

NOTE ON *VIQUESNELIA* OF DESHAYES FROM THE MIOCENE
(SARMATIAN) OF TURKEY.

By G. K. GUDE, F.Z.S.

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THE genus *Viquesnelia* was established by Deshayes in 1857,¹ being based on some simple testaceous rudiments found in great abundance in nummulitic beds in Rumelia. These he considered to be the internal shell of a limacoid Gastropod, which he named *Viquesnelia lenticularis*.² A note was appended to this article by P. Fischer, who referred a mollusc from Mahé, Seychelles, and labelled *Clypeicella Dussumieri*, Val., in the Paris Museum, to the same genus. Another species discovered by Morelet & Drouet in the Azores was also placed in this genus, and described by the former under the designation *Viquesnelia Atlantica*.³ Neither of these, however, bears any resemblance to the type of *Viquesnelia*, as was pointed out subsequently by Fischer,⁴ who rejects the hypothesis that the Azorean mollusc is the living representative of the genus, adding that no evidence exists that these structures should be the internal shells of limacoids rather than opercula.

Morelet's species possesses a shell resembling *Ancylus* and is now placed in the genus *Plutonia*, while Gray in 1855⁵ created the genus *Mariaella* for the reception of the Seychelles species.

D'Archiac⁶ had already previously restricted the genus to the type and only species originally indicated by Deshayes.

While recently working at some Turkish Tertiary Mollusca at the British Museum I had occasion to examine the specimens forming part of the set of fossils collected by A. F. Dabell, Esq., in the district surrounding the Dardanelles, and presented by him to the National Collection.

The specimens of the so-called *Viquesnelia lenticularis* had been obtained with other fossils from the Sarmatian Beds of the Tekfur Dag district, to the north of the Dardanelles. On examining these I was at once struck with their resemblance to a molluscan operculum. The outer or upper surface is slightly concave, has a short spiral nucleus, situate considerably below the centre, consisting of about $1\frac{1}{2}$ whorls. The spiral character then seems to disappear and the lines of growth apparently become sub-ovate or auriculate, the excentricity becoming emphasized by the closer crowding together of the lines of growth at the lower and outer (right) sides. A shallow groove proceeds upwards from the nucleus, running more or less parallel with the right margin and traversing the

¹ Journ. de Conchyl., vol. v, p. 289.

² Tom. cit., p. 287, pl. vii, figs. 14-17.

³ Hist. Nat. des Açores, 1860, p. 139, pl. i, fig. 1.

⁴ Man. de Conchyl., 1883, p. 457.

⁵ Cat. Pulm. Coll. Brit. Mus., pt. i, p. 62.

⁶ Viquesnel, Voyage dans la Turquie, vol. ii, p. 457, 1868.

lines of growth towards the acute oblique apex, while in some specimens another shallow groove proceeds parallel with the left margin. Some radiating impressed lines are also observable in some specimens. The inner or lower surface is convex and more or less finely rugose or papillate, but no spiral or other lines of growth are to be seen. It is surrounded by a raised rim, which is grooved at its periphery. In texture it is evidently horny, as upon being tested by Mr. Newton with acid no reaction took place, as would have been the case had it been calcareous. These organisms appear very abundant, as according to Fischer as many as 500 may be found in a space of 7 or 8 square cm. Although as a rule they are thus found congregated in the matrix without any shells being present, I have found stray specimens associated with various freshwater shells, such as *Planorbis*, *Viviparus*, and bivalves. The presence of one of these structures in a piece of rock containing the shell of a species of *Viviparus* or allied genus led me to compare it with some of the Slavonian operculates, and I found that they accurately fitted the aperture of *Tylopoma Pilari*. It may, consequently, be reasonably inferred that these structures are the operculum of a species of *Tylopoma* or of some allied genus, on the following grounds: (1) They bear no resemblance to the internal shell of any known mollusc. (2) They have combined characters of the operculum of various opisthobranchiate molluscs, i.e. they share the amorphous inner surface of the operculum of *Bithynia* and the excentric lines of growth of the outer surface of that of *Pomatias*. (3) They differ from the operculum of *Viviparus*, which has concentric rings on both surfaces and lacks the grooved rim. The fact that it has never been found *in situ* in the aperture of a shell does not, in my opinion, militate against this assumption, since amongst the numerous specimens of *Viviparus* and allied genera from the Slavonian, Dalmatian, Croatian, and Roumanian beds which have passed through my hands I have never come across a single specimen with the operculum *in situ*. This, I think, may be accounted for by the fact that when these creatures died and the soft parts perished the operculum would probably sink to the bottom and the shell float away. Perhaps some day a specimen may come to light with the operculum *in situ*, when all doubts on the subject will vanish.



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