year before the publication of Miller's classical monograph; but he made no attempt to define it as Miller did, nor did he give diagnoses of any of the species which he referred to the genus. In

<sup>1</sup> In several fossil species, however, the cirrus-facets take up the whole height of the nodal joints.

<sup>2</sup> Die Petrefactenkunde, Gotha, 1820, p. 327.