

**DISTRIBUTION OF FOUR CEPHALOPODA SPECIES ALONG THE CATALAN COAST  
(NW MEDITERRANEAN) USING GIS TECHNIQUES**

**Juan Pablo Pertierra<sup>1,2</sup> and Pilar Sanchez<sup>1</sup>**

<sup>1,2</sup>*Institut de Ciències del Mar, CSIC, Passeig Marítim de la Barceloneta,  
37-49 08003 Barcelona, SPAIN*

<sup>2</sup>*present address: European Commission, DG FISH, Rue de la Loi 200, B-1049  
Brussels, BELGIUM*

---

**ABSTRACT:** In this study the distribution of 4 Cephalopod species (*Loligo (Alloteuthis) media*, *Loligo vulgaris*, *Illex coindetii* and *Eledone cirrhosa*) along the Catalan coast (Northwest Mediterranean) was analysed. Data from experimental trawl catches from 1981 and 1991 were gathered for comparison purposes considering seasonal scale in terms of kg per hour. Both temporal and spatial scales were plotted in order to have a thorough analysis of species distribution pattern. Georeferenced biomass indices were extrapolated along the fishing area using the kriging technique in order to have an estimation of biomass by fishing grounds. During 1981 two species abundance (*Eledone cirrhosa* and *Loligo vulgaris*) were significantly higher with respect to 1991. *Loligo (Alloteuthis) media* and *Illex coindetii* maintained a similar level during both study periods. Some differences in seasonal distribution were found, for example, *Eledone cirrhosa* showed highest abundance during spring in both years along the northern area, decreasing to its lowest level during autumn. *Illex coindetii* showed its highest abundance in spring. Meanwhile abundance of *Loligo (Alloteuthis) media* was higher during summer along the central area and *Loligo vulgaris* showed a similar seasonal pattern along the southern area.

---