

dermata were described by D'Orbigny (1840) and Beyrich (1857). Quenstedt's *Palæontology of Germany* (vol. vi., 1874-76) contains an abundance of new detailed observations but retains the older classification; Angelin's posthumous work on the Swedish Crinoids, edited by Lindström (1878), likewise pays little attention to the results of zoological researches, although it displays a rich diversity of previously unknown forms in its beautiful illustrations. The works of Herbert Carpenter are therefore of very high value as investigations based upon an equal familiarity with fossil and recent forms, and indicating the high-water mark of palæontological and zoological researches at the time. Strictly scientific lines of research have also been adopted in all the more recent works. Two American scientists, Wachsmuth and Springer, have added very considerably to the knowledge of Echinodermata, Wachsmuth's works extending through a period of twenty years, 1877-97; P. de Loriol has made a successful study of Mesozoic forms; in England, F. A. Bather has contributed several memoirs on English and Swedish Crinoids (1890-93); in Germany, O. Jaekel has accomplished valuable new work on Palæozoic Crinoids.

The knowledge of the extinct order of the *Cystoidea*, erected by Buch, was advanced by the researches of Schmidt (1874) on representatives of the group from Russia, by those of Edward Forbes¹ (1848) on British forms, and by the works of Hall and Billings on North American Cystoids. In 1887 Waagen edited a posthumous monograph on the Bohemian Cystoids by Barrande. The systematic arrangement and zoological position of the Cystoids have been discussed in recent years by Haeckel and Jaekel, but the results of their researches are much at variance.

The small group of the *Blastoids*, discovered by Say in 1830, first underwent scientific examination at the hands of Ferdinand Roemer (1852). Subsequent work has extended our know-

¹ Edward Forbes, born 1815 in the Isle of Man, studied medicine and the natural sciences in London, Edinburgh, and Paris, travelled in Algeria, the Alps, and Asia Minor, and conducted in the Ægean Sea his famous investigations on the distribution of marine organisms at the different depths. In 1843 he accepted the Professorship of Botany at King's College in London, and when the Geological Survey was established he was selected as Palæontologist and Professor of Natural History; shortly before his death, in 1854, he exchanged posts with the Professor of Natural History in Edinburgh.