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Ebalia nux A. Milne Edwards, 1883
(Crustacea, Decapoda, Brachyura, Leucosiidae)
from the late Pliocene (Gelasian) of S. Polo d'Enza
(Reggio Emilia, N Italy)

Abstract – We report some fragmentary leucosiid crabs from the late Pliocene (Gelasian) of S. Polo d'Enza (Reggio Emilia, N Italy), assigned to *Ebalia nux* A. Milne Edwards, 1883 (Leucosiidae Samouelle, 1819). This report enlarges the fossil record of this species, known to date from the Pleistocene of S Italy. *Ebalia nux* is known to date only in the fossil record of Italy.

Key words: Crustacea, Decapoda, Brachyura, Pliocene, Italy.

Riassunto – *Ebalia nux* A. Milne Edwards, 1883 (Crustacea, Decapoda, Brachyura, Leucosiidae) del Pliocene superiore (Gelasiano) di S. Polo d'Enza (Reggio Emilia, N Italia).

Segnaliamo alcuni resti frammentari di leucosidi del Pliocene superiore (Gelasiano) di S. Polo d'Enza (Reggio Emilia, N Italia), attribuiti a *Ebalia nux* A. Milne Edwards, 1883 (Leucosiidae Samouelle, 1819). Questa segnalazione allarga il record fossile di questa specie, conosciuta finora nel Pleistocene dell'Italia meridionale. *Ebalia nux* è conosciuta finora solo nel record fossile d'Italia.

Parole chiave: Crustacea, Decapoda, Brachyura, Pliocene, Italia.

Introduction and geological setting

The Cavalmagro (S. Polo d'Enza, Reggio Emilia) blue clays crop out 1 km NW of the Cava Moja locality, previously studied by Marasti & Raffi (1977) for the rich malacological fauna.

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To date, no detailed stratigraphic data have been published for the little deposit of Cavalmagro, so the only correlations are with the section and the faunal assemblage of the near by Cava Moja outcrop from the Piacentian (Marasti & Raffi, 1977), even though there are some peculiar differences.

In fact the malacological association of Cavalmagro is very similar to the assemblage of the section between 90-180 m of Cava Moja (Marasti & Raffi, 1977). The faunula is characterized by the presence of two “circalittoral” species of *Nassarius* (*Amyclina*) and by *Trophon squamulatus* (Brocchi, 1814), both very commons; one *Mitrella* sp. and some smalls Turridae. Moreover rare taxa from deeper (epibathyal) environment are also presents (e.g. *Propeleda hoernesii* (Bellardi, 1875), *Neilo isseli* (Bellardi, 1875), *Zealeda elegans* La Perna *et al.*, 2004) (Bertolaso, pers. comm., 2009). The studied specimens were obtained by washing and sieving the sediment within a gastropod shell correlated with these associations.

On the basis of these data we propose a general circalittoral environment for the studied specimens and a late Pliocene (Gelasian) age.

Finally, we point out that the stratigraphic position of the Gelasian as the first stage of the Pleistocene, is at present the subject of discussion by the members of the IUGS (International Union of Geological Sciences) and INQUA (International Union for Quaternary Research). Waiting for an official review, we retain the Gelasian as late Pliocene in this paper.

Previous reports of *Ebalia* from Italy

At present, six species of *Ebalia* Leach, 1817, are known from the Miocene to Pleistocene of Italy.

One species is known from the middle Miocene (Langhian), *E. lamarmorai* Lörenthey, 1909, from Sardinia (Lörenthey, 1909).

Two species are known from the Pliocene, *E. cfr. E. deshayesi* Lucas, 1846, and *E. fucinii* Ristori, 1892, from Tuscany (for complete references, see De Angeli & Garassino, 2006; De Angeli *et al.*, 2009).

Two species are known from the Pliocene-Pleistocene, *E. cranchii* Leach, 1817, from Emilia Romagna, Tuscany, Lazio, and Sicily; *E. tuberosa* (Pennant, 1777), from Lazio and Sicily (for complete references, see De Angeli & Garassino, 2006; De Angeli *et al.*, 2009).

One species is known from the Pleistocene, *E. nux* A. Milne Edwards, 1883, from the Montalbano Jonico (Basilicata, S Italy) (Soldani & Girone, 2000).

Material

The sample, including one complete carapace and some separated elements of chelipeds and walking legs, is housed in the Palaeontological Collections of the Museo di Storia Naturale, Milano (MSNM i27519). These fragmentary specimens have been ascribed to *Ebalia nux* A. Milne Edwards, 1883 (Leucosiidae Samouelle, 1819).

The systematic arrangement used in this paper follows the recent classifications proposed by De Grave *et al.* (2009) and Schweitzer *et al.* (2010).

Systematic Palaeontology

Section Eubrachyura de Saint Laurent, 1980

Superfamily Leucosioidea Samouelle, 1819

Family Leucosiidae Samouelle, 1819

Subfamily Eballiinae Stimpson, 1871

Genus *Ebalia* Leach, 1817

Type species: *Ebalia bryerii* Leach, 1817, subsequent designation by Rathbun, 1922.

Included fossil species: see Schewitzer *et al.* (2010).

Ebalia nux A. Milne Edwards, 1883

Figs. 1-4

Discussion. The electronic pictures of the studied specimens document an oval outline of the carapace and ornamentation with large flat tubercles evenly distributed on the surface of the carapace and cheliped, characters typical of the extant *E. nux* to which the fossil sample has been assigned. As reported by Zariquey Alvarez (1968: 328) and Falciai Minervini (1992: 184) this species is widespread in the eastern Atlantic, from Great Britain to Cape Verde Islands, and in the Mediterra-

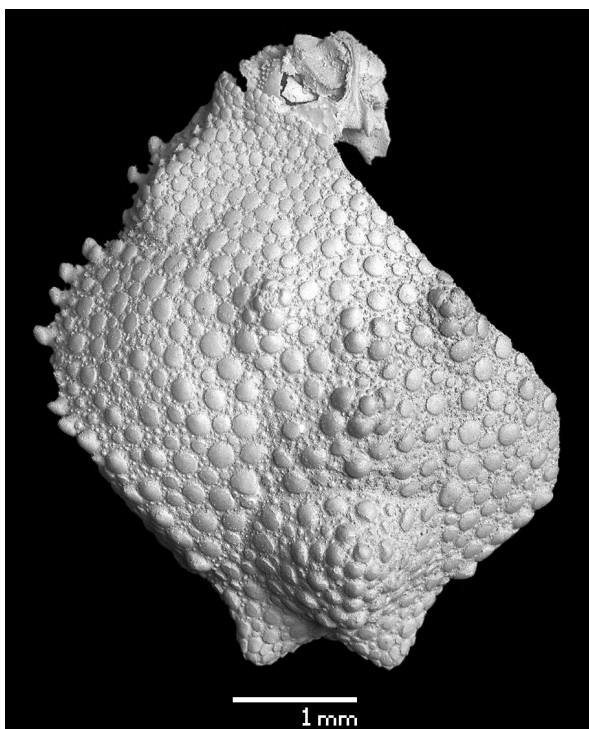
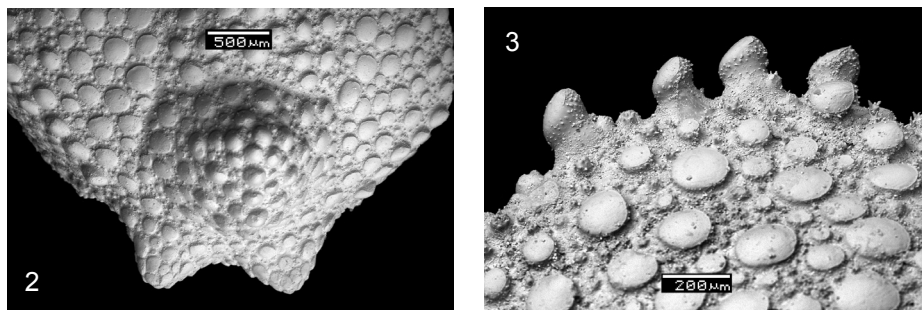


Fig. 1 - *Ebalia nux* A. Milne Edwards, 1883, carapace.

nean Sea. Moreover, as reported by the same authors, among the extant species of *Ebalia*, only *E. nux* is a deep water species, living between 80 and 2500 m on muddy bottoms, as also attested by the fossil specimens of this species from the Pleistocene of Montalbano Jonico, discovered in association with vertebrates and invertebrates of mesobathial and epibathial environments (D'Alessandro *et al.* 2000). The discovery of *E. nux* from the Pliocene enlarges the fossil record of this species, known to date only in southern Italy.

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Figs. 2-3 *Ebalia nux* A. Milne Edwards, 1883. 2) detail of the posterior part of carapace/dettaglio della parte posteriore del carapace. 3) detail of the anterolateral margin with ornamentation/dettaglio del margine anterolaterale con ornamentazione.

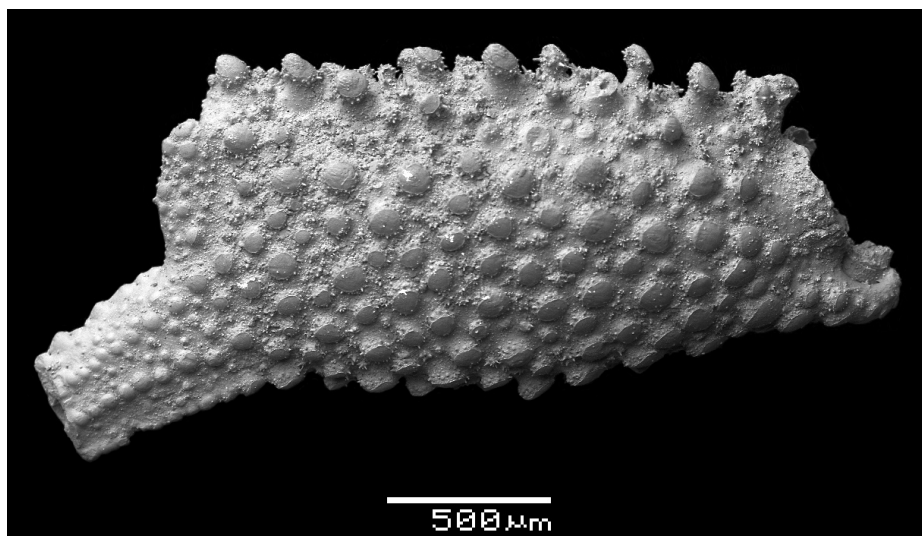


Fig. 4 - *Ebalia nux* A. Milne Edwards, 1883, cheliped/chelipe.

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