

# New records of Dermestid beetles (Coleoptera, Dermestidae) from the Iberian Peninsula and the Balearics

## Nuevos registros de derméstidos (Coleoptera, Dermestidae) para la península ibérica y Baleares

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**Palabras clave:** Coleoptera, Dermestidae, península ibérica, islas Baleares, faunística, nuevos registros.

### ABSTRACT

New records of eight species of little known Dermestidae (Coleoptera) are given for the Ibero-Balearic fauna. Most of them represent first records at regional level: *Anthrenus* (*Anthrenus*) *munroi* Hinton, 1943 (Valencian Community); *Anthrenus* (*Nathrenus*) *biskrensis* Reitter, 1887 (Community of Madrid, second record from the Iberian Peninsula); *Attagenus* (*Attagenus*) *lobatus* Rosenhauer, 1856 (Balearic Islands); *Dermestes* (*Dermestes*) *hispanicus* Kalík, 1952 (Galicia); *Dermestes* (*Dermestinus*) *szekessyi* Kalík, 1950 (Balearic Islands); *Globicornis* (*Hadrotoma*) *hispanica* Pic, 1908 (Castilla-León, second record from the Iberian Peninsula); *Globicornis* (*Hadrotoma*) *sulcata* (Brisout de Barneville, 1866) (Andalusia) and *Megatoma* (*Megatoma*) *ruficornis* Aubé, 1866 (Navarre, third record from the Iberian Peninsula). Worldwide and Iberian distribution is provided for each species, as well as some additional remarks and illustrations.

### RESUMEN

Se aportan nuevos registros de ocho especies de Dermestidae (Coleoptera) poco conocidas para la fauna iberobaleares. La mayoría de ellos constituyen primeras citas a nivel regional: *Anthrenus* (*Anthrenus*) *munroi* Hinton, 1943 (Comunidad Valenciana); *Anthrenus* (*Nathrenus*) *biskrensis* Reitter, 1887 (Comunidad de Madrid, segunda cita para la península ibérica); *Attagenus* (*Attagenus*) *lobatus* Rosenhauer, 1856 (islas Baleares); *Dermestes* (*Dermestes*) *hispanicus* Kalík, 1952 (Galicia); *Dermestes* (*Dermestinus*) *szekessyi* Kalík, 1950 (islas Baleares); *Globicornis* (*Hadrotoma*) *hispanica* Pic, 1908 (Castilla y León, segunda cita para la península ibérica); *Globicornis* (*Hadrotoma*) *sulcata* (Brisout de Barneville, 1866) (Andalucía) y *Megatoma* (*Megatoma*) *ruficornis* Aubé, 1866 (Navarra, tercera cita para la península ibérica). Se proporciona la distribución mundial e ibérica de cada especie, así como algunos comentarios adicionales e ilustraciones.

## 1. INTRODUCTION

The family Dermestidae Latreille, 1804 is represented by about one hundred species in the Iberian Peninsula and the Balearic Islands, belonging to fourteen genera of the six subfamilies recognized worldwide (HÁVA, 2006a, 2007; HERRMANN & HÁVA, 2009; HÁVA 2015, 2018). Data on the presence and distribution of Dermestidae from this geographical area have increased significantly in the last two decades (see the bibliography compiled by PRIETO & HÁVA, 2013; HÁVA, 2015, 2018 and PRIETO *et al.*, 2018). These novelties cover partly a gap in the faunistic knowledge of the family, which has received, in general, little attention by local entomologists (HERRMANN & BAHILLO DE LA PUEBLA,

2003; HERRMANN & BAENA, 2004; BAHILLO DE LA PUEBLA & LÓPEZ-COLÓN, 2004, 2006; PRIETO *et al.*, 2018). The PhD thesis of Paulino Plata Negrache is an exception, but unfortunately it remains unpublished, and only a few chorological data of the treated species were published (PLATA NEGRACHE, 1972a, 1972b; HÁVA *et al.*, 2010). Most of the earlier records are compiled at the catalogues of Coleoptera of FUENTE (1929) and SEABRA (1943), referred respectively to the Ibero-Balearic area and Portugal. Distributional information for Dermestidae species is not currently available at the data bank of the Iberian Fauna Project (IBERFAUNA, 2005), and its taxonomical list needs to be updated.

Part of the recent contributions are based on faunistic inventories of Dermestidae at regional level (BAHILLO DE LA PUEBLA & LÓPEZ-COLÓN, 2006; HÁVA *et al.*, 2010; PRIETO & HÁVA, 2013; SÁEZ BOLAÑO *et al.*, 2013; PRIETO *et al.*, 2018, among others). Studies about urban entomology in Spain have provided noteworthy records of little known species (GAMARRA & OUTERELO, 1992; OUTERELO & GAMARRA, 1996; FERNÁNDEZ-CARRILLO & FERNÁNDEZ-CARRILLO, 2009; GAMARRA *et al.*, 2009; HERNÁNDEZ *et al.*, 2009). Research on biodiversity and ecology of saproxylic beetles have become in the last years another source of interesting records of Iberian Dermestidae (see, among others, PÉREZ MORENO & MORENO GRIJALBA, 2009; GARCÍA LÓPEZ *et al.*, 2013; ROSA MALDONADO, 2014; GARCÍA-LÓPEZ *et al.*, 2016; RECALDE IRURZUN & SAN MARTÍN MORENO, 2016 and RAMILO *et al.*, 2017).

Taxonomic and nomenclatural problems concerning some Ibero-Balearic taxa still remain to be solved. Specific ascription of old records for certain species should be considered carefully, taking into account the later description of new species very close morphologically (KALÍK, 1952; HÁVA, 1999; ZHANTIEV, 2001; HÁVA, 2003, 2005). These difficulties extend also to groups of species, such as the *Anthrenus* (A.) *pimpinellae* (Fabricius, 1775) complex (KADEJ, 2005; KADEJ *et al.*, 2007), some representatives of *Attagenae* Latreille, 1802 included into the former subgenus *Telopes* Redtenbacher in Russegger, 1843 (HERRMANN & BAENA, 2004), or those species of *Trogoderma* Dejean, 1821 showing external resemblance to *T. versicolor* (Creutzer, 1799) (PEACOCK, 1993; HÁVA, 2006b, 2011). Moreover, most of Dermestid beetles of genera such as *Globicornis* Latreille in Cuvier, 1829 or *Megatoma* Herbst, 1791, have rarely been reported at the Iberian Peninsula.

This work provides new records and faunistic remarks of species poorly known for the Ibero-Balearic fauna of Dermestidae, including some belonging to the taxa above mentioned.

## 2. MATERIAL AND METHODS

The studied specimens are deposited in the private collection of Andreas Herrmann, Stade, Germany (AHEC) or in the entomological collection of the Museu de Ciències Naturals de Barcelona (MCNB), Spain. Register numbers of the specimens deposited in the MCNB are indicated, preceded by the acronym MZB ("Museu de Zoologia de Barcelona"). Photographs of the habitus are provided for some of the studied species, based on specimens deposited in both collections. The website of one of the authors (Herrmann, 2018) shows a gallery of images of all the species mentioned in this work, including genitalia and other morphological details. The nomenclature and worldwide distribution for each species follows the Dermestidae catalogues of Háva (2015, 2018).

## 3. RESULTS AND DISCUSSION

Subfamily Dermestinae Latreille, 1804  
Tribe Dermestini Latreille, 1804  
Genus *Dermestes* Linnaeus, 1758

*Dermestes* (*Dermestes*) *hispanicus* Kalík, 1952

Material examined: SPAIN: Galicia: province of Lugo: Monforte de Lemos, U.T.M. 29TPH20: 20-VII/27-VI-2001, J. Pérez Valcárcel *leg.* (light trap), 1 ♀; 27-VI/2-VII-2001, same collector (light trap), 1 ♂. Both specimens M. Prieto *det.* (MZB 2018-0129 and MZB 2018-0130, respectively).

Remarks: Species with a Western-Mediterranean distribution, found in Algeria, Morocco, Portugal, Sardinia, Spain, and Tunisia. In Spain, it occurs in the autonomous communities of Andalusia, Aragón, Castilla-La Mancha, Castilla-León, Extremadura and Madrid (KALÍK, 1952; HÁVA *et al.*, 2010; GARCÍA LÓPEZ *et al.*, 2013, 2016; PRIETO & HÁVA,

2013; SÁEZ BOLAÑO *et al.*, 2013; RAMILO *et al.*, 2017). The first record for Portugal was recently provided by HÁVA (2010a) from the locality of Castelo Branco.

*Dermestes (D.) hispanicus* belongs to the species group of *D. (D.) bicolor* Fabricius, 1781 (HÁVA, 2004, 2015). Both species looks very similar externally. *Dermestes (D.) hispanicus* differs from *D. (D.) bicolor* in its more elongated shape (with higher elytral length/pronotal length ratio), in the conformation of the male genitalia, and in the presence of a triangular depression in the anterior angles of the first visible abdominal sternite (KALÍK, 1952; HÁVA, 2004, 2010a) (Figure 1a-d). According to SÁEZ BOLAÑO *et al.* (2013), it seems a rare species in the Iberian Peninsula. Due to the similarity of both species it is possible that some old records of *D. (D.) bicolor*, previous to the description of *D. (D.) hispanicus*, could correspond actually to the latter. We provide the first record from Galicia, which constitutes the northernmost limit of the species distributional range.

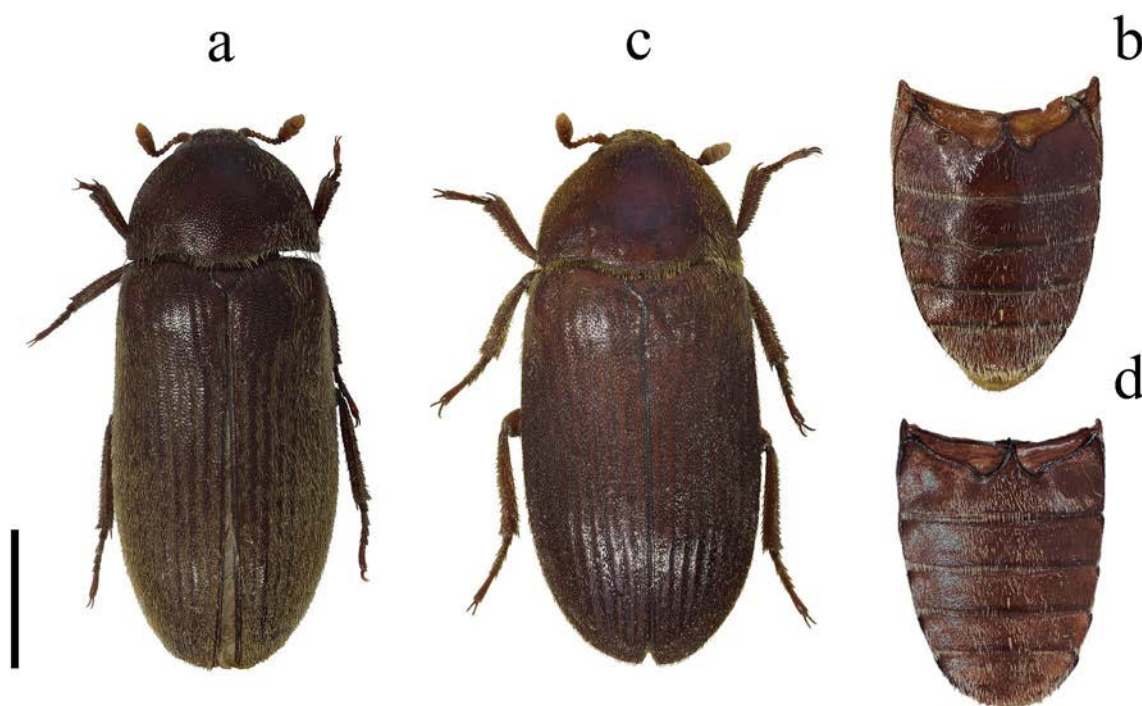


Figure 1. *Dermestes (Dermestes) hispanicus* Kalík, 1952: a) habitus, b) abdomen of the male (MZB 2018-0129 and MZB 2018-0130, respectively). *Dermestes (Dermestes) bicolor* Fabricius, 1781: c) habitus, d) abdomen of the male (MZB 83-8550 and AHEC, respectively). Scale bar: 2 mm.

#### *Dermestes (Dermestinus) szekessyi* Kalík, 1950

Material examined: SPAIN: Balearic Islands: Mallorca: Escorca, Monasterio de Lluç [=Santuari de Santa Maria de Lluç], 18-V-1997, Scherm leg., 2 ♂♂, A. Herrmann det. (AHEC).

Remarks: Euro-Siberian species, widely distributed in Europe, Byelorussia, Ukraine, parts of Russia (Astrakhan, Novosibirsk, Stavropol and Tuva), Caucasus, Kazakhstan and Mongolia. The first citation for the Iberian fauna was given by HÁVA (2006a) based on material captured from the surroundings of Roses (province of Girona). Recorded also from two other provinces of Catalonia (Barcelona and Tarragona), and from the province of Teruel, Aragón (PRIETO & HÁVA, 2013). First record from the Balearic Islands. The known Ibero-Balearic distribution of the species is circumscribed to the northeastern quadrant.

*Dermestes (Dermestinus) szekessyi* and *Dermestes (Dermestinus) gyllenhalii* Laporte de Castelnau, 1840 (also present in the Iberian Peninsula) are the only representatives of the species group of *D. (Dermestinus) gyllenhalii* (HÁVA, 2015) (Figure 2a, b). Both species are similar, but differ by the pubescence of the pronotum (with a glabrous area at the middle of the disc in *D. (Dermestinus) gyllenhalii*), the pubescence of the elytrae

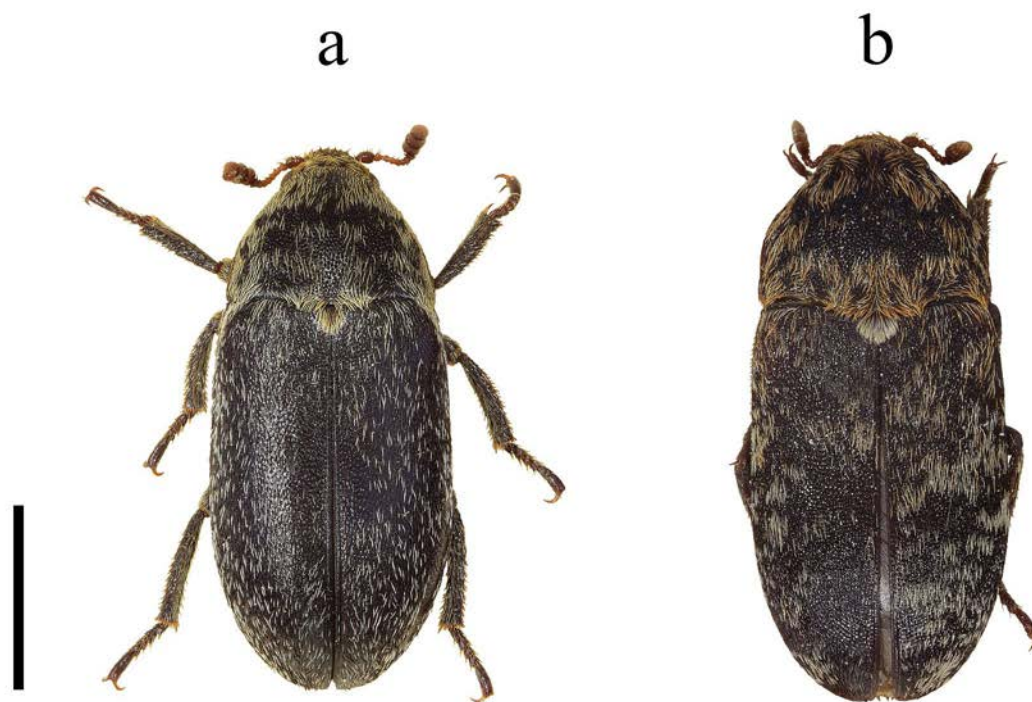


Figure 2. a) habitus of *Dermestes (Dermestinus) szekessyi* Kalik, 1950 (MZB 83-8738), b) habitus of *Dermestes (Dermestinus) gyllenhalii* Laporte de Castelnau, 1840 (MZB 83-8728). Scale bar: 2 mm.

(forming patches of setae in *D. (Dermestinus) gyllenhalii*), the different elongation of the antennal club, and the male genitalia (KALÍK, 1950).

Subfamily Attageninae Laporte de Castelnau, 1840  
Tribe Attagenini Laporte de Castelnau, 1840  
Genus *Attagenus* Latreille, 1802

*Attagenus (Attagenus) lobatus* Rosenhauer, 1856

Material examined: SPAIN: Balearic Islands: Menorca: Ciutadella, 28-VIII-1956, collector unknown, 1 ♀, M. Prieto det. (MZB 83-9188).

Remarks: Species known from some countries of the Mediterranean Europe (introduced into the Czech Republic), North Africa, Turkey, Western and Central Asia, Russia, Afghanistan, Pakistan, India, China and Mongolia; introduced into the United States (HÁVA & NARDI, 2011). There is scarce information about its presence in the Iberian Peninsula, limited so far to the central area of Spain and the province of Barcelona (GAMARRA *et al.*, 2009; PRIETO, 2013; PRIETO *et al.*, 2018). In both cases, the data were obtained from sampling methods in urban environment, using sticky traps. The locality of Ciutadella represents the first record from the Balearic Islands.

It is considered a synanthropic and harmful species (GAMARRA *et al.*, 2009) that can damage both animal and plant materials. According with HINTON (1945) it is associated with products such as skins, furs, feathers, woollen goods, grains or red pepper. *Attagenus (A.) lobatus* has also been detected in zoological collections (HINTON, 1945; HAGSTRUM & SUBRAMANYAM, 2009; PRIETO, 2013).

Subfamily Megatominae Leach, 1815  
Tribe Anthrenini Gistel, 1848  
Subtribe Anthrenina Gistel, 1848  
Genus *Anthrenus* Geoffroy, 1762

*Anthrenus (Anthrenus) munroi* Hinton, 1943

Material examined: SPAIN: Castilla-La Mancha: province of Ciudad Real: Pozuelo de Calatrava, date unknown, J. M. De la Fuente leg., ex coll. A. Codina, 1 ex., M. Prieto



det. (MZB 71-8681). Comunitat Valenciana: province of Alicante: Pego, 10-V-2004, J. M. Diéguez leg., 1 ex., M. Prieto det. (MZB 2010-1476).

Remarks: Mediterranean element, present in Algeria, Bulgaria, Corsica, Cyprus, France, Israel, Italy, Jordania, Lebanon, Libya, Macedonia, Morocco, Portugal, Sardinia, Spain, Syria, Tunisia, Turkey and Ukraine (Crimea). Records from the Iberian Peninsula are scarce and recent: Castelo Branco, in Portugal (HÁVA, 2010b); province of Teruel (HÁVA et al., 2010); Sierra de Tudía, in the province of Badajoz (SÁEZ BOLAÑO et al., 2013) and the province of Barcelona (PRIETO, 2017a; PRIETO et al., 2018). The citizen science platform BIODIVERSIDAD VIRTUAL (2018) shows photographs of specimens from the provinces of Huelva and Toledo (determined by A. Herrmann). First record from the Valencian Community and second from the Castilla-La Mancha autonomous community.

*Anthrenus* (A.) *munroi* belongs to the group of species of A. (A.) *pimpinellae* (Fabricius, 1775) (KADEJ, 2005; KADEJ et al., 2007). This group is represented by seven species in the Iberian Peninsula (HÁVA, 2007, 2015), sharing a similar external appearance: A. (A.) *angustefasciatus* Ganglbauer, 1904, A. (A.) *delicatus* Kiesenwetter, 1851, A. (A.) *dorsatus* Mulsant & Rey, 1868, A. (A.) *festivus* Erichson, 1846, A. (A.) *goliath* Saulcy in Mulsant & Rey, 1868, A. (A.) *munroi* Hinton, 1943 and A. (A.) *pimpinellae* (Fabricius, 1775), the latter with two subspecies. Most of these species were considered as varieties of A. (A.) *pimpinellae* in the catalogue of FUENTE (1929). It is possible that some old records attributed to A. (A.) *pimpinellae* actually correspond to A. (A.) *munroi*, described later (PRIETO, 2017a). *Anthrenus* (A.) *munroi* is distinguished by the characteristic shape of its antennal club, with the apical segment asymmetrical and the line of separation from the previous segment running obliquely (HINTON, 1943).

*Anthrenus* (*Nathrenus*) *biskrensis* Reitter, 1887

Material examined: SPAIN: Community of Madrid: San Agustín de Guadalix, I-VII-2000, Fong & Maté leg., 1 ex., A. Herrmann det. (AHEC).

Remarks: The distribution of this species is restricted so far to the western Mediterranean region: Algeria, Lampedusa Island (Italy), Libya, Malta, Morocco, Sicily, Spain and Tunisia. The only Iberian record that we have found was provided by HÁVA et al. (2014), based on four specimens collected in La Bastida (province of Salamanca) at the Sierra de las Quilamas Natural Area. This is one of the areas selected by GARCÍA-LÓPEZ et al. (2016) for their research on saproxylic coleoptera, all consisting of Mediterranean woodlands dominated by *Quercus pyrenaica* Willd. The specimens were captured using windows traps, during a sampling carried out between February and September 2013.

Besides A. *biskrensis*, the subgenus *Nathrenus* Casey, 1900 is represented in the Iberian Peninsula by other three species (Figure 3a-d): A. (N.) *molitor* Aubé, 1850, A. (N.) *signatus* Erichson, 1846 and A. (N.) *verbasci* (Linnaeus, 1767). The first record of A. (N.) *signatus* for the Iberian Peninsula (Spain) was recently provided by HÁVA (2015) in his world catalogue of Dermestidae.

The specimen from the locality of San Agustín de Guadalix constitutes the second record of A. (N.) *biskrensis* for the Iberian Peninsula, and the first for the Autonomous Community of Madrid. The two known localities for the species are placed in the Central System, a system of mountain ranges in the centre of the Iberian Peninsula.

Tribe Megatomini Leach, 1815

Subtribe Megatomina Leach, 1815

Genus *Globicornis* Latreille in Cuvier, 1829

*Globicornis* (*Hadrotoma*) *hispanica* Pic, 1908

Material examined: SPAIN: Castilla y León: province of Salamanca: Campanarios de Azaba: 21-V-2010, E. Micó, J. Quinto & R. Briones leg., 7 ♂♂ + 1 ♀; 29-VII-2010, same collectors, 1 ♀. All specimens A. Herrmann det. (AHEC).

Remarks: Iberian endemism. Described from the surroundings of Madrid (PIC, 1908), and more precisely from the locality of Moncloa, according to the label of the holotype ♂ (HÁVA, 2008). This record is compiled by FUENTE (1929). PLATA NEGRACHE (1972a) and the data bank of the Iberian Fauna Project (IBERFAUNA, 2005), indicate the presence of the species in the Iberian Peninsula, but without providing precise localities. *Globicornis* (H.) *hispanica* looks similar to G. (H.) *emarginata* (Gyllenhal, 1808), but differs

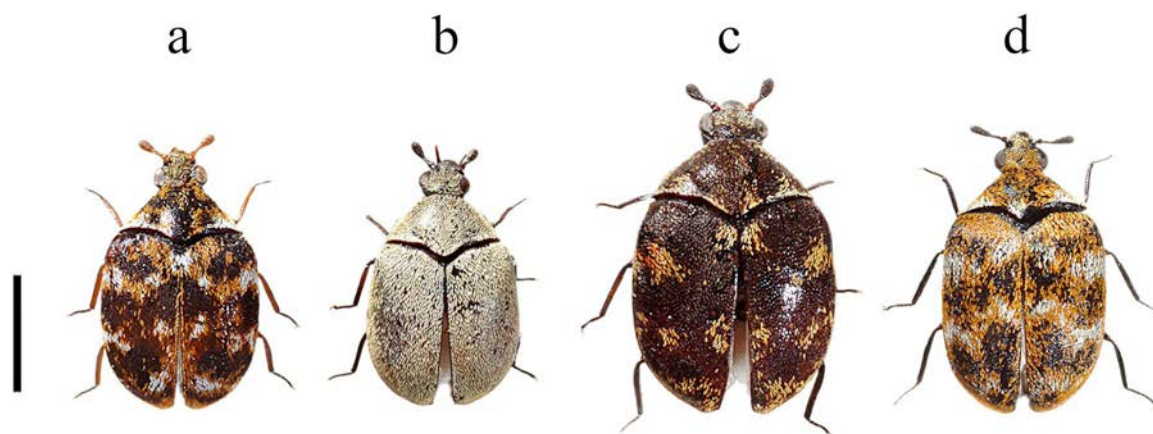


Figure 3. Male habitus of the Iberian species of *Anthrenus* subgenus *Nathrenus* Casey, 1900: a) *A. (N.) biskrensis* Reitter, 1887; b) *A. (N.) molitor* Aubé, 1850; c) *A. (N.) signatus* Erichson, 1846; d) *A. (N.) verbasci* (Linnaeus, 1767). Specimens from the AHEC. Scale bar: 1 mm.

mainly in the shape of the antennal club of the male, narrower and longer in *G. (H.) hispanica* (Figure 4a, b).

The studied material was collected from the Campanarios de Azaba, in the southern of the province of Salamanca. This biological reserve has been object in the last years of several ecological and conservationists studies on saproxylic beetles (MICO *et al.*, 2010; RAMÍREZ-HERNÁNDEZ *et al.*, 2015; GARCÍA-LÓPEZ *et al.*, 2016). The prospected area consist of savannah-like open woodland (known as “dehesa”, in Spain) dominated by *Quercus pyrenaica* Willd. and *Q. rotundifolia* Lam. We have not found other precise citations apart from the type material, so the record provided would represent the second for the Iberian Peninsula and the first for the autonomous community of Castilla-León.

*Globicornis (Hadrotoma) sulcata* (Brisout de Barneville, 1866)

Material examined: SPAIN: Andalusia: date and collector unknown, 1 ♀, A. Herrmann *det.* (AHEC). Guadarrama: date and collector unknown, 1 ♀, A. Herrmann *det.* (AHEC).

Remarks: South-European element (Figure 4c), occurring in France, Italy, Sicily, Spain and Switzerland. As most of the species of *Globicornis*, it is known in the Iberian Peninsula from sparse records. Quoted by FUENTE (1929) from Cáceres, El Escorial and Segovia, and most recently by RAMILO *et al.* (2017) from Sierra de las Quilamas Natural Area (province of Salamanca) and by BAHILLO DE LA PUEBLA & ALONSO ROMÁN (2018) from the locality of Huetos (Araba, Basque Country). The record of RAMILO *et al.* (2017) is based on numerous specimens captured from areas populated by *Quercus pyrenaica* Willd, using the sampling techniques indicated above, in line with other studies on saproxylic beetles carried out in the area (GARCÍA-LÓPEZ *et al.*, 2016).

Data about the provenance of the studied specimens are not precise, but we have not found previous citations for these areas. The record from Andalusia represents the southwesternmost limit of the species distributional range.

*Megatoma (Megatoma) ruficornis* Aubé, 1866

Material examined: SPAIN: Navarra: Garde, Valle de Roncal, fir forest (*Abies alba* Mill.), I-VII-2013, J. I. Recalde & A. F. San Martín *leg.*, 1 ♀, A. Herrmann *det.* (AHEC).

Remarks: Species distributed mainly in Southern Europe: Crete, Cyprus, France, Greece, Hungary, Italy, Lebanon, Serbia, Slovakia, Spain, Turkey and Ukraine. Data about its presence in the Iberian Peninsula are recent. The first record was given by HÁVA *et al.* (2013) from the locality of Cella, in the Sierra de Albarracín (province of Teruel). The record of PRIETO (2017b) is based on a male from the Pyrenees of Lleida, captured in a transition zone between forests of *Pinus sylvestris* L. and *acidophyllous meadows* with *Corylus avellana* L. *Megatoma (M.) ruficornis* is less known than *M. (M.) undata* (Linnaeus,

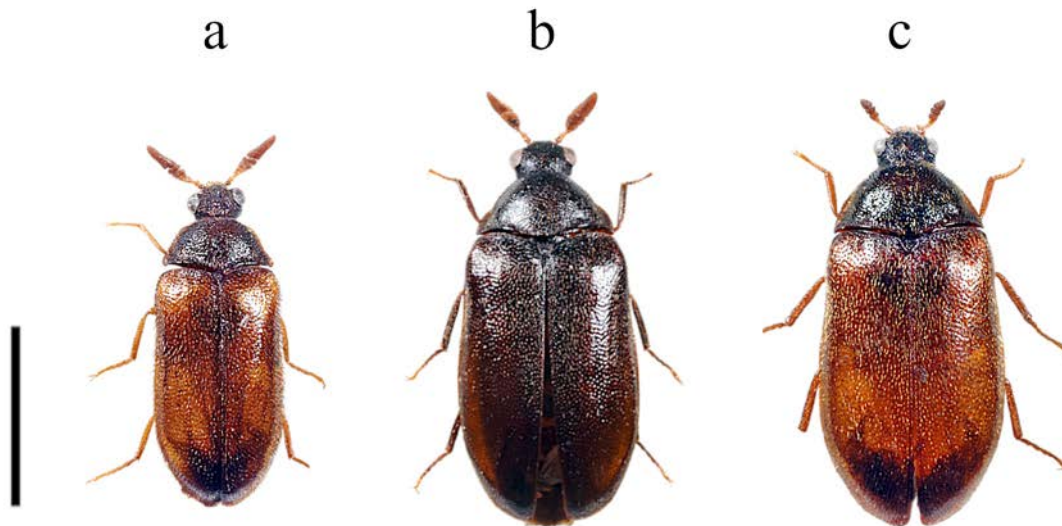


Figure 4. Habitus of: a) *Globicornis (Hadrotoma) hispanica* Pic, 1908 ♂; b) *G. (H.) emarginata* (Gyllenhal, 1808) ♂; c) *G. (H.) sulcata* (Brisout de Barneville, 1866) ♀. Specimens from the AHEC. Scale bar: 2 mm.

1758), the other species of the genus present in the Iberian Peninsula (PRIETO *et al.*, 2018).

The studied specimen is part of the material collected during a sampling campaign for the study of the saproxylic beetles in two Pyrenean forests of Valle de Roncal, Navarra (RECALDE IRURZUN & SAN MARTÍN MORENO, 2016). It was captured in a fir forest (*Abies alba* Mill.) by means of the usual trapping methods for such studies (RECALDE IRURZUN & SAN MARTÍN MORENO, 2016). In fact, the rare records of *M. (M.) ruficornis* known from other neighbouring countries were obtained mostly from inventories of saproxylic coleoptera (PRIETO, 2017b). The record given represents the third for the Iberian Peninsula and the first one for Navarra. The known localities for *M. (M.) ruficornis* are placed in mountain areas of the northeastern quadrant of Spain, covering an elevation range from 800 to 1550 m.

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