

OLINDIAS PHOSPHORICA (DELLE CHIAJE, 1841) PRESENCE IN THE VALENCIAN COMMUNITY (EAST AND SOUTH-EAST SPAIN)

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Abstract

A monitoring program on presence of jellyfish takes place in the Valencian Community since 2009. This program has evidenced the seasonality and relative abundance of jellyfish in beaches as well as the incidence of stings on bathers. The presence/abundance of most jellyfish depends on winds, ocean currents and seasons, and it is common throughout the coast. This is the case of *P. noctiluca*, *R. pulmo* and *C. tuberculata*. *Olindias phosphorica* does not have the same behaviour. This species is distributed particularly in hot spots which are permanent living place. The presence in these enclaves is related with sheltered waters and artificial substrates such as breakwaters. Where *O. phosphorica* has a resident character, it is the major species and the stings registered are 5 times higher than the average calculated for the whole region.

Keywords: *Mediterranean Sea, Cnidaria, Plankton*

The presence/absence of jellyfish has been monitored in the Valencian coast since 2009, through a network of volunteer observers and rescue services of beaches. Since then it has found the usual presence of species such as *Pelagia noctiluca*, *Rhizostoma pulmo* and *Cotylorhiza tuberculata* [1]. The abundance depends mainly on the wind regime and presence is common along the entire coast [2] [3]. Nevertheless *Olindias phosphorica* presents a distribution pattern focused in particular locations such as Santa Pola, where this species is resident since at least 2009 (Figure 1). In these beaches *O. phosphorica* represents the most abundant species during the summer, with a percentage from 66 up to 75% of all jellyfish identifications between 2010 and 2015. The high abundance of *O. phosphorica* is responsible for the high number of stings registered in this location if compared to other Valencian municipalities. The figure 1 shows a comparison between the number of stings from jellyfish recorded by the rescue services on the beaches of Valencian Community during the month of August (month of highest number of stings) and those obtained in Santa Pola.

	2013	2014	2015
Valencian Community	7,22	5,73	4,27
Santa Pola	35,29	23,3	20,63

Fig. 1. Number of stings per km of beach and day during August in Valencian Community and municipality of Santa Pola.

The resident character of this species in certain locations as Santa Pola suggests that *O. phosphorica* completes their cycle polyp-jellyfish on the local waters. Thus the behaviour is different than other species of jellyfish that come from remote areas and are carried by winds and ocean currents. We drew on preliminary similarities among the factors influencing the phenomenon observed: (i) The character of sheltered waters protected from the effects of East and Northeast wind; (ii) Low water renewal rates because of breakwaters built to regenerate the beaches; (iii) Artificial substrates in the breakwaters and the *Caulerpa prolifera* meadows probably promote the polyp stage in local waters.

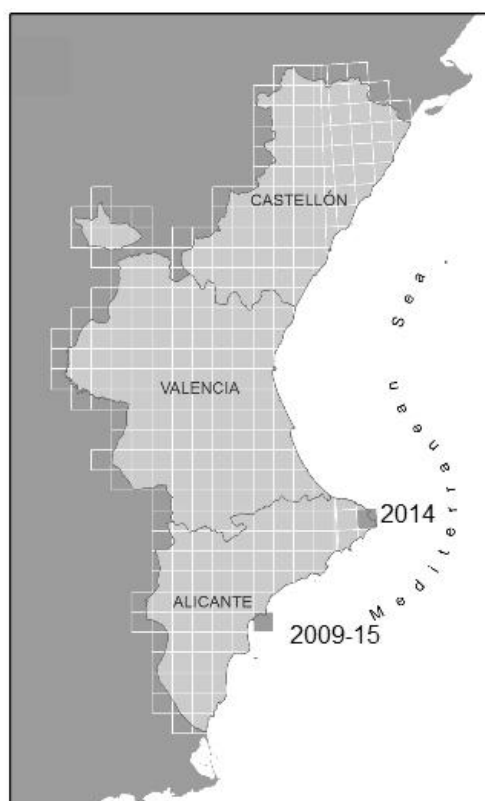


Fig. 2. Presence/absence of *O. phosphorica* in the Valencian Community.

References

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