

life, and certainly was not then ascertained to have the stratigraphical significance and wide geographical diffusion which have now been proved. It is universally admitted that this fauna marks a distinct section of the geological record to which by common consent the name Cambrian is given. The upper limit of this fauna is likewise recognized. So that it is not a question of fact but of nomenclature which is in dispute. With the modification of the accepted base-line at the top of the Tremadoc Slates, I shall continue to employ the terminology proposed by the illustrious author of the "Silurian System" as being quite adequate for the most recent requirements of investigation.<sup>53</sup>

### § 1. General Characters

**ROCKS.**—The Silurian system consists usually of a massive series of graywackes, sandstones, grits, shales, or slates, with occasional bands of limestone. The arenaceous strata include pebbly grits and conglomerates, which are specially apt to occur at or near any local base of the formation, where they rest unconformably on older rocks. Occasional zones of massive conglomerate occur, as among the Llandovery rocks of Britain. The argillaceous strata are in some regions (Livonia, etc.) mere soft clays: most commonly they are hard fissile shales, but in some areas (Wales, etc.), where they have been subjected to intense compression, they appear as hard cleaved slates, or even as crystalline schists. In Europe, the limestones are, as a rule, lenticular, as in the examples of the Bala, Aymestry, and Dudley bands, though

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<sup>53</sup> The reader who would peruse a weighty and dispassionate examination of this disputed question in geological nomenclature should turn to the essay by the venerable Prof. J. D. Dana on "Sedgwick and Murchison; Cambrian and Silurian" (Amer. Journ. Sci. xxxix. 1890, p. 167). With the conclusions of his examination of the whole question I most thoroughly agree.