The distinction between the genera *Rotalia* and *Calcarina* is founded by Carpenter upon the porous or divided aperture, and the "extraordinary development of the supplemental skeleton" of the latter genus. If this view be accepted, and it appears to afford the only practicable basis of separation, the group of forms of which the present species may be taken as the type find their proper position in the genus *Rotalia*. The most familiar examples of the group referred to are *Calcarina calcar*, d'Orbigny, *Calcarina pulchella*, d'Orbigny, *Rotalia armata*, d'Orbigny, *Rotalia bisaculeata*, d'Orbigny, and *Rotalia dentata*, P. and J.; whilst *Calcarina defrancii*, d'Orbigny,[1] furnishes an intermediate link connecting them on the other hand with the true *Calcarinæ*. Excepting *Calcarina pulchella*, which has marginal spines originating in the earlier whorls, they are all characterised to a greater or less degree by the angular or pointed peripheral ends of the chambers; and the test presents either a dentate or a zig-zag outline, according to the size and shape of the projecting angles.

The drawing (Pl. CVIII. fig. 3) represents a well-marked typical specimen of *Rotalia calcar;* the smaller shell (fig. 4) is a young example, either of the same species or of the closely-allied *Rotalia dentata*, Parker and Jones.[2] Between d'Orbigny's models of *Calcarina calcar* and *Rotalia armata* I can detect no distinctive character of the least value.

Rotalia calcar is not uncommon in the shallow water coral-sands of the East and West Indies; it occurs also in the Mediterranean and the Red Sea; on the shores of Madagascar, the Mauritius, and Ceylon, and at the Cape of Good Hope.

Of its geological distribution I am unable to say more than that I have specimens from the Barton Beds (Eocene) of the Isle of Wight, and from the Miocene of Malta; and that Terquem figures what is apparently the same species from the Eocene of the neighbourhood of Paris.

Rotalia pulchella, d'Orbigny, sp. (Pl. CXV. fig. 8, *a.b.*).

Calcarina pulchella, d'Orbigny, 1839, Foram. Cuba, p. 92, pl. v. figs. 16–18.
Rotalia pulchella, Parker and Jones, 1865, Phil. Trans., vol. clv. p. 387.

This beautiful little species appears to belong to the Rotalian rather than the Calcarine group. D'Orbigny's figures represent a clear, thin-walled Rotaliform shell, the segmentation of which is quite distinct on both faces, and the aperture a somewhat large, undivided, arched fissure. But its most remarkable feature consists of three long slender spines, which have their origin in the septal bands of the earlier convolutions, and form nearly equidistant peripheral radii. The spines are solid, and smooth externally,

[1] Moebius figures, under the name *Rotalia defrancei* (Foram. von Mauritius, pl. xiv.), a variety which I should prefer to call *Rotalia calcar;* but his general conclusions as to the Rotalian affinity of the forms under consideration are the same as my own.

[2] *Phil. Trans.*, vol. clv. p. 387, pl. xix. fig. 13, 1865.