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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.


**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 hoernesi* (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* Lőrenthey, 1909, from Sardinia (Lőrenthey, 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 Ebaliinae 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-
ean 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.

**Acknowledgements**

We wish to thank L. Bertolaso, Società Reggiana di Scienze Naturali, Reggio Emilia, for useful collaboration and information on stratigraphy, geology, and faunal assemblage of the outcrops, M. Zilioli, Museo di Storia Naturale, Milano, for the pictures by electronic microscope, and R. M. Feldmann, Kent State University, Ohio, for careful review and criticism.

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/cheliped.
References

Ricevuto: 2 marzo 2010
Approvato: 22 marzo 2010