

SHORT COMMUNICATION

**First record of *Ocypode cursor* (Linnaeus, 1758)
(Crustacea: Decapoda: Ocypodidae) from the Algerian
coast, western Mediterranean Sea**

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Abstract

The tufted ghost crab, *Ocypode cursor* (Linnaeus, 1758), is the only Ocypodidae species present in the Mediterranean Sea and is widely distributed in the eastern part of the Mediterranean Basin. In recent decades, this species has extended its Mediterranean distribution area by colonizing Sicilian, Maltese, Libya and Tunisian coastlines in the central Mediterranean. The present study reports the first record of the species for the Algerian coast in the western Mediterranean.

Keywords: *Ocypode cursor*, Mediterranean Sea, Algeria, protected species

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Ghost crabs, belonging to the genera *Ocypode* and *Hollocypode*, are widespread on tropical and temperate beaches all over the world (Sakai and Türkay 2013; Lucrezi 2015). The genus *Ocypode* is recognized to contain 21 valid species, of which only the tufted ghost crab *Ocypode cursor* is present in the Mediterranean (RAC/SPA – UNEP / MAP 2010; Deidun *et al.* 2017; Karaa *et al.* 2019).

Ocypode cursor is an opportunistic species and a powerful predator (Lucrezi and Schaller 2014); this species is widely distributed on beaches where there is a great abundance of food represented both by living organisms and by carcasses of stranded marine species. Similarly, *O. cursor* feeds on the waste left by bathers on the beaches (Lucrezi *et al.* 2009; Tiralongo *et al.* 2020). Here we report the first confirmed record of *O. cursor* from the Algerian coasts in the western Mediterranean Sea.

Due to its ecological peculiarities and limited habitat, *O. cursor* is one of the nine marine crustacean species protected in the Mediterranean; this crab is listed among the Endangered or Threatened Species (Annex II) of the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (Barcelona Convention 1995) and among the Strictly Protected Fauna Species (Annex II) of the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention 1996–98) (Deidun *et al.* 2017).

Ocypode cursor burrows were observed for the first time on the sandy beach of Tamanart (N 37.052488° E 6.524273°) on 20 October 2019. Two days later, on 22 October 2019, at sunrise (between 05:30 and 06:30 AM), we noted many burrows and some specimens of ghost crab along the beach of Collo (N 36.991609° E 6.563473°) (Figure 1).

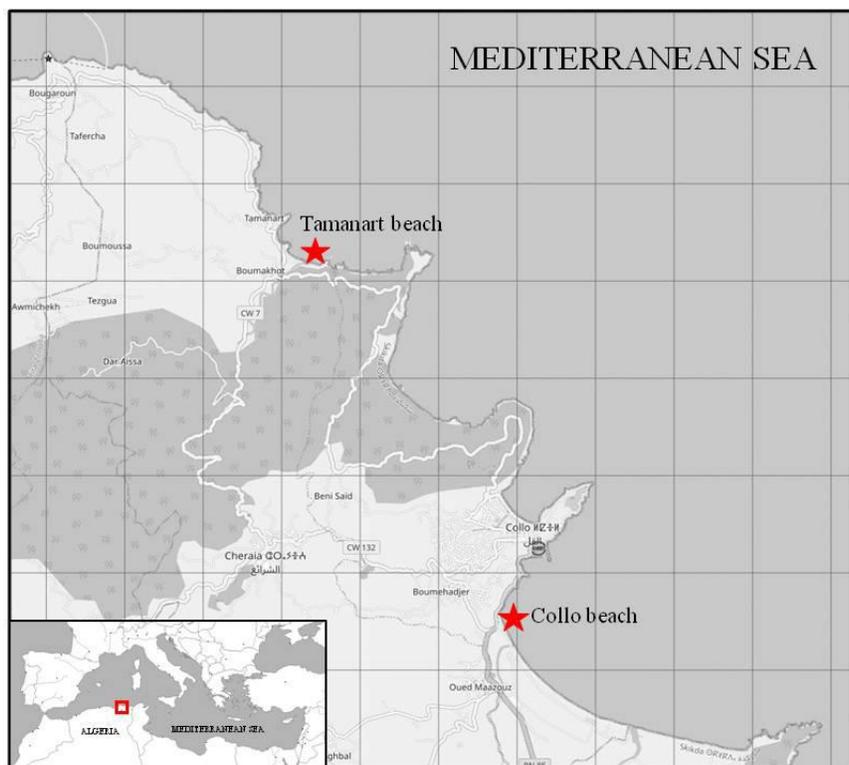


Figure 1. Map of the western Mediterranean, with a close-up of the Algerian coastal area along which *Ocypode cursor* was recorded in the present study (Tamanart beach N 37.052488° E 6.524273° and Collo beach N 36.991609° E 6.563473°).

At the night between 22 and 23 October 2019, on the beach of Collo, we sampled five specimens of *O. cursor*. After making the necessary observations to compare the species we measured the carapace and observed the sexual status (Table 1). No fertile female was found. All the specimens were then released back to the beach after being photographed (Figure 2).

All the captured specimens showed the typical characteristics of *O. cursor*, as reported previously, especially in terms of the shape of the carapace, which was quadrangular, and the typical tufts of bristles above the eyes. This characteristic, in particular, allows to distinguish *O. cursor* from other species of the genus *Ocypode* (Sakai and Türkay 2013; WORMS 2020).



Figure 2. Photos of some specimens and a burrow

Table 1. Biometric characteristics of the captured specimens of *Ocypode cursor*

| | Carapace length (CL) (mm) | Carapace width (CW) (mm) | Weight (g) | Sex |
|---|--|---|-------------------|------------|
| 1 | 37.46 | 29.45 | 56.54 | M |
| 2 | 44.54 | 37.10 | 65.87 | F |
| 3 | 39.05 | 33.56 | 39.01 | F |
| 4 | 21.33 | 17.05 | 28.45 | M |
| 5 | 44.97 | 38.65 | 66.87 | F |

In addition, on the beach of Collo, we counted 989 burrows within a rectangular area, parallel to the coastline, of dimensions approximately 10 x 30 m (300 m²). This allowed us to calculate the density of burrows per square meter, which was approximately 3.3 burrows/m². This value referred to the number of burrows per square meter appears very large compared to that reported by Tiralongo *et al.* (2020) for the coasts of southeastern Sicily (Table 2).

Table 2. Comparison of the number of borrows of *Ocypode cursor* observed in Algeria and Sicily

| | Number of burrows | Total surface Area (m²) | Density (burrows per m²) | Reference |
|----------------|--------------------------|---|--|--------------------------------|
| Sicily | 446 | 15,000 | 0.029 | Tiralongo <i>et al.</i> (2020) |
| Algeria | 989 | 300 | 3.29 | Present study |

This study represents the first record of *O. cursor* along the sandy shores of Algeria. This information contributes to the knowledge on the expansion of the Mediterranean distribution area of *O. cursor*. This kind of new records could represent/constitute locations formerly inhabited, abandoned and re-colonised by the species, on the degree of synchrony between prevailing climactic conditions and the ecological needs of the same species (Thiede 1978; Lucrezi and Schlacher 2014; Vecchioni *et al.* 2019).

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