

Early development stages and the mode of life of graptolites

Roman Kozłowski

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The siculae and early development stages of sessile graptolites of the genera *Idiotubus*, *Dendrotubus* and *Dendrograptus* are described and compared with each other. The sicula of the genus *Idiotubus* and the formation of the first bud are described for the first time. The names of a discophorous sicula for the siculae of sessile graptolites, and of a nematophorous sicula for the siculae of free graptolites are introduced. The comparison of early development stages of sessile graptolites with corresponding stages of *Rhabdopleura compacta* Hincks reveals many similarities. The conditions of reproduction of sessile graptolites are examined. In the nematophorous siculae, the presence of a diaphragm is established on the boundary between the prosicula and the nema. The nema, which in principle is a tube, may be secondarily filled with an organic substance. It is presumed that a cord of soft tissue which in the animal's life time filled the canal of nema, might be homologous to the stolon, formed in *Rhabdopleura* on a contractile stalk of the oozoid. Floating organs of various types might be developed by nema and virgula. Such organs might also be formed at the proximal end of rhabdosome or all along the thecae. Critical remarks on Lapworth's theory concerning the epiplanctonic mode of life of the graptolites with nematophorous siculae are presented. In the author's opinion, their mode of life was rather holoplanctonic. These graptolites probably lived mostly in the surface of the sea, i.e. in neuston layer.

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