

Osservazioni su *Hiatella rugosa* (Linné, 1767) (Bivalvia Hiatellidae) endobionte di poriferi e differenze conchigliari con *Hiatella arctica* (Linné, 1767)

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Riassunto

Gli Autori segnalano il ritrovamento di numerosi esemplari di *Hiatella rugosa* (Linné, 1767) all'interno di grosse spugne della specie *Spongia officinalis* (Linné, 1758), pescate nell'Adriatico centro-settentrionale. *Hiatella rugosa* si distingue da *Hiatella arctica* (Linné, 1767) per avere la cerniera senza denti, mentre in *H. arctica* è presente un piccolo dente in ogni valva. L'elevata variabilità della forma della conchiglia e della posizione dell'umbone in entrambe le specie è confermata dal confronto dei coefficienti di variabilità (CV) calcolati sui rapporti tra altezza e lunghezza e tra distanza umbo-posteriore e lunghezza totale.

Abstract

Historically, diagnoses of species of the genus *Hiatella* are based on external conchological characteristics which are, nevertheless, very variable. A short review of the chief scientific works on this topic, emphasizing the different points of view on the exact diagnosis criteria for the right specific determination of *Hiatella arctica* (Linné, 1767) and *Hiatella rugosa* (Linné, 1767), is presented herein. Many specimens of *H. rugosa* endobiont of the sponge *Spongia officinalis* (Linné, 1758) (Porifera; Dictyoceratida), trawled in the central/northern Adriatic Sea, were measured for biometric purposes. Differences between *H. rugosa* and *H. arctica* are discussed. Within the examined sponges (*S. officinalis*), several molluscan species other than *H. rugosa* were found: the gastropods *Gibbula magus* (Linné, 1758) and *Hadriana oretea* (De Gregorio, 1885) and the bivalves *Barbatia barbata* (Linné, 1758), *Chlamys varia* (Linné, 1758), *Chlamys multi striata* (Poli, 1795) and *Neopycnodonte cochlear* (Poli, 1795). Anterior-posterior shell length (L), umboventral shell height (H) and the distance between the umbo and the posterior margin (D) were measured for 100 specimens of *H. rugosa* and 50 specimens of *H. arctica* collected elsewhere in the Adriatic Sea. Results were plotted and regression equations for both species were calculated for L/H and D/H relationships. The size-range of *H. rugosa* found inside *S. officinalis* was between 13 mm and 31 mm in samples collected in October 2002 and between 4 mm and 30 mm in those from April 2003. In the latter period (April 2003) a moderate recruitment of *H. rugosa* was observed. Juveniles of *H. rugosa* were present in the external part of sponge tissues, whilst adults live deeper within the soft tissues of *S. officinalis*. Burrows made by *H. rugosa* in the soft tissues of *S. officinalis* were not observed, it is, thus, probable that the sponges, as they grow, progressively cover the bivalves. *Hiatella arctica* principally lives in little rock cavities or attached to big bivalve shells (e.g. *Pecten*, *Ostrea*, *Mytilus*) by means of a byssus thread; on the contrary byssus production was not observed in *H. rugosa*. High variability in shell shape and in the position of the umbo in the latter species of Hiatellidae was confirmed by comparison of the Coefficient of Variability (CV) calculated for ratios between height and length of the shell, and between the distance between the umbo and the posterior margin and total shell length. *Hiatella rugosa* may be separated from *H. arctica* by an edentulous hinge, whilst in *H. arctica* one tooth is present on each valve.

Key words

Hiatella arctica; *Hiatella rugosa*; *Spongia officinalis*; Adriatic sea; Biological associations.