

Short scientific noteSubmitted: January 8th, 2018 - Accepted: June 4th, 2018 - Published: June 29th, 2018**First records of *Eyprepocnemis plorans plorans* in southeastern Italy (Orthoptera: Acrididae)**Rocco LABADESSA^{1,*}, Teodoro DURA², Giuseppe MASCIA³, Arianna PISCONTI⁴,
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Abstract

New populations of *Eyprepocnemis plorans plorans* (Charpentier, 1825) are first reported for southeastern Italy. The species was found in the period 2013-2017 in different lowland habitats of Apulia and Basilicata. These data may document a most recent colonization of southeastern Italy, which is potentially due to a wide range shift or expansion of species distribution from adjacent regions or countries.

Key words: *Eyprepocnemis plorans*, grasshopper, Acridoidea, Apulia, Basilicata.

Eyprepocnemis plorans (Charpentier, 1825) is a medium-sized grasshopper belonging to the paleotropical subfamily Eyprepocnemidinae (family Acrididae), of which it represents the only taxon reaching the Mediterranean region at its northwest range limit (Harz 1975). This polytypic species is represented by the subspecies *E. plorans plorans* widely distributed from Africa to southern Asia and Europe, and further three subspecies are limited to tropical African areas (Chopard 1951; Dirsh 1958; Harz 1975; Massa 2009). This grasshopper is largely restricted to lowland marsh habitats, especially near river courses and coastal ecosystems with natural and semi-natural dense vegetation, where adults can be found in late summer and autumn (Hernandez & Presa 1984; Massa et al. 2012). The species shows a generalist feeding behavior and it was found to be potentially harmful to some vegetable crops (Arnaldos & Presa 1992). It is also considered to have a high dispersal ability, as demonstrated by several studies regarding its population genetic structure in the Mediterranean basin (Hernandez & Presa 1984; López-León et al. 2008; Manrique-Poyato et al. 2013).

In Italy, *E. plorans plorans* is known to be rather common in Sicily and Sardinia, with few records reported for the peninsular Tyrrhenian regions with reference to Tuscany, Latium, Campania and Calabria (Fontana et al. 2005; Massa et al. 2012). Moreover, while the species was already known for Sicily, Sardinia and Monte Argentario in the early nineteenth century (Baccetti 1952; Costa 1882;

Failla et al. 1973; Ramme 1927; Riggio 1891), its occurrence in southern peninsular regions has been first noticed since 2006 (Iorio 2010; Massa et al. 2013) (Fig. 1).

New populations of *E. plorans plorans* were recorded in the period 2013-2017 in different lowland marsh habitats of Apulia and Basilicata (Table 1, Fig. 1). The species was found for the first time in autumn 2013 with two records of adult females in the territories of Taranto and Brindisi. Further populations were recorded during the following years in coastal and sub-coastal sites in the provinces of Matera (ID 3, data provided by G. Cancelliere), Foggia, Bari, Taranto and Lecce. The majority of observations were recorded in marsh sites rich in hygrophilous grasses and sedges. The observation of single specimens in urban (ID 1) or dry agricultural habitats (ID 4) was probably coinciding with individual dispersal movements outside breeding sites.

These data, representing the first observations of *Eyprepocnemis plorans plorans* in Apulia and Basilicata, may document a most recent colonization of southeastern Italy from adjacent regions or countries. Indeed this species had never been reported for Apulia before, despite the comprehensive effort made in the past decades for the knowledge of orthopterans of Apulia (La Greca 1959).

Based on the recent observations first documenting the occurrence of *E. plorans plorans* in the southern peninsula (Iorio 2010), it is not unlikely that this grasshopper has been undertaking an expansion through Italy, which

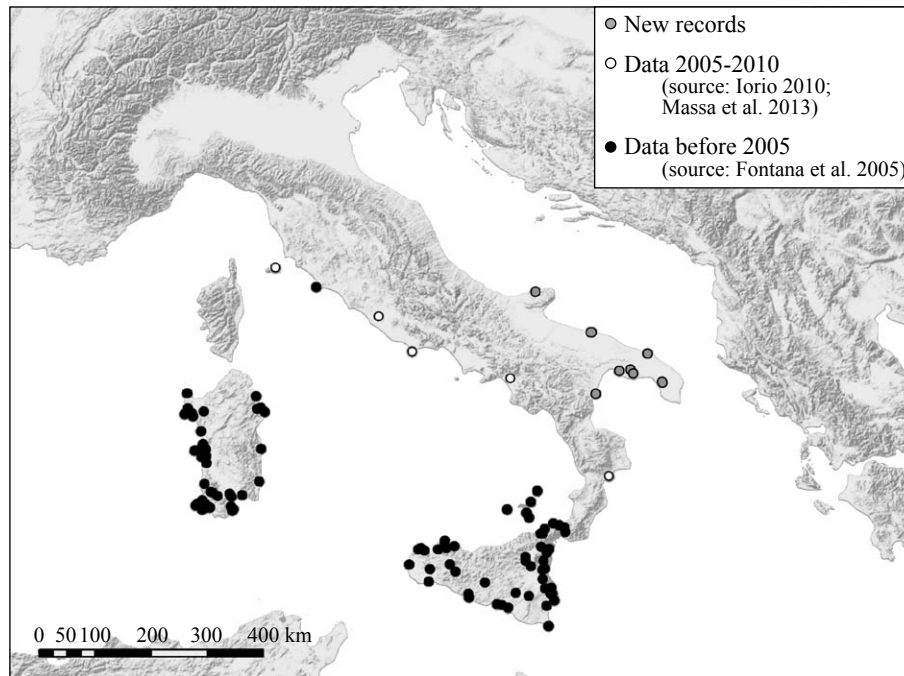


Fig. 1 – Distribution map of the observations of *Eyprepocnemis plorans plorans* in Italy.

Table 1 – Records of *Eyprepocnemis plorans plorans* in Apulia and Basilicata (years 2013-2017).

ID	Location	Coordinates	Altitude (m)	N. specimens
1	Via D. Peluso (Taranto)	40.465N, 17.252E	22	1 ♀
2	Bosco del Compare (Brindisi)	40.660N, 17.884E	16	1 ♀
3	Bosco Pantano (Policoro, Matera)	40.173N, 16.610E	2	1 ♂
4	C.da Panareo (Sava, Taranto)	40.394N, 17.529E	102	1 ♀
5	Lago di Varano (Ischitella, Foggia)	41.913N, 15.795E	3	> 50
6	C.da Pinnella (Galatone, Lecce)	40.181N, 18.085E	47	1 ♀
7	Lamasinata (Bari)	41.136N, 16.827E	2	> 50
8	C.da Doganieri (Galatone, Lecce)	40.166N, 18.092E	47	1 ♀
9	Lama Balice (Bari)	41.140N, 16.808E	1	6
10	C.da Camene (Galatone, Lecce)	40.160N, 18.065E	48	1 ♀
11	San Marzano di S. G. (Taranto)	40.455N, 17.490E	103	5

may have started from the western Italian populations and/or which could have been facilitated by maritime transport among Mediterranean countries. The potential shift or expansion of species distribution, for which Italy represents one of its northern limits, is also in line with several studies reporting insect population shifts as a response to global warming and climate changes (Hickling et al. 2006; Robinet & Roques 2010).

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