{rokbox title=|Ejemplar de Sepia officinalis :: Photo credit: Stefanie Keller (COB-IEO)| thumb=|images/stories/ieo/imagenespublicaciones/centro-oceanografico-baleares-influencia-parametros-ambientales-sepia-officinalis-keller-et-al-2014-thumb.jpg|}images/stories/ieo/imagenespublicaciones/centro-oceanografico-baleares-influencia-parametros-ambientales-sepia-officinalis-keller-et-al-2014.jpg{/rokbox}

Stefanie Keller, Maria Valls, Manuel Hidalgo, Antoni Quetglas, 2014. **Influence of environmental parameters on the life-history and population dynamics of cuttlefish *Sepia officinalis* in the western Mediterranean**. Estuarine, Coastal and Shelf Science Volume 145, 20 May 2014, Pages 31–40.

Abstract: The cuttlefish *Sepia officinalis* constitutes an important fishery resource in the Mediterranean, where it is exploited by both the bottom trawl and small-scale fleet. However, there is currently scarce information on the Mediterranean stocks, since most studies on the population dynamics of this species have been undertaken in the northeast Atlantic. In this work we first analysed different aspects of the cuttlefish life-history from the western Mediterranean such as population structure, reproduction and the trade-offs between somatic condition and reproduction investments. Secondly, we investigated the effects of different environmental parameters (e.g. climate indices, sea surface temperature (SST), rainfall, chlorophyll-a concentration (Chla) and moon phase) on these populations, analysing several landing time series spanning the last 45 years. Our results revealed that Mediterranean cuttlefish populations exhibit strong seasonal variations owing to a reproductive migration towards coastal waters. The positive relationships between somatic and reproductive condition pointed to an income breeder strategy; this was reinforced by the percentage of empty stomachs, which was lowest just before the reproductive period peak. Despite the putative high sensitivity of cephalopod populations to external abiotic factors, our results showed that Mediterranean cuttlefish populations were not affected by most of the environmental parameters investigated. Significant effects were found for SST and a local climatic index, but no or very weak influences were evident for other parameters such as large-scale climatic phenomena (e.g. North Atlantic Oscillation, Mediterranean Oscillation) or other locally-related variables (e.g. rainfall, Chla). Our results revealed a shift in the cuttlefish population dynamics in the early 1980s, which could be related to important changes in the local hydroclimatology reported by previous authors.

Keywords: *Sepia officinalis*, life history, condition, environmental factors, western Mediterranean