

UPDATED CHECK-LIST OF IBERIAN-BALEARIC APHIDINI (HEMIPTERA, APHIDIDAE)

F. García Prieto, N. Pérez Hidalgo, M. P. Mier Durante
and J. M. Nieto Nafría*

ABSTRACT

The check-list of species in the Tribe Aphidini (Hemiptera, Aphididae: Aphidinae) recorded to date from the Iberian Peninsula and Balearic Isles is presented, 139 species are listed. A list of the countries (Andorra, Spain and Portugal) and provinces (Spanish) or districts (Portuguese) where each species and subspecies is known is also included. Five species are mentioned for the first time in Iberian-Balearic territory: *Aphis callunae* Theobald, *A. comosa* (Börner), *A. lantanae* Koch (with the subspecies *A. lantanae coriaria* Börner), *A. erigerontis* Holman and *Schizaphis longicaudata* Hille Ris Lambers. Nine species have been removed from the check-list: *Aphis euphorbiae* Kaltenbach, *A. genistae* Scopoli, *A. pilosellae* (Börner), *A. salsolae* (Börner), *A. striata* Hille Ris Lambers, *Brachyunguis zygophylli* (Nevsky), *B. suaedus* (Paik), *Protaphis centaurea* (Gómez-Menor) and *Schizaphis pilipes* (Ossiannilsson). *Aphis ruborum* Börner & Schilder, 1931 is recognized as the valid name for *Aphis ruborum* Börner, 1932 **syn. nov.** and *Rhopalosiphum oxyacanthae* (Schrank) for *Rhopalosiphum insertum* (Walker). Two new combinations are established: *Xerobion blascoi* **comb. nov.** for *Aphis blascoi* García Prieto & Sanchis Segovia and *Xerobion brutii* **comb. nov.** for *Absinthaphis brutii* Barbagallo. Five binomens have been re-established: *A. althaeae* (Nevsky), *A. ballotae* Passerini, *A. longirostris* (Börner), *A. ononidis* (Schouteden) and *A. picridis* (Börner) to replace *A. davletshinae* Hille Ris Lambers, *A. balloticola* Szelegiewicz, *A. longirostrata* Hille Ris Lambers, *A. kaltenbachi* Hille Ris Lambers and *A. stroyani* Szelegiewicz, respectively. The life cycle of *Aphis stachydis* Mordvilko is given and its males and oviparous females are described. Taxonomic, faunistics and nomenclatural data of other taxa are also given.

Key words: Hemiptera, Aphididae, Aphidini, aphids, Iberian-Balearic check-list, new synonyms, new combinations.

RESUMEN

Lista actualizada de los Aphidini (Hemiptera, Aphididae) ibero-baleares

Se presenta el catálogo de las especies de la tribu Aphidini (Hemiptera, Aphididae: Aphidinae) citadas hasta este momento en la península Ibérica e islas Baleares, con 139 especies. Se relacionan los países (Andorra, España y Portugal) y las provincias (españolas) o distritos (portugueses) en los que se han citado cada una de las especies y en su caso subespecies. Cinco especies se citan por primera vez en territorios ibero-baleares: *Aphis callunae* Theobald, *A. comosa* (Börner), *A. lantanae* Koch (con la subespecie *A. lantanae coriaria* Börner), *A. erigerontis* Holman y *Schizaphis longicaudata* Hille Ris Lambers. Nueve especies se suprimen del catálogo ibero-baleares de la tribu: *Aphis euphorbiae* Kaltenbach, *A. genistae* Scopoli, *A. pilosellae* (Börner), *A. salsolae* (Börner), *A.*

Departamento de Biología Animal; Universidad de León; 24071 León (Spain).

* dbajnn@unileon.es

striata Hille Ris Lambers, *Brachyunguis zygophylli* (Nevsky), *B. suaedus* (Paik), *Protaphis centaurea* (Gómez-Menor) y *Schizaphis pilipes* (Ossiannilsson). Se establece que *Aphis ruborum* Börner & Schilder, 1931 es el nombre válido para *Aphis ruborum* Börner, 1932 **sin. nov.** y que *Rhopalosiphum oxyacanthae* Schrank lo es para *Rhopalosiphum insertum* (Walker). Se establecen dos nuevas combinaciones: *Xerobion blascoi* **comb. nov.** para *Aphis blascoi* García Prieto & Sanchis Segovia y *Xerobion brutii* **comb. nov.** para *Absinthaphis brutii* Barbagallo. Se restablece el uso de 5 binómenos: *A. althaeae* (Nevsky), *A. ballotae* Passerini, *A. longirostris* (Börner), *A. ononidis* (Schouteden) y *A. picridis* (Börner) en lugar respectivamente de *A. davletshinae* Hille Ris Lambers, *A. balloticola* Szelegiewicz, *A. longirostrata* Hille Ris Lambers, *A. kaltenbachi* Hille Ris Lambers y *A. stroyani* Szelegiewicz. Se da a conocer con seguridad el ciclo vital de *Aphis stachydis* Mordvilko y se describen sus hembras ovíparas y machos. Sobre varios taxones se ofrecen informaciones taxonómicas, faunísticas y nomenclaturales.

Palabras clave: Hemiptera, Aphididae, Aphidini, pulgones, lista faunística íbero-balear, nuevas sinonimias, nuevas combinaciones.

Introduction

To date, 142 aphid species belonging to the Tribe Aphidini Latreille, 1802 (Hemiptera, Aphididae) in the taxonomical sense of Remaudière & Remaudière (1997), have been recorded from the Iberian-Balearic territory, with 13 species recorded from Andorra (Seco Fernández *et al.*, 1998), 70 from continental Portugal (Ilharco, 1996; Aldryhim & Khalil, 1996; Ilharco, 2002) and 135 from peninsular Spain and the Balearic Isles (Nieto Nafría *et al.*, 1984; Blackman & Eastop, 1984; Stroyan, 1984; Nieto Nafría & Mier Durante, 1985; Nieto Nafría *et al.*, 1986; Meliá Masiá, 1986; Arcos & Cabello, 1988; Nieto Nafría *et al.*, 1987; Mier Durante *et al.*, 1989; Nieto Nafría *et al.*, 1990a; Nieto Nafría *et al.*, 1990b; Meliá Masiá, 1991; Mier Durante & Nieto Nafría, 1991; Nieto Nafría *et al.*, 1991; Tizado Morales, 1991; Tizado Morales & Nieto Nafría, 1991; Meliá Masiá, 1995; Mier Durante *et al.*, 1996; García Prieto & Sanchis Segovia, 1998; Michelena *et al.*, 1998; Meliá Masiá, 2003).

Within the framework of the research programme on Iberian-Balearic aphid fauna (Nieto Nafría & Mier Durante, 1998; Nieto Nafría *et al.*, 2003), we have reviewed the specimens belonging to the subtribe Aphidini (in the taxonomical sense according to Remaudière & Remaudière, 1997) in the aphid collection of Leon University [Department of Animal Biology], as well as the bibliographical references for specimens in other collections, some of which we have been able to study.

Results

As a result of the study:

- 5 species are included in the Iberian-Balearic check-list of Aphidini: *Aphis callunae* Theobald, 1915, *A. comosa* (Börner, 1950), *A. lantanae* Koch, 1854, *A. erigerontis* Holman, 1966 and *Schizaphis longicaudata* Hille Ris Lambers, 1939.
- 9 species are removed from the mentioned check-list: *Aphis euphorbiae* Kaltenbach, 1843, *A. genistae* Scopoli, 1763, *A. pilosellae* (Börner, 1952), *A. salsolae* (Börner, 1940), *A. striata* Hille Ris Lambers, 1976, *Brachyunguis zygophylli* (Nevsky, 1929), *B. suaedus* (Paik, 1965), *Protaphis centaurea* (Gómez-Menor, 1950) and *Schizaphis pilipes* (Ossiannilsson, 1959).
- The Iberian-Balearic Aphidini-fauna now consists of 139 species. Of these, 20 are from Andorra, 71 from continental Portugal and 131 from peninsular Spain and Balearic Isles.

THE IBERIAN-BALEARIC CHECK-LIST OF SPECIES AND SUBSPECIES BELONGING TO THE TRIBE APHIDINI

The provinces (in Spain) and districts (in Portugal) where they are known are listed. The national, provincial or district first record is indicated with an asterisk (*). For species with two or more subspecies the list of provinces and districts where the species was recorded includes those related to all its subspecies and also those corresponding to records without reference to subspecies.

The Spanish provinces and Portuguese districts are given in Spanish and Portuguese, respectively.

Different contributions for several species (on faunistics, morphology, taxonomy, bionomics or nomenclature) are given at the end of the list in "notes on the check-list".

Subfamily **APHIDINAE** Latreille, 1802 [Aphidii]

Tribe **APHIDINI** Latreille, 1802

Subtribe **APHIDINA** Latreille, 1802

Genus *Anthemidaphis* Tashev, 1967 [see note 1]

Anthemidaphis oligommata Tashev, 1967

ANDORRA. SPAIN: León.

Genus *Aphis* Linnaeus, 1758

Subgenus *Aphis* Linnaeus, 1758

Aphis (Aphis) acetosae Linnaeus, 1767

ssp. *acetosae* Linnaeus, 1767

SPAIN: León.

Aphis (Aphis) affinis Del Guercio, 1911

PORTUGAL: Braga, Bragança, Castelo Branco, Faro, Lisboa, Portalegre and Setúbal. SPAIN: Asturias, Castellón, Madrid, *Orense, Segovia, Toledo and Valencia.

Aphis (Aphis) alienus Theobald, 1915 [see note 2]

PORTUGAL: Braga. SPAIN: Ávila, Cantabria, León and Orense.

Aphis (Aphis) althaeae (Nevsky, 1929) [see note 3]

ssp. *althaeae* (Nevsky, 1929) [see note 4]

SPAIN: Castellón, León, Madrid, Salamanca, Sevilla, Soria, Teruel, Toledo, Vizcaya and Zamora.

Aphis (Aphis) arbuti Ferrari, 1872

PORTUGAL: Aveiro, Braga, Castelo Branco, Leiria, Lisboa, Setúbal and Vila Real. SPAIN: Islas Baleares; Barcelona, Cantabria, Castellón, Gerona, León, Orense and Salamanca.

Aphis (Aphis) armata Hausmann, 1802 [see note 5]

PORTUGAL: Aveiro.

Aphis (Aphis) ballotae Passerini, 1860 [see note 6]

SPAIN: *Burgos, Granada, León, Madrid, Teruel and Valencia.

Aphis (Aphis) brotericola Mier Durante, 1978

SPAIN: Albacete, Alicante, Almería, Burgos, Castellón, Cuenca, Granada, Madrid, Salamanca, Soria, Teruel, Toledo, Valencia and Zamora.

Aphis (Aphis) brunellae Schouteden, 1903

SPAIN: Orense and Soria.

Aphis (Aphis) brunnea Ferrari, 1872

SPAIN: Almería, *Jaén, Soria and Valencia.

Aphis (Aphis) bupleuri (Börner, 1932)

SPAIN: Almería, Teruel and Valencia.

Aphis (Aphis) callunae Theobald, 1915 [see note 7]

*SPAIN: León and Lérída.

Aphis (Aphis) caroliboerneri (Remaudière, 1952)

SPAIN: Castellón and Valencia.

Aphis (Aphis) chloris Koch, 1854

SPAIN: Islas Baleares; *Albacete, Asturias; *Barcelona, Cáceres, Cantabria, Granada, Guipúzcoa, *Huesca, *Jaén, León, *Murcia, Orense, Salamanca, Soria, Valencia, Zamora and Zaragoza.

Aphis (Aphis) cisticola Leclant & Remaudière, 1972

PORTUGAL: Santarem. SPAIN: Islas Baleares; Alicante, Almería, Ávila, Cáceres, Cádiz, Cuenca, León, Lugo, Orense, Salamanca, Soria, Teruel, Valencia and Zamora.

Aphis (Aphis) clematidis Koch, 1854

ssp. *clematidis* Koch, 1854

SPAIN: Granada and Valencia.

Aphis (Aphis) clinopodii Passerini, 1862

SPAIN: *Asturias, León and Orense.

Aphis (Aphis) commensalis Stroyan, 1952

PORTUGAL: Bragança.

Aphis (Aphis) comosa (Börner, 1950) [see note 8]

*SPAIN: León, Lérída and Zaragoza.

Aphis (Aphis) confusa Walker, 1849

SPAIN: Asturias, Cantabria, Castellón, León, Valencia and Zamora.

Aphis (Aphis) coronillae Ferrari, 1872 [see note 9]

ANDORRA.

Aphis (Aphis) craccaae Linnaeus, 1758

SPAIN: Cáceres, *Huesca, León and *Lérída.

Aphis (Aphis) craccivora Koch, 1854

ssp. *craccivora* Koch, 1854 [see note 10]

ANDORRA. PORTUGAL (14 of the 18 continental districts): Aveiro, Beja, Braga, Coimbra, Evora, Faro, Guarda, Leiria, Lisboa, Portalegre, Porto, Santarem, Setúbal and Viseu. SPAIN (41 of the 47 peninsular provinces): Islas Baleares; Álava, *Albacete, Alicante, Almería, *Asturias, Ávila, Badajoz, *Barcelona, Burgos, Cáceres, Cádiz, Cantabria, Castellón, Córdoba, Cuenca, *Gerona, Granada, Guipúzcoa, Huesca, Jaén, *La Coruña, La Rioja, León, Lérída, Lugo, Madrid, Málaga, Murcia, Navarra, Orense, Pontevedra, Salamanca, Segovia, Sevilla, Soria, Tarragona, Teruel, Valencia, Vizcaya, Zamora and Zaragoza.

Aphis (Aphis) crepidis (Börner, 1940) [see note 11]

PORTUGAL: Setúbal. SPAIN: Islas Baleares; León and Valencia.

Aphis (Aphis) cytisorum Hartig, 1841ssp. *cytisorum* Hartig, 1841

SPAIN: Álava, Alicante, Almería, Ávila, Burgos, Cádiz, Cantabria, Castellón, Granada, Guipúzcoa, Jaén, *La Coruña, León, *Lérida, Lugo, Orense, Pontevedra, Salamanca, Sevilla, Soria, Toledo, Valencia, *Valladolid, Zamora and *Zaragoza.

ssp. *sarothamni* Franssen, 1928

PORTUGAL: Aveiro, Castelo Branco, Guarda, Leiria, Lisboa, Portalegre, Setúbal and Viseu.

Aphis (Aphis) etiolata Stroyan, 1952

SPAIN: León.

Aphis (Aphis) fabae Scopoli, 1763 [see note 12]

*ANDORRA. PORTUGAL (15 of the 18 continental districts): Aveiro, Beja, Braga, Bragança, Coimbra, Evora, Faro, Guarda, Lisboa, Portalegre, Porto, Santarem, Setúbal, Vila Real and Viseu. SPAIN (44 of the 47 peninsular provinces): Islas Baleares; Álava, *Albacete, Alicante, Almería, Asturias, Ávila, Badajoz, Barcelona, Cáceres, Cádiz, Cantabria, Castellón, Córdoba, Cuenca, Gerona, Granada, Guipúzcoa, Huelva, Huesca, Jaén, La Coruña, La Rioja, León, Lérida, Lugo, Madrid, Málaga, Murcia, Navarra, Orense, Palencia, Pontevedra, Salamanca, Segovia, Sevilla, Soria, *Tarragona, Teruel, Toledo, Valencia, Valladolid, Vizcaya, Zamora and Zaragoza.

ssp. *cirsiacanthoidis* Scopoli, 1763

SPAIN: Almería, Castellón and León.

ssp. *fabae* Scopoli, 1763

PORTUGAL: Aveiro, Beja, Braga, Bragança, Coimbra, Evora, Faro, Guarda, Lisboa, Portalegre, Santarem, Setúbal, Vila Real and Viseu. SPAIN: Álava, Alicante, Almería, *Asturias, Ávila, Cáceres, Castellón, Cuenca, Guipúzcoa, Huesca, León, Lugo, *Madrid, *Orense, *Palencia, Pontevedra, Salamanca, Segovia, Madrid, Salamanca, Segovia, Teruel, Valencia, Vizcaya, Zamora and Zaragoza.

ssp. *mordwilkoii* Börner & Janisch, 1922

SPAIN: Valencia.

ssp. *solanella* Theobald, 1914

PORTUGAL: Aveiro, Braga, Coimbra, Faro, Lisboa, Portalegre, Porto, Santarem, Setúbal and Viseu. SPAIN: *Islas Baleares; Álava, Alicante, Almería, *Asturias, *Ávila, *Cáceres, Castellón, *Córdoba, *Granada, Guipúzcoa, Huesca, León, Lugo, *Madrid, *Orense, *Palencia, Pontevedra, Salamanca, *Soria, Valencia, Vizcaya and Zamora.

Aphis (Aphis) farinosa Gmelin, 1790ssp. *farinosa* Gmelin, 1790

PORTUGAL: Aveiro, Braga, Castelo Branco, Coimbra, Leiria, Lisboa and Setúbal. SPAIN: Islas Baleares; *Albacete, Alicante, Almería, Asturias, Ávila, Cádiz, Cantabria, Castellón, Cuenca, Granada, Guipúzcoa, *Huesca, *Jaén, *La Coruña, León, *Lérida, Madrid, Málaga, *Navarra,

Orense, *Pontevedra, Salamanca, Soria, Toledo, Vizcaya and Zamora.

Aphis (Aphis) forbesi Weed, 1889

SPAIN: Castellón, León and Valencia.

Aphis (Aphis) frangulae Kaltenbach, 1844 [see note 13]

*ANDORRA. PORTUGAL: Aveiro, Braga, Coimbra, Lisboa and Setúbal. SPAIN: Álava, Almería, Asturias, Ávila, Cáceres, Cádiz, Cantabria, Castellón, Córdoba, *Cuenca, Granada, Guipúzcoa (only *A. f. beccabungae*), *Huesca, Jaén, *La Coruña, León, *Lérida, Madrid, *Murcia, Orense, Salamanca, Sevilla, *Teruel, Valencia, Zamora and *Zaragoza.

ssp. *beccabungae* Koch, 1855

SPAIN: *Ávila, *Guipúzcoa, León, *Valencia and *Zamora.

ssp. *frangulae* Kaltenbach, 1844

SPAIN: León and Valencia.

Aphis (Aphis) fumanae Remaudière & Leclant, 1972

SPAIN: Islas Baleares; Castellón and Teruel.

Aphis (Aphis) galiiscabri Schrank, 1801

PORTUGAL: Lisboa. SPAIN: Castellón, Guipúzcoa, Huesca, *Lérida, *Soria and Vizcaya.

Aphis (Aphis) gossypii Glover, 1877

PORTUGAL: Aveiro, Beja, Braga, Castelo Branco, Coimbra, Faro, Leiria, Lisboa, Santarem, Setúbal and Viseu. SPAIN: Islas Baleares; Álava, *Albacete, Alicante, Almería, Asturias, Ávila, Badajoz, Burgos, Cáceres, Cádiz, Cantabria, Castellón, Córdoba, Granada, Huelva, La Rioja, León, Lérida, Madrid, Málaga, Murcia, Navarra, Orense, Palencia, *Pontevedra, Salamanca, Sevilla, *Tarragona, Teruel, Valencia, Vizcaya, Zamora and Zaragoza.

ssp. *capsellae* Kaltenbach, 1843

PORTUGAL: Castelo Branco and Santarem.

ssp. *gossypii* Glover, 1877

PORTUGAL: Aveiro, Beja, Braga, Coimbra, Faro, Leiria, Lisboa, Santarem, Setúbal and Viseu. SPAIN: Islas Baleares; Álava, *Albacete, Alicante, Almería, Asturias, Ávila, Badajoz, Burgos, Cáceres, Cádiz, Cantabria, Castellón, Córdoba, Granada, Huelva, La Rioja, León, Lérida, Madrid, Málaga, Murcia, Navarra, Orense, Palencia, *Pontevedra, Salamanca, Sevilla, *Tarragona, Teruel, Valencia, Vizcaya, Zamora and Zaragoza.

Aphis (Aphis) haroi Nieto Nafría, 1974

SPAIN: Ávila and *León.

Aphis (Aphis) hederiae Kaltenbach, 1843

*ANDORRA. PORTUGAL: Braga, Castelo Branco, Lisboa, Santarem, Setúbal and Viseu. SPAIN: Islas Baleares; Álava,

Alicante, Almería, Asturias, Barcelona, Burgos, Cádiz, Cantabria, Castellón, Cuenca, Granada, Guipúzcoa, Huesca, *La Rioja, León, Lugo, Madrid, Orense, Salamanca, Sevilla, Soria, Teruel, Valencia, Vizcaya, Zamora and Zaragoza.

Aphis (Aphis) helianthemii Ferrari, 1872
ssp. *helianthemii* Ferrari, 1872

SPAIN: Asturias, Cantabria, Castellón, *Huesca and Valencia.

Aphis (Aphis) hillerislambersi Nieto & Mier, 1976 [see note 14]

SPAIN: Islas Baleares; Álava, Alicante, Almería, Castellón, Jaén, León, Madrid, *Málaga, Orense, Palencia, Salamanca, Teruel, Valencia, Zamora and Zaragoza.

Aphis (Aphis) hispanica Hille Ris Lambers, 1959
SPAIN: Almería.

Aphis (Aphis) hypochoeridis (Börner, 1940)
SPAIN: Ávila, Cáceres, Cantabria, *Huesca, León, Orense, Valencia and Zamora.

Aphis (Aphis) idaei van der Goot, 1912
ANDORRA. SPAIN: Granada, Guadalajara, *Huesca, León, Madrid and Soria.

Aphis (Aphis) ilicis Kaltenbach, 1843
PORTUGAL: Braga. SPAIN: *Cuenca, Huesca, León, Soria and Toledo.

Aphis (Aphis) intybi Koch, 1855
PORTUGAL: Lisboa. SPAIN: Islas Baleares; Álava, *Albacete, Alicante, Cádiz, Castellón, Cuenca, Granada, *Huesca, León, Salamanca, Segovia, Soria, Teruel, Valencia and Zamora.

Aphis (Aphis) jacobaeae Schrank, 1801
PORTUGAL: Santarem. SPAIN: *Asturias, León, Madrid, Murcia, Orense, Salamanca, Segovia, Soria and Zamora.

Aphis (Aphis) klimeschi (Börner, 1950)
ANDORRA. *SPAIN: Zamora.

Aphis (Aphis) lambersi (Börner, 1940)
PORTUGAL: Viseu. SPAIN: Almería, Cantabria, Huesca and León.

Aphis (Aphis) lamiorum (Börner, 1950)
SPAIN: Alicante, Cantabria, Huesca, León, Madrid, Teruel and Zamora.

Aphis (Aphis) lantanae Koch, 1854
ssp. *coriaria* Börner, 1952 [see note 15]
*ANDORRA.

Aphis (Aphis) lichtensteini Leclant & Remaudière, 1972
PORTUGAL: Lisboa. SPAIN: Islas Baleares; Ávila, Cáceres, León, Orense, Salamanca, Segovia, Valencia and Zamora.

Aphis (Aphis) longirostris (Börner, 1950) [see note 16]
SPAIN: León.

Aphis (Aphis) loti Kaltenbach, 1862
*ANDORRA. PORTUGAL: Braga with doubts (Ilharco, 1968, 1979, pers. comm., 2003). SPAIN: Almería, Asturias, Cantabria, Castellón, *Huesca, *León, *Murcia, Orense, Soria and Zamora.

Aphis (Aphis) lotiradicis Stroyan, 1972
SPAIN: León.

Aphis (Aphis) lupoi Barbagallo & Stroyan, 1982
PORTUGAL: Beja, Bragança and Santarem.

Aphis (Aphis) mammulata Gimingham & Hille Ris Lambers, 1949
SPAIN: León.

Aphis (Aphis) mamonthovae Davletshina, 1964
PORTUGAL: Lisboa. SPAIN: *Asturias, Castellón (Meliá Masiá, 2003: *A. verbenae* Nevsky, 1929), León, *Pontevedra and Valencia.

Aphis (Aphis) multiflorae Barbagallo & Stroyan, 1982
SPAIN: *Asturias, Castellón,* Orense, Pontevedra and Valencia.

Aphis (Aphis) nasturtii Kaltenbach, 1843 [see note 17]
PORTUGAL: Beja, Coimbra, Lisboa, Santarem and Setúbal. SPAIN: Islas Baleares; Alicante, Almería, Asturias, Ávila, Badajoz, Cantabria, Castellón, Granada, La Coruña, León, Madrid, Málaga, Murcia, Navarra, Orense, Pontevedra, Salamanca, Soria, Valencia, Zamora and Zaragoza.

Aphis (Aphis) nepetae Kaltenbach, 1843
SPAIN: Huesca and Valencia.

Aphis (Aphis) nerii Boyer de Fonscolombe, 1841
PORTUGAL: Faro, Lisboa, Santarem, Setúbal, Viana do Castelo and Viseu. SPAIN: Islas Baleares; Alicante, Almería, Barcelona, Cádiz, Cantabria, Castellón, Córdoba, *Gerona, Granada, Huesca, Madrid, Málaga, Salamanca, Sevilla and Valencia.

Aphis (Aphis) newtoni Theobald, 1927
SPAIN: León and Soria.

Aphis (Aphis) ononidis (Schouteden, 1903) [see note 18]
SPAIN: Ávila.

Aphis (Aphis) origani Passerini, 1860

PORTUGAL: Beja and Castelo Branco. SPAIN: Asturias, Cádiz, Cantabria, Castellón, Huesca, León, Orense and Vizcaya.

Aphis (Aphis) parietariae Theobald, 1923

*ANDORRA. PORTUGAL: Lisboa. SPAIN: Islas Baleares; Alicante, Almería, *Asturias, Cáceres, Cádiz, Cantabria, Castellón, Cuenca, Granada, *Huesca, *La Coruña, *La Rioja, Lugo, Madrid, Orense, *Palencia, Pontevedra, Valencia and Zamora.

Aphis (Aphis) passeriniana (Del Guercio, 1900)

SPAIN: Granada.

Aphis (Aphis) pernillae Heie, 1986

SPAIN: Ávila, Cáceres, La Rioja, León, Salamanca, Valencia and Zamora.

Aphis (Aphis) picridis (Börner, 1950) [see note 19]

PORTUGAL: Lisboa and Portalegre. *SPAIN: Cantabria and Valencia.

Aphis (Aphis) plantaginis Goeze, 1778

SPAIN: Asturias and León.

Aphis (Aphis) polygonata (Nevsky, 1929)

PORTUGAL: Lisboa and Santarem. SPAIN: Almería, Castellón, Granada, León, Salamanca and Zamora.

Aphis (Aphis) pomi De Geer, 1773

*ANDORRA. PORTUGAL: Aveiro, Braga, Bragança, Faro, Leiria, Lisboa, Santarem and Viseu. SPAIN: Islas Baleares; Álava, Alicante, Almería, Asturias, Cantabria, Castellón *Cuenca, Granada, Huesca, Jaén, La Coruña, La Rioja, León, Madrid, Salamanca, Sevilla, Soria, Teruel, Toledo, Valencia, Vizcaya, Zamora and Zaragoza.

Aphis (Aphis) praeterita Walker, 1849

SPAIN: *Álava, Cantabria, Guipúzcoa, *Huesca, León, *Teruel and Vizcaya.

Aphis (Aphis) proffti (Börner, 1942)

SPAIN: Cantabria, León and Teruel.

Aphis (Aphis) psammophila Szelegiewicz, 1967 [see note 20]

SPAIN: León and Zamora.

Aphis (Aphis) pseudocomosa Stroyan, 1972

SPAIN: León and Zamora.

Aphis (Aphis) pulegii Del Guercio, 1911

PORTUGAL: Beja, Braga, Bragança, Lisboa, Portalegre and Setúbal. SPAIN: León and *Pontevedra.

Aphis (Aphis) punicae Passerini, 1863

PORTUGAL: Faro, Lisboa, Portalegre, Santarem and Setúbal. SPAIN: Islas Baleares; Alicante, Almería, Cáceres, Castellón, Granada with doubts (Arcos & Cabello, 1988), Madrid, Málaga and Valencia.

Aphis (Aphis) ruborum (Börner & Schilder, 1931) [see note 21]

PORTUGAL: Aveiro, Braga, Castelo Branco, Coimbra, Leiria, Lisboa, Setúbal, Viana do Castelo, Vila Real and Viseu. SPAIN: Islas Baleares; Álava, *Albacete, Alicante, Almería, Asturias, Ávila, Barcelona, Cáceres, Cádiz, Cantabria, Castellón, Cuenca, Gerona, Granada, Guipúzcoa, Huesca, Jaén, *La Coruña, *La Rioja, León, *Lérida, Lugo, Madrid, *Navarra, Orense, Pontevedra, Salamanca, Segovia, Soria, Teruel, Valencia, Vizcaya and Zamora.

Aphis (Aphis) rumicis Linnaeus, 1758 [see note 22]

PORTUGAL: Lisboa, Santarem and Setúbal. SPAIN: Alicante, Asturias, Ávila, Barcelona, Cantabria, Castellón, Huesca, León, Madrid, Salamanca, Segovia, Soria, Valencia and Zamora.

Aphis (Aphis) salicariae Koch, 1855

*ANDORRA. SPAIN: Lérida.

Aphis (Aphis) salviae Walker, 1852

PORTUGAL: Evora. SPAIN: Islas Baleares; Alicante, Almería, Córdoba, Cuenca, Jaén, León, Soria, Toledo, Valencia and Zamora.

Aphis (Aphis) sambuci Linnaeus, 1758

ANDORRA. PORTUGAL: Beja, Coimbra, Evora, Lisboa, Portalegre and Santarem. SPAIN: Álava, Almería, Asturias, Ávila, Barcelona, Cantabria, Castellón, Cuenca, Granada, Huesca, *La Coruña, León, *Lérida, Madrid, *Navarra, Orense, Salamanca, Soria, Valencia, *Valladolid, Vizcaya, Zamora and Zaragoza.

Aphis (Aphis) sanguisorbae Schrank, 1801 [see note 23]

PORTUGAL: Evora. SPAIN: Almería, *Asturias, Ávila, *Burgos, Cáceres, Cuenca, Granada, *Huesca, León, Madrid, *Orense, Soria, Valencia and Zamora.

Aphis (Aphis) sedi Kaltenbach, 1843

PORTUGAL: Lisboa. SPAIN: Islas Baleares; Álava, *Albacete, Alicante, Almería, *Asturias, Cantabria, Castellón, Granada, Guipúzcoa, Huesca, Jaén, León, Madrid, Orense, Salamanca, Soria, Toledo, Valencia and Zamora.

Aphis (Aphis) serpylli Koch, 1854

PORTUGAL: Braga. SPAIN: Almería, Cantabria, Castellón, Cuenca, Granada, León, Madrid, Orense, Segovia, Soria, Teruel, Valencia and Zamora.

Aphis (Aphis) spiraeicola Patch, 1914 [see note 24]

ANDORRA. PORTUGAL: Aveiro, Beja, Braga, Bragança, Coimbra, Faro, Leiria, Lisboa, Portalegre, Santarem, Setúbal

and Viseu. SPAIN: Islas Baleares; Alicante, Almería, Asturias, *Cáceres, Cádiz, Cantabria, Castellón, Córdoba, Cuenca, Gerona, Granada, Huelva, León, Lérida, Madrid, Málaga, Murcia, Pontevedra, Salamanca, Sevilla, Tarragona and Valencia.

Aphis (Aphis) spiraephaga Müller, 1961 [see note 25]
PORTUGAL: Bragança and Lisboa. SPAIN: Madrid.

Aphis (Aphis) stachydis Mordvilko, 1929 [see note 26]
PORTUGAL: Lisboa. *SPAIN: Teruel.

Aphis (Aphis) subnitida (Börner, 1940)
PORTUGAL: Lisboa. SPAIN: *Burgos and León.

Aphis (Aphis) taraxacicola (Börner, 1940)
SPAIN: Alicante, Cantabria, Guipúzcoa, *León and *Palencia.

Aphis (Aphis) teucryi (Börner, 1942)
SPAIN: León and Valencia.

Aphis (Aphis) thermophila (Börner, 1950) [see note 27]
SPAIN: Castellón.

Aphis (Aphis) thomasi (Börner, 1950)
SPAIN: Asturias, *Burgos, Cádiz, Cantabria, Granada, *Guipúzcoa, León, Valencia and Zamora.

Aphis (Aphis) tirucallis Hille Ris Lambers, 1954 [see note 28]
PORTUGAL: Lisboa. SPAIN: Islas Baleares; Álava, Alicante, Almería, Castellón, Cuenca, Granada, *Huesca, *La Coruña, Madrid, Málaga, *Salamanca, Soria, *Toledo and Valencia.

Aphis (Aphis) tormentillae Passerini, 1879
PORTUGAL: Braga.

Aphis (Aphis) tripolii Laing, 1920
SPAIN: Asturias.

Aphis (Aphis) ulicis Walker, 1870
PORTUGAL: Braga, Leiria and Santarem. SPAIN: Alicante, Cádiz, Castellón, Cuenca, Granada, *La Coruña, León, Lugo, Orense, *Pontevedra, Valencia, Vizcaya and Zamora.

Aphis (Aphis) ulmariae Schrank, 1801
SPAIN: Cantabria, León and *Lérida.

Aphis (Aphis) umbrella (Börner, 1950)
PORTUGAL: Aveiro, Faro, Leiria, Lisboa, Portalegre, Santarem and Setúbal. SPAIN: Islas Baleares; Alicante, Almería, *Asturias, Cádiz, Cantabria, Castellón, *Cuenca, Granada, *Huesca, León, *Lérida, Madrid, Málaga, Murcia,

*Palencia, *Pontevedra, Salamanca, Teruel, Valencia and Zamora.

Aphis (Aphis) urticata Gmelin, 1790

PORTUGAL: Braga, Bragança, Castelo Branco and Viseu. SPAIN: Islas Baleares; Álava, Alicante, Asturias, Ávila, Cáceres, Cantabria, Castellón, Gerona, Granada, Guipúzcoa, Huesca, *La Coruña, *La Rioja, León, *Lérida, Lugo, Madrid, Navarra, Orense, Pontevedra, Salamanca, Segovia, Soria, Valencia, Vizcaya and Zamora.

Aphis (Aphis) vallei Hille Ris Lambers & Stroyan, 1959
PORTUGAL: Lisboa. SPAIN: Islas Baleares; Alicante, Almería, Castellón, Granada, Huesca, *Lérida, Málaga and Teruel.

Aphis (Aphis) verbasci Schrank, 1801

PORTUGAL: Castelo Branco and Lisboa. SPAIN: Islas Baleares; Alicante, Almería, Asturias, Ávila, Cantabria, Castellón, *Cuenca, Granada, *Huesca, León, *Lérida, Lugo, Madrid, Orense, Salamanca, Segovia, Soria, Valencia and Zamora.

Aphis (Aphis) viburni Scopoli, 1763

PORTUGAL: Castelo Branco. SPAIN: Barcelona, Cantabria, León, Madrid and Sevilla.

Aphis (Aphis) violae Schouteden, 1900

SPAIN: Castellón.

Aphis (Aphis) vitalbae Ferrari, 1872

SPAIN: Álava, Alicante, Asturias, Cantabria, Guipúzcoa, Huesca, León, *Lérida, Soria, Valencia and Zaragoza.

Aphis (Aphis) viticis Ferrari, 1872

SPAIN: Islas Baleares; Cádiz.

Subgenus *Bursaphis* McVikar Baker, 1934

Aphis (Bursaphis) epilobiaris Theobald, 1927

SPAIN: Alicante, Cantabria, *Cuenca, León, Soria, Teruel, Valencia, *Zamora and Zaragoza.

Aphis (Bursaphis) epilobii Kaltenbach, 1843

PORTUGAL: Braga, Castelo Branco, Coimbra, Lisboa and Viseu. SPAIN: Cantabria, León, *Lugo, Madrid, Orense, Segovia, Soria, *Valencia and *Zamora.

Aphis (Bursaphis) grossulariae Kaltenbach, 1843 [see note 29]

SPAIN: Cantabria and León.

Aphis (Bursaphis) oenotherae Oestlund, 1887

ssp. *oenotherae* Oestlund, 1887

SPAIN: Cantabria and *León.

Aphis (Bursaphis) schneideri (Börner, 1940)

SPAIN: León.

Subgenus *Pseudoprotaphis* Kadyrbekov, 2001

Aphis (Pseudoprotaphis) erigerontis Holman, 1966 [see note 30]

*SPAIN: León.

Genus *Brachyunguis* B. Das, 1918

Subgenus *Brachyunguis* B. Das, 1918

Brachyunguis (Brachyunguis) harmalae B. Das, 1918

SPAIN: Castellón, Madrid, Teruel, Valencia and Zaragoza.

Brachyunguis (Brachyunguis) tamaricis (Lichtenstein, 1885)

PORTUGAL: Faro. SPAIN: Islas Baleares; Alicante, Almería, Cádiz, Castellón, *Ciudad Real, Granada, *La Coruña, León, *Madrid and Zaragoza.

Genus *Cryptosiphum* Buckton, 1879 [see note 31]

Cryptosiphum artemisiae Buckton, 1879

ssp. *artemisiae* Buckton, 1879

ANDORRA. PORTUGAL: Porto. SPAIN: Almería, *Lérida and Madrid.

Genus *Ephedraphis* Hille Ris Lambers, 1959

Ephedraphis ephedrae (Nevsky, 1929) [see note 32]

SPAIN: Toledo, Zamora and Zaragoza.

Genus *Protaphis* Börner, 1952 [see note 33]

Protaphis ignatii (Gómez-Menor, 1950)

SPAIN: Almería and Murcia.

Protaphis terricola (Rondani, 1847)

PORTUGAL: Viseu and Lisboa. SPAIN: Islas Baleares; Alicante, Almería, Ávila, Burgos, Cantabria, Castellón, Cuenca, Granada, Jaén, León, Madrid, Salamanca, Soria, Toledo, Valencia, Zamora and Zaragoza.

Genus *Toxoptera* Koch, 1856

Toxoptera aurantii (Boyer de Fonscolombe, 1841)

ssp. *aurantii* (Boyer de Fonscolombe, 1841)

PORTUGAL: Aveiro, Beja, Braga, Coimbra, Lisboa, Portalegre, Porto and Setúbal. SPAIN: Islas Baleares; Alicante, Almería, *Asturias, Cádiz, Castellón, Córdoba, Granada, Guipúzcoa, Huelva, León, Málaga, Murcia, Pontevedra, Salamanca, Sevilla, Tarragona and Valencia.

Genus *Toxoptera* Börner, 1940 [see note 34]

Toxoptera vandergooti (Börner, 1933)

ANDORRA. SPAIN: Cantabria, León and Madrid.

Genus *Xerobion* Nevsky, 1928 [see note 35]

Xerobion blascoi (García Prieto & Sanchís Segovia, 1998) **comb. nov.** [see note 36]

SPAIN: *Almería, Huesca and Zaragoza.

Xerobion eriosomatium Nevsky, 1928

SPAIN: Zaragoza.

Xerobion georgii (Mier Durante & Nieto Nafría, 1991)

SPAIN: Ávila, *Jaén, *León, Madrid and *Zaragoza.

Subtribe **RHOPALOSIPHINA** Mordvilko, 1914

Genus *Hyalopterus* Koch, 1854 [see note 37]

Hyalopterus amygdali (E. Blanchard, 1840) [see note 37]

*PORTUGAL: Beja, Faro, Lisboa, Santarem and Setúbal. SPAIN: Islas Baleares; Alicante, Almería, Cáceres, Córdoba, Castellón, Granada, Jaén, Murcia, Salamanca, Sevilla, Valencia and Zamora.

Hyalopterus pruni (Geoffroy, 1762) [see note 37]

PORTUGAL: Lisboa, Portalegre and Santarem. SPAIN: Islas Baleares; Alicante, Castellón, Huesca, León, *Lérida, Madrid, Soria, Teruel, Valencia and Zamora.

Genus *Hysteroneura* Davis, 1919

Hysteroneura setariae (Thomas, 1878)

SPAIN: Castellón.

Genus *Melanaphis* van der Goot, 1917

Melanaphis bambusae (Fullaway, 1910)

PORTUGAL: Aveiro, Lisboa and Santarem. SPAIN: Castellón, Tarragona and Valencia.

Melanaphis donacis (Passerini, 1862)

PORTUGAL: Aveiro, Faro, Lisboa, Santarem and Setúbal. SPAIN: Islas Baleares; Alicante, Almería, Cádiz, Castellón, Granada, Guipúzcoa, Jaén, León, Málaga, Palencia, *Pontevedra, Salamanca, Teruel and Valencia.

Melanaphis pyraria (Passerini, 1862)

PORTUGAL: Faro and Lisboa. SPAIN: Asturias, Castellón, Granada, Guipúzcoa, La Rioja, León, Madrid, Salamanca, Valencia, Zamora and Zaragoza.

Genus *Rhopalosiphum* Koch, 1854*Rhopalosiphum maidis* (Fitch, 1856)

ANDORRA. PORTUGAL: Lisboa, Portalegre and Santarem. SPAIN: Alicante, Almería, Ávila, Badajoz, Cáceres, Castellón, Granada, Guipúzcoa, La Coruña, León, Lérida, Madrid, Murcia, Navarra, Orense, Pontevedra, Salamanca, Sevilla, Soria, Teruel, Valencia, Valladolid, Zamora and Zaragoza.

Rhopalosiphum nymphaeae (Linnaeus, 1761)

PORTUGAL: Coimbra, Bragança, Lisboa, Setúbal, Santarem and Viseu. SPAIN: Almería, Ávila, Castellón, La Coruña, León, Madrid, Salamanca, Sevilla, Soria, Teruel, Valencia and Zamora.

Rhopalosiphum oxyacanthae (Schrank, 1801) [see note 38]

PORTUGAL: Bragança, Coimbra and Leiria. SPAIN: Alicante, Almería, Castellón, Jaén, León, Salamanca, Soria, Teruel, Valencia and Zamora.

Rhopalosiphum padi (Linnaeus, 1758)

ANDORRA. PORTUGAL: Aveiro, Coimbra, Guarda, Lisboa, Portalegre, Santarem, Setúbal and Vila Real. SPAIN: Alicante, Almería, Ávila, Badajoz, Barcelona, Cáceres, Cádiz, Cantabria, Castellón, Granada, Huesca, Madrid, Lérida, León, Orense, Salamanca, Sevilla, Soria, Teruel, Valencia, Zamora and Zaragoza.

Rhopalosiphum rufiabdominale (Sasaki, 1899)

PORTUGAL: Lisboa. SPAIN: Almería, Alicante, Barcelona, Castellón, Granada, Navarra and Valencia.

Genus *Schizaphis* Börner, 1931Subgenus *Schizaphis* Börner, 1931*Schizaphis (Schizaphis) graminum* (Rondani, 1852)

ssp. *graminum* (Rondani, 1852)

ANDORRA. PORTUGAL: Aveiro, Lisboa, Portalegre and Setúbal. SPAIN: Almería, Badajoz, *Cádiz, Castellón, Granada, La Coruña, León, Lérida, Madrid, *Murcia, *Navarra, Orense, Pontevedra, Salamanca, Sevilla, Soria, Teruel, Valencia, Valladolid, Zamora and Zaragoza.

Schizaphis (Schizaphis) longicaudata Hille Ris Lambers, 1939 [see note 39]

*SPAIN: León.

Schizaphis (Schizaphis) pyri Shaposhnikov, 1952

PORTUGAL: Aveiro. SPAIN: Castellón.

Schizaphis (Schizaphis) rotundiventris (Signoret, 1860)

PORTUGAL: Setúbal. SPAIN: *Alicante, Castellón, Granada, Valencia and *Zaragoza.

Subgenus *Paraschizaphis* Hille Ris Lambers, 1947*Paraschizaphis (Paraschizaphis) caricis* (Schouteden, 1906)

PORTUGAL: Setúbal.

Schizaphis (Paraschizaphis) rosazevedoi (Ilharco, 1961)

PORTUGAL: Beja, Lisboa, Portalegre, Santarem and Setúbal.

Schizaphis (Paraschizaphis) scirpi (Passerini, 1874)

SPAIN: Castellón, *Madrid, Salamanca, Teruel, Valencia and Zamora.

NOTES ON THE CHECK-LIST

- 1.- *Anthemidaphis* has frequently been considered (Barbagallo & Stroyan, 1982; Remaudière & Remaudière, 1997) as one of the subgenera of *Aphis*, however, in order to reduce the variety of the very extensive genus *Aphis*, we consider it as a genus in accordance with Eastop & Hille Ris Lambers (1976) and Eastop (1979).
- 2.- *Aphis alienus* was given its specific name (Theobald, 1915, pg. 54) because its type series was located in *Lasius alienus* ants' nests. The name should therefore be considered as a noun in apposition (Theobald, 1927, pg. 190; Börner, 1952, pg. 228) though in fact it is an adjective. However (see for example: Kloet & Hincks, 1945, pg. 68, in combination with *Doralis*; Eastop & Hille Ris Lambers, 1976, pg. 42, in combination with *Aphis*) *aliena* has frequently been written as a feminine adjective because *Aphis* is feminine; we believe this is an erratum and not a correction in the sense of the International Code of Zoological Nomenclature.
- 3.- Hille Ris Lambers (1966, pg. 125) established *Aphis davletshinae* to replace *A. althaeae* (Nevsky, 1929) because he believed the latter to be a senior homonym of *althaea* Harris, 1776 (*nomen dubium* according to Eastop & Hille Ris Lambers, 1976, pg. 42). However, this was a mistake, opposed to what is stated in article 58.1 of the International Code of Zoological Nomenclature, Fourth Edition (Comisión Internacional de Nomenclatura Zoológica, 2000).
- 4.- The record of *Aphis davletshinae* from Cantabria by Nieto Nafria (1976, pg. 19) was due to the incorrect identification of *A. umbrella* specimens.
- 5.- *Aphis armata* and *A. fabae* are morphologically similar, especially subspecies *A. f. cirsiacanthoidis*, *A. f. fabae* and *A. f. mordwilkoii* (*A. f. solanella* can be differentiated fairly easily by its shorter setae);

biologically, they are clearly different as *A. armata* is monoecious holocyclic on *Digitalis*, to the point that the gynoparous females are apterous. Stroyan (1984) points out that the only certain way of identifying the species is to capture sexuals on the digitalis; however, he provided differentiating morphological characters of viviparae, most of which are not very useful as metric and meristic data for *A. armata* and *A. fabae* overlap. The viviparous females caught in Soria (Nieto Nafría *et al.*, 1987, pg. 369), Cantabria (Ghosh *et al.*, 1994, pg. 85) and León (Tizado Morales, 1991, pg. 73 and Mier Durante *et al.*, 1996, pg. 7) provinces have long setae but not enough (ventral setae of hind femora and hind tibiae 1.1-1.6 and 1.3-1.4 times longer than diameter of tibia at the middle, respectively). So *A. armata* has been removed from the Spanish aphid fauna check-list, but remains in the Portuguese one as identification of the known citations was confirmed by Ilharco (pers. comm., 2003).

- 6.- For two aphid species in the subfamily Aphidinae living on *Ballota* (one belonging to the genus *Aphis* and the other to *Brachycaudus*) Szelegiewicz (1968) assigned the name *Aphis ballotae* to the latter and established the replacement name *ballotico-la* for the former. This was not the correct choice as there are two specimens seen by Passerini (much later designated as lectotypes by Hille Ris Lambers of *A. ballotae* Passerini, unpublished datum!), currently at the Natural History Museum – London, belonging to the group *frangulae/gossypii* of the genus *Aphis* (Blackman, pers. comm., 2004).

Also, *Aphis ballotico-la* Szelegiewicz, 1968 is a *nomen nudum* because when it was established as a new name for «*Aphis ballotae*: auct., non Passerini, 1860», Szelegiewicz gave no description or indication: the bibliographic reference to Szulczewski is not sufficient as he (Szulczewski, 1950, pg. 34) did not provide any characters for his “Aphididae 34”.

- 7.- *Aphis callunae* is mentioned for the first time in the Iberian Peninsula on its only known host-plant *Calluna vulgaris*: León (Redipuertas, 19-VII-2004, Pérez Hidalgo *leg.*) and Lérida (Pontaut, 12-X-1989, Nieto Nieto Nafría and Mier Durante *leg.*).
- 8.- *Aphis comosa* is mentioned for the first time in the Iberian Peninsula on *Melilotus albus*: León (Palacios del Sil, 28-VI-1986, Remaudière and Nieto Nafría *leg.* and 6-XI-86 Nieto Nafría *leg.*; Pradorrey, 24-VI-1991, Nieto Nafría and Mier Durante *leg.*), Lérida (Pont de Suert, 26-VI-1989; Vinyals, 12-X-1989, Nieto Nafría and Mier Durante *leg.*) and Zaragoza (Sigüés, 30-VI-1991, Nieto Nafría and Mier Durante *leg.*).

The presence of this species in the Peninsula is not surprising as its distribution area is very wide (from Great Britain, France and Italy to Latvia, Poland and Romania) and also its host-plant, *Melilotus albus*, is common in most of the Peninsula.

- 9.- The record of *Aphis coronillae* from León by Nieto Nafría *et al.* (1990b, pg. 369) was due to the incorrect identification of *A. pseudocomosa* specimens.
- 10.- *Anthemis arvensis* is not a host plant for *Aphis craccivora craccivora* in the Peninsula because the record by Tizado Morales (1991, pg. 75) was due to the incorrect identification of *A. fabae* specimens.
- 11.- We have removed Zamora province from the distribution area of *Aphis crepidis* as well as the record by Mier Durante (1978, pg. 103), because it was an aphid misidentification.
- 12.- *Aphis fabae* is given the taxonomical sense admitted by Remaudière & Remaudière (1997), though several authors believe *solanella* to be a good species (Ilharco, 1996; Thieme & Dixon, 2004). Records for the Portuguese districts listed under *A. fabae fabae* refer to records of *A. fabae* without indicating the subspecies.
- 13.- It should be underlined that some records of *Aphis frangulae* or *A. f. frangulae* (especially those from two decades ago or more) were misidentifications of *A. gossypii*, more probably of *A. gossypii gossypii*. *Chenopodium bonus-henricus*, *Lysimachia vulgaris* and *Succisa pratensis* are not host plants for *A. frangulae* in the Iberian Peninsula because the records by Tizado Morales (1991, pg. 80) were due to the incorrect identification of *A. fabae* (the first two) and *A. confusa* (the latter) specimens.
- 14.- Although *Aphis hillerislammersi* is quite possibly found in Portugal, its record by Aldryhim & Khalil (1996, pg. 175) is mistaken according to Ilharco (pers. comm., 2003).
- 15.- *A. lantanae coriaria* (as also *A. lantanae*) is recorded for the first time in the Iberian Peninsula: Andorra (La Massana, 29-VI-1997, on *Viburnum lantana*, Mier Durante and Nieto Nafría *leg.*).

The characters of the studied specimens coincide with data provided by Stroyan (1984) and Jörg & Lampel (1995) for the above subspecies (considered a species by some authors). *A. lantanae coriaria* is known (Stroyan, 1984; Jörg & Lampel, 1995) from mountainous regions of Austria, Switzerland and Italy. For the moment its presence in Andorra marks the western limit of its small distribution area and enables us to maintain the hypothesis that it is linked to mountainous environments.

- 16.- Hille Ris Lambers (1966, pg. 125) established *Aphis longirostrata* to replace *A. longirostris* Börner, 1950 (junior secondary homonym of *A. longirostris* Fabricius, 1787). However, this was a mistake, opposed to what is stated for the replacement of junior secondary homonyms in article 59.4 of the International Code of Zoological Nomenclature, Fourth Edition (Comisión Internacional de Nomenclatura Zoológica, 2000).
- 17.- *Clematis vitalba* is not a host plant for *Aphis nasturtii* in the Iberian Peninsula because the record by Tizado Morales (1991, pg. 83) was due to the incorrect identification of *A. vitalbae* specimens.
- 18.- Hille Ris Lambers (1956) believed that *Pergandeida ononidis* Schouteden, 1903 was a good species and transferred it to the genus *Aphis*, establishing the replacement name *A. schoutedeni* because a secondary homonymy exists with *Aphis ononidis* Kaltenbach. Hille Ris Lambers (1956) was right with regard to taxonomy but not to nomenclature as *ononidis* Kaltenbach had already been transferred to another genus decades ago (see Nieto Nafria *et al.*, 1998, pg. 395). Eastop & Hille Ris Lambers (1976, pg. 347) considered Schouteden's species as a synonym of *A. kaltenbachi* Hille Ris Lambers, 1956, presumably taking into account Börner's comments (1940, pg. 3, and 1952, pg. 81) on its host plant: *Genista* and not *Ononis*.
- We have reviewed the syntypes (one male in poor condition and 3 oviparous females) of *P. ononidis* Schouteden preserved at the "Institut royal des Sciences naturelles de Belgique" (Brussels) and we can conclude that their characters coincide with what is established for *A. kaltenbachi*. Consequently, the valid name for the only existing taxonomical species is *A. ononidis* (Schouteden) in spite of the fact that its specific name is not really appropriate (International Code of Zoological Nomenclature, Fourth Edition, art. 18; Comisión Internacional de Nomenclatura Zoológica, 2000) as this aphid lives on *Genista* and not on *Ononis*.
- 19.- Szelegiewicz (1961, pg. 303) established *Aphis stroyani* to replace *A. picridis* (Börner, 1950) (junior secondary homonym of *A. picridis* Fabricius, 1775). However, this was a mistake, contrary to what is stated for the replacement of junior secondary homonyms in article 59.4 of the International Code of Zoological Nomenclature, Fourth Edition (Comisión Internacional de Nomenclatura Zoológica, 2000).
- 20.- According to verifications made, records of *Aphis psammophila* from Cádiz (Nieto Nafria *et al.*, 1990a, pg. 303) and León (Robles García & Nieto Nafria, 1983, pg. 263; and Tizado Morales, 1991, pg. 86) provinces were misidentifications of *A. thomasi* specimens, although other records of the species in León province were correct. Records for Valencia (Suay Cano & González Funes, 1998) were also due to the incorrect identification of *A. thomasi* specimens (González Funes, pers. comm., 2003).
- 21.- Börner (1932) described *Doralis ruborum*. However, Börner & Schilder (1931, pg. 605) had already used this name (undoubtedly referring to the same aphids). Sorauer's book, containing the chapter by Börner & Schilder, was published in 1932, but a separate of the chapter given by Börner himself to G. Remaudière is dated 1931. As: (1) article 21.8 of the International Code of Zoological Nomenclature, Fourth Edition (Comisión Internacional de Nomenclatura Zoológica, 2000) determines that: «Before 2000, an author who distributed separates in advance of the specified date of publication of the work in which the material is published thereby advanced the date of publication», the publication by Börner & Schilder is dated 1931; and (2) the name *D. ruborum* is accompanied by morphological characters, the name is available and by rule of priority is the valid one for the species. Therefore *D. ruborum* Börner, 1932 **syn. nov.** and *D. ruborum* Börner & Schilder, 1931 are synonymous.
- 22.- The records of *Aphis rumicis* from the Balearic Islands (Seco & Mier, 1988, pg. 9) and the peninsular provinces of Lugo (Mier Durante & Nieto Nafria, 1985, pg. 76), Orense (Mier Durante & Nieto Nafria, 1983, pg. 328) and Vizcaya (Nieto Nafria & Mier Durante, 1982, pg. 356) were due to the incorrect identification of *A. fabae*.
- 23.- *Aphis sanguisorbae* and *A. poterii* (Börner, 1940) are both considered valid species (Börner, 1940), synonyms (Eastop & Hille Ris Lambers, 1976) and also (Remaudière & Remaudière, 1997) subspecies of *sanguisorbae*; the latter as a result of a comment by Stroyan (1984) who gives the name *sanguisorbae* to the same British specimens previously assigned (Stroyan, 1955; Prior & Stroyan, 1977) to *poterii*. The separating characteristics provided by Börner (1940) and the above British authors are not enough to consider that we are dealing with two taxonomically different beings or even subspecies.
- 24.- The record of *Aphis spiraecola* from Córdoba (Nieto Nafria *et al.*, 1986, pg. 386) was due to the incorrect identification of *A. gossypii* specimens.
- 25.- The record of *Aphis spiraephaga* from León (Robles García & Nieto Nafria, 1983, pg. 264) was due to the incorrect identification of *A. fabae* specimens.

26.- Jörg & Lampel (1988) pointed out that the life cycle of *Aphis stachydis* is monoecious holocyclic, but gave no data on sexuals. Apterous males and oviparous females and apterous viviparous females were caught in Teruel (Noguera de Albarracín, 12-X-1974, Nieto Nafría *leg.*) on *Stachys arvensis*. We describe the males and oviparous females based on the specimens from Teruel province and from France (Remaudière *leg.*, collection of the "Muséum national d'Histoire naturelle" at Paris): La Combe, Passy (Haute Savoie), 21-VIII-1985, on *Stachys* sp. and 22-X-1985 on *S. recta*, and Saint-Colomban (Alpes Maritimes), 10-VI-1988, on *Stachys* sp.

OVIPAROUS FEMALES (from 8 specimens: 6 Spanish and 2 French).- Body 1.47 to 1.65 mm long. Antennae 0.75 to 0.85 mm, 0.5 to 0.6 times the body and dark brown or black except for proximal half of joint III; terminal processus 2.2 to 3.1 times base of antennal joint VI (2.2 to 2.7 in Spanish specimens and 2.7 to 3.1 in the French ones). Hind legs of some specimens completely dark or black (except proximal part of femora) with tip of tibiae and tarsi strongly pigmented; in some specimens hind legs completely dark brown or black (except for proximal part of femora), but pale in others with coxae, femora (except the proximal part), tip of tibiae and tarsi pigmented. Hind tibiae with 28 to 95 scent plaques (28-58 in the Spanish material and 55-95 in the French material). Only the stigmatic sclerites are present. Siphunculi black pigmented, 1.1 to 1.5 times the cauda and 3.3 to 4.2 times its diameter in the middle. Abdominal segment VIII with 5 to 9 setae, which are 35 to 45 µm long. Genital plate with 22 to 30 setae. Cauda dark brown pigmented, 1.0 to 1.4 times longer than its basal width and with 6 to 9 setae.

APTEROUS MALES (from 6 specimens: 4 Spanish and 2 French).- Body 1.06 to 1.21 mm long. Antennae 0.82 to 0.90 mm, 0.7 to 0.8 times body and black except for the very proximal part of segment III, which is paler; terminal processus 2.2 to 2.5 times base of antennal segment VI. Setae on antennal segment III 0.6 to 0.8 times the joint diameter of the same segment. Antennal segments III, IV and V with 10-18 (widely distributed), 9-17 and 5-13 secondary sensoria, respectively. Ultimate rostral segment 0.09 to 0.10 mm. Legs pale, with coxae, femora (except for proximal part), tip of tibiae and tarsus dark. Abdomen with stigmatic sclerites, sometimes small marginal sclerites on segments II to IV, small spinal sclerite on VII and transversal bar on VIII. Siphunculi black coloured, 0.12 to 0.15 mm, 1.0 to 1.3 times longer than cauda

and 3.2 to 4.1 times its diameter in the middle. Cauda dark brown pigmented, 1.0 to 1.3 times longer than its basal width.

- 27.- The record of *Aphis thermophila* in Cantabria (Nieto Nafría, 1976, pg. 22) was due to the incorrect identification of *A. helianthemis* specimens.
- 28.- The record of *Aphis tirucallis* in Zamora (Mier Durante, 1978, pg. 117) was due to the incorrect identification of *A. brotericola* specimens.
- 29.- *Epilobium hirsutum* is not a host plant for *Aphis grossulariae* in the Iberian Peninsula because the record by Nieto Nafría *et al.* (1990b, pg. 83) was due to the incorrect identification of *A. epilobii*.
- 30.- Nieto Nafría *et al.* (1990b, pg. 371) recorded *Aphis (Protaphis) striata* Hille Ris Lambers, 1967 in León province (Aralla, 1-VII-1986, on *Erigeron acer* roots), but according to data provided by Hille Ris Lambers (1967), Holman (1966) and Kadyrbekov (2001b), especially on the number of secondary sensoria in the different antennal segments and length of rostrum, we can conclude that the record was in fact the incorrect identification of *A. erigerontis* Holman, 1966, which has been included by Kadyrbekov (2001b) in his new subgenus *Pseudoprotaphis*. It is a monoecious holocyclic species living on *E. acer* and is known from the Czech Republic, Finland, Poland and Slovakia.
- 31.- *Cryptosiphum* has been included in this check-list of the tribe Aphidini according to Shaposhnikov (1964), Heie (1986) and Remaudière & Remaudière (1997), though Börner (1952), Stroyan (1984) and Kadyrbekov (2002) believe it should be included in the tribe Macrosiphini, very close to *Anuraphis* Del Guercio, 1907 and *Dysaphis* Börner, 1931.
- 32.- It is usually accepted (Remaudière & Remaudière, 1997) that the species includes 2 subspecies: *ephedrae* and *taurica* Mamontova-Solukha, 1963, which can be separated according to the characters indicated by Mamontova-Solukha (1963).
Nieto Nafría & Mier Durante (1985) recorded the nominotypical subspecies in Spain but we cannot confirm the identification of this subspecies because the characters of the Spanish specimens partly coincide with those established by Mamontova-Solukha for each one. Comparative studies on this species are necessary to clarify the validity of the subspecies.
- 33.- *Protaphis* can be considered either a genus (Börner, 1952; Eastop, 1979; Kadyrbekov, 2001a, 2001b) or subgenus (Eastop & Hille Ris Lambers, 1976; Remaudière & Remaudière, 1997). We choose the first option in order to reduce the variety of the very extensive genus *Aphis*.

- 34.- *Toxopterina* can be considered either a genus (Börner, 1952; Eastop & Hille Ris Lambers, 1976; Eastop, 1979) or a subgenus (Barbagallo & Stroyan, 1982; Remaudière & Remaudière, 1997) of *Aphis*, or as a synonym of the latter (Stroyan, 1984). We choose the first option in order to reduce the variety of the very extensive genus *Aphis*.
- 35.- According to Kadyrbekov (2001b), *Absinthaphis* Remaudière, 1973 is synonym of *Xerobion*. *Absinthaphis* had previously been considered a genus or subgenus of *Aphis*, whereas *Xerobion* was always considered a genus. At present the genus includes 21 species, the distribution of which coincides with that of its host plants Asteraceae or Chenopodiaceae.
- 36.- Kadyrbekov (2001b) did not include *Aphis blascoi* or *Absinthaphis brutii* Barbagallo, 1996 in *Xerobion*, where, undoubtedly, they should be included with the names: *Xerobion blascoi* **comb. nov.** and *Xerobion brutii* **comb. nov.**
- 37.- The genus *Hyalopterus* Koch, 1854 is easily differentiated from the rest of the tribe Rhopalosiphina Mordvilko, 1914 and only includes two species (Remaudière & Remaudière, 1997): *H. amygdali* and *H. pruni*. The life cycle of both species is dioecious holocyclic, alternating between species of *Prunus* (Rosaceae) and species of various genera of grasses (Poaceae) in the Peninsula: *Arundo donax*, *Calamagrostis pseudophragmites*, *Phragmites australis* and bamboos; but sometimes migration to secondary hosts is incomplete and populations remain on the primary host during the summer without producing any males (Barbagallo *et al.*, 1998; Lampel, 1968).

The apterous fundatrigeniae (parthenogenetic females living on the primary host) are very difficult to differentiate morphologically (Basky & Szalay-Marszó, 1987; Blackman & Eastop, 2000), even without considering genetic differences between two forms of *H. amygdali*: “form A” and “form B” (Mosco *et al.*, 1997), whereas it seems possible to differentiate them by the bionomical criterion of the host plant. It is not possible to differentiate the apterous virginogeniae (parthenogenetic females living on the secondary host) and all the alatae females by morphological criteria in the light of data available at present and they can only be identified by plant transfer tests or by relating located populations to the trees where the alate fundatrigeniae emigrated from.

Therefore: (i) Records of *Hyalopterus pruni* on the secondary host (*Arundo donax*, *Calamagrostis pseudophragmites* and *Phragmites australis*) in ANDORRA, in PORTUGAL: Aveiro, Lisboa,

Santarem and Viana do Castelo, and in SPAIN: Islas Baleares; *Albacete, Alicante, Almería, Ávila, Barcelona, Badajoz, Cádiz, Cantabria, Castellón, Córdoba, Cuenca, Gerona, Granada, Huesca, Jaén, León, Lérida, Madrid, Málaga, Murcia, Navarra, Orense, *Pontevedra, Salamanca, Sevilla, Soria, Teruel, Toledo, Valencia, Vizcaya and Zamora should be considered as records of the *Hyalopterus* species; (ii) Records of *Hyalopterus pruni* on *Prunus dulcis* and *P. persica* (see check-list), should be considered as records of *H. amygdali* (see catalogue); (iii) Records of *Hyalopterus pruni* on other species of *Prunus* (*P. armeniaca*, *P. avium*, *P. cerasifera*, *P. domestica*, *P. mahaleb* and *P. spinosa*) are of *H. pruni* (see catalogue).

- 38.- Following a specific and very well-founded proposition by Blackman (pers. comm., 2004) and according to Börner (1952), Börner & Heinze (1957), Vidano (1959) and Remaudière (pers. comm., 2004), *Rhopalosiphum oxyacanthae* (Schank, 1801) and *Rhopalosiphum insertum* (Walker, 1849) are synonyms. As determined by the rule of priority *R. oxyacanthae* is the valid name for the species, though *R. insertum* has been used in the last 40 years (Eastop & Hille Ris Lambers, 1976; Remaudière & Remaudière, 1997), perhaps because Doncaster (1961) did not consider that a synonym between them existed.

- 39.- *Schizaphis* (*Schizaphis*) *longicaudata* is new for the Iberian Peninsula: León (Genestacio, 5-VII-1980, on *Phalaris arundinacea*, Gutiérrez Aláiz and Robles Blanco *leg.*; León, suction trap, 1-VI-1987; Villanueva del Árbol, 26-VI-2004, Pérez Hidalgo *leg.*).

Schizaphis graminum can be differentiated by its longer cauda (at least 1.2 times the cornicular length in *longicaudata* and 1.1 times at the most in *graminum*), hence its name. It is known in various northern and central European countries (Austria, Belgium, Czech Republic, Finland, Germany, Latvia, The Netherlands, Poland, Slovakia and Sweden) on some grasses, especially *P. arundinacea*.

SPECIES EXCLUDED FROM THE IBERIAN-BALEARIC CHECK-LIST OF THE TRIBE APHIDINI

Aphis (*Aphis*) *euphorbiae* Kaltenbach, 1843

The record of this species in Valencia by Suay Cano & González Funes (1998, pg. 40) was due to a misidentification of *A. tirucallis* Hille Ris Lambers (González Funes, pers. comm., 2003). Previously Gómez-Menor & Nieto Nafría (1977,

pg. 230) have mentioned this species from Cuenca and Madrid provinces (on the identifications made by the first author), but we tend to think he was mistaken because (1) both species are very similar and (2) *A. euphorbiae* has not been recorded on any other occasion in the Peninsula whereas *A. tirucallis* is very common in the Southern Subplateau of Spain and we have caught it in both provinces.

Aphis (Aphis) genistae Scopoli, 1763

This species was recorded by Mier Durante (1978, pg. 107) in Zamora and has not been mentioned in the Peninsula since. A detailed study of the only viviparous apterous female in the sample, according to information available at present, shows that its characters do not adapt to those of the above species, neither can we say for sure which species it does belong to.

Aphis (Aphis) pilosellae (Börner, 1952)

Records of this species from Huesca (Mier Durante & Nieto Nafría, 1978, pg. 161) and Valencia (Suay Cano & González Funes, 1998, pg. 44) provinces were due to the incorrect identification of *A. fabae* specimens (as we have verified) and of *A. picridis* specimens (González Funes, pers. comm., 2003).

Aphis (Aphis) salsolae (Börner, 1940)

Aphis salsolae was recorded by Nieto Nafría (1977, pg. 154) from Madrid, but Nieto Nafría *et al.* (1984) excluded it from the Spanish aphid checklist because Eastop & Hille Ris Lambers (1976) had previously regarded it as a synonym of *A. craccivora*. Holman (in Remaudière & Remaudière, 1997) rejected the synonym. The Spanish specimens on *Salsola* belong to *A. craccivora* taking into account the differentiating characters between *craccivora* and *salsolae* established by Holman (pers. comm., 2003).

Aphis (Protaphis) striata Hille Ris Lambers, 1976

This species was erroneously recorded due to the mistaken identification of *A. erigerontis* specimens [see note 30].

Brachyunguis (Brachyunguis) zygophylli (Nevsky, 1929)

Gómez-Menor (1950, pg. 104) described *Brachyunguis zygophylli*; Nieto Nafría (1974, pg. 72) considered that the specific name was a

homonym of *Brachyunguis zygophylli* (Nevsky, 1929) and gave it the replacement name *B. gomezmenori*. Eastop & Hille Ris Lambers (1976, pg. 115) considered that *B. zygophylli* Gómez-Menor and obviously *B. gomezmenori* were synonyms of *B. zygophylli* (Nevsky, 1929).

A study of the specimens seen by Gómez-Menor and preserved at the “Museo Nacional de Ciencias Naturales” in Madrid, and other ones seen by Aguirre Segura (Aguirre-Segura & Pascual, 1993) demonstrates that *B. zygophylli* Gómez-Menor (and *B. gomezmenori* Nieto Nafría) are not synonyms of *B. zygophylli* (Nevsky, 1929) but of *B. harmalae* B. Das, 1918 (*B. zygophylli* Gómez-Menor **syn. nov.** and *B. gomezmenori* Nieto Nafría **syn. nov.**).

Brachyunguis (Xerophilaphis) suaedus (Paik, 1965)

Meliá Masiá (2003, pg. 65) recorded this species (and the subgenus *Xerophilaphis*) for the first time in Iberian-Balearic territory (Islas Columbretes, Castellón province) but was really referring (Meliá Masiá, pers. comm., 2004) to *Clypeoaphis suaedae* (Mimeur, 1934) (Aphidinae: Macrosiphini).

Protaphis centaurea (Gómez-Menor, 1950)

Gómez-Menor (1950, pg. 101) described *Dasia centaurea*. Nieto Nafría (1974, pg. 73) established the synonym between this species and *Protaphis hartigi* (Hille Ris Lambers, 1931), which was not accepted by Eastop & Hille Ris Lambers (1976, pg. 90), who considered *Aphis (Protaphis) centaurea* (Gómez-Menor, 1951) (*lapsus* in the date) as a good species.

After studying the material seen by Gómez-Menor and preserved at the “Museo Nacional de Ciencias Naturales” in Madrid there is no doubt that *Dasia centaurea* (**syn. nov.**) is a synonym of *Protaphis terricola* (Rondani, 1847), which may be the only species of the genus in Western Europe.

Schizaphis (Schizaphis) pilipes (Ossiannilsson, 1959)

According to Aguirre Segura (pers. comm., 2004) the records of this species from Almería (Aguirre-Segura & Pascual, 1993) and Granada (Arcos & Cabello, 1988) were based on the incorrect identification of *Schizaphis rotundiventris* (Signoret, 1860) specimens.

ACKNOWLEDGEMENTS

We would like to thank Doctors Pilar González Funes (“Instituto Cavanilles de Biodiversidad, Universidad de Valencia”, Valencia, Spain), Fernando A. Ilharco (“Estação

Agronómica Nacional”, Oeiras, Portugal), Jaroslav Holman (“Entomologický ústav, Akademie věd České republiky”, České Budějovice, Czech Republic), Antonio Aguirre Segura (“Grupo de Investigación de Ecología de Zonas Áridas, Universidad de Almería”, Almería, Spain) and Antonio Meliá Masiá (“Servicio de Sanidad Vegetal, Subdelegación del Gobierno”, Castellón, Spain) for the information on different species. Also, Dr. Roger Blackman (“The Natural History Museum”, London, United Kingdom) for the interesting information on Passerini’s slide of *Aphis ballotae* and for his conclusive opinion on the identity of *Aphis oxyacanthae*. Our thanks to Doctors Jérôme Constant (“Afdeling von Entomologie, Institut royal des Sciences naturelles de Belgique”, Brussels, Belgium) for lending us the syntypes of *A. ononidis* Schouteden, Antonio Aguirre Segura for lending us the *Brachyunguis harmalae* specimens from Almería, and Carolina Martín Albadalejo (“Museo Nacional de Ciencias Naturales, C.S.I.C.”, Madrid, Spain) for lending us the *B. zygophilli* and *Dasia centaurea* specimens collected by Gómez-Menor. We are grateful to Dr. Miguel Ángel Alonso Zarazaga for his advice on nomenclature and to Prof. Georges Remaudière for his constant support.

This paper was financed by the Spanish Government (“Ministerio de Ciencia y Tecnología”): *Iberian-Balearic Aphidinae Fauna (Hemiptera, Aphididae) Tribe Aphidini and first part of the tribe Macrosiphini* research project (REN2001-1956-C17-03/GLO).

References

- AGUIRRE-SEGURA, A. & PASCUAL, F., 1993. Contribución al estudio de los áfidos (Homoptera: Aphididae) de Andalucía: las especies de Pterocommatinae y Aphidinae (Aphidini) de Almería. *Boletín de la Asociación Española de Entomología*, 17(2): 83-101.
- ALDRYHIM, Y. N. & KHALIL, A. F., 1996. The Aphididae of Saudi Arabia. *Fauna of Saudi Arabia*, 15: 161-195.
- ARCOS, M. & CABELLO, T., 1988. Comparación de efectividad de trampas de agua y de luz en las capturas de áfidos (Hom.: Aphidoidea). *Boletín de Sanidad Vegetal, Plagas*, 14: 415-424.
- BARBAGALLO, S., CRAVEDI, P., PASQUALINI, E. & PATTI, I., 1998. *Pulgones de los principales cultivos frutales*. Bayer & Ediciones Mundi-Prensa. Madrid. 125 pp.
- BARBAGALLO, S. & STROYAN, H. L. G., 1982. Osservazioni biologiche, ecologiche e tassonomiche sull’áfido-fauna della Sicilia. *Frustula Entomologica* (N.S.), [1980], 3: 1-182.
- BASKY, Z. & SZALAY-MARSZÓ, L., 1987. Study of isolation mechanisms in the *Hyalopterus pruni* and *Hyalopterus amygdali* complex. In: J. Holman, J. Pelikán, A.G.F. Dixon & L. Weismann (eds.). *Population Structure, Genetics and Taxonomy of Aphids and Thysanoptera*. SPB Academic Publishing. The Hague: 370-376.
- BLACKMAN, R. L. & EASTOP, V. F., 1984. *Aphids on the World’s Crops: An Identification Guide*. J. Wiley & Sons. Chichester. 8 + 466 pp.
- BLACKMAN, R. L. & EASTOP, V. F., 2000. *Aphids on the World’s Crops. An identification guide (Second edition)*. J. Wiley & Sons. Chichester. 8 + 466 pp.
- BÖRNER, C., 1932. Mitteilungen über Blattläuse. *Anzeiger für Schädlingskunde*, 8: 32-33.
- BÖRNER, C., 1940. *Neue Blattläuse aus Mitteleuropa*. Naumburg. 4 pp.
- BÖRNER, C., 1952. Europae Centralis aphides. Die Blattläuse Mitteleuropas: Namen, Synonyme, Wirtspflanzen, Generationszyklen. *Schriften der Thüringischen Landesarbeitsgemeinschaft für Heilpflanzenkunde und Heilpflanzenbeschaffung in Weimar*, 4(1) (*Mitteilungen der Thüringischen Botanischen Gesellschaft, Beiheft*, 3(1)): 1-484.
- BÖRNER, C. & HEINZE, K., 1957. Aphidina-Aphidoidea. Blattläuse, plantlice (aphids), pucerons (aphides). In: P. Sorauer (ed.). *Handbuch der Pflanzenkrankheiten*. Verlag Paul Parey. Berlin & Hamburg, 5(4): 1-402.
- BÖRNER, C. & SCHILDER, F. A., 1931. Aphidoidea, Blattläuse. In: P. Sorauer (ed.). *Handbuch der Pflanzenkrankheiten*. Verlagsbuchhandlung Paul Parey. Berlin, 5(2): 551-673.
- COMISIÓN INTERNACIONAL DE NOMENCLATURA ZOOLOGICA, 2000. *Código Internacional de Nomenclatura Zoológica. Cuarta edición*. Museo Nacional de Ciencias Naturales (CSIC). Madrid. 20 + 156 pp.
- DONCASTER, J. P., 1961. *Francis Walker’s aphids*. British Museum (Natural History). London. 8 + 165 pp.
- EASTOP, V. F., 1979. Key to the genera of subtribe Aphidina (Homoptera). *Systematic Entomology*, 4: 379-388.
- EASTOP, V. F. & HILLE RIS LAMBERS, D., 1976. *Survey of the World’s Aphids*. Dr. W. Junk b.v. Publ. The Hague. 573 pp.
- GARCÍA PRIETO, F. & SANCHÍS SEGOVIA, A., 1998. *Aphis (Absinthaphis) blascoi* sp. n. living on *Artemisia herba-alba* in Los Monegros (Spain). In: J. M. Nieto Nafria & A. F. G. Dixon (eds.). *Aphids in natural and managed ecosystems*. Universidad de León (Secretariado de Publicaciones). León: 345-349.
- GHOSH, A. K., MIER DURANTE, M. P. & NIETO NAFRÍA, J. M., 1994. Distribution of aphidfauna (Homoptera: Aphididae) in the North of Orocantabrian phytogeographic Province, Spain. *Boletín de la Asociación Española de Entomología*, 18(3-4): 81-91.
- GÓMEZ-MENOR, J. & NIETO NAFRÍA, J. M., 1977. Contribución al conocimiento de los pulgones de España (Hem. Homoptera Aphidoidea). *Graellsia*, 32: 227-260.
- GÓMEZ-MENOR ORTEGA, J., 1950. Algunas especies nuevas de áfidos (Homoptera, Aphidae). *Eos (Madrid)*, tomo extraordinario 1950: 97-118 + 5 lám.
- HEIE, O. E., 1986. The Aphidoidea (Hemiptera) of Fennoscandia and Denmark. III. Family Aphididae: subfamily Pterocommatinae and tribe Aphidini of subfamily Aphidinae. *Fauna Entomologica Scandinavica*, 17: 1-314.

- HILLE RIS LAMBERS, D., 1956. On aphids from the Netherlands with descriptions of new species (Aphididae, Homoptera). *Tijdschrift voor Entomologie*, [1955], 98(4): 229-249.
- HILLE RIS LAMBERS, D., 1966. Some synonyms in Aphididae (Homoptera). *Entomologische Berichten*, 26: 124-126.
- HILLE RIS LAMBERS, D., 1967. New and little known members of the aphid fauna of Italy (Homoptera, Aphididae). *Bollettino di Zoologia Agraria e di Bachicoltura*, (II), 8: 1-32.
- HOLMAN, J., 1966. Contributions to the taxonomy of the genus *Aphis* (Homoptera, Aphididae) - I. *Acta Entomologica Bohemoslovaca*, 63(1): 40-61.
- ILHARCO, F. A., 1968. Algumas correções e adições à lista de afídeos de Portugal Continental II Parte (Homoptera-Aphidoidea). *Agronomia Lusitana*, 29(4): 221-245.
- ILHARCO, F. A., 1979. 1.º Aditamento ao Catálogo dos Afídeos de Portugal Continental (Homoptera, Aphidoidea). *Agronomia Lusitana*, 39(4): 253-294.
- ILHARCO, F. A., 1996. 2.º aditamento ao catálogo dos Afídeos de Portugal Continental (Homoptera, Aphidoidea). *Agronomia Lusitana*, [1991-1995], 45(1-4): 5-66.
- ILHARCO, F. A., 2002. Revision of the aphid genus *Paraschizaphis* Hille Ris Lambers, 1947 (Homoptera, Aphidoidea). *Agronomia Lusitana*, 50(1-2): 13-80.
- JÖRG, E. & LAMPEL, G., 1988. Xerothermophile Aphiden der Schweiz und angrenzender Gebiete mit besonderer Berücksichtigung des Kantons Wallis (Homoptera, Aphidina). *Mitteilungen der Schweizerischen Entomologischen Gesellschaft*, 61: 43-88.
- JÖRG, E. & LAMPEL, G., 1995. Morphological studies on the *Aphis fabae* group (Homoptera, Aphididae). *Mitteilungen der Schweizerischen Entomologischen Gesellschaft*, 68: 387-412.
- KADYRBEKOV, R. KH., 2001a. Contribution to the systematic of aphid genus *Protaphis* Börner, 1952 (Homoptera, Aphididae) in the former USSR fauna. *Tethys Entomological Research*, 3: 65-90.
- KADYRBEKOV, R. KH., 2001b. Contribution to the systematic of the xerobiont supraspecific taxa from subtribe Aphidina (Homoptera, Aphididae). *Tethys Entomological Research*, 3: 91-99.
- KADYRBEKOV, R. KH., 2002. Revision of the aphids genus *Cryptosiphum* Buckton, 1879 (Homoptera, Aphidinae). *Tethys Entomological Research*, 6: 39-48.
- KLOET, G. S. & HINCKS, W. D., 1945. Aphidoidea. In: G. S. Kloet & W. D. Hincks (eds.). *A check list of British insects*. Stockport: 49 + 483 pp.
- LAMPEL, G., 1968. *Die Biologie des Blattläus-Generationswechsels. Mit besonderer Berücksichtigung terminologischer Aspekte*. Gustav Fischer Verlag. Jena. 264 pp.
- MAMONTOVA-SOLUKHA, V. A., 1963. Novi dani pro faunu popelic (Homoptera, Aphidoidea) Ukraini. *Pratsi Institutu Zoologii Akademii Nauk Ukrainckoy RSR*, 19: 11-40.
- MELIÁ MASIÁ, A., 1986. Contribución al conocimiento de los pulgones (Homoptera, Aphidoidea) sobre plantas agrícolas y forestales en España. *Boletín de Sanidad Vegetal, Plagas*, 12: 335-342.
- MELIÁ MASIÁ, A., 1991. Presencia en España de *Aphis violae* Schouteden and *Neotoxoptera violae* Pergande (Homoptera, Aphididae) sobre *Viola odorata* L. *Boletín de Sanidad Vegetal, Plagas*, 17: 537-343.
- MELIÁ MASIÁ, A., 1995. Novedades de la Tribu Rhopalosiphina (Homoptera: Aphididae) para Europa y el Este ibérico. *Boletín de la Asociación Española de Entomología*, 19(3-4): 131-139.
- MELIÁ MASIÁ, A., 2003. *Estudio faunístico de los pulgones (Homoptera: Aphididae) de Castellón*. Fundación Caja Castellón - Bancaja. Castellón. 339 pp.
- MICHELENA, J. M., GONZÁLEZ, P. & SANCHÍS, A., 1998. Pulgones (Homoptera, Aphididae) y parasitoides (Hymenoptera, Braconidae, Aphidiinae) de la zona pirenaica. *Nouvelle Revue d'Entomologie (N.S.)*, 15(2): 125-129.
- MIER DURANTE, M. P., 1978. *Estudio de la afidofauna de la provincia de Zamora*. Publicaciones de la Caja de Ahorros Provincial. Zamora. 226 pp.
- MIER DURANTE, M. P., GHOSH, A. K., ZAIXSO, H. & NIETO NAFRÍA, J. M., 1996. Afidofauna (Homoptera, Aphididae) de la vertiente sur de la provincia fitogeográfica Orocantábrica, España. *Graellsia*, 51: 3-16.
- MIER DURANTE, M. P. & NIETO NAFRÍA, J. M., 1978. Primera contribución al conocimiento de los pulgones (Hom. Aphidoidea) del Alto Aragón. *Boletín de la Sociedad Española de Entomología*, 2: 157-167.
- MIER DURANTE, M. P. & NIETO NAFRÍA, J. M., 1983. Aportaciones a la afidofauna de Galicia, II (Hom. Aphidoidea). *Boletín de la Asociación Española de Entomología*, 6(2): 325-336.
- MIER DURANTE, M. P. & NIETO NAFRÍA, J. M., 1985. Aportaciones a la afidofauna de Galicia, 3. *Trabajos Compostelanos de Biología*, 12: 67-85.
- MIER DURANTE, M. P. & NIETO NAFRÍA, J. M., 1991. *Aphis (Absinthaphis) georgii* n. sp. (Homoptera Aphididae), a new aphid living on *Artemisia* (Compositae) in Spain. *Entomologica Basiliensis*, 14: 9-21.
- MIER DURANTE, M. P., SECO FERNÁNDEZ, M. V. & NIETO NAFRÍA, J. M., 1989. *Xerobion eriosomatinum* (Aphididae Aphidini) y otros pulgones de la Cordillera Ibérica y de sus proximidades. *Boletín de la Asociación Española de Entomología*, 13: 353-372.
- MOSCO, M. C., ARDUINO, P., BULLINI, L. & BARBAGALLO, S., 1997. Genetic heterogeneity, reproductive isolation and host preferences in mealy aphids of the *Hyalopterus pruni* complex (Homoptera, Aphidoidea). *Molecular Ecology*, 6: 667-670.

- NIETO NAFRÍA, J. M., 1974. Recopilación de las citas de pulgones (Aphidinea) de España. *Graellsia*, 28: 45-102.
- NIETO NAFRÍA, J. M., 1976. Contribución al conocimiento de la afidofauna de la provincia de Santander (Homoptera: Aphidoidea). *Anales del Instituto de Estudios Industriales, Económicos y de Ciencias*, 1: 11-36.
- NIETO NAFRÍA, J. M., 1977. Algunas correcciones y adiciones al catálogo afidológico español. *Boletín de la Real Sociedad Española de Historia Natural (Biología)*, [1975], 73: 149-168.
- NIETO NAFRÍA, J. M., DELFINO, M. A. & MIER DURANTE, M. P., 1990a. Ampliación del conocimiento de la fauna de pulgones (Hom. Aphidoidea) de Andalucía. *Zoologica Baetica*, 1: 7-32.
- NIETO NAFRÍA, J. M., DÍAZ GONZÁLEZ, T. E. & MIER DURANTE, M. P., 1984. *Catálogo de los pulgones (Hom. Aphidoidea) de España y de sus plantas hospedadoras*. Universidad de León (Secretariado de Publicaciones). León. 174 pp.
- NIETO NAFRÍA, J. M. & MIER DURANTE, M. P., 1982. Contribución al estudio de los pulgones de Vascongadas (II): Aphidinae (Hom. Aphidoidea). *Munibe*, 34(4): 353-360.
- NIETO NAFRÍA, J. M. & MIER DURANTE, M. P., 1985. Nuevas aportaciones a la afidofauna ibérica (Hom. Aphididae). *Boletim da Sociedade Portuguesa de Entomologia*, supl. 1(3): 115-125.
- NIETO NAFRÍA, J. M. & MIER DURANTE, M. P., 1998. *Hemiptera, Aphididae* I. In: M.A. Ramos *et al.* (eds.). *Fauna Ibérica*, vol. 11. Museo Nacional de Ciencias Naturales. CSIC. Madrid. 424 pp.
- NIETO NAFRÍA, J. M., MIER DURANTE, M. P., BINAZZI, A. & PÉREZ HIDALGO, N., 2003. *Hemiptera, Aphididae* II. In: M.A. Ramos *et al.* (eds.). *Fauna Ibérica*, vol. 19. Museo Nacional de Ciencias Naturales. CSIC. Madrid. 351 pp.
- NIETO NAFRÍA, J. M., MUÑOZ MARTÍNEZ, I. & MIER DURANTE, M. P., 1987. Pulgones (Hom. Aphidoidea) de la provincia de Soria, II: Aphididae. *Boletín de la Asociación Española de Entomología*, 11: 367-384.
- NIETO NAFRÍA, J. M., REMAUDIÈRE, G. & MIER DURANTE, M. P., 1986. Contribución al conocimiento de la fauna de pulgones (Homoptera Aphidoidea) de Andalucía. *Actas VIII Jornadas de la Asociación Española de Entomología, Sevilla*: 282-399.
- NIETO NAFRÍA, J. M., REMAUDIÈRE, G. & MIER DURANTE, M. P., 1990b. Newly recorded aphid species in the phytogeographic province Orocantabrian of Spain. *Acta Phytopathologica et Entomologica Hungarica*, 25(1-4): 365-373.
- NIETO NAFRÍA, J. M., REMAUDIÈRE, G. & MIER DURANTE, M. P., 1991. Novedades para la afidofauna (Hom. Aphididae) española en la provincia fitogeográfica Orocantábrica (Cordillera Cantábrica, España). *Boletín de la Asociación Española de Entomología*, 15: 317-324.
- PRIOR, R. N. B. & STROYAN, H. L. G., 1977. A new species of *Aphis* from *Potentilla palustris*, with a discussion of related species. *Systematic Entomology*, 2: 245-253.
- REMAUDIÈRE, G. & REMAUDIÈRE, M., 1997. *Catalogue des Aphididae du monde / Catalogue of the world's Aphididae. Homoptera Aphidoidea*. INRA Editions. Versailles. 478 pp.
- ROBLES GARCÍA, M. B. & NIETO NAFRÍA, J. M., 1983. Algunos Aphidini de la provincia de León. *Eos*, 59: 255-268.
- SECO, M. V. & MIER, M. P., 1988. Contribuciones al conocimiento de los pulgones (Hom. Aphidoidea) de las Baleares. I. Introducción y afidofauna de Mallorca. *Bolletí de la Societat d'Història Natural de les Balears*, [1986], 30: 5-17.
- SECO FERNÁNDEZ, M. V., MIER DURANTE, M. P., PUJADE, J. & NIETO NAFRÍA, J. M., 1998. Aphids caught with Malaise trap in the Principality of Andorra (Iberian Peninsula). In: J.M. Nieto Nafría & A.F.G. Dixon (eds.). *Aphids in natural and managed ecosystems*. Universidad de León (Secretariado de Publicaciones). León: 471-479.
- SHAPOSHNIKOV, KH., 1964. Suborder Aphidinea, Plant lice. In: G.Ya. Bei-Bienko (ed.). *Keys to the Insects of the European U.S.S.R.*, Vol. I. Israel Program Scientific Translations. Jerusalem: 616-799.
- STROYAN, H. L. G., 1955. Recent additions to the British aphid fauna. Part II. *Transactions of the Royal Entomological Society of London*, 106(7): 283-339 + 3 pl.
- STROYAN, H. L. G., 1984. Aphids-Pterocommatinae and Aphidinae (Aphidini) Homoptera, Aphididae. *Handbooks for the Identification of British Insects*, 2(6): 1-232.
- SUAY CANO, V. A. & GONZÁLEZ FUNES, P., 1998. Estudio de los pulgones (Homoptera: Aphididae) de la provincia de Valencia. I: Subfamilia Aphidinae, Tribu Aphidini. *Boletín de la Asociación Española de Entomología*, 22(1-2): 37-59.
- SZELEGIEWICZ, H., 1961. Über zwei wenig bekannte mitteleuropäische Blattlausarten (Homoptera Aphididae). *Bulletin de l'Académie Polonaise des Sciences*, (II), 9(7): 303-307.
- SZELEGIEWICZ, H., 1968. Mszyce Aphidodea. *Katalog Fauny Polski*, 21(4): 1-316.
- SZULCZEWSKI, J. W., 1950. Wyrosle Wielkopolskiego Parku Narodowego. *Prace Monograficzne Przyroda Wielkopolskiego Parku Narodowego*, 2: 141-178.
- THEOBALD, F. V., 1915. New myrmecophilous aphides. *The Entomologist's Record and Journal of Variation*, 27: 54.

- THEOBALD, F. V., 1927. *The plant-lice or Aphididae of Great Britain*. Vol. II. Headley Brothers. Ashford. 411 pp.
- THIEME, T. & DIXON, A. F. G., 2004. The case for *Aphis solanella* being a good species. In: J.C. Simon *et al.* (eds.). *Aphids in a new millennium*. INRA Editons. Paris: 189-194.
- TIZADO MORALES, E. J., 1991. *Estudio comparado de la fauna y la biología de pulgones (Hom.), afidiinos (Hym.) y otros insectos acompañantes en dos áreas de la provincia de León*. Universidad de León. Secretariado de publicaciones (294 pp.). (Tesis doctoral en microficha, n.º 67) León. 8 pp. + 4 microfichas.
- TIZADO MORALES, E. J. & NIETO NAFRÍA, J. M., 1991. Aportaciones a la afidofauna leonesa. Novedades para la fauna española del género *Aphis* (Homoptera, Aphididae). *Boletín de la Asociación Española de Entomología*, 15: 275-287.
- VIDANO, C., 1959. Análisi morfológica ed etológica del ciclo eterogónico de *Rhopalosiphum oxyacanthae* (Schrank) Börner su Pomoidee e Graminacee (Hemiptera Aphididae). *Bolletino de Zoologia Agraria e Bachicoltura*, (2), 2: 1-225.

Recibido, 27-VII-2004
Aceptado, 23-XI-2004
Publicado, 31-XII-2004