

Cristellaria wetherellii, Jones, sp. (Pl. CXIV. fig. 14).

- Marginulina*, sp., Sowerby, 1834, Trans. Geol. Soc. Lond., ser. 2, vol. v. p. 135, pl. ix. fig. 12.
 „ *wetherellii*, Jones, 1854, Morris's Cat. Brit. Foss., p. 37.
 „ „ Parker and Jones, 1859, Ann. and Mag. Nat. Hist., ser. 3, vol. iv. p. 350.
 „ *fragaria*, Gümbel, 1868, Abhandl. d. k. bayer. Akad. d. Wiss., II. Cl., vol. x. p. 635, pl. i. fig. 58, *a.b.c.*
Cristellaria asperula, Id. Ibid. pl. i. fig. 65, *a.b.*
 „ *arcuata*, Hantken, 1875, Mittheil. Jahrb. d. k. ung. geol. Anstalt, vol. iv. p. 51, pl. v. fig. 10.
 „ *fragaria*, Id. Ibid. p. 53, pl. vi. figs. 1-3.

Amongst the numerous old friends that have turned up under new conditions during the investigation of the Challenger material, there are few that it has been a greater pleasure to meet with than this handsome and striking species, so familiar as a London Clay fossil.

The test of *Cristellaria wetherellii* is usually pod-like or crosier-shaped, but varies greatly in length and in the relative development of the spiral and linear portions. It is however always more or less spiral at the commencement, and almost invariably exhibits considerable lateral compression; therefore, so far as such characters are of any distinctive value, it belongs to the genus *Cristellaria* rather than to *Marginulina*. The salient feature of the species is its peculiar surface-decoration, consisting of closely-set raised tubercles, which take the place of continuous limbate septal lines. These are often, but not invariably, connected by slight, oblique, longitudinal costæ, most apparent on the earlier portions of the shell.

There are several figured varieties, besides those enumerated in the above synonymy, which cannot be separated from the present species by any valid zoological characters. Of these, *Cristellaria decorata*, Reuss (Zeitschr. d. deutsch. geol. Gesellsch., vol. vii. p. 269, pl. viii. fig. 16, pl. ix. figs. 1, 2), which differs in little beyond its slightly carinate margin; and *Marginulina hochstetteri*, Stache (Novara.-Exped., geol. Theil, vol. i., Paläont., p. 221, pl. xxii. fig. 55), which is represented by a nearly straight *Vaginulina*-like shell with the tubercles well developed but without costæ, are good examples, and there are many others which display similar surface-ornament but more nearly resemble the typical involute *Cristellarians* in their mode of growth.

Somewhat damaged recent specimens of *Cristellaria wetherellii* have been obtained at two Challenger Stations, namely:—off Raine Island, Torres Strait, 155 fathoms; and off the coast of South America, south-east of Pernambuco, 350 fathoms.

As a fossil the species dates back at least as far as the early part of the Tertiary epoch, if not to the Cretaceous formations. It is common in the London Clay (Jones and Parker, Brady), and occurs also in the Nummulitic Marl of the Bavarian Alps (Gümbel), in the *Clavulina-szabóii* beds of Hungary (Hantken), and probably also in similar deposits of later geological age.