
Read March 18, 1823.

The singular form and appearance of the marine substance commonly called Flustra arenosa, induced me lately to make the following observations, which I beg leave to lay before the Society, with its synonyma.

Flustra arenosa, crustacea arenosa lutosa, poris simplicibus subquincuncialibus. Solander and Ellis Zooph. p. 17. n. 10.


English Sandy Millepora. Ellis Coral. p. 74. pl. 25. fig. e.


This
This production is ranked by Ellis and Gmelin as a species of the genus *Flustra*, which belongs to the order *Vermes Zoophyta* of Linnaeus; although Ellis is uncertain whether it belongs to that genus or not; and Gmelin also appears to doubt whether it be a *Flustra*. Mr. Boys in vol. v. of the *Trans. Linn. Soc.* above quoted, states that he considered it undoubtedly to be the *nidus* of some marine animal, as he had found the cells entire, with eggs in each; but later naturalists (Blainville perhaps alone excepted) do not agree with him in this opinion.

The shape of this substance is curious; it greatly resembles the hoof of a colt, and is about equal in thickness to the peel of an apple or of an orange.

It is composed of fine particles of sand, cemented by animal gluten, and forms a crustaceous substance of a semicircular shape, very friable when dry. If a piece be held to the light, it will appear full of circular cells, which are in some degree transparent, and placed nearly in a quincunx order. Upon opening the cells, I discovered in each, one or two minute testaceous bodies of a yellowish colour, which are transparent and very brittle. In the interior of these I further observed an orange spot, darker than the rest of the shell, and which I conjectured to be the dead animal belonging to the shell.

In order to ascertain more accurately the nature of this substance, and of the small shells I had observed in the dry specimen, I procured fresh from the sea on the coast of Durham, where it abounds, a piece, which I placed immediately in a glass of sea-water, and changed the water occasionally. A few days after, the embryo shells hatched; I examined them with a microscope, and found that they bore a perfect resemblance to the young shells of the *livid Nerite* (*Nerita glaucina* of Linn.). The animal contained in each was white, and had two very minute black
black specks situated on the front, which I concluded without
doubt to be its eyes.

Tab. IX. Fig. 1. represents, in its natural size, the under
surface of a portion of this substance, broken through the middle
of a perfect specimen, at right angles to its edge; and shows
plainly the arrangement of the shells, which are expressed by
the shaded parts of the drawing.

Fig. 2. is a similar section, somewhat magnified, to exhibit
more clearly the forms of the cells, contained between the two
layers of conglutinated sand.

Fig. 3. represents one of the minute shells in its natural size.

Fig. 4. is a back view of the same, highly magnified.

Fig. 5. is a young shell of *Nerita glaucina*, seen also from the
back; which is here introduced to be compared with the last
figure. And for the same reason, Fig. 6. shows the aperture
and umbilicus of the shell, Fig. 5., in order to prove the exact
resemblance which it bears to Fig. 7., another small shell, re-
presented from the side of the aperture and umbilicus, and mag-
nified on the same scale as Fig. 4.

Fig. 8. is the same as Fig. 7. in its natural size.

The exact similitude of these small testaceous bodies to the
livid Nerite, induces me to believe that they are the young of
that species.

This substance is sometimes found with a small hole in each
of the cells opening on the under surface (as at Fig. 1.): this
hole is formed by the shell contained in the cell, which, when
sufficiently grown, forces its way through the under coating of
sand, and thus exchanges its former abode for the shore.

If a part of this production, when perfectly dry, be immersed
in muriatic acid, it will slightly effervesce, and the calcareous
particles will be dissolved; and others which are indissoluble, will
be