THE OCCURRENCE OF THE BLUE CRAB, *CALLINECTES SAPIDUS* RATHBUN, 1896 (DECAPODA, BRACHYURA, PORTUNIDAE) IN THE EASTERN ADRIATIC (CROATIAN COAST)

BY

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ABSTRACT

On 15 October 2004, four specimens of the blue crab, *Callinectes sapidus* were caught near Ston (Pelješac peninsula, south-eastern Adriatic) in a hypersaline lagoon (salt pond) at a depth of 0.50 m. An other specimen was caught in the Neretva River estuary on 1 October 2004 at a depth of 7 m, and a second one at the same location on 6 December 2006 at a depth of 5 m. The records from this study constitute the first report of this species from the eastern Adriatic coast and confirm the spreading of *C. sapidus* throughout the Adriatic Sea. The present records of the blue crab in the eastern Adriatic, however, do not allow any reliable comments to be made regarding whether or not the species has established a population in the area. In any event, the impact of a possibly successful colonization of this region by this and other exotic species would, at least, represent a significant change in the composition of the native fauna.

RÉSUMÉ

Le 15 octobre 2004, quatre spécimens du crabe bleu, *Callinectes sapidus* ont été capturés près de Ston (péninsule de Pelješac, sud-est de l’Adriatique) dans une lagune hypersalée (étang salé) à une profondeur de 0,50 m. Un autre spécimen a été pris dans l’estuaire de la rivière Neretva le 1er octobre 2004 à une profondeur de 7 m, et un second à cette même station le 6 décembre 2006 à une profondeur de 5 m. Les résultats de cette étude constituent la première mention de cette espèce sur la côte Adriatique orientale et confirment la dispersion de *C. sapidus* dans toute la mer Adriatique. Cependant, ces observations du crabe bleu dans l’Adriatique orientale ne permettent aucun commentaire fiable quant à savoir si l’espèce a établi ou non une population dans cette région.

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Dans tous les cas, l’impact d’une possible colonisation réussie dans cette région, par cette espèce ou des autres espèces exotiques représenterait, au moins, un changement significatif dans la composition de la faune native.

**INTRODUCTION**

The blue crab, *Callinectes sapidus* Rathbun, 1896, inhabits estuaries and shallow coastal waters in the intertidal to 90 m depth. Its distribution covers the western Atlantic (from Nova Scotia to Uruguay), the eastern Atlantic (from the Baltic Sea to the Netherlands and France), the Mediterranean Sea, and Japanese waters (Galil et al., 2002). This species was, until now, only recorded from the western part of the Adriatic Sea (Števčić, 1990). It has a wide ecological tolerance, and is a predator of fishes, molluscs, and crustaceans, and even is also necrophagous and cannibalistic. Feeding on algae as well, it can have a strong impact on natural populations of algae (Hines et al., 1987). The species tolerates high salinities and temperatures (up to 117 psu and up to 45°C; Powers, 1977) and it can survive at low dissolved oxygen concentrations (below 0.08 mg/l; Williams, 1974). It has a complex life history in which it utilizes both oceanic and estuarine habitats. Mating generally occurs in the lower salinity regions of estuaries from spring to fall. After mating, females migrate down-estuary to higher salinity regions (Turner et al., 2003). Larvae are transported offshore by tides (Natunewicz et al., 2001) and the larval phase is long, from 30 to 70 days (Holthuis & Gottlieb, 1955).

The present paper reports the first known occurrence of *C. sapidus* in the eastern Adriatic Sea, along the Croatian coast.

**MATERIAL AND METHODS**

On 15 October 2004, four specimens of *Callinectes sapidus* were collected near Ston (Pelješac peninsula, southeastern Adriatic) (fig. 1) in a hypersaline lagoon (salt ponds) at a depth of 0.50 m. One other specimen was caught with a fish trap in the Neretva River estuary (fig. 1) on 1 October 2004 at a depth of 7 m, while a second specimen was captured there by gillnet on 6 December 2006 at a depth of 5 m. The sediment in the hypersaline lagoon (Ston) was sandy while clayey, while sandy-muddy and muddy in the Neretva River estuary (covered with photophilic algae, such as *Ulva lactuca* L., *Enteromorpha* sp., and *Cystoseira barbata* C. Agardh., as well as with meadows of *Cymodocea* sp., and *Zostera* sp.). The temperature in the Neretva River estuary ranges from 10.2°C to 22.7°C, and salinity from 8.0 to 23.4 psu. After collection, the specimens were identified to