

and the British Silurian deposits. This preliminary work was followed in the year 1852 by the first volume of his great work on the Silurian system in Bohemia, a work which stands almost unrivalled in palæontological literature. From the year 1852 to the year of his death, 1883, Barrande continued the work and produced twenty-two thick quarto volumes with 1,160 wonderfully prepared plates depicting the complete fauna of the Silurian basin in Bohemia. He bequeathed means in order that the work should be continued to the end.

A geological Introduction in the first volume gives a very careful description of the geology of the area. According to Barrande, the stages A and B are "Azoic," and comprise at the base crystalline schists reposing on granite and gneiss, and above the schists, unfossiliferous greywackes, slates, and shales. Stage C contains the oldest (Cambrian) "Primordial fauna," wherein peculiar Trilobite genera predominate. Stage D contains the second distinct fauna, the equivalent of the Lower Silurian fauna in the Llandeilo and Caradoc series of Wales, the Champlain group of North America, the Orthoceras Limestone of Sweden and Esthland.

While these horizons, A to D, are chiefly greywackes and shales, the higher stages, E to G, are pre-eminently calcareous. Stage E is distinguished by an exceptionally rich fauna, identical with the Wenlock fauna in the British area. Stages F and G are calcareous, stage H comprises soft shales; in these three stages Cephalopod and fish remains are the most frequent fossils. For this fauna Barrande could not find any equivalent in the palæontological sequence of the British Silurian deposits, but he assigned the whole complex E to H to Upper Silurian, and regarded it as a third distinct fauna in the palæontological development.

While Barrande recognised the fundamental agreement between the Silurian horizons determined by him in Bohemia and those already observed in other areas, he remarked on the occurrence of what appeared to be in a measure antecedent "Colonies" of organisms. He found that not infrequently rock-layers containing accumulations of organic types like those of the next higher stage were imbedded in the lower stage; and Barrande explained these "Colonies" by the influx of organisms from certain neighbouring districts in which the fauna had already reached another phase of development.

Barrande's explanation of the "Colonies" was contested by