

are restricted entirely to the genus *Monograptus*, of which *M. Nilssoni*, *M. colonus*, *M. leintwardinensis*, *M. Salweyi*, *M. bohemicus*, *M. scanicus*, *M. priodon* (var. *ludensis*), and *M. Roemeri* are especially characteristic. The distinctive graptolitic zone of this part of the Silurian series has been named that of *Monograptus Nilssoni*, and is the last of the long series.

A few corals occur in the Lower Ludlow rock, all of species that had already appeared in the Wenlock limestone, but the conditions of deposit were evidently unfavorable for their growth. The trilobites are less numerous than in older groups; they include the venerable *Calymene Blumenbachii*; also *Phacops caudatus*, *P. constrictus*, *P. Downingiae*, *Acidaspis coronatus*, *Cheirurus bimucronatus*, *Encrinurus punctatus*, *Lichas anglicus*, *Homalonotus delphinocephalus*, *H. Knightii*, and *Cyphaspis megalops*. But other forms of crustacean life occur in some number. As the trilobites began to wane, numerous phyllopods appeared, the genus *Ceratiocaris* being represented by nine or more species. Still more remarkable, however, was the increasing importance of the merostomatous crustaceans (*Eurypterus*, *Hemiaspis*, *Pterygotus*). Though brachiopods are not scarce, hardly any seem to be peculiar to the Lower Ludlow rock, nearly all of the known species occurring in the Wenlock group. *Rhynchonella Wiltoni*, *Spirifer exporrectus*, *S. crispus*, *S. bijugosus*, *Strophomena euglypha*, *S. rhomboidalis*, *Atrypa reticularis*, *Discina Morrisii*, *Lingula lata*, and *L. Lewisii* are not infrequent. Among the more frequently recurring species of lamellibranchs the following may be named—*Cardiola interrupta*, *C. striata*, *Ctenodonta sulcata*, *Grammysia cingulata*, *Modiolopsis gradata*, *M. Nilssoni*, *Orthonota amygdalina*, *O. rigida*, *O. semisulcata*, and a number of species of *Pterinea*. Among the gasteropods not uncommon species are *Cyclonema corallii*, *Euomphalus alatus*, *Holopella gregaria*, *Loxonema sinuosa*, and *Murchisonia Lloydii*. The old heteropod genus *Bellerophon* is still represented (*B. expansus*). The cephalopods abound, the genus *Orthoceras* being the prevalent type (*O. angulatum*, *O. annulatum*, *O. bullatum*, *O. ludense*, *O. subundulatum*, *O. tracheale*), but with species of *Exosiphonites*, *Lituities*, and *Phragmoceras*. The numbers of straight and curved cephalopods form one of the distinguishing features of the zone. At one locality, near Leintwardine in Shropshire, which has been prolific in Lower Ludlow fossils, particularly in star-fishes and eurypterid crustaceans, a fragment of the fish *Scaphaspis* (*Pteras-*