

NOTA / NOTE

New records of *Sceliphron curvatum* (Smith, 1870) in the Iberian Peninsula (Hymenoptera: Sphecidae)

Filippo Ceccolini

Via Europa 16/A, I-52016 Rassina, Arezzo (ITALY)
ORCID: 0000-0002-1476-914X. email: ceccolinif@virgilio.it

Abstract: New records in the Iberian Peninsula of the alien mud-dauber wasp *Sceliphron curvatum* (Smith, 1870) (Hymenoptera: Sphecidae) are reported through photographic material on the websites iNaturalist and observation.org. The occurrence of this species is first recorded for the Principality of Andorra and the districts of Beja, Braga and Viana do Castelo, in Portugal, and the provinces of Cáceres, Cádiz, Córdoba, Gipuzkoa, La Rioja, Málaga and Ourense, in Spain. Moreover, a species of the subgenus *Hensenia* Pagliano & Scaramozzino, 1990 is reported for the first time for the Portuguese districts of Castelo Branco, Portalegre, Santarém and Vila Real, the Spanish provinces of Albacete and Guadalajara and the archipelago of the Canary Islands. Almost certainly also these latter records are to be attributed to *S. curvatum*, but the available photos do not allow a certain identification respect to the similar *Sceliphron deforme* (Smith, 1856), found in Eastern Europe, but currently not in the Iberian Peninsula.

Key words: Hymenoptera, Sphecidae, *Sceliphron curvatum*, alien species, distribution, Andorra, Spain, Portugal.

Resumen: Nuevos registros de *Sceliphron curvatum* (Smith, 1870) en la Península Ibérica (Hymenoptera: Sphecidae). Se aportan nuevos registros de la avispa alfarera exótica *Sceliphron curvatum* (Smith, 1870) (Hymenoptera: Sphecidae) en la Península Ibérica mediante fotos de las plataformas online iNaturalist y observation.org. La especie es citada por primera vez en el Principado de Andorra y en los distritos de Beja, Braga and Viana do Castelo, en Portugal, y en las provincias de Cáceres, Cádiz, Córdoba, Gipuzkoa, La Rioja, Málaga y Ourense, en España. Además, se cita por primera vez una especie del subgénero *Hensenia* Pagliano & Scaramozzino, 1990 para los distritos portugueses de Castelo Branco, Portalegre, Santarém y Vila Real, las provincias españolas de Albacete y Guadalajara y para el archipiélago de las Islas Canarias. Es casi seguro que estas últimas citas también pueden atribuirse a *S. curvatum*, pero las fotografías disponibles no permiten una identificación segura respecto a *Sceliphron deforme* (Smith, 1856), que se encuentra en Europa del Este, pero no actualmente en la Península Ibérica.

Palabras clave: Hymenoptera, Sphecidae, *Sceliphron curvatum*, especie exótica, distribución, Andorra, España, Portugal.

Recibido: 14 de noviembre de 2024

Aceptado: 26 de noviembre de 2024

Publicado on-line: 3 de diciembre de 2024

Introduction

The genus *Sceliphron* Klug, 1801 includes 34 species widespread in all continents except Antarctica (Pulawski, 2024). In the Iberian Peninsula there are five species of this genus of mud-dauber wasps, two of which are allochthonous: *Sceliphron caementarium* (Drury, 1773) and *Sceliphron curvatum* (Smith, 1870) (Castro, 2020).

The latter species is native to the mountainous areas of central and southern Asia and in the last decades it has spread to many countries in Europe (see Pulawski, 2024), where the first known record dates back to 1979 in Austria (van der Vecht, 1984). This mud-dauber wasp was found in the Iberian Peninsula for the first time in 1999 with a record from Tres Cantos, located in the Community of Madrid (Gayubo & Izquierdo, 2006). More recently, the species was found also in Portugal, where the first record dates back to 2016 in the districts of Bragança and Faro (Castro, 2020). Currently, *S. curvatum* is known in many regions of the two countries, showing a quickly spread of this species also in

the Iberian Peninsula, as well as in other European countries [see Castro (2020) for a summary of its distribution in Spain and Ceccolini (2021) for a summary of its distribution in Portugal].

The spread of this alien mud-dauber wasp is still ongoing in the Iberian Peninsula and the present contribution gives records in several new regions in the territory.

Material and methods

All material examined consists of photographed specimens from the websites iNaturalist (IN) or observation.org (OB). Among the species of *Sceliphron* of the Iberian Peninsula, the identification of *S. curvatum* is relatively easy through photos since it has gaster (petiole excluded) with reddish bands [see Pagliano & Negrisolo (2005)]. Anyway, the recent introduction in Europe of the similar alien species *Sceliphron deforme* (Smith, 1856) from Asia (Ćetković *et al.*, 2011) makes the identification more uncertain. Indeed, *S. deforme* shows the same coloration pattern as *S. curvatum* and the two species can be recognized observing the shape of the first metasomal tergum (Schmid-Egger, 2005; Zoltán & Zsolt, 2014). For this reason, like in Castro (2020) and Ceccolini (2021), only records from photos in which the first metasomal tergum is well evident have been considered as sure occurrence of *S. curvatum*. Anyway, since *S. deforme* is currently known in Europe only in Russia and the Balkans (Ćetković *et al.*, 2011), it is unlikely that the other available photos from the Iberian Peninsula of *Sceliphron* within the subgenus *Hensenia* Pagliano & Scaramozzino, 1990 (to which belong both *S. deforme* and *S. curvatum* and not the other European species of *Sceliphron*) are to be attributed to *S. deforme*. Anyway, it is not possible to certainly exclude a further introduction (hitherto unknown) in recent times also in the Iberian Peninsula of this species. Other records from photos of nests or specimens in which the shape of the first metasomal tergum is not well evident are given as likely occurrence of *S. curvatum* to be confirmed.

For each record the following information is given: locality, coordinates, date, number of specimens, author of the photo, website and related link. Geographical coordinates are in decimal degrees (datum WGS84). The uncertainty (abbreviated as un.) of data (in metres) is indicated according to the point-radius method (Wieczorek *et al.*, 2004). All listed records have been confirmed by the author.

Material examined

Confirmed records:

ANDORRA

- **Ordino:** between La Cortinada and Ansalonga, 42.57201°N 1.52064°E (un. = 14 m), 13.VII.2024, 1 specimen, photo by "kenneth_alexander" (IN) (see [here](#)).

PORTUGAL

- **Beja:** Ourique, Camping Serro da Bica, 37.5667°N -8.26457°E (un. not recorded), 28.V.2021, 1 specimen, photo by Jorge Safara (IN) (see [here](#)).
- **Braga:** Braga city, R. Nova de Santa Cruz, 41.55769°N -8.39867°E (un. = 53 m), 31.V.2024, 1 specimen, photo by Sofia Duarte (IN) (see [here](#)).
- **Viana do Castelo:** Caminha, Marinhas, Caminho do Cruzeiro, 41.87787°N -8.80655°E (un. = 8 m), 23.VII.2024, 1 specimen, photo by David Cabral (IN) (see [here](#)).

SPAIN

Andalusia:

- **Cádiz:** Cádiz, Parque Genovés, 36.53561°N -6.30425°E (un. = 24 m), 30.VII.2023, 1 specimen, photo by "sbushes" (IN) (see [here](#)); San Roque, 36.28704°N -5.31418°E (un. not recorded),

13.VIII.2022, 1 specimen, photo by David Barros Cardona (IN) (see [here](#)).

- **Córdoba:** Córdoba city, Calle Madre Escolapias, 37.9096°N -4.7822°E (un. = 5 m), 2.VII.2023, 1 specimen, photo by Alfonso Rodríguez (OB) (see [here](#)); *idem*, Av. Campo de la Verdad, 37.87453°N -4.76964°E (un. = 1 m), 28.IX.2024, 1 specimen, photo by "apusaffinis" (IN) (see [here](#)); *idem*, Guadalquivir river, 37.87865°N -4.74201°E (un. = 1 m), 4.VI.2024, 1 specimen, photo by "apusaffinis" (IN) (see [here](#)); *idem*, Campus Universitario de Rabanales, 37.91415°N -4.72645°E (un. = 2 m), 5.VI.2023, 1 specimen (Fig. 1), photo by "davidfdz_b82" (IN) (see [here](#)); *idem*, C. Colonia San José, 37.91749°N -4.71454°E (un. = 31 m), 7.VII.2022, 1 specimen, photo by "davidfdz_b82" (IN) (see [here](#)).
- **Málaga:** Antequera, 37.00695°N -4.55348°E (un. = 15 m), 25.V.2022, 1 specimen, photo by Susanne Vogel (IN) (see [here](#)); Málaga, near Paseo de Salvador Rued, 36.72589°N -4.40358°E (un. = 23 m), 26.VIII.2024, 1 specimen, photo by "franki5555" (IN) (see [here](#)); Marbella, Paseo de Bolivia, 36.50288°N -4.78964°E (un. = 3 m), 24.VIII.2024, 1 specimen, photo by Kian Hayles-Cotton (IN) (see [here](#)); *idem*, Nueva Andalucía, 36.50921°N -4.95686°E (un. = 15 m), 12.VII.2023, 1 specimen, photo by Ramón Ramiro Carta (IN) (see [here](#)); Casarabonela, 36.7833°N -4.8572°E (un. not recorded), 26.VI.2022, 1 specimen, photo by Roberto Cabo Morgner (OB) (see [here](#)).

Basque Country:

- **Gipuzkoa:** San Sebastián, Miramón-Zorroaga, 43.29294°N -1.9862°E (un. = 186 m), 26.IV.2024, 1 specimen, photo by "andergd" (IN) (see [here](#)).

Extremadura:

- **Cáceres:** Aldeanueva de la Vera, 40.14452°N -5.68148°E (un. not recorded), 28.V.2020, 1 specimen, photo by "ytar" (IN) (see [here](#)).

Galicia:

- **Ourense:** Os Milagres do Med, 42.23232°N -7.63379°E (un. = 31 m), 11.IX.2023, 1 specimen, photo by Antonio Rico García (IN) (see [here](#)); Verín, 41.9341°N -7.4383°E (un. not recorded), 6.VI.2021, 1 specimen, photo by Xosé Bergantiños (OB) (see [here](#)); *idem*, 41.9306°N -7.4396°E (un. = 71 m), 6.VI.2024, 1 specimen, photo by Xosé Bergantiños (OB) (see [here](#)).

La Rioja:

- Briñas, 42.6008°N -2.8309°E (un. = 4 m), 4.X.2024, 1 specimen, photo by Juan Dominguez (OB) (see [here](#)).

Records of nests or specimens without clear vision of the shape of the first metasomal tergum:

PORTUGAL

- **Castelo Branco:** Covilhã, Quintas da França, 40.27356°N -7.43276°E (un. not recorded), 4.VIII.2022, 1 specimen, photo by G. Marques (IN) (see [here](#)); Oleiros, Roqueiro, 39.96979°N -7.84118°E (un. = 1 m), 7 nests, photo by Alexandre Barata (IN) (see [here](#)); Sertã, Casal Novo, 39.88173°N -8.10086°E (un. not recorded), 27.VIII.2022, 5 nests, photo by "vitexlucens" (IN) (see [here](#)); Castelo Branco, Escola Secundária Nuno Alvares, 39.8207°N -7.4923°E (un. not recorded), 17.VI.2021, 1 specimen, photo by João Esteves (IN) (see [here](#)); Proença-a-Nova, 39.72878°N -7.84462°E (un. = 1700 m), 15.X.2022, 4 specimens, photo by Ricardo Martins (IN) (see [here](#)); Penamacor, Zona Balnear do Meimão, 40.26956°N -7.14451°E (un. not recorded), 24.IX.2022, 13 nests, photo by Simão Mateus (IN) (see [here](#)).
- **Portalegre:** Portalegre city, R. Dr. Galiano Tavares, 39.29055°N -7.42576°E (un. = 31 m), 10.IX.2020, 3 nests, photo by "mtfoliveira" (IN) (see [here](#)); Avis, Alcôrrego, 39.01161°N -7.92609°E (un. not recorded), 7.X.2022, 3 nests, photo by David Pereira (IN) (see [here](#)).
- **Santarém:** Macao, near Pereiro, 39.58332°N -8.01362°E (un. not recorded), 20.V.2023, 3 nests, photo by Sara Araújo (IN) (see [here](#)).
- **Viana do Castelo:** Vilarelho, 41.86832°N -8.83424°E (un. not recorded), 10.VII.2024, 1 specimen, photo by Diana Santos (IN) (see [here](#)).

- **Vila Real:** Alijó, Pinhão, 41.19096°N -7.54502°E (un. not recorded), 8.VI.2024, 1 specimen, photo by "bemima" (IN) (see [here](#)).

SPAIN

- **Andalusia: Cádiz:** Algeciras, Plaza Alta, 36.1312°N -5.4474°E (un. not recorded), 20.VIII.2023, 10 nests, photo by M^a del Carmen Fajardo Arcos (OB) (see [here](#)). **Córdoba:** Córdoba, Santa María de Trassierra, 37.9353°N -4.8985°E (un. = 13 m), 20.VIII.2022, 6 nests, photo by "amora_picos" (IN) (see [here](#)); Alozaina, 36.74322°N -4.86442°E (un. = 11 m), 7.II.2021, 14 nests, photo by Palangana Fresquita (IN) (see [here](#)); Fuengirola, near Plaza de los Niños, 36.54563N -4.63118°E (un. not recorded), 23.III.2020, at least 9 nests, photo by "nataliagd" (IN) (see [here](#)).
- **Basque Country: Gipuzkoa:** Astigarraga, 43.28006°N -1.95054°E (un. = 96 m), 23.VI.2020, 6 nests, photo by "franeriell" (IN) (see [here](#)).
- **Canary Islands: Gran Canaria:** Maspalomas, Avenida Estados Unidos, 27.75542°N -15.57039°E (un. = 23 m), 21.VI.2022, 1 specimen, photo by Alexander Weigand (IN) (see [here](#)).
- **Castilla-La Mancha: Albacete:** Albacete, near Plaza José Ramón Martínez Gualda, 38.98631°N -1.86407°E (un. = 165 m), 28.VII.2020, 1 specimen, photo by "diegogargarr" (IN) (see [here](#)); *idem*, Tobarra, 38.5874°N -1.69353°E (un. = 72 m), 21.VI.2021, 1 specimen, photo by "onique" (IN) (see [here](#)). **Guadalajara:** Uceda, Calle de París, 40.79618°N -3.49349°E (un. = 3 m), 25.VII.2021, 4 nests, photo by "jlsoriat" (IN) (see [here](#)).
- **Galicia: Ourense:** O Barco de Valdeorras, Rúa Barco de Ávila, 42.4149°N -6.9906°E (un. = 5 m), 1.X.2021, 1 specimen, photo by Francisco Manuel Illanes Ramos (OB) (see [here](#)).
- **La Rioja:** Albelda de Iregua, 42.38119°N -2.46466°E (un. not recorded), 3.IX.2023, at least 29 nests, photo by José Antonio León Mangado (IN) (see [here](#)).

Discussion

The first record of *S. curvatum* from the Pyrenean country of Andorra is given. Moreover, in Portugal the first known occurrence of the species is reported for the districts of Beja, Braga and Viana do Castelo, whilst in Castelo Branco, Portalegre, Santarém and Vila Real is recorded for the first time a *Sceliphron* belonging to the subgenus *Hensenia*, likely to be assigned to *S. curvatum*, but that attribution must be confirmed (see previously in the text).

In Spain, the record from Briñas is the first for the autonomous community of La Rioja, whilst the provinces in which the occurrence of *S. curvatum* is surely recorded for the first time are Cáceres, Cádiz, Córdoba, Gipuzkoa, Málaga, and Ourense. In the provinces of Guadalajara and Albacete, as well as in the archipelago of the Canary Islands, the occurrence, although probable, must be confirmed.

The updated distribution of *S. curvatum* in the Iberian Peninsula is reported in Fig. 2 (Portugal) and Fig. 3 (Spain).

References

- Castro, L. 2020. Tercera actualización sobre la distribución de *Sceliphron curvatum* (Smith 1870) (Hymenoptera: Sphecidae) en la Península Ibérica y Baleares. *Revista gaditana de Entomología*, **11**: 7-22.
- Ceccolini, F. 2021. New records for the alien mud-dauber wasp *Sceliphron curvatum* (Smith, 1870) in Portugal (Hymenoptera: Sphecidae). *Revista gaditana de Entomología*, **12**(1): 213-219.
- Ćetković, A., Mokrousov, M.V., Plečaš, M., Bogusch, P., Antić, D., Đorović-Jovanović, L., Krpo-Ćetković, J. & Karaman, M. 2011. Status of the potentially invasive Asian species *Sceliphron deforme* in Europe, and an update on the distribution of *S. curvatum* (Hymenoptera: Sphecidae). *Acta entomologica serbica*, **16**(1/2): 91-114.

Gayubo, S.F. & Izquierdo, I. 2006. Presencia de la especie invasora *Sceliphron curvatum* (F. Smith 1870) en la Península Ibérica (Hymenoptera: Apoidea: Sphecidae). *Boletín de la Sociedad Entomológica Aragonesa*, **39**: 257-260.

Pagliano, G. & Negrisoló, E. 2005. *Hymenoptera Sphecidae. Fauna d'Italia*. 40. Ed. Calderini, Bologna, 560 pp.

Pulawski, W.J. 2024. *Catalog of Sphecidae sensu lato*. California Academy of Sciences, Golden Gate Park, San Francisco, California (Last updated 5 October 2024). Available from: <https://www.calacademy.org/scientists/projects/catalog-ofsphecidae>

Schmid-Egger, C. 2005. *Sceliphron curvatum* (F. Smith 1870) in Europa mit einem Bestimmungsschlüssel für europäischen und mediterranen *Sceliphron*-Arten (Hymenoptera, Sphecidae). *Bembix*, **19**: 7-28.

van der Vecht, J. 1984. Die orientalische Mauerwespe *Sceliphron curvatum* (Smith) in der Steiermark, Österreich (Hymenoptera: Sphecidae). *Entomofauna*, **5**: 213-219.

Wieczorek, J., Guo, Q. & Hijmans, R.J. 2004. The point-radius method for georeferencing locality descriptions and calculating associated uncertainty. *International Journal of Geographical Information Science*, **18**(8): 745-767.

Zoltán, V. & Zsolt, J. 2014. Új agdatok és határozókulcs Magyarország lopódarázs faunájához (Hymenoptera: Sphecidae). *Natura Somogyiensis*, **24**: 157-164.

1



Fig. 1. - Specimen of *S. curvatum* from Campus Universitario de Rabanales in Córdoba. (Photo by "davidfdz_b82").

2

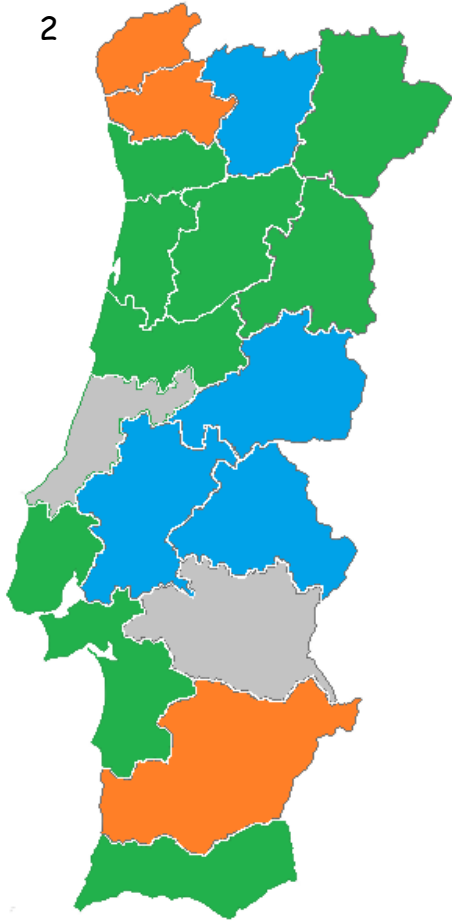


Fig. 2. - Updated distribution of *S. curvatum* in Portugal. Green = districts where the species was known; orange = districts where the species is recorded for the first time through the presente work; blue = districts where the species must be confirmed.

Fig. 3. - Updated distribution of *S. curvatum* in Spain. Green = districts where the species was known; orange = districts where the species is recorded for the first time through the presente work; blue = districts where the species must be confirmed.

3

