

Buch, however, clearly distinguished the essential differences between Crinoids and Cystids.¹ The same was the case with Edward Forbes, who having given the Crinoids ordinal rank in 1841² under the remarkable name "Pinnigrada," assigned the same position to the Cystids in 1848.³ Von Buch seems to have considered the Blastoids as a third group of equal value with these two. Roemer, on the other hand, degraded the Cystidea and Blastoidea to the level of families or sections of the order Crinoidea, separating off the brachiata forms of the latter as true Crinoidea.⁴ A few years later he proposed to call these by the name "Actinoidea," and to rank them together with Blastoids and Cystids as suborders of the Crinoidea.⁵ This term was thus employed, not in the strict sense of Miller's original definition, but as co-extensive with the name "Pelmatozoa," which had been proposed by Leuckart four or five years previously; though Roemer appears to have been unacquainted with it. This was unfortunate, as the use of Leuckart's excellent name in the *Lethaea Geognostica* would have avoided much subsequent confusion.

In the second volume of Bronn's "Thier-Reich" the Echinoderms are thrown together with the Coelenterates into the comprehensive "Kreis" of Strahlenthiere or Aktinozoa. Four classes of Coelenterates are first considered, and then the Blastoidea and Crinoidea, for which the cumbersome names "Blastactinota" and "Crinactinota" are proposed. Fortunately, however, they have not come into general use. The Cystids are thrown back among the Crinoids, for Bronn did not consider them as differing from the brachiata Crinoids to the same degree as the Blastoids. This was altogether in opposition to the views of Von Buch and Edward Forbes, and also to those of Roemer,⁷ to whom the peculiarities of the Blastoids and Cystids appeared so marked, "dass sie als gleichwerthige, wenn auch nicht gleich umfangreiche Sectionen oder Unterordnungen den ächten Crinoiden entgegen zu setzen sind." Viewed by the light of later knowledge, Bronn's classification was of a distinctly retrogressive nature.

Besides the Cystids he recognised two other divisions of the Crinoidea, viz., the Brachiata or the Crinoidea proper, and the Costata, Müller, the latter including the problematical *Saccosoma*.

The terminology employed by Bronn for the different groups of the stalked Echinoderms is extremely difficult to understand, and appears to contain many errors. Thus on pp. 193 and 421 (*op. cit.*), the name "Actinoidea" for the true Crinoids is attributed to Müller, though it is really Roemer's, as explained above; while on pp. 207 and 210 the true Crinoids are referred to as "Anthodiata," in contradistinction to the other division

¹ Ueber Cystideen, *Abhandl. d. k. Akad. d. Wiss. Berlin*, 1845, pp. 12, 13, 17, 27.

² A History of British Starfishes and other Animals of the class Echinodermata, London, 1841, p. xiv.

³ On the Cystidea of the Silurian Rocks of the British Islands, *Mem. of the Geological Survey of Great Britain, and of the Museum of Practical Geology*, 1848, vol. ii. part 2, pp. 526, 527.

⁴ Monographie der fossilen Crinoiden-familie der Blastoideen, und der Gattung Pentatremites im Besondern, *Archiv f. Naturgesch.*, Jahrg. xvii., Band i. pp. 387, 388.

⁵ *Lethaea Geognostica*, Bd. i., Theil 2, p. 224.

⁶ *Op. cit.*, pp. 180, 193.

⁷ *Lethaea Geognostica*, Bd. i. Theil 2, p. 224.