rings, as represented in Fig. 20; the anterior portion carrying the eyes, which in some are reticulated, like those of many insects (Figs. 18 and 19); the mouth was placed forward and beneath the head. Many of these Crustaceans could roll themselves into balls, like the wood-louse (Figs. 23 and 25). They swam on their backs.

During the middle and later Silurian ages, whole rocks were formed almost exclusively of their remains; during the Devonian period they seem to have gradually died out, almost disappearing in the Carboniferous age, and being only represented by one doubtful species in the Permian rocks of North America. The Trilobites are unique as a family, marking with certainty the rocks in which they

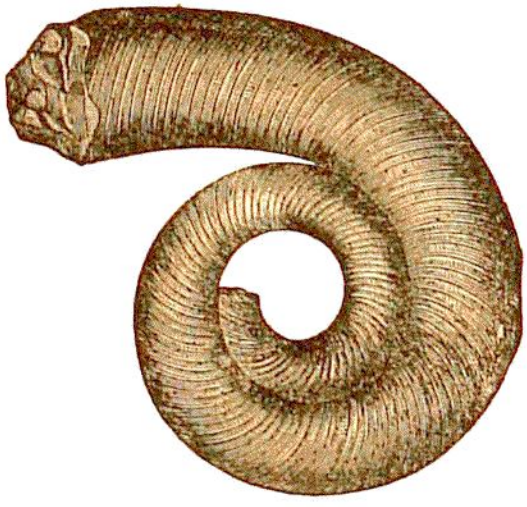

Fig. 21.—Lituites cornu-arietis. One-third natural size.

Fig. 22.—Hemicosmites pyriformis. One-third natural size.

occur; "and yet," says Hugh Miller, "how admirably do they exhibit the articulated type of being, and illustrate that unity of design which pervades all Nature, amid its endless diversity!" Among other beings which have left their traces in the Silurian strata is *Nereites Cambriensis*, a species of annelide, whose articulations are very distinctly marked in the ancient rocks.

Besides the Trilobites, many orders of Mollusca were numerously represented in the Silurian seas. As Sir R. Murchison has observed, no zoological feature in the Upper Silurian rocks is more striking than the great increase and profusion of Cephalopods, many of them of great size, which appear in strata of the age immediately antecedent to the dawn of vertebrated life. Among the Cephalopods we have *Gyroceras* and *Lituites cornu-arietis* (Fig. 21), whose living representatives are the Nautilus and Cuttlefish of every sea. The genus *Bellerophon* (Figs. 54 and 56), with many others, represented the