

The subordinate modifications are for the most part distinguished by the different degrees of development of features already present in the type, and in but few is there any new feature superadded.

It frequently happens that, in restricted areas, the striate or costate *Lagenæ* are divisible into tolerably well-marked groups, which it is impossible to preserve when gatherings from wider limits or more extended bathymetrical range are taken into account. This fact has already been adverted to in the case of *Lagena striata*. I am assured by my friend Mr. Joseph Wright of Belfast, who has given much attention to the subject, that in the Irish (and therefore presumably in the British) seas, there are two modifications of *Lagena sulcata*, namely, *Lagena williamsoni* and *Lagena costata*, which are always distinguishable from the typical form; the former by a ring of reticulated or hexagonal ornament at the base of the neck, the latter by the really sulcate rather than costate condition of the surface. Of these, *Lagena williamsoni* at any rate is probably a good local variety, the characters partaking more or less of those of *Lagena hexagona*; but there is much less to go upon in the case of *Lagena costata*, which, viewed from a wider standpoint, appears only as one of innumerable individual modifications of the parent form.

*Lagena sulcata* is one of the most abundant and most generally diffused of all the members of the genus. It is at home in every latitude from Baffin's Bay and Smith Sound or the shores of Novaya Zemlya, to the equator; and from the equator to Heard Island, far south in the Southern Ocean; and the bathymetrical range extends from the littoral zone to a depth of 2750 fathoms.

Its geological history is similarly extensive. It has been discovered by Mr. John Smith of Kilwinning, in shales of Upper Silurian age, at Lincoln Hill, Woolhope, and a very similar though perhaps varietally distinct form occurs in the Carboniferous Limestones of the north of England and of Scotland. It is present in the Lower Lias of Yorkshire (Blake), and recurs in almost every subsequent microzoic deposit down to recent times.

*Lagena sulcata*, var. *interrupta*, Williamson (Pl. LVII. figs. 25, 27; apiculate specimens, Pl. LVIII. figs. 5, 6).

*Lagena striata*, var. *interrupta*, Williamson, 1848, Ann. and Mag. Nat. Hist., ser. 2, vol. i. p. 14, pl. i. fig. 7.

„ *vulgaris*, var. *interrupta*, Id. 1858, Rec. For. Gt. Br., p. 7, pl. i. fig. 11.

„ *alternans*, Terquem, 1875, Anim. sur la Plage de Dunkerque, p. 21, pl. i. fig. 4.

„ *interrupta*, Id. 1882, Mém. Soc. géol. France, sér. 3, vol. ii., Mém. III. p. 27, pl. i. fig. 10.

As stated by Williamson, this variety only differs from the typical *Lagena sulcata*, “in the unequal lengths and discontinuous character of the costæ, which sometimes do not extend over more than one half of the shell.”

The distribution is practically identical with that of the type.