{rokbox title=|Pinna nobilis :: Foto: Salud Deudero| thumb=|images/stories/ieo/imagenespublicaciones/centro-oceanografico-baleares-salud-deudero-pinna-2012-thumb.jpg|}images/stories/ieo/imagenespublicaciones/centro-oceanografico-baleares-salud-deudero-pinna-2012.jpg{/rokbox}

Iris E. Hendriks, Lorena Basso, **Salud Deudero**, Miguel Cabanellas-Reboredo, and Elvira Álvarez, (2012). **Relative growth rates of the noble pen shell *Pinna nobilis* throughout ontogeny around the Balearic Islands (Western Mediterranean, Spain)**. Journal of Shellfish Research.2012. 31 (3), 749-756

Abstract: In this study, we evaluated the growth of adults and juveniles of the endangered noble pen shell Pinna nobilis, calculated the growth rates of newly recruited juveniles, and described relative directional growth during ontogeny. We described growth using posterior adductor muscle scars (PAMS) and fit of the von Bertalanffy growth curve for adult population data at shallow depths (5–10 m) around the Mallorca and Ibiza islands, and compared the parameters with other Mediterranean populations. Populations around Mallorca could be fitted according to the von Bertalanffy function $L_t = 65.31(1 - e^{-0.11(t + 0.53)})$, whereas for Ibiza the function was $L_t = 154.55(1 - e^{-0.03(t + 4.31)})$.
We compared first-year growth rates obtained in the laboratory and from field collections with newly settled individuals. We found that experimentally evaluated growth rates of juveniles in the laboratory of 0.18 mm/day are low compared with minimum values obtained in the field, which range, on average, from 0.28–0.32 mm/day, indicating food availability can limit growth. Furthermore we investigated relative allometric growth patterns during ontogeny using a unique data set ranging from measurements of newly recruited juveniles with shell length less than 1 cm to measurements on adult shells of 69.8 cm length. Fitting a sigmoidal function to our data and solving for the allometric exponent b, we found 3 distinct growth periods: preferential growth in the length direction up to 5.82 cm in shell length, then widening of the shell up to 14.64 cm, after which the shape of the shell becomes more elongated once again.

Keywords: *Pinna nobilis*, pen shell, growth rates, allometric growth, von Bertalanffy growth curve