

graptolites of the genera *Climacograptus*, *Cœnograptus*, *Dichograptus*, *Dicranograptus*, *Didymograptus*, *Diplograptus*, *Monograptus*, *Loganograptus*, *Phyllograptus*, *Retiolites*, and *Tetragraptus*, with species of *Siphonotreta* and *Hymenocaris*, which occur in the Lower Silurian series of Victoria—an enormous series of sedimentary deposits, estimated by Mr. Selwyn to be not less than 35,000 feet thick—also many Upper Silurian fossils from New South Wales and Victoria, including such world-wide species as *Favosites gotlandica*, *Heliolites interstinctus*, *Calymene Blumenbachii*, *Encrinurus punctatus*, *Entomis tuberosa*, *Phacops caudatus*, *Atrypa reticularis*, *Strophomena pecten*, *Pentamerus Knightii*, *P. oblongus*, *Whitfieldia* (*Meristella*) *tumida*, *Orthoceras ibex*.¹²⁶ Near Bathurst and elsewhere, the Upper Silurian rocks of New South Wales have been much altered, sandstones passing into quartzites, slates into gneiss and hornblendic schists, and the coral-limestones into crystalline marbles with total obliteration of fossils.¹²⁷

In New Zealand some dark slates and crystalline limestones which form the mass of Mount Arthur, and from which a few graptolites, etc., have been obtained, are referred to the Lower Silurian series. They are much disturbed by hornblendic and syenitic eruptive rocks. To the Upper Silurian series are assigned some fossiliferous rocks from which *Calymene Blumenbachii*, *Spirifer radiatus*, *Stricklandinia lyrata*, etc., have been procured (Baton River series). A great part of the so-called metamorphic schists are probably Upper Silurian rocks.¹²⁸

Section iii. Devonian and Old Red Sandstone

In Wales and the adjoining counties of England, where the typical development of the Silurian system was worked out by Murchison, the abundant Silurian marine fauna disappears in the red rocks that overlie the Ludlow group. From that horizon upward in the geological series, we have

¹²⁶ McCoy, "Prodromus of Palæontology of Victoria"; L. G. de Koninck, "Recherches sur les Fossiles Paléozoïques de la Nouvelle-Galles du Sud," Brussels, 1876; R. Etheridge, jun., "Catalogue of Australian Fossils"; W. B. Clarke, "Remarks on the Sedimentary Formations of New South Wales," 4th edit.; C. S. Wilkinson, "Notes on the Geology of New South Wales," Sydney, 1882.

¹²⁷ C. S. Wilkinson, *op. cit.*

¹²⁸ Hector, "Handbook of New Zealand," p. 37.