

forms predominate, including remains of dragon-flies and mayflies. There are also cockroaches and grasshoppers. The elytra and other remains of numerous beetles have been obtained belonging to still familiar types (Curculionidæ, Elateridæ, Melolonthidæ). A wing (Palæontina oolitica) disinterred from the Stonesfield Slate was originally believed to be the oldest known trace of a butterfly, but it is now considered to belong to the hemiptera. A few dipterous insects have been detected even as low down as the Lias toward the base of the system.<sup>48</sup>

In no department of the animal kingdom was the advent

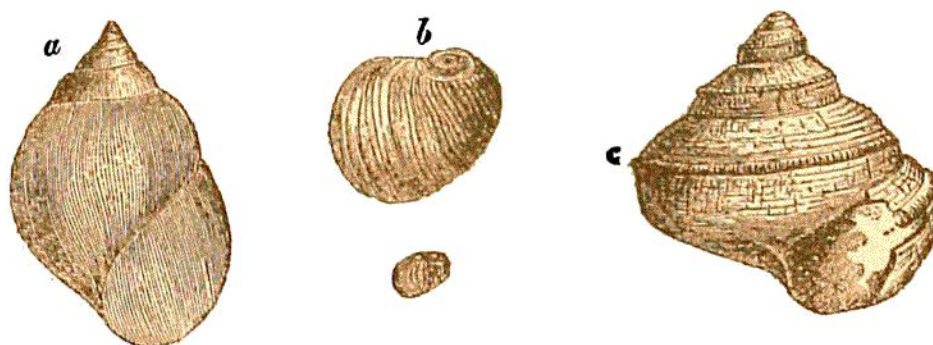


Fig. 393.—Jurassic Gasteropods.

*a*, *Natica hulliana*, Lyc. (Lower Oolite); *b*, *Nerita costulata*, Desh. (Lower Oolite, nat. size and mag.); *c*, *Pleurotomaria reticulata*, Sow. (Kimeridge clay,  $\frac{1}{2}$ ).

of Mesozoic time more marked than among the fishes. The Palæozoic types, with their heterocercal tails, nearly died out. The sharks and rays were well represented by species of *Acrodus* and *Hybodus*, while the ganoids appeared in numerous, mostly homocercal genera, such as *Dapedius*, *Æchmodus*, *Mesodon*, *Gyrodus*, *Lepidotus*, *Pholidophorus*, *Pachychormus*, *Caturus*, *Leptolepis*, *Megalurus*.<sup>49</sup>

The most impressive feature in the life of the Jurassic period was the abundance and variety of the reptilian

<sup>48</sup> A. G. Butler, *Geol. Mag.* x. 1873, p. 2; i. 2d ser. 1874, p. 446. Scudder, *Bull. U.S. Geol. Surv.* No. 71, 1891, p. 175, and authorities there cited.

<sup>49</sup> For a list of Liassic fishes, see memoir by H. E. Sauvage, *Ann. Sciences Geol.* vi. 1875.