

***Enoplognatha mandibularis* (Lucas, 1846) (Arachnida, Araneae, Theridiidae), new theridiid to the community of Galicia**

Enoplognatha mandibularis (Lucas, 1846) (Arachnida, Araneae, Theridiidae), nuevo terídido para la comunidad de Galicia

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Abstract

This study presents the first record of *Enoplognatha mandibularis* (Lucas, 1846) to the autonomous community of Galicia, Spain. Two adult males were studied, one was accidentally captured in a mosquitoes ovitrap in the municipality of Redondela, Pontevedra province, and the second was found dead inside the Faculty of Biology at the University Campus As Lagoas-Marcosende, Pontevedra province. These findings contribute to the understanding of the distribution of *E. mandibularis* in the Iberian Peninsula.

Keywords: *Enoplognatha mandibularis*; distribution; Galicia; Theridiidae; ovitrap.

Resumen

Este estudio presenta el primer registro de *Enoplognatha mandibularis* (Lucas, 1846) para la comunidad autónoma de Galicia, España. Se estudiaron dos machos adultos, uno fue capturado fortuitamente por una ovitrampa para mosquitos en el municipio de Redondela, provincia de Pontevedra, y el segundo se encontró muerto en el interior de la Facultad de Biología en el Campus Universitario As Lagoas-Marcosende, provincia de Pontevedra. Estos hallazgos contribuyen al entendimiento de la distribución de *E. mandibularis* en la península ibérica.

Palabras clave: *Enoplognatha mandibularis*; distribución; Galicia; Theridiidae; ovitrampa.

Enoplognatha Pavesi, 1880 (Araneae, Theridiidae) is a cosmopolitan genus of spiders that belongs to the fourth family with the greatest species richness worldwide. Currently, 75 species are formally accepted, of which 16 have been cited in the Iberian Peninsula (DE BIURRUN *et al.*, 2024; WORLD SPIDER CATALOG, 2024).

Enoplognatha mandibularis has a remarkably large distribution that fits the Eurosiberian chorotype (MILANO *et al.*, 2019). It includes Europe (mainly the countries bordering the Mediterranean Sea), north of Africa, Turkey, Israel, from western Russia to central Asia and China (WORLD SPIDER CATALOG, 2024). It is the most cited species of its genus in the Iberian Peninsula, with up to 91 documented records (DE BIURRUN *et al.*, 2024). Despite the abundance of records, the biology of this species is still mostly unknown (NENTWIG *et al.*, 2024), which highlights the lack of studies in such an important group as spiders, both in ecosystem conservation and in biotechnological advances (BRANCO *et al.*, 2019; MILANO *et al.*, 2021).

One adult male *E. mandibularis* was accidentally captured in a mosquitoes ovitrap (Fig. 1) intended for the collection of mosquito eggs from the 24th to the 31st of October 2023. The trap was located on the soil near one of the walls of a health center in the municipality of Redondela (UTM coordinates: 527259,80 4679032,02; zone 29; 100 m a.s.l.). A second adult male was found dead and dry on the 7th of March 2024, on one of the interior walls of the Faculty of Biology at the University Campus As Lagoas-Marcosende (UTM coordinates: 526047,87 4668435,16; zone 29; 410 m a.s.l.). Specimens were studied under a Leica S9 D stereomicroscope equipped with a Flexacam C1 camera and following the key of NENTWIG *et al.* (2024). To confirm the identification, the presence of the diagnostic characters of *E. mandibularis* was verified, such as the basal tubercle on the radix of the copulatory bulb (Fig. 2e) and two large teeth on the cheliceral groove (basal one stronger, longer and with a curved base) (Fig. 2b). Other characters typical of the genus were also observed, such as the sternum protruding between coxae IV (Fig. 2b), lateral eyes almost touching (Fig. 2c), male chelicerae strongly enlarged and divergent (Fig. 2a) and the stridulatory ridges on the posterior part of the carapace (Fig. 2d) (LEVY, 1998; BOSMANS & VAN KEER, 1999; NENTWIG *et al.*, 2024). Because the male captured by the ovitrap could have spent up to a week in water, it was slightly damaged, so a meticulous cleaning job was carried out to remove the adhered debris and much of the filaments of fungi or bacteria that had begun to grow on the joint membranes. Even so, the coloration was noticeably deteriorated and the dorsal folium of the opisthosoma was practically indiscernible. However, the male found dead at the University was in even worse condition, with the prosoma and opisthosoma deformed due to being completely dried out.

Fig. 1 Ovitrap in which the *Enoplognatha mandibularis* specimen was captured.

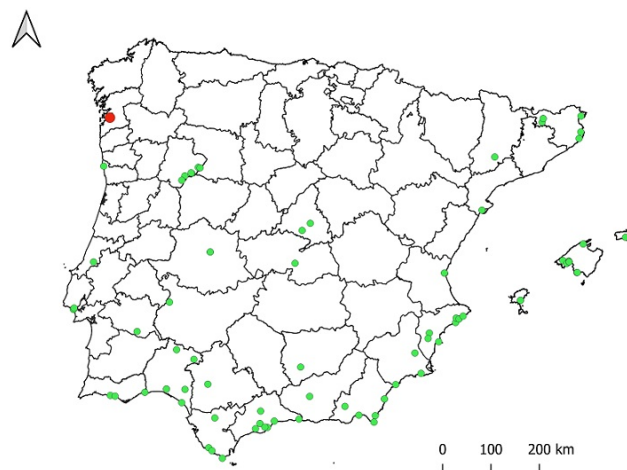


Fig. 2 Adult male of *Enoplognatha mandibularis* captured in Redondela. a. Dorsal view. b. Ventral view. c. Frontal view. d. Stridulatory organ; black arrows pointing to the stridulatory ridges on the posterior part of the carapace and the stridulatory picks on the anterodorsal part of the opisthosoma. e. Ventral view of the copulatory bulb; black arrow pointing the basal tubercle on the radix.



Fig. 3 represents the previous records from the Iberian Spider Catalog of DE BIURRUN *et al.* (2024), along with the new citation shown here. A clear predominance is observed on the Mediterranean coast, while in the northwest of the peninsula only this new record appears, which would be closest to those in north of Portugal in the districts of Porto and Bragança. The closest one is in Vila do Conde, district of Porto, approximately 100 km away. Therefore, this is the first citation for the province of Pontevedra and for the entire Autonomous Community of Galicia, increasing the distribution range of this theridiid to the northwest of the peninsula.

Fig. 3 Distribution map of *Enoplognatha mandibularis* in the Iberian Peninsula and the Balearic Islands. The green dots represent the previous records and the red dot corresponds to the new record for Galicia. Map made with Quantum GIS software (QGIS) version 3.28 (QGIS DEVELOPMENT TEAM, 2009).



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