

Miguel Cabanellas-Reboredo, Andreu Blanco, Salud Deudero, Silvia Tejada, (2010). [Effects of the invasive macroalga *Lophocladia lallemandii* on the diet and trophism of *Pinna nobilis* \(Mollusca: Bivalvia\) and its guests *Pontonia pinnophylax* and *Nepinnotheres pinnotheres* \(Crustacea: Decapoda\)](#). Scientia Marina, Vol 74, No 1 (2010).

Abstract: *Pinna nobilis* and its guests *Pontonia pinnophylax* and *Nepinnotheres pinnotheres* were sampled from *Posidonia oceanica* meadows invaded and non-invaded by the red alga *Lophocladia lallemandii*. Understanding the interactions among native and invasive species was the primary aim. Therefore, the effects of the invasive *L. lallemandii* on the percentage contribution of the food sources of *P. nobilis* and its guests and their trophic associations were investigated by applying mixing models to the $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ stable isotopes. Isotopic analyses revealed that the guests of *P. nobilis* occupied a higher trophic level than their host due to their capacity for food selection. The invasion of *L. lallemandii* altered the percentage contribution of the food sources to the consumers' diet. Whereas the percentage contribution of the food sources to the $\delta^{13}\text{C}$ signatures did not really change, *L. lallemandii* produced variations in the percentage contribution to the $\delta^{15}\text{N}$ signatures. This red macroalga represented one of the main food sources for *P. nobilis*, with a real contribution of 19.4% in the invaded meadows. Moreover, *L. lallemandii* slightly decreased the trophic level of the consumers. This study provides the first isotopic and trophic data for the pea crab *N. pinnotheres*.

Keywords: *Pinna nobilis*; *Pontonia pinnophylax*; *Nepinnotheres pinnotheres*; food sources;

stable isotopes; mixing models;

Lophocladia lallemandii

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Posidonia oceanica