

Lower.—The clay-slate of Looe, Cornwall, has yielded a species of *Pteraspis*, also *Pleurodictyum problematicum*. The lower gritty slates and limestone bands of North Devon contain, among other fossils, *Favosites* (*Pachypora*) *cervicornis*, *Cyathophyllum helianthoides*, *Petraia celtica*, *Pleurodictyum problematicum*, *Cyathocrinus* (two species), *Homalonotus* (two species), *Phacops laciniatus*, *Fenestella antiqua*, *Atrypa reticularis*, *Orthis arcuata*, *Spirifer canaliferus*, *S. lævicostus*, *Pterinea spinosa*, etc. The recent researches of Mr. Ussher and Prof. Kayser have brought the Lower Devonian rocks of South Devon into closer palæontological relations with their equivalents on the Continent. Among the species noted by these observers are—*Pleurodictyum problematicum*, *Spirifer hystericus*, *S. paradoxus*, *S. macropterus*, *S. cultrijugatus*, *Strophomena rhomboidalis*, *Rhynchonella daleidensis*, *Chonetes sarcinulata*, *C. semiradiata*, *Pterinea costata*, *Homalonotus gigas*—an assemblage which resembles that in the Coblenzian stage of Rhineland.

Middle.—It is in this division that limestones are best developed and fossils are most abundant. Some of the limestones of South Devon are made up of corals, and from their lenticular or sporadic occurrence suggest that they were accumulated as reefs. Large masses of limestone rapidly die out laterally and are replaced by slates. In the Ashprington district a thick group of volcanic rocks consisting of breccias and tuffs (*schalstein*) and diabasic lavas appears entirely to take the place of the limestones. These volcanic ejections are traceable for many miles, sometimes dwindling down and giving place to limestones or slates, and again swelling out into considerable masses.¹³⁷ They appear to have been discharged from numerous small vents across the area of south Devonshire, but no trace of any similar material has yet been detected in the northern part of the county.

The palæontological evidence makes it abundantly clear that the limestones of Torquay and Plymouth represent the great Middle Devonian limestones of France, Belgium, and Germany—the *Calcaire de Givet*, and the *Stringocephalen-Kalk* and *Calceola-Kalk* of the Eifel. Near Torquay shaly limestones occur containing fossils that place them on the

¹³⁷ Champornowne on the Ashprington Volcanic Series, *Quart. Journ. Geol. Soc.* 1889, p. 369.