GAILLONELLA (Plate IV. figs. 10, 11.).—These animalcules are free, and their cases bivalve, and of a cylindrical, globular, or discoidal form; they occur in chains, in consequence of their self-division being imperfect, and the new individuals remaining attached to the old. The *Gaillonellæ* are among the most abundant and prolific of animal organisms, and are to be found in every pool, stream, and lake: fossil species occur abundantly in the Virginian marl and other strata.

SYNHEDRA (Plate IV. fig. 12.).—The shield is siliceous, and of a slender, elongated form. The animal is attached by the base (fig. 12 *a*.) in youth, and afterwards becomes free. It is found fossil in the Mountain-meal of Santa Fiora, &c.

PODOSPHENIA (Plate IV. fig. 13.).—The carapace is cruciform, or wedge-shaped, and is attached in youth by the small end, but afterwards becomes free. These animalcules are often found arranged in clusters, as in the figure. M. Ehrenberg states that they inhabit the sea, and not fresh-water; but Mr. Lee has discovered specimens in streams communicating with the Thames, so closely resembling the figures of M. Ehrenberg, both in the individual forms, and in the mode of grouping, as evidently to belong to the same genus, if not species. The *Podosphenia* occurs fossil in the polishing slate of Bilin.