Decapod assemblages associated with shallow macroalgal communities in the northwestern Alboran Sea: Microhabitat use and temporal variability

Á. Mateo-Ramírez, J. Urra, J.L. Rueda, P. Marina, J.E. García Raso

PII: S1385-1101(17)30088-6
DOI: doi:10.1016/j.seares.2018.02.009
Reference: SEARES 1629

To appear in: *Journal of Sea Research*

Received date: 28 March 2017
Revised date: 18 January 2018
Accepted date: 16 February 2018

Please cite this article as: Á. Mateo-Ramírez, J. Urra, J.L. Rueda, P. Marina, J.E. García Raso , Decapod assemblages associated with shallow macroalgal communities in the northwestern Alboran Sea: Microhabitat use and temporal variability. The address for the corresponding author was captured as affiliation for all authors. Please check if appropriate. Seares(2018), doi:10.1016/j.seares.2018.02.009

Decapod assemblages associated with shallow macroalgal communities in the northwestern Alboran Sea: microhabitat use and temporal variability

Á. Mateo-Ramírez[a,b*], J. Urra[b,c], J.L. Rueda[b], P. Marina[c], J.E. García Raso[b].

[a] *Instituto Mediterráneo de Estudios Avanzados, IMEDEA (CSIC-UIB). C/ Miquel Marqués 21, 07190, Esporles, Illes Balears, Spain.*

[b] *Universidad de Málaga, Departamento de Biología Animal, Campus de Teatinos s/n, 29071 Málaga, Spain.*

[c] *Centro Oceanográfico de Málaga, Instituto Español de Oceanografía, Puerto Pesquero s/n, 29640 Fuengirola (Málaga), Spain.*

*Corresponding author

E-mail address: a.mateoramirez@gmail.com

ABSTRACT

Decapod assemblages associated with algal fronds and the underlying substratum in two different photophilous macroalgal beds dominated by the brown algae *Halopteris scoparia* were studied in the northwestern Alboran Sea, between July 2007 and April 2008. A total of 35 decapod species were found in the macroalgal beds, most of them inhabiting both strata and with *Hippolyte leptocerus*, *Pilumnus hirtellus*, *Sirpus zariquieyi*, *Acanthonyx lunulatus*, *Athanas nitescens* and *Achaeus gracilis* as the dominant species. Assemblages on algal fronds and sediment displayed significant variations mainly due to differences in the abundance values of some dominant species (e.g. *H. leptocerus*) and/or the presence of certain species exclusively in one strata (eg. *Pisa nodipes* in algal fronds, *Atelecyclus rotundatus* and *Sicyonia carinata* on the sediment stratum). Higher abundance, species richness and Shannon-Wiener diversity index values were registered in the sediment stratum, with a higher contribution of adults-large individuals than of juvenile-small individuals. The temporal variability of the studied assemblages showed maximum abundance values in November, when algal development is minimal. This decoupling between temporal patterns of decapod assemblages and macroalgal dynamic could be related to the lifestyles (recruitment