

Ophthalmidium, Kübler.*Oculina*, Kübler and Zwingli [1866].*Ophthalmidium*, Kübler [1870].*Hauerina*, pars, Brady [1879].

Under the generic name *Oculina*,¹ subsequently changed by Kübler to *Ophthalmidium*,² because the former term was already employed by naturalists for another and very different group of organisms, Kübler and Zwingli have described a number of anomalous *Miliolæ*, obtained by them from various beds of Liassic and Oolitic age in Switzerland and elsewhere.

There can be little doubt that several of the specimens figured by these authors are simply *Spiroloculina* with that irregularity of contour which is a not uncommon feature of the early representatives of the genus, and they are very similar in general character to the species named by Terquem and Berthelin *Spiroloculina concentrica*, the multiform conditions of which are illustrated by a large series of drawings in their memoir on the Foraminifera of the Middle Lias of Essey-lès-Nancy.³

But amongst Kübler and Zwingli's specimens there are some, that for example described and figured as *Ophthalmidium liasicum*, in which there is a distinct deviation from the Spiroloculine plan of growth, the commencement of the shell being planospiral and non-septate (Cornuspiral), and these may very properly be taken as the type of an intermediate group. If we accept the dimorphous, or occasionally trimorphous condition of the test as the essential character, the minor structural features laid down by Kübler need not be insisted upon. The supposed perforation of the shell-wall which he describes as of frequent occurrence has been adverted to both by Rupert Jones and by Terquem and Berthelin, and I agree with these authors in regarding the statement as probably erroneous, and dependent on an imperfect method of observation. Many of the specimens are punctate, that is to say, studded with superficial pits or depressions, and when mounted in Canada balsam or turpentine, and examined by transmitted light, could only be distinguished with difficulty from perforated shells.

Without necessarily accepting all Kübler and Zwingli's species as belonging to the genus, I propose to adopt the term *Ophthalmidium* for the complanate *Miliolidæ* which commence growth on the Cornuspiral plan and become Spiroloculine at a subsequent stage, in some cases making a further change by putting on three or four segments in each of the latter convolutions.

The recent specimens answering to this general description may be referred to two varietal forms, in one of which the chambers are inflated and the peripheral margin

¹ Mikroskopische Bilder aus der Urwelt der Schweiz. Heft ii. der mikroskopischen Mittheilungen. Neujahrsblatt von der Bürgerbibliothek in Winterthur, 1866; p. 11, pl. i. fig. 24, &c.

² Die Foraminiferen des schweizerischen Jura, Winterthur, 1870, p. 46.

³ *Mém. Soc. géol. France*, 1875, sér. 2, vol. x. mém. III., pl. xvii. figs. 1-4.