

which they had been raised by Forbes, they had been, and were subsequently, still further degraded. For d'Orbigny¹ took an entirely different view of the characters of the various types of the Pelmatozoa from those held by some of his predecessors; and he not only threw the Cystids and Blastoids back among the Crinoids, but he considered these two groups merely as families. He divided the order Crinoidea into twelve families, among which are the Comatulidæ, Pentremitidæ, Cystidæ, and lastly the Pentacrinidæ; and Pictet² subsequently reduced this number to nine, but without making any change in the four above mentioned.

Dujardin and Hupé³ also adopted this singular arrangement, according to which the differences between a *Pentacrinus* and a *Pentremites*, *Echinosphærites* or *Actinocrinus*, are of no greater systematic value than those between *Pentacrinus* and *Comatula*. In this country, however, thanks mainly to the teaching of Prof. Huxley,⁴ Crinoids, Cystids, and Blastoids have always been regarded as independent but equivalent divisions, formerly orders, but now classes of the Echinodermata. To these Huxley⁵ has since added another, as to the necessity for which there has been a considerable difference of opinion, viz., the Edriasterida.

This group, which includes the curious sessile forms *Agelacrinus*, *Edrioaster*, and their allies, has been generally placed among the Cystids; but it has been re-established quite lately under the name of Agelacrinoidea by S. A. Miller, in ignorance of Prof. Huxley's classification of fifteen years ago.

I am inclined to think myself that if these forms be anything more than the isolated disks of Palæocrinoids, as was thought possible by Sir Wyville Thomson (*ante*, p. 85), their proper place is among the Cystids.

Two other new orders (*i.e.*, classes) of the class (*i.e.*, subkingdom) Echinodermata have recently been proposed by S. A. Miller.⁶ These are the Lichenocrinoidea and the Myelodactyloidea. But I cannot regard them as of equal value with the Crinoids, Cystids, and Blastoids. Our knowledge of the structure of *Lichenocrinus* is of the most limited character; and it is therefore totally insufficient for the basis of a class definition. The same may be said of *Cyclocystoides*, which together with the so-called *Myelodactylus* is placed by Miller in a new order that he proposes to call Myelodactyloidea. Whatever be the nature of *Cyclocystoides*, there can, I think, be little doubt that Salter, Charlesworth, and more recently Nicholson and Etheridge⁷ were right in regarding the

¹ Cours élémentaire de Paléontologie et de Géologie stratigraphique, Paris, 1852, t. ii. fasc. i. p. 134.

² Traite de Paléontologie, t. iv. p. 282.

³ Histoire Naturelle des Zoophytes, Échinodermes, Paris, 1862, pp. 55-58.

⁴ Lectures on General Natural History, *Medical Times and Gazette*, November 1856, p. 463.

⁵ An Introduction to the Classification of Animals, London, 1869, p. 130.

⁶ Description of three New Orders and four New Families, in the class Echinodermata, and eight New Species from the Silurian and Devonian Formations, *Journ. Cincinnati Soc. Nat. Hist.*, vol. v. pp. 221-223.

⁷ A Monograph of the Silurian Fossils of the Girvan District in Ayrshire, Edinburgh, 1880, pp. 330-334.