ARDUINO. The ideas of Arduino were less theoretical than Moro's; he divided the Paduan, the Vicentin, and the Veronese mountains into primary, secondary, and tertiary. The secondary mountains are for the most part formed of compact limestone in continuous strata, containing petrified organic bodies; these strata vary in hardness, fineness of grain, composition, colour, and in the species of marine organisms they contain, since, according to the author, there is but one kind in each stratum.

BALDASSARI. Whilst Donati explored the Adriatic in order to investigate the habitats of living beings, Baldassari made researches on the fossils of the Siennese territory. He recognised, as had Marsilli in the territory of Parma, Spada near Verona, and Schiavo in Sicily, that the remains were not mixed confusedly, but, on the contrary, distributed in families in such a manner that in certain spots *Arca* abounded, while in others the comb-shell, *Venus*, *Murex*, &c., were more plentiful, according to the nature of the rock. He noticed the regular arrangement of fossils in the various strata, the natural position of the corals, the perforation of the rocks by lithophagous shells, but he gave no opinion on the theoretical bearings of these facts, *i.e.*, whether the sea had been withdrawn suddenly or gradually, whether the animal or vegetable productions supposed to belong to the torrid zone had been brought thence to the north, or whether the temperature of the country was higher then than it is now. In the great works of Wolfgang Knorr and Walet (1755–1773) a distinction is drawn between the pelagic fossils and those found on the sea-coast, and they express the opinion that those whose analogues have not been found must exist in the deep seas as yet unexplored.

In Italy during the eighteenth century the microscope was applied to the examination of marine deposits, and had much influence on the study both of living animals and of fossils,[1] for the sand of the Adriatic, near Rimini, was found to be almost exclusively composed of microscopic shells, and the Tertiary marls of the sub-Apennine hills were

BECCARI. also found to contain a prodigious quantity of them. Beccari, towards 1729, created a new branch of conchology by the discovery of a small kind of polythalamous shell of nautiloid shape (*Nautilus Beccarii*, Linné). The coils of the helix and its transverse divisions give it a great resemblance to the ammonite, a comparison which was long adopted for all the other analogous forms so plentiful in the marls of North Italy.

BIANCHI. Ten years later G. Bianchi, better known by the name of J. Plancus, announced that he had found on the shore at Rimini the living analogue of the small fossil ammonite, and that its dimensions were such that it required 130 of them to equal the weight of a grain of wheat. He found a great many other species, which he still classed along with the nautili and ammonites, on account of their internal divisions. His work[2] contributed much to increase our knowledge on this subject, and at a later period he pointed out that,

[1] See d'Archiac, Cours de Paléontologie Stratigraphique, tom. i. p. 26, Paris, 1862.

[2] De conchis minus notis in littore Ariminensi, Venice, 1739 (cited by d'Archiac).