

New records of crown wasps in the Iberian Peninsula (Hymenoptera: Stephanidae)

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Abstract: New records of *Stephanus serrator* (Fabricius, 1798) and *Megischus anomalipes* (Foerster, 1855) (Hymenoptera: Stephanidae) are given for the Iberian Peninsula. In particular, *S. serrator* is reported for the first time from Aragon, Basque Country, and Castilla y León (Spain), whilst *M. anomalipes* is reported for the first time from Évora and Faro (Portugal), and from Aragon, Catalonia, Castilla-La Mancha, Madrid, and Extremadura (Spain).

Key words: Hymenoptera, Stephanidae, *Stephanus serrator*, *Megischus anomalipes*, faunistics, first records, Portugal, Spain.

Resumen: Nuevos registros de estefánidos en la Península Ibérica (Hymenoptera: Stephanidae). Se aportan nuevos registros de *Stephanus serrator* (Fabricius, 1798) y *Megischus anomalipes* (Foerster, 1855) (Hymenoptera: Stephanidae) para la Península Ibérica. En particular, *S. serrator* es citada por primera vez en Aragón, País Vasco y Castilla y León (España), mientras que *M. anomalipes* es citada por primera vez en Évora y Faro (Portugal), y en Aragón, Cataluña, Castilla-La Mancha, Madrid y Extremadura (España).

Palabras clave: Hymenoptera, Stephanidae, *Stephanus serrator*, *Megischus anomalipes*, faunística, primeros registros, Portugal, España.

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Introduction

The crown wasp family Stephanidae Leach, 1815 is a small group of idiobiont ectoparasitoids of wood boring insect larvae (Aguiar, 2004), including more than 260 worldwide extant species (Ge et al., 2023). In Europe only four species occur, but two of these, *Foenatopus turcomanorum* (Semenov, 1891) and *Afromegischus gigas* (Schletterer, 1889), are known in Europe only on the island of Crete (Hilszczański, 2011). *Stephanus serrator* (Fabricius, 1798) and *Megischus anomalipes* (Foerster, 1855) are more widespread on the continent, although their records are scattered (Ceccolini, 2021) and both species are present in the Iberian Peninsula (Ceballos, 1956).

In Portugal the only record of *S. serrator* known so far is from the district of Porto (Ceccolini, 2021), whilst in Spain the species is reported from Pontevedra (Ceballos, 1926), Asturias (Dusmet, 1935, 1944), Barcelona (Selfa et al., 2014; Sarto i Monteys & Torras i Tutusaus, 2018), Cáceres, Jaén, Valencia, Cantabria (Selfa et al., 2014), Gerona, and Navarre (Ceccolini, 2021). Moreover, a record from Catalonia without precise locality is given by Pujade-Villar et al. (2009).

Also for *M. anomalipes* the known records from the Iberian Peninsula are poor and scattered. In Portugal, in addition to the Madeira island (Schmiedeknecht, 1930; Madl, 1991, 2013), it is known from the district of Beja (Ceccolini, 2021). In Spain the occurrence of the species was reported by Kieffer (1902) and Ceballos (1956), but without locality, being the only records with precise locality given by Pujade-Villar & Tinaut (2022) from Granada and by Verdugo (2024) from Cádiz.

The present paper provides new records of crown wasps from the Iberian Peninsula, improving the faunistic knowledge of this little investigated group of Hymenoptera.

Material and methods

The material examined consists of photographed specimens from the websites iNaturalist (IN) or observation.org (OB). The two species of Stephanidae present in the Iberian Peninsula can be well-differentiated by photo because *S. serrator* has a ventral margin of hind femur with 3 tooth-like processes, while *M. anomalipes* has two tooth-like processes (Dal Pos & Turrisi, 2017). Furthermore, in *Megischus* the females have an ivory band in the distal part of the ovipositor, before the apex and the number of tarsomeres is 3 in the hind legs, while in *Stephanus* the ovipositor is dark throughout its length and the number of hind tarsomeres is 5 (Aguar, 2004).

For each site, the following information is given: locality, geographical coordinates, date, number and sex of specimens, author of the photo, website, and relative link. Geographical coordinates are in decimal degrees (datum WGS84). The uncertainty (abbreviated as un.) of data (in meters) is indicated according to the point-radius method (Wieczorek *et al.*, 2004).

Each record was identified or confirmed by the author. The updated distributions of the two species in the Iberian Peninsula are reported in Figs. 2 and 4.

Material examined

Stephanus serrator (Fabricius, 1798)

SPAIN

Aragon:

- **Huesca:** Graus, 42.1915°N 0.3468°E (un. = 5 m), 27.VI.2023, 1 female (Fig. 1), photo by Carlos González Sanz (OB) (see [here](#)).

Basque Country:

- **Álava:** Zuia, 42.9857°N -2.8316°E (un. not recorded), 17.VII.2012, 1 female, photo by "Gorbeia Parque Natural" (OB) (see [here](#)).

Castilla y León:

- **Segovia:** Sepúlveda, 41.29607°N -3.78402°E (un. = 369 m), 15.VII.2023, 1 female, photo by Fernando Rodríguez (IN) (see [here](#)).

Megischus anomalipes (Foerster, 1855)

PORTUGAL

- **Évora:** Reguengos de Monsaraz, near Campinho, 38.34464°N -7.44940°E (un. = 2 m), 10.VIII.2023, 1 male, photo by Axel Gosseries (IN) (see [here](#)); idem, 38.34202°N -7.45559°E (un. = 122 m), 4.XI.2024, 1 female (Fig. 3), photo by Axel Gosseries (IN) (see [here](#)).
- **Faro:** Olhão, Moncarapacho, 37.08209°N -7.79080°E (un. = 11 m), 5.VI.2023, 1 male, photo by "carynolivia" (IN) (see [here](#)).

SPAIN

Aragon:

- **Huesca:** Graus, 42.1421°N 0.3620°E (un. not recorded), 27.IX.2016, 1 female, photo by Carlos González Sanz (OB) (see [here](#)).

Catalonia:

- **Lleida:** Artesa de Segre, 42.0550°N 1.0897°E (un. not recorded), 13.VII.2022, 1 female, photo by Ramon M Batlle Artigues (OB) (see [here](#)).

Castilla-La Mancha:

- **Toledo:** Las Nieves, 39.83236°N -3.96624°E (un. = 47 m), 30.VI.2024, 1 male, photo by Jorge Íñiguez (IN) (see [here](#)).

Extremadura:

- **Badajoz:** Olivenza, 38.77426°N -7.16991°E (un. not recorded), 4.X.2024, 1 female, photo by Barbara Cristina Tita (IN) (see [here](#)).

Madrid:

- **Madrid:** Tielmes, 40.2559°N -3.3119°E (un. not recorded), 1 female, photo by Enrique Hernández (OB) (see [here](#)); idem, Monte de El Pardo, 40.5248°N -3.7784°E (un. not recorded), 31.VII.2012, 1 female, photo by Jose Ignacio Pascual (OB) (see [here](#)).

Conclusions

The first records of *S. serrator* are given from the provinces of Huesca, Álava, and Segovia, which are also the first ones respectively for the regions of Aragon, Basque Country, and Castilla y León.

With the addition of the first records from Évora and Faro, the occurrence of *M. anomalipes* is now documented in three districts in mainland Portugal. Moreover, in Spain is reported for the first time from Badajoz, Huesca, Lleida, Madrid, and Toledo. The five regions of these provinces (Extremadura, Aragon, Catalonia, Madrid, and Castilla-La Mancha, respectively) are added to Andalusia, the only one where the species was previously known (Pujade-Villar & Tinaut, 2022; Verdugo, 2024). Although the addition of various records, the faunistic knowledge of the crown wasps in the Iberian Peninsula, as well as in other countries, is still far to be satisfactory and future studies will be needed to give further information on the distribution of this neglected group of insects.

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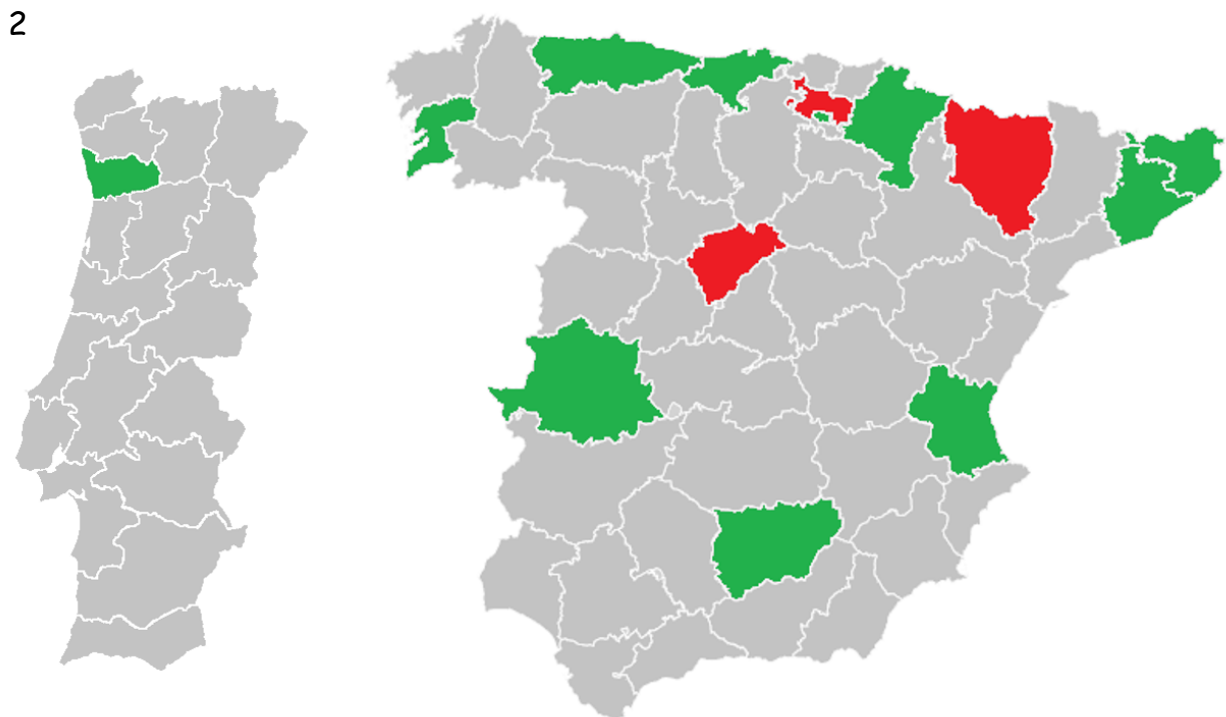


Fig. 1. - Female of *Stephanus serrator* from Huesca (Spain). Photo by Carlos González Sanz.

Fig. 2. - Updated distribution of *Stephanus serrator* in the Iberian Peninsula (left on Portugal, right on Spain). Green = districts/provinces where the species was known; red = districts/provinces where the species is recorded for the first time through the present paper; grey = districts/provinces with no records.

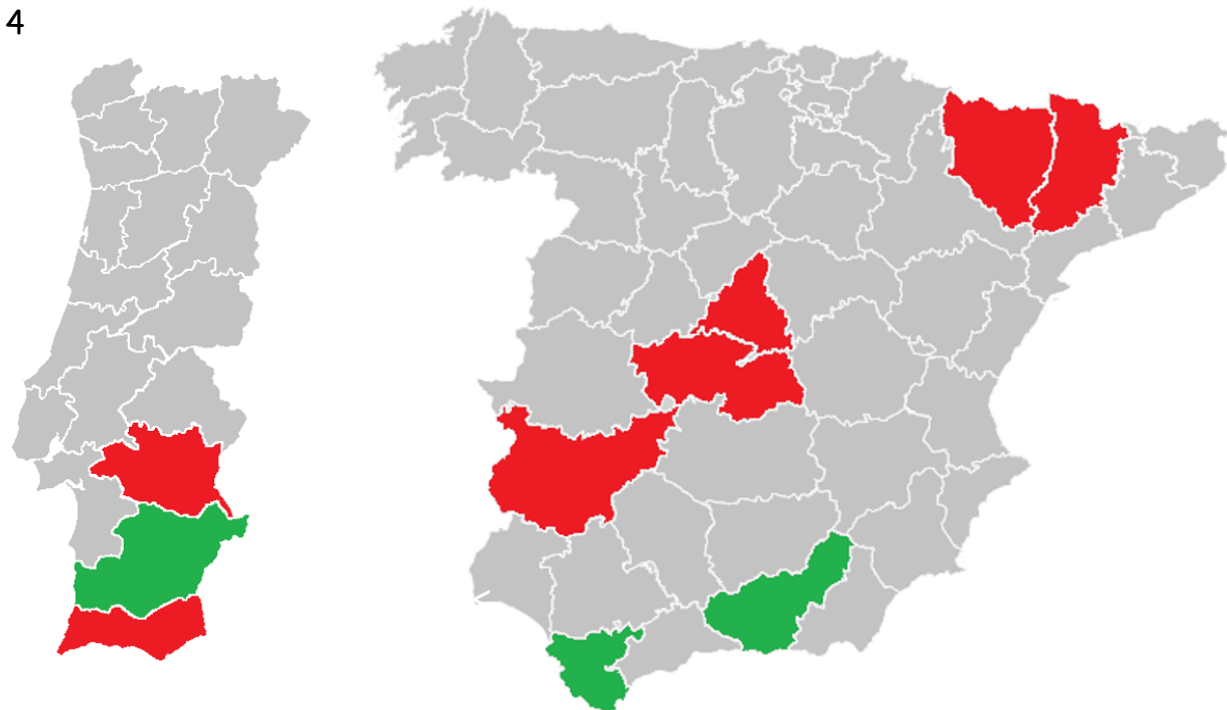


Fig. 3. - Female of *Megischus anomalipes* from Évora (Portugal). Photo by Axel Gosseries.

Fig. 4. - Updated distribution of *Megischus anomalipes* in the Iberian Peninsula (left on Portugal, right on Spain). Green = districts/provinces where the species was known; red = districts/provinces where the species is recorded for the first time through the present paper; grey = districts/provinces with no records.