

of the "Crinactinota," viz., the Cystids. On the other hand, according to the scheme on p. 421, "Anthodiata" was the name proposed by Burmeister for the Blastoids, while the term "Brachiata" was also his, and included the true Crinoids and the Cystids. On pp. 3, 227, and 230, however, the term "Brachiata" is used by Bronn to denote the true Crinoids only, and it is attributed to Müller. Zittel has followed Bronn in this respect, and, as I believe, erroneously. For I have searched Müller's writings on Crinoids repeatedly without finding this expression, though frequent reference is made to the "Crinoidea Tessellata mit Armen."

After various unsuccessful attempts to discover where Burmeister's nomenclature was published, I applied to Prof. F. J. Bell, who was kind enough to make a search in the library of the Zoological Department at the Museum of Natural History, with the following result. In his *Zoonomische Briefe*, published at Leipzig in 1856 (vol. i. p. 243), Burmeister gives the following "Systematische Uebersicht der Crinoideen."

I. *Crinoidea anthodiata*.

1. Cystideen. 2. Blastoideen.

II. *Crinoidea brachiata*.

3. Tessellaten. 4. Articulaten. 5. Gesippten (*Crinoidea costata*). 6. Holopus.

This classification of Burmeister's deserved more attention than it has hitherto received; for it was the first which clearly brought out the difference between the true Crinoids with segmented arms attached to the radials and the "Anthodiata" or Blastoids and Cystids, in which there are either no arms at all or structures of an entirely different nature from those of the true Crinoids. In this, as in other respects, the Blastoids and Cystids at once differ from the Crinoids and resemble each other. In fact they are so closely linked together that it is extremely difficult to refer forms like *Hybocystites* and *Cystoblastus* to one group rather than to the other.<sup>1</sup>

The term Crinoidea should, I think, be limited to the strictly brachiata forms for which it was proposed by Miller; and it is much less applicable to the stalked Echinoderms generally than Leuckart's name "Pelmatozoa." But except as regards this question of nomenclature Burmeister's classification agrees far better with our present knowledge than many of those published before or since his time, e.g., that of d'Orbigny, Pictet, or of Dujardin and Hupé.

Low as the Cystids had fallen in Bronn's classification from the ordinal position to

<sup>1</sup> Quenstedt has solved the difficulty respecting the systematic position of *Cystoblastus* by describing it twice over. On p. 684 of his "Encriniden" it appears among the Cystids, and is figured on Tab. 113, fig. 89; but on p. 724 it is described as a Blastoid, and it is figured on Tab. 114, fig. 98, under the name of *Cycloblastus*.