

— SHORT COMMUNICATION —

## Eastward spread of *Ergalatax junionae* Houart, 2008 (Gastropoda, Mollusca), a recent alien species in the Mediterranean

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The muricid *Ergalatax junionae* Houart, 2008 is recorded for the first time in Greece. Natural dispersal of recently introduced populations via shipping is assumed as its mode of introduction. This discovery represents a considerable expansion in the eastern Mediterranean.

**Key words:** alien mollusca, Mediterranean, Greece, *Ergalatax obscura*, *Ergalatax junionae*.

### INTRODUCTION

An introduced *Ergalatax* species in S. Turkey was provisionally identified as *E. martensi* (Dall, 1923) (Engl, 1995; Buzzurro *et al.*, 1995), but afterwards it was considered as conspecific with *E. obscura* Houart, 1996 from the Red Sea and the Gulf of Aden (Houart, 1996). For many years Mediterranean malacologists have reported this alien eastern Mediterranean species as *Ergalatax obscura*. In fact, *E. martensi* (Dall, 1923) is a junior secondary homonym of *E. martensi* (Schepman, 1893), which in turn is a senior synonym of *E. obscura*. According to a recent review by Houart (2008), both species were mixed because of their close relationship and the presence of some related forms, whereas the introduced species should actually be identified as *E. martensi* (Dall, 1923) which occurs primarily in the Gulf of Oman and in the Persian Gulf and which was renamed *E. junionae* Houart, 2008.

### MATERIALS AND METHODS

Currently, thirty specimens of *Ergalatax junionae* (Fig. 1) were collected from the rocky intertidal zone (2 m depth) in Vai Kriti (approximately 35° 15'N, 26° 16'E) by P. Ovalis in September 2007. The individuals collected ranged from 13 mm to 27 mm in height. Later visits in the same area revealed that the population of the species appear to be sustainable and expanding. Representative specimens of the species are deposited in the shell collection of the Institute of Oceanography, Hellenic Centre for Marine Research.



FIG. 1. *Ergalatax junionae* Houart 2008 from Crete.

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TABLE 1. Diagnostic features of three *Ergalatax* species

	<i>Ergalatax martensi</i>	<i>Ergalatax margariticola</i>	<i>Ergalatax junionae</i>
Shell morphology	Shell medium sized, up to 25.5 mm in length. Length/width ratio 1.39-1.92. Heavy, stout. Protoconch conical, of 3+ whorls	Generally stouter and broader, with a wider shoulder. Shell up to 40 mm in length. Length/width ratio 1.50-1.83. Protoconch of 3.5-4.15 whorls, conical	Shell medium sized up to 29 mm in length. Length/width ratio 1.91-2.03. Protoconch conical, with 3.5 whorls
Aperture	Cream or pale yellow with 7 denticles within	Bluish-white, occasionally with a tinge of pink or mauve on the columellar lip. 6 denticles within	White with 6 denticles within
Last teleoconch whorl	6-8 axial ribs, rarely 5 or 9	8-12 axial ribs, occasionally with 1-3 erratically placed, broad varices	8-11 ribs on the last whorl. Occasionally with one or two erratically placed broad varices
Colour	Creamy white, milky white or tan, usually with some light to dark brown coloured spiral cords on shoulder and on prominent nodes	Colour varying from almost entirely dark brown to whitish with 2 or 3 dark brown or blackish brown coloured primary spiral cords	White or creamy white with dark brown or blackish brown primary spiral cords, and occasionally one or two secondary cords

## RESULTS AND DISCUSSION

### *Other names used for the Mediterranean specimens*

*Cronia* cf. *konkanensis* Melvill 1893: Giunchi & Tiselli, 1995

*Ergalatax martensi* (Dall 1923: *Morula*): Buzzurro et al. (1995), Engl (1995)

*Ergalatax obscura* Houart, 1996: various authors after 1996 including Delongueville & Scaillet (2007).

The shell morphology of some specimens of *E. junionae* resembles *E. martensi* from the Red Sea and the Gulf of Aden, and *Ergalatax margariticola*, a very common Indo-West Pacific species. The distinguishing characters of the three species are illustrated in Table 1.

### *History of introduction*

1992: S. Turkey: Mersina to Tasuçu, S. Turkey: Engl (1995)

1993: S. Turkey, Iskenderum: Giunchi & Tiselli (1995)

1993: SE Cyprus, Protaras: Buzzurro & Greppi (1997)

2000: Cyprus, Larnaka, collected by J. Varnavas: Zenetos et al. (2004)

2002: Lebanon: Zibrowius & Bitar (2003)

2003-2004: SE. Turkey, Gulf of Fethiye: Ozgur & Öztürk (2007)

< 2004: Syria: I. Ammar pers. commun.

2004: Israel, Akhiziv-Rosh Hanikra: Singer (2005), Mienis (2006)

2007: E. Turkey, Fethiye-Oludeniz (coll. R. Houart)

2007: Greece, N. Crete, this work.

Based on first identification and presumed origin, natural expansion of their Red Sea populations into the Mediterranean following the common route of Lessepsian immigrants was assumed (Zenetos et al., 2004). However, on tracing the history of *E. junionae* introduction into the Mediterranean and given its origin, it is suspected that shipping is the most probable vector instead. Indeed, as noted by Delongueville & Scaillet (2007), the ships docking at oil terminals in the Gulf of Iskederun (Eastern Turkey) could have introduced the species into the Eastern Mediterranean Sea. From there it spread rapidly to the south (Cyprus, Lebanon, Syria, and within 12 years to Israel) and at a lower rate eastwards (E. Turkey in 2003: Ozgur & Öztürk, 2007) and it is now well established

in N. Crete.

Up-to-date there have been 35 alien mollusc species in Greece (Zenetos *et al.*, 2005; Zenetos *et al.*, 2007; Ovalis & Zenetos, 2007; ELNAIS website). The present findings increase the number of alien mollusca in Greek waters to 36.

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