

NOTA / NOTE

Cimex hirundinis Lamarck, 1816 (Hemiptera: Cimicidae) in Portugal

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Abstract: The swallow bug, *Cimex hirundinis* Lamarck, 1816 (Hemiptera, Cimicidae), is recorded from a specific locality in mainland Portugal for the first time, following a 1966 record from the country without further details. The new record significantly increases the known Iberian distribution of the species.

Key words: Hemiptera, Cimicidae, *Cimex hirundinis*, first locality, Portugal.

Resumen: *Cimex hirundinis* Lamarck, 1816 (Hemiptera: Cimicidae), nueva especie para Portugal. Se cita por primera vez *Cimex hirundinis* Lamarck, 1816 (Hemiptera: Cimicidae) de una localidad concreta en Portugal continental, tras un registro sin más detalle publicado en 1966. El nuevo registro amplía significativamente la distribución ibérica conocida de la especie.

Palabras clave: Hemiptera, Cimicidae, *Cimex hirundinis*, primera localidad, Portugal.

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Introduction

The swallow bug, *Cimex hirundinis* Lamarck, 1816 (Hemiptera, Cimicidae), is a hematophagous true bug species described by LAMARCK (1816), presumably from Europe, as it was reportedly observed by Latreille on a swallow's nest. Until recently, *Cimex hirundinis* was classified in the genus *Oeciacus* Stål, 1873, which was synonymized with *Cimex* Linnaeus, 1758 by BALVÍN *et al.* (2015) based on molecular evidence.

The swallow bug is associated with at least 20 bird species (TRILAR *et al.*, 1997) and presents a wide global distribution that includes Europe (from the Iberian Peninsula to Great Britain, in the west, and from Scandinavia and Russia to the Balkans, in the east), northern Africa (Algeria, Morocco, and Tunisia), and Asia (from the Near and Middle East to eastern Siberia) (PÉRICART, 1996). The known Iberian distribution of *C. hirundinis* includes the Spanish provinces of Barcelona (SÁNCHEZ, 1920), Huelva (HILL, 1992), Badajoz (DE LOPE *et al.*, 1993), and Zaragoza (TANCO, 2018) (Map 1).

As for Portugal, the literature survey conducted yielded only two references to the occurrence of *C. hirundinis* in the Portuguese mainland: USINGER (1966) and PÉRICART (1996). In the former - a worldwide monograph of the family Cimicidae - USINGER (1966) first recorded the species from Portugal, albeit without any details ["*In the British Museum (Nat. Hist.) spirit collection are specimens from Switzerland, Portugal, and Algeria.*"]. In the latter, while studying the western Palaearctic cimicid fauna, PÉRICART (1996) mentioned the possible presence of *C. hirundinis* in Portugal by including "PO?" in the list of European countries of occurrence. As a result, we consider the record presented below to be the first from a specific locality in Portugal, thus confirming its presence in the country.

Material examined

Porto district: Vila Nova de Gaia municipality: Laborim de Baixo, on the ceiling inside an apartment (41.105718, -8.603911; MGRS: 29TNF3350; 127 m a.s.l.), 05/01/2020 (1 ♂, Manuel José Silva & J.M. Grosso-Silva leg., MHNC-UP col.: MHNCUP/ART/41071).

Discussion

The record presented herein not only provides the first locality for the swallow bug in mainland Portugal, as stated above, but it also greatly expands the known Iberian range of the species as illustrated in Map 1.

According to PÉRICART (1972), swallow bugs hibernate on birds' nests both as adults and as nymphs (not feeding during the absence of the hosts) and may, under certain circumstances, leave the nest and enter houses. The collecting conditions in Laborim de Baixo are consistent with this behaviour, as the specimen was collected in the early winter on the second floor of a residential building, in a room whose only window stands a few metres away from a house martin nest, *Delichon urbica* (Linnaeus, 1758).

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References

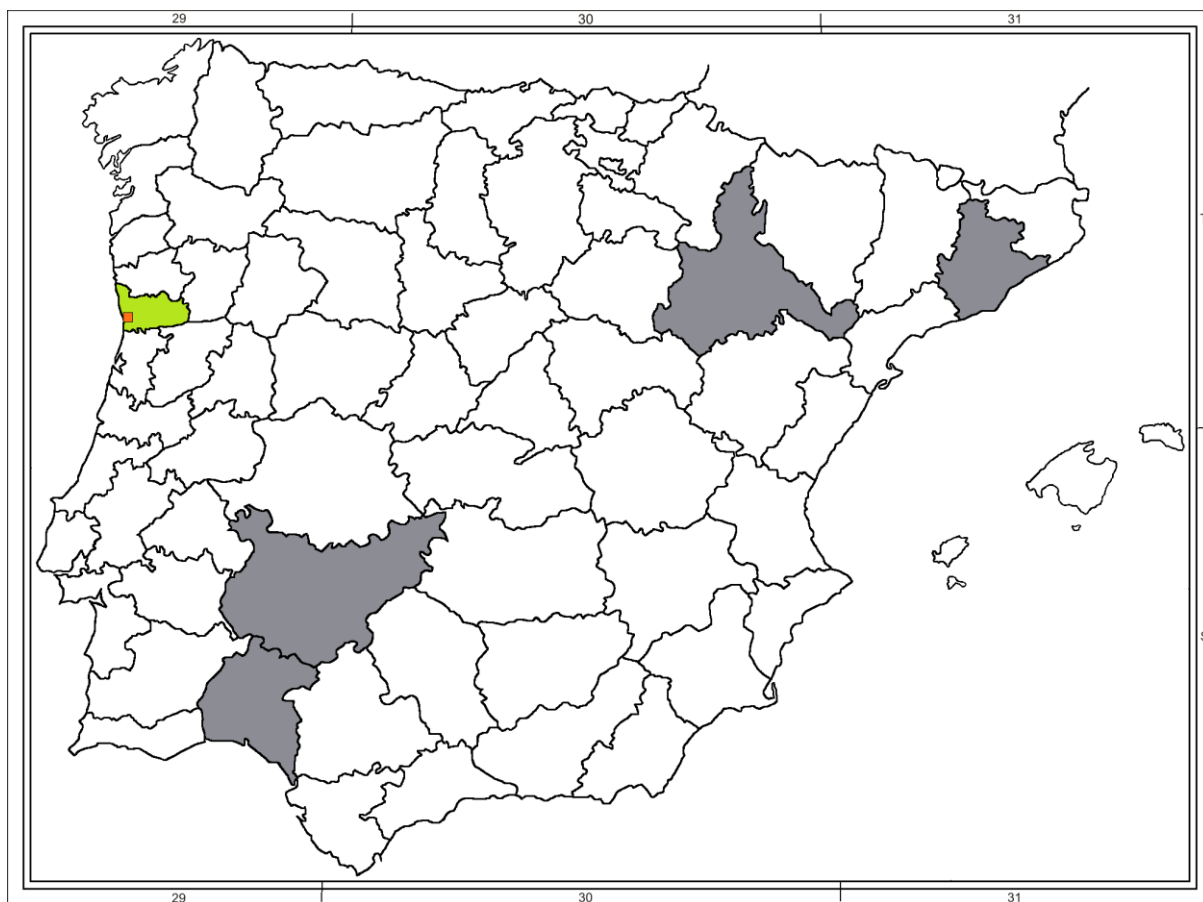
- BALVÍN, O., ROTH, S. & VILÍMOVA, J. 2015. Molecular evidence places the swallow bug genus *Oeciacus* Stål within the bat and bed bug genus *Cimex* Linnaeus (Heteroptera: Cimicidae). *Systematic Entomology*, **40**: 652-665.
- DE LOPE, F., GONZÁLEZ, G., PÉREZ, J.J. & MØLLER, A.P. 1993. Increased detrimental effects of ectoparasites on their bird hosts during adverse environmental conditions. *Oecologia*, **95**: 234-240.
- HILL, L.A. 1992. Observations at a colony of House Martins *Delichon urbica* in SW Spain, with particular reference to moult. *Ringing & Migration*, **13**(2): 113-116.
- LAMARCK, J.B.P.A.M. de. 1816. *Histoire naturelle des animaux sans vertèbres, présentant les caractères généraux et particuliers de ces animaux, leur distribution, leurs classes, leurs familles, leurs genres, et la citation des principales espèces qui s'y rapportent; précédée d'une Introduction offrant la Détermination des caractères essentiels de l'Animal, sa distinction du végétal et des autres corps naturels, enfin, l'Exposition des Principes fondamentaux de la Zoologie*. Tome troisième. Verdière, Paris. 586 pp.
- PÉRICART, J. 1972. *Hémiptères Anthocoridae, Cimicidae et Microphysidae de l'Ouest-paléarctique*. Faune de l'Europe et du Bassin Méditerranéen, 7. Edit. Masson, Paris. 402 pp.
- PÉRICART, J. 1996. Family Cimidae Latreille, 1802 - bed-bugs, pp. 141-144. In: AUKEMA, B. & RIEGER, C. (eds.). *Catalogue of the Heteroptera of the Palaearctic Region. Volume 2. Cimicomorpha I*. The Netherlands Entomological Society, Amsterdam. 361 pp.

SÁNCHEZ, A. 1920 (1918). Catalèg dels insectes del Museu pertanyents al ordre Hemíptera. *Publicacions de la Junta de Ciències Naturals de Barcelona*, **III**: 225-258.

TANCO, J. 2018. *Cimex hirundinis* Lamarck 1816 (Hemiptera: Cimicidae), primera cita para Aragón. *Revista gaditana de Entomología*, **IX**(1): 103-104.

TRILAR, T.; GOGALA, A. & GOGALA, M. 1997. Distribution of the swallow bug (*Oeciacus hirundinis*) in Slovenia, with an unusual finding in a fat dormouse (*Myoxus glis*) nest. *Acta entomologica slovenica*, **5**(1): 45-50.

USINGER, R.L. 1966. *Monograph of Cimicidae (Hemiptera - Heteroptera)*. Entomological Society of America, Maryland. 572 pp.



Map 1. - Iberian distribution of *Cimex hirundinis* Lamarck, 1816, with the previously known Spanish provinces in grey, the new Portuguese district in green, and the new Portuguese MGRS 100 km² square in orange.