

BRACHYURAN CRABS ASSOCIATED WITH MARINE FOULING FROM EGYPTIAN MEDITERRANEAN HARBORS

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Abstract

The present study deals with the brachyuran decapods associated with marine fouling in Egyptian Mediterranean harbors. Nine species of 9 genera affiliating to 5 families were recorded. Remarks on the species recorded are provided.

Keywords: Fouling, Decapoda, South-Eastern Mediterranean, Nile Delta

Introduction

Fouling is the growth of marine biota on submerged objects. Its investigation in Egypt dates back to 1960 [1]. Fouling harbors different organisms including brachyuran crabs.

Material and methods

Brachyuran crabs associated with marine fouling in 7 Egyptian Mediterranean harbors (Figure 1) collected between the years 1977 and 2015, were identified.

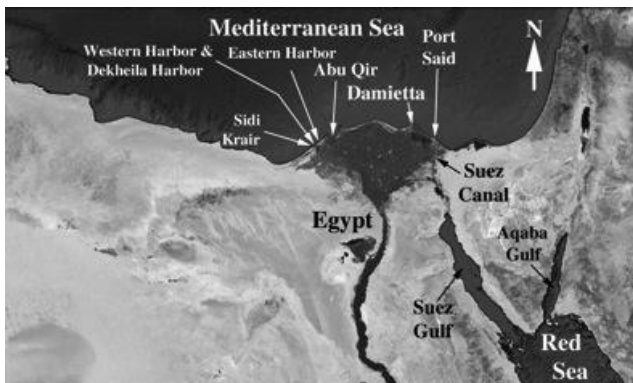


Fig. 1. Sampling localities.

Results and discussion

Through the present work 9 brachyuran crabs affiliating to 9 genera of 5 families were recorded, 5 of them (*i.e.* more than 55% of the total recorded species) are of Indo-Pacific origin (Table 1). These are *Coleusia signata*, *Hyastenus hilgendorfi*, *Charybdis hellerii*, *Pilumnopus vauquelini*, and *Sphaerosius nitidus*. The other four species (*Liocarcinus depurator*, *Eriphia verrucosa*, *Pachygrapsus marmoratus*, and *Brachynotus sexdentatus*) are Atlanto-Mediterranean in origin.

Tab. 1. Distribution of the recorded species in the studied harbors.

Harbor	S.	DK.	W.	E.	A.	D.	P.	O.
<i>C. signata</i>							+	I
<i>H. hilgendorfi</i>							+	I
<i>C. hellerii</i>	+			+				I
<i>L. depurator</i>				+				A
<i>E. verrucosa</i>		+		+				A
<i>P. vauquelini</i>						+	+	I
<i>S. nitidus</i>							+	I
<i>P. marmoratus</i>						+	+	A
<i>B. sexdentatus</i>		+	+	+	+		+	A

S. = Sidi Krair (31° 03'N, 29° 40'E), DK. = Dekheila (31°08'N, 29°47'E), W. = Western (31° 11'N, 29° 52'E), E. = Eastern (31° 12'N, 29° 53'E), A.= Abu Qir (31° 19'N, 30° 04'E), D.= Dameitta (31° 28'N, 31° 45'E), and P.= Port Said (31° 16'N, 32° 19'E). O. = Origin, I= Indo-Pacific, A= Atlanto-Mediterranean.

Coleusia signata inhabits the entire Red Sea on muddy and sandy gravel bottoms from subtidal to 22 m deep. Its first appearance in the Mediterranean dates back to 1953 [2] and in Egypt dates back to 1969 [3]. *Hyastenus hilgendorfi* inhabits Indo-West Pacific region at 0-93 m on coarse and soft bottoms. In Mediterranean it exists since 1960 [4] and in Egyptian Mediterranean since 1969 [3]. *Charybdis hellerii* inhabits Indo-West Pacific region and invaded the Western Atlantic [5]. Its depth range is 3-162 m on different types of bottoms [3]. It inhabits the Mediterranean since (1924-25) [5] and in the Egyptian Mediterranean since 1936 [6]. *Pilumnopus vauquelini* inhabits Red Sea to Arabic Gulf; found in fouling, sandy mud and coarse bottoms at 0-3 m deep. Its first record in the Mediterranean was from Egypt in 1924 [7]. *Sphaerosius nitidus* inhabits Red Sea to Japan in fouling and at 50 fathoms deep. Its record in Egypt and Mediterranean dates back to 1969 [3]. The presence of these 5 alien species associated to fouling may define the fouling attached to ship hulls as a mean of introducing these species to the Mediterranean Sea. The number of Indo-Pacific species recorded in the present study equals 1/3 of the total Indo-Pacific species procured in the Egyptian Mediterranean waters. More investigation may reveal more crab species associated to fouling in the Mediterranean.

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