

the decay of galena, which he suspects to be itself a secondary production, arising from the metallization of white carbonate of lead by hepatic gas. This, our author says, appears evident in a specimen which he means to send to Mr. Greville. In one part of this specimen there is a cluster of large crystals; one of which, upon being broken, was found to be converted into minium, to a considerable thickness, while its centre was still galena.

Mr. Smithson does not say where this native minium was found; but his letter is dated from Cassell in Hesse.

*Description of a rare Species of Worm Shells, discovered at an Island lying off the North-west Coast of the Island of Sumatra, in the East Indies. By J. Griffiths, Esq. Communicated by the Right Hon. Sir Joseph Banks, K.B. P.R.S. Read February 13, 1806. [Phil. Trans. 1806, p. 269.]*

The shells here described were discovered in a small island called Battoo, after a violent earthquake that occurred in the year 1797. Upon the receding of the inundation caused by the earthquake, they were seen protruding from a bank of slightly-indurated mud, in a small sheltered bay, surrounded by coral reefs. They were procured by means of a servant sent by Mr. Griffiths for that purpose, who was very expert in diving, and who stated that he found these shells sticking out of the mud to the extent of ten inches, or even more, and being from one to three fathoms under water. They were in considerable number, standing in different directions, and separate from each other. Mr. Griffiths was informed that the shells were filled with a soft gelatinous flesh, and that the animal threw out tentacula, resembling small Actiniæ, from the two apertures at the apex. They were easily extracted from their bed, but were all mutilated more or less: this, the author thinks, was occasioned by the earthquake.

The longest of these shells that came into the possession of Mr. Griffiths was five feet four inches in length. The circumference at the base was nine inches, tapering upwards to two inches and a half. But others were of very different dimensions. The large end of the shell is completely closed, and has a rounded appearance: at this part it is very thin. The small end, or apex, is very brittle, and is divided by a longitudinal septum, which extends downwards eight or ten inches, into two distinct tubes, from whence protrude the tentacula already mentioned. The substance of the shell has a radiated appearance, and having an outer crust of a pure white colour, and an inside enamel of a yellow tinge. The external surface is often interrupted by a sudden increase of thickness, which probably indicates the different growths of the shells; but these interruptions are merely on the outside shell, and do not extend into the radiated substance. The thickness of these shells varies very much; so also does their shape, some being nearly straight, others crooked and contorted. Their internal surface is generally smooth, but is sometimes

covered with excrescences resembling tubercles. There was no indication that the animal had adhered to any part of the shell.

The great length and size of these shells, and the division in the upper part, constitute, in Mr. Griffiths's opinion, their chief peculiarities. The radiated appearance of the substance of the shells is such, that they might, in his opinion, be easily mistaken for stalactites. Mr. Griffiths at first considered these shells as a new genus; but afterwards, on consulting the works of Rumphius, he found in that author a description of some shells, very similar, but differing by having two long-jointed tubes issuing from their upper part. These shells were found in shallow water among mangrove-trees.

*Observations on the Shell of the Sea Worm found on the Coast of Sumatra, proving it to belong to a Species of Teredo; with an Account of the Anatomy of the Teredo Navalis.* By Everard Home, Esq. F.R.S. Read May 1, 1806. [*Phil. Trans.* 1806, p. 276.]

In the first part of this paper Mr. Home relates some further particulars respecting the sea worm shell from Sumatra, of which an account was, some time since, laid before this Society by Mr. Griffiths. A specimen of one of these shells, five feet long, but imperfect at both ends, was given to Mr. Home by Capt. Maxwell; and in order to remove all doubt respecting its nature, a part of it was analysed by Mr. Hatchett, who found that it was composed of carbonate of lime and an animal gelatinous substance, greater in quantity than in the *Chama Gigas*, but less than in the common oyster.

The subsequent discovery of two boring shells and two flattened opercula, sufficiently evinced that the shell here treated of belonged to the genus *Teredo*; and as the internal structure and economy of Teredines are very little known, our author thought that nothing would tend more to enable us to form an adequate idea respecting this new species (which he thinks may be called *Teredo gigantea*), than an accurate knowledge of the common species *Teredo Navalis*. With this view, by the assistance of Sir Joseph Banks and Mr. Whitbey, Mr. Home obtained some pieces of wood, with live Teredines in them, from Sheerness. By means of these, and of some specimens in the British and the Hunterian Museums, he has been enabled, with the assistance of Mr. Clift and Mr. Brodie, to give a very circumstantial description, accompanied by drawings, of the anatomy of the *Teredo Navalis*.

The Teredines brought from Sheerness, lived in salt water for the space of three days after being brought to town, during which time these animals were observed to throw out two small tubes; the largest of which was about three fourths of an inch in length, and had, within its external orifice, a fringe composed of about twenty very small tentacula. These tentacula were visible only when the tube was fully extended, because the animal drew in this tube by inverting it; whereas the smaller tube was not inverted when drawn in. The smallest of these tubes appeared to be the most sensible; for the