

Repaired injuries and shell form in some Palaeozoic pleurotomarioid gastropods

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Pleurotomarioid gastropods typically develop a spiral band called the selenizone in the outer whorl face of the shell that is formed by the closure of an open slit in the apertural margin. The slit and selenizone may be important in controlling the extent to which fractures induced by predatory attacks propagate across the whorl surface. A prominent selenizone can prevent fractures from traversing the entire whorl. Study of six Palaeozoic pleurotomarioid gastropod species with repaired shell injuries shows that repaired injuries are dependent on both the nature of the selenizone and shell form. The species can be divided into three morphological groups (turbiniiform, trochiform and planispiral) and show a variety of selenizones with different degrees of prominence. Turbiniiform shells show more repaired injuries than planispiral forms, indicating that species in the former group more often survive predatory attacks. The studied material is too sparse for meaningful statistical analysis, but individual case studies suggest that the combined influence of shell form and the nature of the selenizone can make the interpretation complex.

Key words: Gastropoda, Pleurotomarioidea, repaired injuries, shell form, selenizone, Palaeozoic.

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