

of which is formed of a tough brown fossiliferous limestone, generally of only a few feet in thickness, but nearly constant in its occurrence from Dorsetshire to Yorkshire, and the very indefinite base of the Marlstone forms the eastern boundary of the Lower Lias.

The Lower Lias clay and limestone of England is, as a whole, rich in fossils, the general grouping of which cannot be more than noticed here in a cursory manner. These strata yield *Extracrinus* among the Crinoids, (fig. 35); of Brachiopoda, a few species of *Spiriferæ*, *Terebratulæ*, and *Rhynchonellæ*, and numbers of Lamellibranchiate molluscs, such as *Gryphæa incurva*, *Oysters*, *Pectens*, *Limas*, *Pinnas*, *Aviculas*, *Pholadomyas*, and others. Having been deposited mostly in deep sea, univalve shells are much less common, but of the Cephalopoda, which are free swimmers, there are vast numbers of *Ammonites*, *Belemnites*, and *Nautili* (see fig. 35), together with many fishes, and the great marine Enalosaurian reptiles, *Ichthyosaurus* (fish-lizard) and *Plesiosaurus* (see fig. 36), and the insectivorous flying reptile, *Pterodactylus brevirostris*.

THE MARLSTONE SERIES, or MIDDLE LIAS, which succeeds the Lower Lias clay, is generally somewhat argillaceous below, graduating upward into a brown, ferruginous, soft, sandy rock, with hard nodular bands, and a very marked brown ferruginous limestone at the top. It is rich in many forms of *Ammonite*, *Belemnite*, *Plagiostoma*, *Lima*, *Pinna*, *Pholadomya*, *Pecten*, *Modiola*, *Terebratula*, and *Rhynchonella*, besides a very characteristic *Spirifer* (*S. Walcottii*, fig. 36), one of the few remaining shells of that Palæozoic genus. Where the Lower Lias and Marlstone join, the strata graduate into each other, but through the central parts of England these passage-beds are rarely clearly ex-