of the rocks, and by their extraordinary number of careful observations.

Farey published a *General View of the Agriculture and Minerals of Derbyshire* in 1815, with geological sections and maps. Thomas Webster and Professor William Buckland[1] studied the character and distribution of the younger sedimentary rocks of England. Buckland described in detail the pebble and sand deposits above the Tertiary formations and below the very youngest fluviatile, lacustrine, or marine deposits. He identified the widely-distributed pebble-beds with the epoch of the universal Deluge, and called them *Diluvial detritus;* the youngest deposits he termed *Post-diluvial* (alluvial) *detritus.* He also made a large collection of fossils from the Liassic and Oolite series in the Midlands, and followed William Smith's initiative in working out successive horizons upon palæontological evidence. Buckland's system of the Secondary formations, more especially of the Jurassic formation, has remained a model of clearly-defined palæontological horizons of strata.

The magnificently-formed basaltic pillars of Staffa, the Giant's Causeway, and County Antrim early attracted notice. Pennant's *Book of Travel* (1774) gave descriptions and illustrations of these, without attempting any explanation of their origin. John Whitehurst (1786), the Rev. William Hamilton (1790), and Abraham Mills (1790) advanced the idea of a volcanic origin, and Faujas de Saint-Fond, after a journey in Scotland and Ireland, supported this explanation.

On the other hand, Kirwan (1799) and the Rev. William Richardson (1808) reported the discovery of fossils in the basalt of Ballycalla, near Portrush, and consequently advocated the aqueous origin of basalt, trap, granite, etc.; but Playfair proved that the supposed fossiliferous basalt of Portrush was only metamorphosed Lias.

Contributions to the geology of Ireland were made by Conybeare and Buckland (1813), Vaughan Sampson (1814),

[1] William Buckland was born 1784, the eldest son of the Rev. Charles Buckland, at Axminster, in Devonshire; studied theology in Oxford, and was a Fellow of Christ's College there. In 1813 he was appointed Professor of Mineralogy, and in 1819 was made in addition the first Professor of Geology in Oxford; in 1845 he became Dean of Westminster. He died 1856, held in the highest respect and esteem by all English geologists. (*The Life and Correspondence of William Buckland*, by his daughter, Mrs. Gordon; London, 1894.)