



Shell breakage and repair in the Ordovician gastropod *Barrandicella? tarda* from the Upper Ordovician of Bohemia (Czech Republic)

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Abstract. A shell of *Barrandicella? tarda* (PERNER, 1903) with a repaired breakage in dorsal area was found in the Upper Ordovician Zahořany Formation in fields at Praha 15-Dubeč. It is the first known archinacellid gastropod with fractured and repaired shell found in the Barrandian Area. New shell bears a long, narrow chevron-like pattern.

■ *Barrandicella?*, repaired injury, Gastropoda, Upper Ordovician, Czech Republic

Barrandicella? tarda (PERNER, 1903) is a rare member of archinacellid gastropods, sparsely occurring in epifaunal communities of the Upper Ordovician (Berounian) Zahořany Formation and exceptionally also in the Vinice and Bohdalec Formations, respectively. (For description and discussions see Perner 1903, Horný 1963, Peel et Horný 1999, Horný 2001.) Several specimens were found in the town of Loděnice near Beroun, and a few, best preserved specimens were collected in fields in Praha 15-Dubeč. The species usually occurs in silty calcareous or siliceous concretions, together with rich fauna of trilobites, gastropods, cyrtoneid tergomyans, hyolites, echinoderms, orthoconic nautiloids, brachiopods, and other invertebrates.

In 2004 one of us (V. V.) found a small, incomplete specimen (13.8 mm long, 9.4 mm wide) with a counterpart in fields near Dubeč. It is preserved in a small concretion from the Zahořany Formation, containing an immature specimen of *Bucanopsina calypso* (PERNER, 1903) and an unidentified orthoconic cephalopod. The internal mould is covered with rests of limonitized shell. Surface of the external mould is coarse due to weathering processes and the presence of limonite; nevertheless, dense concentric lines of growth are well preserved but the fine radial striae, characteristic for the species, are not observable.

The regular development of concentric lines was affected by a deep, local injury in the laterodorsal region, which caused an origin of a concentric depression running across the shell and reflected on the internal mould. Although the shell growth continued regularly, in the place of injury originated new shell, growing from below the old shell and forming a narrow chevron-like pattern with an axial rib, persisting for a considerably long distance (2.0 mm). It comprises about 20 fine growth lines. Even after it disappeared, a narrow radial structure of more emphasized, regular growth lines followed its direction for about 3.0 mm.

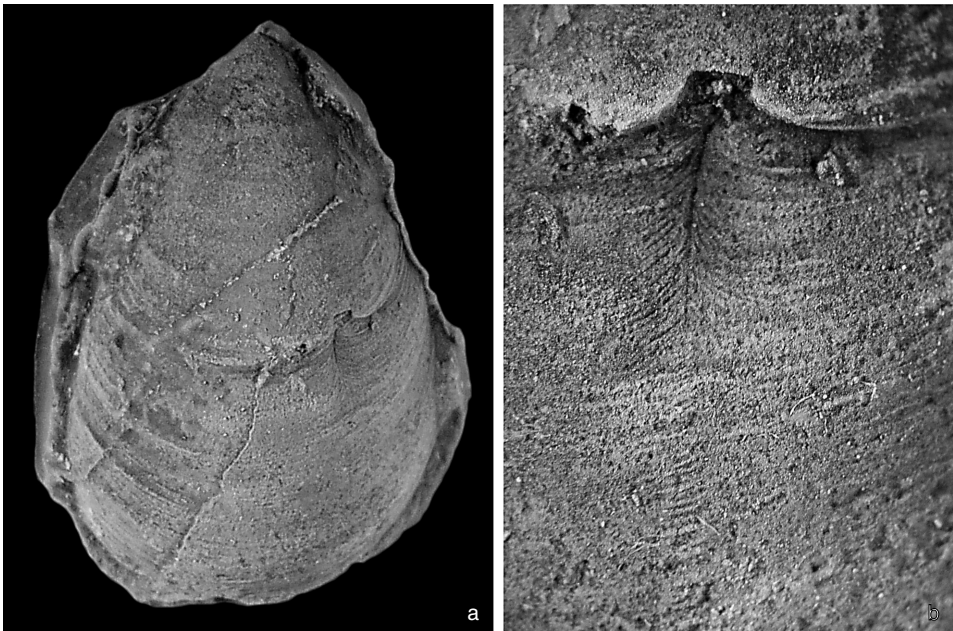


Fig. 1. Latex impression of *Barrandicella? tarda* (PERNER, 1903), L 37639. a – $\times 8$, b – enlarged place of injury with chevron-like pattern of repaired shell, $\times 18$.

The injury belongs to the category of narrow U-shaped fractures (Peel 1984, Horný 1997, Lindström et Peel 1997) and probably represents a failed attack of a small orthoconic cephalopod.

The specimen has been deposited in the collections of the Department of Palaeontology, Natural History Museum, National Museum, Prague, under catalogue number L 37639.

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