

assistance of C. Vogt, Agassiz was enabled to elucidate many obscure points in fossil fishes. Agassiz also introduced emendations in the classification of recent fishes, and added many new data regarding the evolution and the range in time of the various families. His sub-division of fishes into Placoidei, Ganoidei, Cycloidei, and Ctenoidei, according to the scaly skeleton, was certainly one-sided and artificial, and had to be discarded. At the same time, Agassiz conferred a great boon when he brought the Ganoidei into the strong relief of a sub-division, and insisted upon their importance both as essential links in the phylogenetic history of fishes and as a group comprising many specific types of high value for the characterisation of geological horizons. Agassiz was the first scientist who, in discussing the genealogy of fishes, pointed out the correspondence between the characters of different forms succeeding one another in time, and the characters of successive phases passed through by an organism during embryonic development. The observation was one of those far-reaching truths which are now and then wrested from nature; Haeckel worked out the same idea and elevated it to its merited rank as a fundamental bio-genetic principle. Hence, although the actual classificatory system proposed by Agassiz for the fishes could not supersede the Cuvierian system, and was soon appreciably changed for the better by Johann Müller's valuable works (1844), the name of Agassiz will always be among the most honoured in ichthyological literature. A later monograph on the remarkable fishes of the Old Red Sandstone was in many respects supplementary to the earlier work of the Neuchâtel *savant*.

A large number of special memoirs followed the works of Agassiz and Müller, and gave a greater insight into the remarkable varieties and wide distribution of the remains of fossil fishes. Those of Grey Egerton, Count Münster, Andreas Wagner (the Director of the Museum of Natural History in Munich), Costa, Thiollière, Pictet, Von der Marck, Kner, Zigno, Steindachner, H. von Meyer, Trachel, are all works of high palæontological merit. Pander's monographs on the fossil fishes of the Silurian and Devonian deposits in Russia (1856 and 1858) are distinguished by exceptional discernment, and by the wonderfully successful drawings of the microscopic structure of teeth and scales. It proved a difficult matter to determine the essential characters of