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P5-19. Molecular diversity and haplotype distribution in two marine crab species

Ariadna Colmenero^a, Maria Sellés^a, Eva Rojo^a, Clàudia Lagares^a, Bruna Serra^a, Víctor Ojeda^a,
Elena Marco-Herrero^b, Pere Abelló^c, Francesc Mestres^a

^aDept. Genètica, Microbiologia i Estadística, Secció Genètica Biomèdica, Evolutiva i del Desenvolupament, Barcelona, Spain, ^bCentro Oceanográfico de Cádiz – IEO, Cádiz, Spain, ^cInstitut de Ciències del Mar – CSIC, Barcelona, Spain.

A fragment of the *COI* (*Cytochrome Oxidase subunit I*) mitochondrial gene was studied in a pair of marine crab species: *Liocarcinus depurator* and *Geryon longipes*. The two species differed with regard to the marine depth in which they inhabit: the first one is found in the continental shelf and upper slope (50 to 500 m) and the second one in the middle and lower slope and also in the bathyal bottoms (400 to 2000 m). Populations in the Atlantic-Mediterranean transition were studied. Also, *G. longipes* sequences downloaded from DNA databases were also used in the analyses. Differences in the parameters that describe the molecular diversity were observed between both species. However, the most relevant point was the distinct pattern in the haplotype distribution. In the case of *L. depurator*, two haplogroups were detected, one predominant in water masses of Atlantic origin and the other in Mediterranean waters. Three main areas with regard the two haplogroups were observed: Cadiz Gulf, Alboran Sea and Levantine/Catalan coasts. This was not the case for *G. longipes*, because the population distribution of haplotypes did not follow a geographic pattern, apparently related to the rather homogeneous conditions of the deep-sea habitat of *G. longipes*. We hypothesize that this result is due to the different habitat of these two species, since their habitat characteristics differ widely during their adult, non-larval, stage, irrespective of the geographical location of the populations.

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