The species is likewise common in the fossil condition, occurring freely in the microzoic rocks of almost the whole Tertiary system. It has been recorded from the Eocene beds of the south of France (d'Orbigny), and of the London Basin (Parker and Jones, Brady); the Septaria-clays of Germany, and the Salt-clay of Galicia (Reuss); the Miocene of various ages in many parts of Austria and Hungary (Reuss, Karrer, Hantken); and the Pliocene of Italy (d'Orbigny).

## Clavulina parisiensis, d'Orbigny (Pl. XLVIII. figs. 14–18).

Clavulina parisiensis, d'Orbigny, 1826, Ann. Sci. Nat., vol. vii. p. 268, No. 3 ;—Modêle, No. 66. Valvulina parisiensis, Parker, Jones, and Brady, 1865, Ann. and Mag. Nat. Hist., ser. 3, vol. xvi. pp. 29, 35, pl. i. fig. 26.

Clavulina parisiensis differs from Clavulina communis in the distinctly triangular contour of the triserial or primordial portion of the test, but in other respects the two species are very similar. The uniserial chambers are sometimes more or less inflated or even moniliform, and the test is often, though not invariably, coarsely arenaceous and rough externally.

In both the recent and fossil states, this species is much less common than *Clavulina communis*. It has only been observed at twelve Challenger Stations, all of which, with a single exception, have depths of less than 600 fathoms. They are as follows : in the North Atlantic, off Culebra Island, 390 fathoms; off Bermuda, 435 fathoms; and off the Azores, 450 fathoms : in the South Atlantic, off Pernambuco, 350 fathoms : in the North Pacific, off the Philippine Islands, 95 fathoms; and at Station 253, in the very deep area, 3125 fathoms : lastly, at six Stations in the South Pacific, ranging in depth from 7 fathoms to 580 fathoms.

The specimens originally described by d'Orbigny were fossils from the Lower Tertiary beds of the neighbourhood of Paris, and the form is tolerably plentiful in the London Clay, near Clapham Common; but I am not aware that it has been found in later formations.

## Clavulina parisiensis, var. humilis, nov. (Pl. XLVIII. figs. 19-21).

This is a small, feeble, local variety, which has only been observed off the Philippine Islands, at a depth of 95 fathoms. The test is thin, but somewhat rough externally. It commences growth after the manner of *Clavulina angularis*, and not only the triserial segments but the earlier portion of the uniserial line have the angular contour of that species. The remainder of the test is cylindrical, and the segments are even more distinct and individually rounded than in most examples of *Clavulina parisiensis*. The length scarcely exceeds  $\frac{1}{30}$ th inch (0.8 mm.).