

Individual classes, orders, or families have sometimes been made the subject of special study. A notable monograph is that by Coquand on the Ostreaceæ of the Cretaceous formation (1869), and several monographs have been devoted to the consideration of the Cretaceous family of the Rudistes. Neumayr in 1891 proposed a classification of the Lamelli-branchia based upon the characters of the hinge, and Jackson and Bernard endeavoured to make the developmental history of shells and hinge useful for systematic distinctions.

The literature on fossil Cephalopods is almost too extensive to be reviewed. As far back as 1798, Cuvier had united all the Cuttle-fishes, together with Nautilus and the Foraminifera in one group, which he named *Cephalopoda*, and ranked as a distinct class clearly differentiated from all other molluscs.

The anatomy and morphology of cuttle-fishes was carefully studied by Cuvier and Della Chiaje, and the brilliant anatomical researches of Owen (1832) on the Pearly Nautilus afterwards gave a clear insight into the relationships of the Cephalopoda. Owen sub-divided the Cephalopoda into two orders, the *Tetrabranchiata* with two pairs of ctenidial gills, and the *Dibranchiata* with a single pair of ctenidial gills. To the Tetrabranchs, Owen assigned, in addition to Nautilus and the fossil Nautilites, the large assemblage of the Ammonites. Lamarck in 1801 had differentiated the genera Nautilus, Orbulites, Ammonites, Planulites, and Baculites, and had pointed out the difference between the sutural lines of the chamber divisions in Nautilus and Ammonites. Denys de Montfort (1808), Sowerby, and Parkinson added a few more Cephalopod genera, and De Haan in 1825 classified the known genera under three families (Ammonitea, Goniatites, and Nautilia).

Marked advance was effected by the investigations of Leopold von Buch (1829 and 1839). According to the position of the siphuncle, Buch distinguished two chief groups, Nautilidæ and Ammonitidæ, and sub-divided the latter according to the form of the sutural line into the three sections, Goniatites, Ceratites, and Ammonites. Buch introduced a precise terminology for the various parts of the sutural lobes; he distinguished fourteen families, partly in accordance with the shape and decoration of the shell, partly in accordance with the sutural lines. The spirally-rolled forms were contrasted by Buch with the straight Baculites and the