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**Contribution to the knowledge of the genus *Micaria*  
in the West-palaearctic region, with description of the new genus  
*Arboricaria* and three new species  
(Araneae Gnaphosidae)**

**Abstract** - The species of the genus *Micaria* from Northern Africa are revised and partly neotypes are designated. One new species belonging in the genus *Micaria* is described: *M. belezma* Bosmans **n. sp.** from Algeria. The following names are newly synonymized: *M. fastuosa* (Lucas, 1846) [preoccupied by *M. fastuosa* (C.L. Koch, 1835)] with *M. pygmaea* Kroneberg, 1875; *M. septempunctata* O.P.-Cambridge, 1872 with *M. pallipes* (Lucas, 1846); *M. romana* L. Koch, 1866 with *M. albovittata* (Lucas, 1846); *M. formicaria* (Lucas, 1846) (non Sundevall, 1831), *M. praesignis* L. Koch, 1867, *M. lucasi* Thorell, 1871 and *M. albimana* O.P.-Cambridge, 1872 with *M. coarctata* (Lucas, 1846) and *M. simplex* Bösenberg, 1902 with *M. silesiaca* L. Koch, 1875; *M. fausta* Karsch, 1881 is considered as a species incertae sedis. The new genus *Arboricaria* Bosmans **n. gen.** is described, containing the species from the former *M. subopaca*-group: *A. cyrnea* (Brignoli, 1983) [type species], *A. sociabilis* (Kulczynski, 1897), *A. subopaca* (Westring, 1861) [all **n. comb.**] and two new species: *A. koeni* Bosmans **n. sp.** from Greece and *A. brignolii* Bosmans & Blick **n. sp.** from Portugal. Additional distribution data and measurements of other Mediterranean species are presented. Lists of synonyms, insufficiently known species and valid species within the two genera in the palaearctic region are added.

**Résumé** - Contribution à la connaissance du genre *Micaria* dans la Région Palaearctique occidentale, avec description du genre nouveau *Arboricaria* et de trois nouvelles espèces (Araneae Gnaphosidae).

Les espèces du genre *Micaria* de l'Afrique du Nord sont revisées et partiellement des néotypes sont désignés. Une nouvelle espèce de l'Algérie est décrite: *M. belezma* Bosmans **n. sp.**. Les noms suivants sont mis en synonymie (**n. syn.**): *M. fastuosa* (Lucas, 1846) [préoccupé par *M. fastuosa* (C.L. Koch, 1835)] avec *M. pygmaea* Kroneberg, 1875; *M. septempunctata* O.P.-Cambridge, 1872 avec *M. pallipes* (Lucas, 1846); *M. romana* L. Koch, 1866 avec *M. albovittata* (Lucas, 1846); *M. formicaria* (Lucas, 1846) (non Sundevall, 1831), *M. praesignis* L. Koch, 1867, *M. lucasi* Thorell, 1871 et *M. albimana* O.P.-Cambridge, 1872 avec *M. coarctata* (Lucas, 1846) et *M. simplex* Bösenberg, 1902 avec *M. silesiaca* L. Koch, 1875; *M. fausta* Karsch, 1881 est considérée une espèce incertae sedis. Le nouveau genre *Arboricaria* Bosmans **n. gen.** est décrit, renfermant les espèces de l'ancien *M. subopaca*-group: *A. cyrnea* (Brignoli, 1983) [espèce type], *A. sociabilis* (Kulczynski, 1897), *A. subopaca* (Westring, 1861) [toutes **nov. comb.**] et deux espèces nouvelles: *A. koeni* Bosmans **n. sp.** de la Grèce et *A. brignolii* Bosmans & Blick **n. sp.** du Portugal. De nouvelles données de distribution et des mensurations d'autres espèces Méditerranéennes sont présentées. Dans les deux genres, listes de synonymies, espèces valides et insuffisamment connues de la région paléarctique sont ajoutées.

**Riassunto** - Contributo alla conoscenza del genere *Micaria* nella Regione W-paleartica, con descrizione del nuovo genere *Arboricaria* e di tre nuove specie (Araneae Gnaphosidae).

Sono revisionate le specie nordafricane del genere *Micaria*, con designazione di neotipi. *Micaria belezma* Bosmans **n. sp.** è descritta di Algeria. Sono proposte le seguenti nuove sinonimie (**n. syn.**): *M. fastuosa* (Lucas, 1846) [preoccupato da *M. fastuosa* (C.L. Koch, 1835)] con *M. pygmaea* Kroneberg, 1875; *M. septempunctata* O.P.-Cambridge, 1872 con *M. pallipes* (Lucas, 1846); *M. romana* L. Koch, 1866 con *M. albovittata* (Lucas, 1846); *M. formicaria* (Lucas, 1846) (non

Sundevall, 1831), *M. praesignis* L. Koch, 1867, *M. lucasi* Thorell, 1871 e *M. albimana* O.P.-Cambridge, 1872 con *M. coarctata* (Lucas, 1846) e *M. simplex* Bösenberg, 1902 con *M. silesiaca* L. Koch, 1875; *M. fausta* Karsch, 1881 è considerata specie incertae sedis. Viene istituito il nuovo genere *Arboricaria* Bosmans **n. gen.**, che comprende le specie del precedente gruppo di *Micaria subopaca*: *A. cyrnea* (Brignoli, 1983) [specie tipo], *A. sociabilis* (Kulczynski, 1897), *A. subopaca* (Westring, 1861) [tutte **nov. comb.**] e le nuove specie *A. koeni* Bosmans **n. sp.** di Grecia e *A. brignolii* Bosmans & Blick **n. sp.** del Portogallo. Sono forniti nuovi dati corologici e misure di altre specie mediterranee. Di entrambi i generi sono indicati i sinonimi, le specie valide e quelle insufficientemente conosciute della Regione paleartica.

**Key words:** Araneae, Gnaphosidae, *Micaria*, *Arboricaria*, new genus, new species, taxonomy, distribution, synonyms, valid species, Mediterranean region, Palaearctic.

## INTRODUCTION

The genus *Micaria* Westring, 1851 occurs with many species in the Palaearctic and Nearctic regions. In older collections, there are generally few specimens, probably because they are difficult to collect in the field. Earlier descriptions thus were based on very few specimens, and hence the morphological variation within the species was not known. Furthermore, the descriptions were not based on genital organs but on morphological criteria only. This probably explains why so many *Micaria* species remained insufficiently known for such a long time, or still are at the moment.

Recent descriptions or revisions are generally based on more specimens, and mainly on genital characters. Platnick & Shadab (1988) stated that male palps and epigynes of *Micaria* species are simple, but most of the species can be fairly well distinguished by genitalic structures. Colour and morphological characters, such as presence and size of abdominal spots and constriction of the abdomen, are variable and a large number of specimens is necessary to detect the range of this variability. When a large number of specimens of two related species is compared, such characters can be distinguishing but they are very difficult to describe in words or drawings. Size, as expressed in length or width of cephalothorax, appears to be a valuable character; there are small, middle-sized and large species. Ratios of, for instance length/width of cephalothorax have proved to be important: using this criterion, Wunderlich (1979) distinguished males of *Micaria formicaria* and *M. albimana* (now synonymized with *M. coarctata*), whereas their palps are identical. As measurements of the cephalothorax can be important to distinguish certain species, and as they are rare in literature, we give them for the examined Mediterranean specimens.

Recently, several contributions to the taxonomy of the genus *Micaria* have been made. Revisions and descriptions are now based on larger series, and the distances between related species could well be established. Miller (1967) and Wunderlich (1979) treated mainly the European fauna, Platnick & Shadab (1988) treated the Nearctic fauna, Mikhailov & Fet (1986) and Mikhailov (1988, 1991, 1995) treated the fauna of the south-eastern part of the former USSR, Danilov (1993, 1997) treated the fauna of Siberia and Hayashi (1985) and Tang et al. (1997) contributed to the fauna of Japan and China respectively. In these papers, species described in the past were re-examined, and many

appeared to be synonyms of well-known species and to have large distribution areas. The synonymy has become quite complicated, and we think it useful to present a list of all synonyms concerning the genus *Micaria* in the palaearctic region at the end of this paper.

Six species from northern Africa, formerly known by one sex only are revised in this paper:

- Four species from Algeria, described by Lucas (1846): *M. albovittata*, *M. coarc-tata*, *M. fastuosa* and *M. pallipes*;
- Another one from Algeria described by Lucas (1846) as *M. formicaria*, for which by preoccupation by *M. formicaria* (Sundevall, 1832) the new name *M. lucasi* Thorell, 1871 was proposed;
- One species described from Libya: *M. fausta* Karsch, 1881.

At first, it was simply the purpose to identify the *Micaria* specimens from the Algerian collection of the first author. We therefore reconsidered the eight species described from North Africa: *M. albovittata* (Lucas, 1846), *M. coarctata* (Lucas, 1846), *M. dives* (Lucas, 1846), *M. fastuosa* (Lucas, 1846), *M. lucasi* Thorell, 1871 [= *M. formicaria* (Lucas), replacement name] and *M. pallipes* (Lucas, 1846), all from Algeria, *M. fausta* (Karsch, 1881) from Libya and *M. cherifa* Jocqué, 1977 from Morocco. Except for *Micaria dives*, a well-known species occurring all over the Mediterranean region (reaching Central Europe in the north and Japan in the east) and *M. cherifa*, according to Mikhailov (1991) a synonym of *M. romana*, all other species appear to be insufficiently known, or different authors have different opinions on their taxonomic status. *M. albovittata*, *M. pallipes* and *M. fausta* are only known from their original description and figure as valid species in both catalogues of Bonnet (1957) and Roewer (1954). Wunderlich (1979) considers them valid species. *Micaria lucasi* is considered as a valid species by Bonnet and Roewer, whereas Wunderlich considers it a doubtful synonym of *M. formicaria*. *M. coarctata* is considered a junior synonym of *M. formicaria* by Bonnet and Roewer, Wunderlich considers it a doubtful synonym of *M. formicaria* as well. The case of *M. fastuosa* is the most complicated: Bonnet lists it as a valid species, Roewer as a synonym of *M. fulgens* and Wunderlich considers it as a synonym of *M. dives*. It is remarkable that three different authors have three different opinions on the status of the same species. This is even more remarkable in view of the fact that none of these authors studied type or topotypic material of the species concerned.

We were only able to find type material of one species figuring on the above list: *M. fausta* Karsch, deposited in the Museum für Naturkunde, Berlin, collected in Libya, Tripoli. This appeared to be a juvenile Gnaphosid which we cannot attribute to a definite genus. In the original description, the presence of abdominal spots is not mentioned, so the species impossibly can be a *Micaria*. It has to be considered *incertae sedis*. From one more species, *M. coarctata*, probably identified by Simon, we found material in the MHNTP. Material of the other species could not be traced.

It appeared soon that, in order to identify the material from Algeria, we had to consider all the species described from the Mediterranean region. As much species as possible from the Mediterranean region were examined, and compared with our material. For species occurring in the African part of the Mediterranean region, we present complete

descriptions. For species occurring only in the European part of the Mediterranean region we present measurements, distribution data and any useful comments. And finally we have at least a small note to every valid species known from the western palaearctic region.

Measurements are in mm. The following abbreviations are used: CJvK: collection Johan Van Keer; CMJ: Collection Marc Jannsen; CPP: collection Piet Poot; CRB: collection Robert Bosmans; CTB: collection Theo Blick; IRSNB: Institut royal des Sciences naturelles de Belgique, Bruxelles; MNHNP: Muséum national d'Histoire naturelle, Paris; MNZHB: Museum für Naturkunde, Zentralinstitut der Humboldt-Universität, Berlin; NHML: Natural History Museum, London; NHMW: Naturhistorisches Museum, Wien; NMB: Naturhistorisches Museum, Basel; SMF: Senckenberg Museum Frankfurt; SMNS: Staatliches Museum für Naturkunde Stuttgart; ZMH: Zoologisches Museum Hamburg.

#### DESCRIPTION OF SPECIES

##### 1. SPECIES FROM NORTH AFRICA

###### *Micaria dives* (Lucas, 1846) (figs 1 - 4)

*Drassus dives* Lucas, 1846: 220 (descr. ♀).

*Micariolopis dives*; Simon, 1932: 956 (descr. ♂, ♀).

*Micaria similis* Tyschchenko, 1965: 701 (descr. ♀).

*Micaria dives*; Wunderlich, 1979: 297 (descr. ♂, ♀); Mikhailov, 1988: 328.

*Micaria tyszchenkoi* Brignoli, 1983: 583 (nom. nov. pro *M. similis* Tyschchenko, 1965 - preocc.)

TYPE MATERIAL. Originally described from Algeria, Wilaya El Tarf, El Kala, type material lost; neotype ♂ from Algeria, Wilaya Alger, El Harrach, 2.VI.1986, R. Bosmans leg. (deposited in MNHNP).

DESCRIPTION. Measurements: ♂: total length 2.6-3.6; cephalothorax 1.34-1.70 long, 0.81-1.08 wide; ♀: total length 3.8-4; cephalothorax 1.58-1.61 long, 0.98-1.00 wide.

Colour: Variable, but femora I always with basal part black, distal part pale with two black spots.

♂ palp: figs 1-2; epigyne: fig. 3; vulva: fig. 4.

MATERIAL EXAMINED. ALGERIA. Alger: El Harrach, 4 ♂ ♂ 2 ♀ ♀, 4.VI.1983, 1 ♂ 1 ♀, 16.VI.1985 and 6 ♂ ♂ 1 ♀, 2.VI.1986, in pitfalls in park, R. Bosmans leg. (CRB). Blida: Oued Djer, forêt des Soumatas, 1 ♂ in pitfalls in maquis, 18.VI.1989, R. Bosmans leg. (CRB). Tizi Ouzou: Sebaou-el-Kedim, 50 m, 1 ♂ in dry grassland, 10.V.1998, R. Bosmans leg. (CRB). MOROCCO. Marrakech: Gueliz, 3 ♂ ♂ 8 ♀ ♀ in garden around hotel, 11.VII.1999, R. Bosmans leg. (CRB). SPAIN. Orense: Laroucco, 1 ♀, 12.VIII.1994, R. Bosmans leg. (CRB). GERMANY. Saxonia: Oberlausitz, near Lohsa, 1 ♀, 17.V.-16.VI.1999, 1 ♀, 17.VI.1999, 1 ♀, 27.V.2000, T. Blick & al. leg. (CTB). GREECE. Peloponesos: Arkadia, Leonidio, Paleochori, 2 ♂ ♂, G. Delmastro leg. (CRB).

DISTRIBUTION. One of the commonest circum-Mediterranean *Micaria* species, reaching Benelux and Denmark in the north (Roberts, 1998; Langemark, 1996 unpubl.) and inhabiting large parts of the former USSR, China and Japan in the Far East (Mikhailov, 1997; Song et al., 1999; Kamura, 1990).

*Micaria pygmaea* Kroneberg, 1875 (figs 5-8)

*Drassus fastuosus* Lucas, 1846: 221 (descr. ♀) (preoccupied by *Drassus fastuosus* (C.L. Koch, 1835) in synonymy of *M. fulgens*).

*Micaria pygmaea* Kroneberg, 1875: 19 (descr. ♂) n. syn.

*Micaria todilla* Simon, 1878: 28 (descr. ♀); Wunderlich, 1979: 306 (descr. ♀).

*Micaria trochilus* Simon, 1890: 110 (descr. ♀).

*Micaria judaeorum* Strand, 1915: 161 (descr. ♀).

*Micaria harmsi* Wunderlich, 1979: 283 (descr. ♂).

*Micaria pygmaea*; Mikhailov & Fet, 1986: 180; Wunderlich, 1987: 246; Mikhailov, 1988: 325.

TYPE MATERIAL. Lucas' type material of *Drassus fastuosus* is lost, and we select here a ♂ from Algeria as neotype: Algeria: M'sila: S. Baniou, Chott-el-Hodna, 400 m, in pitfalls in small dunes bordering the chott, IV-V.1988, R. Bosmans leg.; deposited in MNHNP.

DIAGNOSIS. The species is distinguished by the absence of a male tibial apophysis, and by the transverse anterior depression in the female epigyne; further distinctive characters are the small size, the reddish brown cephalothorax and the more or less constricted abdomen.

REMARKS. Lucas' (1846) diagnosis of *Micara fastuosa* included that it differed from *M. dives* by the shape of the cephalothorax: in *M. fastuosa*, it is gradually narrowing to the front, whereas in *M. dives* it has a distinct antero-lateral constriction. Furthermore, the colour of the cephalothorax is very dark reddish brown in *M. dives*, and bright reddish brown in *M. fastuosa*. These differences are present in two series of specimens from Algeria and the first author identifies them as *M. dives* and *M. fastuosa*.

Lucas (1846) described *M. fastuosa* from the east of Algeria, from Annaba and El Kala. In the material, a ♂ and ♀ collected at Baniou correspond completely with Lucas' detailed description of *Drassus fastuosus*, and the first author identified these specimens as *Micaria fastuosa* (Lucas, 1846). It appears that the species is identical to *Micaria pygmaea* Kroneberg, 1875 as figured by Mikhailov & Fet (1986) and Wunderlich (1987) and *M. fastuosa* (Lucas) thus would become the valid name. *M. fastuosa* (Lucas, 1846) is however preoccupied by *M. fastuosa* (C.L. Koch, 1835) and *M. pygmaea* hence remains the valid species. *Micaria todilla* Simon, 1878, *Micaria trochilus* Simon, 1890, *Micaria judaeorum* Strand, 1915 and *Micaria harmsi* Wunderlich, 1979 are other synonyms, as pointed out by Mikhailov & Fet (1986) and Wunderlich (1987). The presence in Algeria fills a large gap in its distribution area.

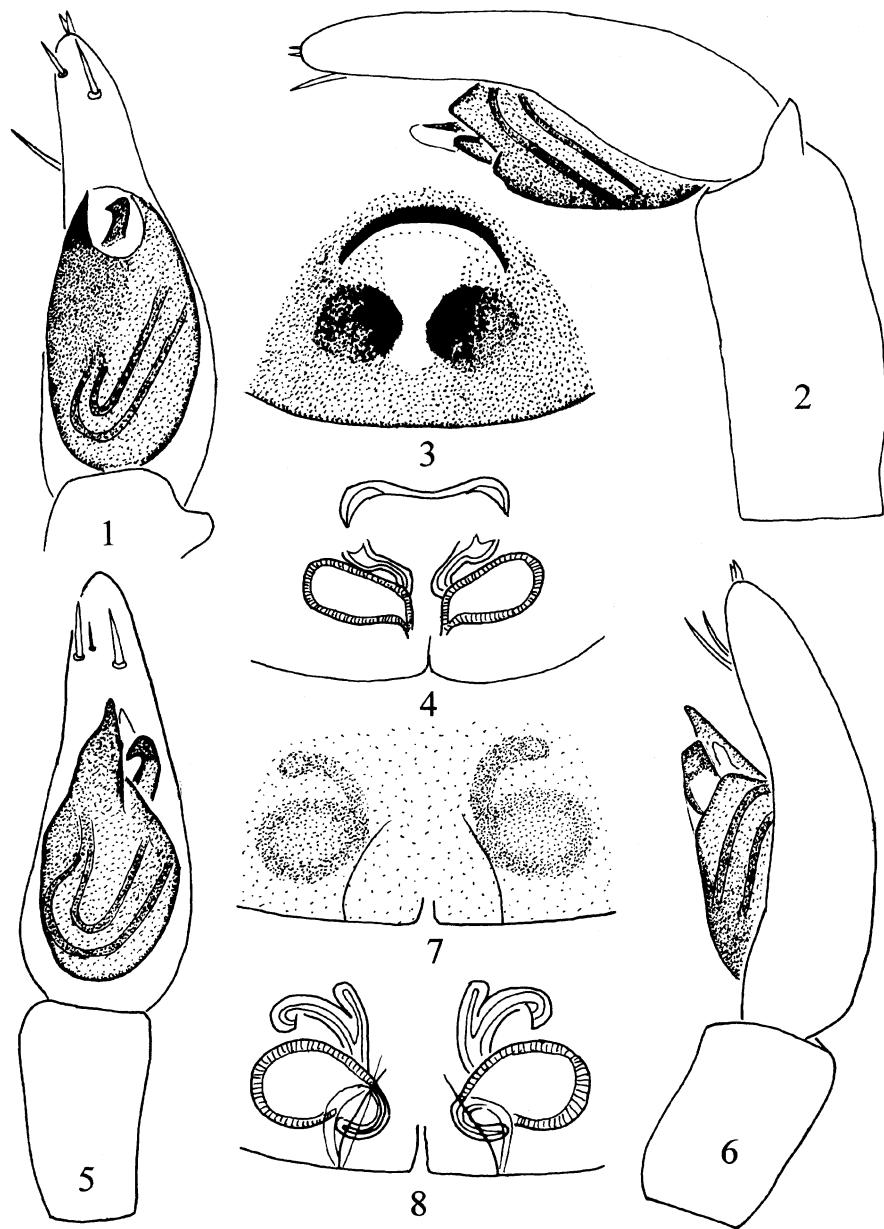
Simon (1884a) considered *M. fastuosa* a synonym of *M. dives*, but later authors all had different opinions. Roewer (1954) considered the species as a synonym of *Micaria fulgens*, Bonnet (1957) listed it as a separate species as *Micariolepis fastuosa* and finally Wunderlich (1979) listed it as a synonym of *Micaria dives*, as Simon did.

DESCRIPTION. Measurements: ♂: total length 2.0; cephalothorax 1.11 long, 0.64 wide; ♀: total length 2.8; cephalothorax 1.20 long, 0.73 wide.

♂ palp: figs 5-6; epigyne: fig. 7; vulva: fig. 8.

MATERIAL EXAMINED. ALGERIA. M'sila: S. Baniou, Chott-el-Hodna, 400 m, 1 ♀, together with the neotype ♂, in pitfalls in small dunes bordering the chott, IV-V.1988, R. Bosmans leg. (CRB). GREECE. Crete: Mirtos, 1 ♀, 4.III.1978, R. Bosmans leg (CRB).

DISTRIBUTION. A species with a large distribution, as *M. pygmaea* or one of its synonyms recorded from the Canary Islands, Spain, Greece, Cyprus, Egypt, Israel, Yemen, Syria,



Figs 1-8. *Micaria dives* (Lucas): 1 - ♂ palp, ventral view; 2 - Idem, lateral view; 3 - Epigyne; 4 - Vulva; *Micaria fastuosa* (Lucas): 5 - ♂ palp, ventral view; 6 - Idem, lateral view; 7 - Epigyne; 8 - Vulva.

Uzbekistan, Turkmenia and Tadzhikistan (Mikhailov & Fet, 1986; Mikhailov, 1988; Wunderlich, 1987). Its presence in Algeria completes a circum-Mediterranean distribution pattern, and its occurrence in France and Italy is to be expected.

*Micaria pallipes* (Lucas, 1846) (figs 9-12)

*Drassus pallipes* Lucas, 1846: 227 (descr. ♀).

*Micaria septempunctata* O.P.-Cambridge, 1872: 250 (descr. ♂, ♀) **n. syn.**

*Micaria oceanica* Denis, 1964: 95 (descr. ♂, ♀).

*Micaria femoralis* Denis, 1966: 110 (descr. ♀).

*Micaria milleri* Wunderlich, 1979: 284 (descr. ♀).

*Micaria septempunctata*; Wunderlich, 1979: 307; Mikhailov & Fet, 1986: 178; Wunderlich, 1987: 245; Mikhailov, 1988: 324.

TYPE MATERIAL. Neotype ♀ from Algeria, Wilaya of Boumerdes, Le Figuier, 5 m, in dunes near the beach, 2.V.1986, R. Bosmans leg.; deposited in MHNHP.

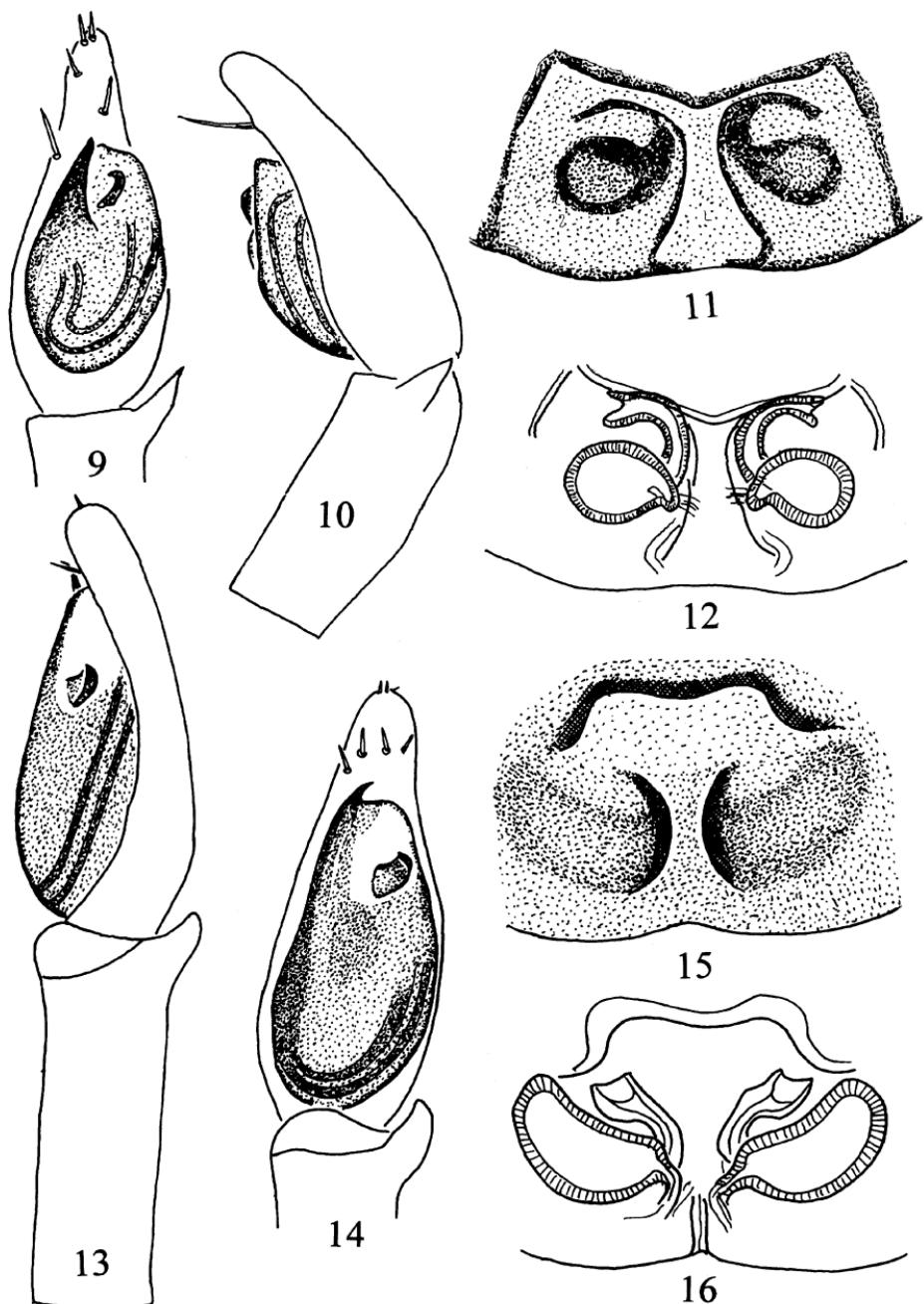
DIAGNOSIS. Apart from the male palp and the female epigyne, the species is diagnosed by its small size, the very dark cephalothorax and the yellow legs with contrasting black femora.

REMARKS. *Micaria pallipes* (Lucas, 1846) was described from Cap Caxine near Alger. The species is mentioned as a valid species in Roewer (1954) and Bonnet (1957). Lucas' original description and figures of the general morphology are excellent, and they allow us to identify several of the Algerian specimens as *M. pallipes*. A ♀ collected at Le Figuier, very near the type locality, is hereby selected as neotype. *Micaria septempunctata* O.P.-Cambridge, 1872, redescribed by Wunderlich (1979), is identical to our material and is evidently a junior synonym. *Micaria oceanica* Denis, 1964, *M. femoralis* Denis, 1966 and *M. milleri* Wunderlich, 1979 are junior synonyms as well, as pointed out by Mikhailov & Fet (1986) and Wunderlich (1987).

DESCRIPTION. Measurements: ♂: total length 2.2-2.6; cephalothorax 1.07-1.11 long, 0.66-0.70 wide; ♀: total length 2.7-3.4; cephalothorax 1.07-1.24 long, 0.66-0.84 wide.

♂ palp: figs 9-10; epigyne: fig. 11; vulva: fig. 12.

MATERIAL EXAMINED. ALGERIA. Boumerdes: Cap Djinet, Barrage de l'Oued Arbaa, 10 m, 1 ♀, 4.III.1988, R. Bosmans leg. (CRB); Le Figuier, 5 m, dunes near the beach, 1 ♀ (neotype), 2.V.1986, R. Bosmans leg. (CRB); Zemmouri, 10 m, 1 ♀ in dunes, 27.IV.1984, R. Bosmans leg. (CRB). MOROCCO. Marrakech: Gueliz, 1 ♀ in garden around hotel, 11.VII.1999, R. Bosmans leg. (CRB). TUNISIA. Nabeul: El Haouaria, 1 ♂, 19.IV.1993, K. De Smet leg. (CRB). Siliana: Makhtar, 1 ♀, 23.I.1995, R. Bosmans leg. (CRB). SPAIN. Badajoz: Zafra SW, Rio Bodion, 1 ♀, 2.IV.1997, R. Bosmans leg. (CRB); W Ronquillo, 1 ♂ 1 ♀, 5.IV.1994, R. Bosmans leg. (CRB); Embalse de la Sirena, 1 ♂, 12.IV.1994, R. Bosmans leg. (CRB). Cadiz: San Roque, 1 ♂, 4.IV.1997, R. Bosmans leg. (CRB); Tarifa, 1 ♂ 1 ♀, IV.1994, P. Poot leg. (CPP). Ciudad Real: Laguna del Camino de Villafranca, 1 ♀, 13.IV.1998, R. Bosmans leg. (CRB). Granada: Ventoros de San José, 1 ♂, 12.IV.1998, R. Bosmans leg. (CRB). Huelva: Rivera Chanza, 1 ♀, 7.IV.1996, R. Bosmans leg. (CRB). PORTUGAL. Alto Alentejo: Ribera do Almugro, 1 ♀, 8.IV.1996, R. Bosmans leg. (CRB). FRANCE. Bouches du Rhône: Salin de Giraud, 2 ♀ ♀, 8.IV.1998, K. De Smet leg. (CRB). GREECE: Crete: Aghia Ghalini, IV.1997, 1 ♀ in litter on beach, 27.IV.1997, J. Van Keer leg. (CJvK). SYRIA: Hammaralkassra, 4 ♂ ♂ 4 ♀ ♀ in cultivated fields, VII.-VIII.1989, V.-VII.1990, I. Al Hussein leg. (CTB).



Figs 9-16. *Micaria pallipes* (Lucas): 9 - ♂ palp, ventral view; 10 - Idem, lateral view; 11 - Epigyne; 12 - Vulva; *Micaria albovittata* (Lucas): 13 - ♂ palp, ventral view; 14 - Idem, lateral view; 15 - Epigyne; 16 - Vulva.

DISTRIBUTION. Formerly known from Libya, Bulgaria, Madeira, Lebanon and southern parts of the former Soviet Union (Mikhailov & Fet, 1986; Mikhailov, 1988, 1997; Wunderlich, 1987), and cited here for the first time from Algeria, Morocco, Tunisia, Spain, Portugal, France, Greece and Syria.

*Micaria albovittata* (Lucas, 1846) (figs 13-16)

- Drassus albovittatus* Lucas, 1846: 226 (descr. ♀).  
*Micaria romana* L. Koch, 1866: 67 (descr. ♀) **n. syn.**  
*Drassus scintillans* O.P.-Cambridge, 1871: 412 (descr. ♂, ♀).  
*Micaria nuptialis* O.P.-Cambridge, 1872: 250 (descr. ♂, ♀).  
*Micaria spinulosa* Simon, 1878: 13 (descr. ♀).  
*Micaria rogenhoferi* Herman, 1879: 162, 358 (descr. ♂, ♀).  
*Micaria turcica* Drensky, 1915: 159 (descr. ♀).  
*Micaria centrocnemis*; Schenkel, 1936: 284 (non Kulczynski, 1885 - see Song et al., 1999).  
*Micaria cherifa* Jocqué, 1977: 325 (descr. ♂, ♀).  
*Micaria romana*; Wunderlich, 1979: 260; Mikhailov, 1991: 78.  
*Micaria albovittata*; Wunderlich, 1979: 296.

TYPE MATERIAL. Described from the NE of Algeria from Constantine, type material lost. Neotype ♂ from the NE of Algeria, Tebessa, Bekkaria forest, 1100 m, in pitfalls in *Pinus halepensis* forest, 15.VI.1989, R. Bosmans leg.; deposited in MNHNP.

DIAGNOSIS. Together with *M. formicaria* and *M. coarctata*, this is one of the largest *Micaria species*. Males of *M. albovittata* and *M. formicaria* have identical palps with two small tibial teeth, whereas there is only one in *M. coarctata*; males of *M. albovittata* and *M. formicaria* are distinguished by colour and shape of the cephalothorax: blackish brown, ratio length/width = 1.5-1.6 in *M. albovittata*, reddish brown, ratio length-width = 1.8-1.9 in *M. formicaria*. Females of *M. albovittata* and *M. formicaria* differ from *M. coarctata* by the broad, transverse groove in the epigyne, which is narrow in *M. coarctata*. The epigynes of *M. albovittata* and *M. formicaria* are very similar, but the species are easily distinguished by the spermathecae, being oval and reaching the anterior sclerified ridge in *M. formicaria*, more rounded and not reaching the anterior ridge in *M. albovittata*.

REMARKS. *Micaria albovittata* is listed as a distinct species in Roewer (1954) and Bonnet (1957). In his revision of the European species of the genus *Micaria*, Wunderlich (1979) stated that *M. romana* L. Koch, 1866 was cited from North Africa as *M. albovittata* (Lucas, 1846), but did not take the logical conclusion that *M. albovittata* is the senior synonym. The abundant material from Algeria contains several specimens agreeing with Lucas' (1846) original description and figures of *Drassus albovittatus*, and we consider both species as synonyms. A neotype from the Algerian material is selected above. We agree with Wunderlich (1979) that *M. romana* is the same species, and consider it a junior synonym. It could be suggested that the name *M. romana* should be retained, as most commonly used one, for the sake of stability. As Simon (1878) used the same name in another sense (see following species), we prefer to use the oldest available and valid name, i.e. *M. albovittata* (Lucas, 1846). This thus becomes the correct name for the species, previously described as *Micaria romana* L. Koch, 1866, *Drassus scin-*

*tillans* O.P.-Cambridge, 1871, *Micaria nuptialis* O.P.-Cambridge, 1872, *M. spinulosa* Simon, 1878, *M. rogenhoferi* Herman, 1879, *M. turcica* Drensky, 1915 and *M. cherifa* Jocqué, 1977.

DESCRIPTION. Measurements: ♂: total length 4.8-7.6; cephalothorax 2.04-2.96 long, 1.32-1.84 wide; ♀: total length 6.0-7.6; cephalothorax 1.98-2.82 long, 1.38-1.64 wide. Three ♂♂ from Corsica are smaller: total length 4.0-5.2; cephalothorax 1.74-2.40 long, 1.12-1.52 wide.

♂ palp: figs 13-14; epigyne: fig. 15; vulva: fig. 16.

MATERIAL EXAMINED. ALGERIA. M'sila: Djebel Maadid, Kalaa des Beni Hammad, 980 m, 1 subadult ♂ 1 ♀, stones in grassland, 28.IV.1988, R. Bosmans leg. (CRB). Saida: 40 km S Saida, Oued Oum Djerane, 1 ♂ in maquis of *Quercus ilex*, 1.X.1981, R. Bosmans leg. (CRB). Tebessa: Bekkaria forest, 1100 m, 3 ♂♂ 1 ♀, together with the neotype male, in pitfalls in *Pinus halepensis* forest, 15.VI.1989, R. Bosmans leg. (CRB). Tizi Ouzou: N Boghni, 180 m, 5 ♂♂ 3 ♀♀, stones along Oued Boghni, 27.IV.1989, R. Bosmans leg. (CRB). MOROCCO. Marrakech: Chichaoua, 350 m, 1 ♀ in flooded orchard, 8.VII.1999, R. Bosmans leg. (CRB). PORTUGAL. Beira Alta: Folgosinho, 1 ♂, 17.V.1995, P. Poot leg. (CMJ). FRANCE. Corse du Sud: Col de Vizzavona, 3 ♂♂, 28.V.1995, R. Bosmans leg. (CRB). Brittany/Finisterre: near Primelin, 1 ♀ in coastal habitats with halophilous vegetation, 11.-16.VIII.1996, T. Blick leg. (CTB). GREECE. Peloponesos, Arlogida: Oros Didymo, 1 ♂, 25.V.1998, R. Bosmans leg. (CRB). Arkadia: Megalopolis, Thersileion, 1 ♀, 29.V.1995, G. Delmastro leg. (CRB).

DISTRIBUTION. North Africa, temperate and Mediterranean Europe (Wunderlich, 1979), former European USSR, Caucasus and SW-Asian mountains (Mikhailov, 1997).

#### *Micaria coarctata* (Lucas, 1846) **n. stat.** (figs 17-20)

*Drassus coarctatus* Lucas, 1846: 228 (descr. ♀) (validated, ex synonymy of *M. fulgens*).

*Drassus formicarius* Lucas, 1846: 228 (descr. ♀); preoccupied by *M. formicaria* (Sundevall, 1831) **n. syn.**

*Micaria praesignis* L. Koch, 1867: 862 (descr. ♀) **n. syn.**

*Micaria lucasii* Thorell, 1871: 172 nom. nov. pro *D. formicarius* Lucas **n. syn.**

*Micaria albimana* O.P.-Cambridge, 1872: 251 (descr. ♀) **n. syn.**

*Micaria smaragdula* Simon, 1878: 14 (descr. ♂, ♀).

*Micaria romana*; Simon, 1878: 15 (non L. Koch, 1866).

*Micaria chalybeia* Kulczynski, 1897, in: Chyzer & Kulczynski, 1897: 256 (descr. ♂, ♀).

*Micaria albimana*; Wunderlich, 1979: 264 (descr. ♂, ♀); Mikhailov & Fet, 1986: 176; Mikhailov, 1988: 322.

TYPE MATERIAL. Described from Algeria, Constantine, Oued Rummel, type material lost. Neotype ♂ from Algeria, wilaya de Guelma, Hammam Meskoutine (MNHN 5188, sub *Micaria coarctata*).

DIAGNOSIS. See under *M. albovittata*.

REMARKS. Lucas' description of *M. coarctata* allows the first author to identify a large number of his specimens from Algeria as such. A specimen from the MNHN collected at about 100 km from the type locality and identified as *M. coarctata* by Simon is indicated here as neotype. The species does not differ in any way from *M. albimana*, as described by Wunderlich (1979) and this name becomes a junior synonym. Roewer (1954) and

Bonnet (1957) incorrectly consider *M. coarctata* a junior synonym of *M. formicaria* (Sundevall); the first author has no observations of the latter species in North Africa. On the other hand, we find no sufficient differences in Lucas' original descriptions and figures of the species *Micaria coarctata* and *M. formicaria* (= *M. lucasi*) and we therefore consider them synonyms, *coarctata* being the valid name. Roewer (1955) and Bonnet (1957) considered *Micaria lucasi* as a separate, valid species.

*Micaria praesignis* L. Koch, 1867 is another forgotten *Micaria* species, described from the Greek island Syra. The type material is not available (absent from the MNZHB, NHML, and NHMW). *Micaria* species occurring in Greece are the small species *M. dives* and *M. fastuosa* and the large ones *M. albovittata* and *M. coarctata*; *M. formicaria* was cited by Hadjisarrantos (1940), but this is probably incorrect. According to Simon (1884a) who examined the type ("nous avons le type sous les yeux"), the species is large and related to *M. romana* (sensu Simon, 1878) and *M. smaragdula*, both considered here synonyms of *M. coarctata*. Simon's description of the size, the cephalothorax with a V-shaped pattern of scales and the presence of 2 small ventral spines on the tibiae I (2 pairs in *M. albovittata*) all point to *M. coarctata*, and we therefore think it is safe to consider *M. praesignis* a junior synonym of *M. coarctata*.

**DESCRIPTION.** Measurements: ♂: total length 4.0-5.9; cephalothorax 1.76-2.48 long, 1.10-1.61 wide; ♀: total length 4.4-6.4; cephalothorax 1.82-2.22 long, 1.28-1.41 wide.

♂ palp: figs 17-18; epigyne: fig. 19; vulva: fig. 20.

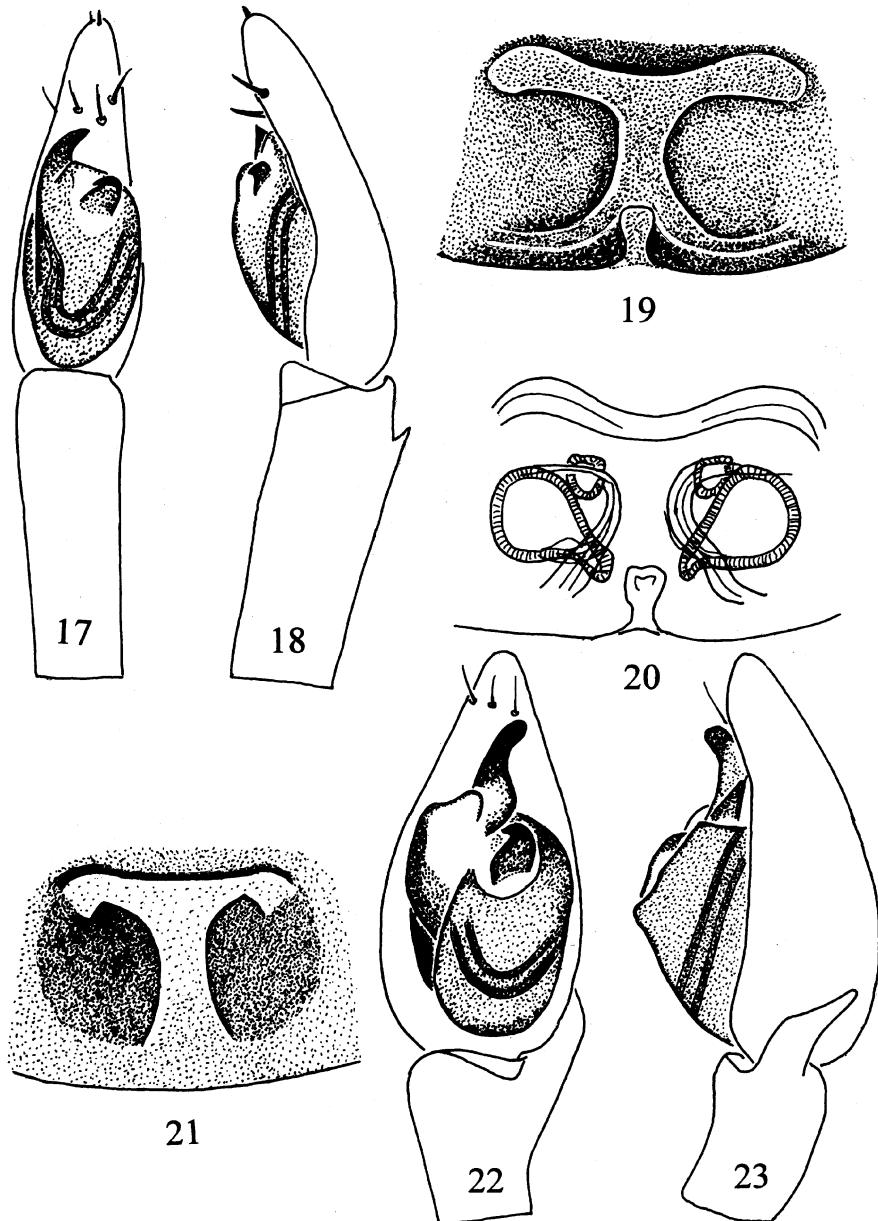
**MATERIAL EXAMINED.** ALGERIA. Blida: Atlas de Blida, Chrea, 1520 m, 1 ♂ in pitfalls in *Cedrus atlanticus* forest, 20.VI.1987, R. Bosmans leg. (CRB). Boumerdes: road Larbaa - Col des 2 Bassins, 800 m, 1 ♂, stones in open *Quercus ilex* forest, 21.V.1987, R. Bosmans leg. (CRB). M'sila: SE Aïn-el-Hadjel, Mergueb reserve, 550 m, 1 ♀, pitfalls in steppe, R. Bosmans leg. (CRB). Tissensisilt: Theniet-el-Had, Djebel Ouarsenis, 1540 m, 1 ♀ in pitfalls in *Cedrus atlanticus* forest, 18.VIII.1988, R. Bosmans leg. (CRB). Tizi Ouzou: Massif du Djurdjura, Tala Guilef, 1650 m, 1 ♂ 1 ♀, 18.VII.1993, R. Bosmans leg. (CRB). Tlemcen: Souk el Thine, 150 m, 1 ♀, stones in dry grassland, 24.V.1990, R. Bosmans leg. (CRB). MOROCCO. Marrakech: Col de Tizi 'n Tichka N, 2260 m, 2 ♀ ♀ along rivulet, 6.VII.1999, R. Bosmans leg. (CRB). FRANCE. Alpes Maritimes: Cannes, Pégomas, 1 ♂, J. Hublé leg. (CRB). SPAIN. Caceres: Talaván, Finca de Baldo, 8 ♂♂ 7 ♀♀, 10.VII-23.VIII.1996, U. Stengele leg. (CRB). GREECE. Crete: Lendas, 2 ♂♂ 4 ♀♀, 18.V.1994, J. Van Keer leg. (CJvK). SWITZERLAND: Wallis: Fiesch, 3 ♂♂ 2 ♀♀, Schenkel leg. 1924, 1925 (NMB).

**DISTRIBUTION.** From the Mediterranean region to Middle Asia (Mikhailov & Fet, 1986; Mikhailov, 1988, 1997; Wunderlich, 1987); the single record of the species in Central Europe (Wunderlich, 1994) has been checked by the second author. It is a female of *Micaria pulicaria* with relatively small spermathecae (similar to *M. coarctata*), but within the variability of the species and it fits well with *M. pulicaria* in size and coloration of body and legs. So the northernmost record of *M. coarctata* are known from southern Switzerland and the species is to be deleted at the German checklist.

*Micaria triguttata* Simon, 1884 (fig. 21)

*Micaria triguttata* Simon, 1884b: 122 (descr. ♂); Wunderlich, 1979: 270 (descr. ♂, ♀); Urones & Pérez-Pérez, 1985: 218.

**DIAGNOSIS.** Recognized by its small size, and by the presence of 5-7 ventral spines on the



Figs 17-23. *Micaria coarctata* (Lucas): 17 - ♂ palp, ventral view; 18 - Idem, lateral view; 19 - Epigyne; 20 - Vulva; *Micaria triguttata* Simon: 21 - Epigyne; *Micaria belezma* Bosmans n. sp.: 22 - ♂ palp, ventral view; 23 - Idem, lateral view.

tibia; males are furthermore by the elongate median apophysis and the very short embolus.

MATERIAL EXAMINED. ALGERIA. Blida: Atlas de Blida, Djebel Tamesguida, 950 m, 1 ♀, stones in *Quercus ilex* forest, 17.II.1989, R. Bosmans leg.. SPAIN. Caceres: Talavan, Finca el Baldo, 3 ♂♂ 1 ♀, 4.X-23.X.1996, U. Stengele leg. (CRB).

DESCRIPTION. Measurements: ♀: total length 2.9; cephalothorax 1.30 long, 0.89 wide.

Epigyne: fig. 21.

DISTRIBUTION. Previously only known from Spain, where it was cited from Ronda in Cadiz (Wunderlich, 1979), from San Juan de la Peña in Huesca (Urones & Pérez-Pérez, 1985), from Miranda de Ebro in Alava (Simon, 1884b) and from La Muela in Zaragoza (Wunderlich, 1979); cited here for the first time out of Spain from Algeria, and at least to be expected in Portugal and Morocco.

***Micaria belezma* Bosmans n. sp. (figs 22-23)**

TYPE MATERIAL. Holotype ♂ from Algeria, wilaya of Batna, Massif de l'Aures, Monts de Belezma, Col Telmet, 1800 m, stones in *Cedrus atlantica* forest, 8.IV.1982, R. Bosmans leg.; deposited in IRSNB.

ETYMOLOGY. The specific name is a noun in apposition taken from the type locality.

DIAGNOSIS. Easily distinguished from all other *Micaria* species by the long and typically curved tibial apophysis and embolus.

DESCRIPTION. Measurements: ♂: total length 2.7; cephalothorax 1.29 long, 0.69 wide.

Colour: Cephalothorax rugose, dark reddish brown, with scattered white scales, postero-laterally with two pairs of white squamous tufts. Abdomen dark grey, constricted just before the middle, with one median and two medio-lateral white tufts. Legs with dark reddish brown femora, other segments yellowish brown; metatarsi and tarsi with row of stiff setae. Spination: femur I d 1-0-0 p 0-0-1, femur II-IV d 1-0-0 p 0-0-0; tibia III p 0-1-1 v 0-1-1, Tibia IV P 0-0-0 v 0-1-1; metatarsus III p 0-0-1 v 0-0-2 r 0-0-1, metatarsus IV p 1-0-1 v 0-0-2 r 0-0-1.

Palp (figs 22-23): Tibial apophysis well-developed, terminally curved upwards; median apophysis wide; embolus strongly developed, terminally curved and passing the bulbus for a long distance.

♀: Unknown.

OTHER MATERIAL EXAMINED. None.

DISTRIBUTION. Only known from the Aures Massif in Algeria.

2. REVIEW OF THE REMAINING SPECIES OF THE WEST-PALEARCTIC REGION. (Remark: Only selected synonymies are mentioned here, more synonyms are listed in table 1)

***Micaria aenea* Thorell, 1871**

*Micaria aenea* Thorell, 1871: 271 (descr. ♀); Wunderlich, 1979: 271 (descr. ♂, ♀); Platnick & Shadab, 1988: 30 (descr. ♂, ♀).

**MEASUREMENTS.** ♂: total length 3.6-4.2; cephalothorax 1.48-1.70 long, 1.16-1.36 wide; ♀: total length 3.6-3.8; cephalothorax 1.56-1.62 long, 1.24-1.34 wide.

**MATERIAL EXAMINED.** FRANCE. Pyrénées Orientales: Mont Canigou, 2200 m, 2 ♂♂ 5 ♀♀, 5.VII.1991, R. Bosmans leg. (CRB).

**DISTRIBUTION.** A boreo-montane species, occurring in North America, Asia and Europe (Wunderlich, 1979; Platnick & Shadab, 1988; Mikhailov, 1997). Described from the French Pyrénées as *Micaria vandeli* by Denis (1950).

#### *Micaria alpina* L. Koch, 1872

*Micaria alpina* L. Koch, 1872: 313; Wunderlich, 1979: 281 (descr. ♂, ♀); Platnick & Shadab, 1988: 18 (descr. ♂, ♀).

**DISTRIBUTION.** Alps, Wales, Scotland, Scandinavia, Asian Mountains, Canada and Alaska (Wunderlich, 1979; Roberts, 1998; Horsfield, 1986; Mikhailov, 1997; Platnick & Shadab, 1988). Recently found in northern Japan (Ono, 1994). Records from China refer to *M. pulcherrima* (see Song et al., 1999).

#### *Micaria constricta* Emerton, 1894

*Micaria constricta* Emerton, 1894 (non *Micaria constricta* L. Koch, 1876 nom. nud.); Platnick & Shadab, 1988: 14 (descr. ♂, ♀).

*Micaria eltoni* Jackson, 1922; Wunderlich, 1979: 279 (descr. ♂, ♀).

**DISTRIBUTION.** Norway: Spitsbergen and Bear Island, Canada, USA (Wunderlich, 1979; Platnick & Shadab, 1988).

#### *Micaria formicaria* (Sundevall, 1831)

*Clubiona formicaria* Sundevall, 1831: 34.

*Micaria formicaria*; Wunderlich, 1979: 266 (descr. ♂, ♀); Mikhailov, 1988: 322; Danilov, 1997: 116.

**MEASUREMENTS.** ♂: total length 4.0-4.8; cephalothorax 1.76-2.12 long, 1.04-1.18 wide.

**MATERIAL EXAMINED.** FRANCE. Vaucluse: Mont Ventoux, 1 ♂, 26.VII.1991, R. Bosmans leg. (CRB). Landes: Le Muret, 4 ♂♂, 23.VIII.1985, R. Bosmans leg. (CRB). Pyrénées Orientales: Odello, 1 ♂, 6.VII.1991, R. Bosmans leg. (CRB). SWITZERLAND. Swiss Jura mountains: Movelier: 3 ♂♂ 2 ♀♀, Nenzlingen: 1 ♀, Vicques: 2 ♂♂ 1 ♀, 15.VI.-18.VIII.1994 (CTB), total record 16 ♂♂ 8 ♀♀, V.-XI.1994, B. Baur et al. leg.

**DISTRIBUTION.** Cited from all over Europe and northern Africa (Wunderlich, 1979), but probably often misidentified. Citations from temperate Europe are most probably correct, but its distribution area in the south of Europe requires a better definition.

**REMARK.** *Micaria formicaria* has often been cited from northern Africa, but it is not present in the material from Algeria, nor from any other seen material of the Mediterranean region. This points in the direction of its absence from this region. Most citations of *M. formicaria* from the mediterranean region could concern the common mediterranean species *M. albovittata*. Kritscher (1996) for instance cites two *Micaria* species from the mediterranean island Malta: *coarctata* (as *smaragdula*) and *formicaria*. The latter citation probably concerns *M. albovittata*.

*Micaria fulgens* (Walckenaer, 1802)*Aranea fulgens* Walckenaer, 1802: 222.*Micaria fulgens*; Wunderlich, 1979: 259 (descr. ♂, ♀); Mikhailov, 1988: 321.

**MEASUREMENTS.** ♂: total length 3.6-5.6; cephalothorax 1.92-2.14 long, 1.28-1.60 wide; ♀: total length 4.6-5.2; cephalothorax 2.12-2.22 long, 1.48-1.54 wide.

**MATERIAL EXAMINED.** SPAIN. Huesca: Bielsa, 2 ♀♀, 4.IX.1984, R. Bosmans leg. (CRB). FRANCE. Haute Savoie: Villarodin, 4 ♂♂, 6.VI.1986, R. Bosmans leg. (CRB). Pyrénées Orientales: Mont Canigou, 1000 m, 3 ♂♂ 3 ♀♀, 8.VII.1982, R. Bosmans leg. (CRB). ITALY. Trentino: Lases, stony debris, 1 ♂ 1 ♀, 13.XI.1991-12.IV.1992, R. Molenda leg. (CTB). GERMANY & SWITZERLAND. Numerous specimens in CTB.

**DISTRIBUTION.** Europe except the British Isles, North Africa (Wunderlich, 1979), in Asia until Middle and South Siberia (Mikhailov, 1997).

**REMARKS.** For North Africa Wunderlich (1979) gives no precise countries or localities. We could not trace any other concrete North-African citation, and the species is not present in the material. The presence in North Africa thus should be confirmed.

*Micaria funerea* Simon, 1878*Micaria funerea* Simon, 1878: 18; Wunderlich, 1979: 263 (descr. ♂, ♀); Mikhailov, 1988: 328.

**MEASUREMENTS.** ♂: total length 3.6; cephalothorax 1.62 long, 1.18 wide; ♀: total length 3.6-4.4; cephalothorax 1.40-1.62 long, 0.94-1.06 wide.

**MATERIAL EXAMINED.** FRANCE. Haute Corse: Corte, 2 ♀♀ in short grassland, 25.V.1995, R. Bosmans leg. (CRB); Col de Vergio, 1 ♂ 4 ♀♀, 24.V.1995, J. Van Keer leg. (CJvK).

**DISTRIBUTION.** *Micaria funerea* is a rare species. Only in Corsica, it has been cited from several localities and by different authors, indicating is it not rare on this island (Simon, 1878; Kraus, 1955; Canard, 1989; present paper). From four other countries, it was only cited from one locality: from Spain by Simon (1926), from Italy by Caporiacco (1936), from Bulgaria by Deltshev (1990) and from the Russian Caucasus by Mikhailov (1988, 1997).

*Micaria gomerae* Strand, 1911*Micaria gomerae* Strand, 1911: 194.*Micaria gomerensis*; Bonnet, 1957: 2840 (etymological changement).*Micaria gomerae*; Wunderlich, 1979: 297 (descr. ♂, ♀); Wunderlich, 1987: 247 (descr. ♂, ♀).

**DISTRIBUTION.** Canary Islands (Wunderlich, 1979, 1987).

*Micaria guttigera* Simon, 1878*Micaria guttigera* Simon, 1878: 19; Wunderlich, 1979: 269 (descr. ♂, ♀).

**MEASUREMENTS.** ♂: total length 3.4-4.6; cephalothorax 1.54-2.0 long, 1.05-1.43 wide; ♀: total length 4.0-5.6; cephalothorax 1.66-2.04 long, 1.12-1.41 wide.

**MATERIAL EXAMINED.** FRANCE. Pyrénées Orientales: Mont Canigou, 1250 m, 1 ♂ 1 ♀, 8.VII.1982, R. Bosmans leg. (CRB). SPAIN. Avila: Monbeltran, 1 ♀, III.1990, R. Bosmans leg. (CRB). Gerona: Bruguera, 1 ♂, 8.VII.1991, R. Bosmans leg. (CRB); Puerta de Tosas, 3 ♂♂ 6

♀ ♀, 10.VII.1991, R. Bosmans & J. Van Keer leg. (CRB, CJvK); Ripoll, 1 ♂, 17.VII.1991, R. Bosmans leg. (CRB); San Marti de Ogassa, 2 ♀ ♀, 15.VII.1992, R. Bosmans leg. (CRB). Granada: Pic Valeta, 1950 m, 3 ♀ ♀, 10.VIII.1991, R. Bosmans leg. (CRB). Huesca: Bielsa, 1900 m, 2 ♀ ♀, 4.IX.1984, R. Bosmans leg. (CRB). Leon: Villanueva de la Manzana, 1 ♀, 12.VIII.1994, R. Bosmans leg. (CRB). PORTUGAL. Beira Alta: Folgosinho, 1 ♂, 17.V.1997, P. Poot leg. (CMJ).

**DISTRIBUTION.** According to Wunderlich (1979) occurring everywhere in Southern Europe, but we know only of citations from Portugal (Bacelar, 1927, 1928; Cardoso, 1999 unpubl.), Spain (Urones & Pérez-Pérez, 1985; Urones, 1986), Andorra (Denis, 1938), and France (Simon, 1932; Denis, 1948, 1960). We add here localities from the same three countries.

#### *Micaria guttulata* (C.L. Koch, 1839)

*Macaria guttulata* C. L. Koch, 1839: 95.

*Micaria guttulata*; Simon, 1878: 25; Wunderlich, 1979: 273 (descr. ♂, ♀).

**MATERIAL EXAMINED.** GERMANY. Bavaria: Ködnitzer Weinleite near Kulmbach, 3 ♂ ♂ 2 ♀ ♀ 13.V.-24.VI.1990, 9 ♂ ♂ 1 ♀ 8.V.-9.VII.1991, 1 ♀ 9.IX.-9.X.1991, M.-A. Fritze & T. Blick leg. (CTB).

**DISTRIBUTION.** Central and Southern Europe (Wunderlich, 1979), but not known from the Netherlands, northern Germany and Poland; in the former USSR until Middle Asia and Middle Siberia (Mikhailov, 1997).

#### *Micaria lenzi* Bösenberg, 1899

*Micaria lenzi* Bösenberg, 1899: 101 (descr. ♀); Wunderlich, 1979: 277 (descr. ♂, ♀).

*Micaria dahli* Bösenberg, 1899: 101 (descr. ♂).

*Micaria mutilata* Caporiacco, 1935: 223.

**MATERIAL EXAMINED.** GERMANY. Saxonia: Oberlausitz, near Lohsa, 7 ♂ ♂ 2 ♀ ♀ 17.V.-20.VII.1999, 1 ♀ 27.V.2000, T. Blick & al. leg. (CTB).

**DISTRIBUTION.** Germany, Czechia, Roumania (Wunderlich, 1979; Roumania: see also Braun, 1982), Netherlands (Roberts, 1998), large parts of the former USSR (Mikhailov, 1988, 1997; Danilov, 1997) and China (Song et al., 1999).

#### *Micaria nivosa* L. Koch, 1866

*Micaria nivosa* L. Koch, 1866: 58 (descr. ♂); Wunderlich, 1979: 256.

*Micaria radiata* L. Koch, 1866: 65 (descr. ♀).

*Micaria rossii* Strand, 1909: 137.

*Micaria similis strandi* Kolosvary, 1936: 96.

*Micaria decorata* Tullgren, 1942: 225.

**MATERIAL EXAMINED.** POLAND. Bieszczady Mountains, Preluky Duszczodyn, 1 ♂, 4.IX.1993, H. Metzner leg. (CTB).

**DISTRIBUTION.** In Central and Southeastern Europe the species is apparently restricted to high mountain areas. So especially records from lower sea level in northern Germany and northern Poland (Fründ et al., 1994; Starega, 1983) should be verified - but these fit with low level records in southern parts of the Baltic Sea region in Scandinavia (Tullgren, 1946; Lehtinen et al., 1979: see below) and Estonia (Wunderlich, 1979).

Mikhailov (1988, 1997) cites it from European Russia to southern and middle Siberia and Kazakhstan. According to Wunderlich (1979) *M. nivosa* occurs in Europe except England, but we do not know any citation from the Iberian Peninsula, France, Belgium, the Netherlands and Denmark. As there seems to be no verified record from Southern and Southwestern Europe, Pesarini's (1995) *M. nivosa* from southern Italy (without any detailed data) should be checked.

**REMARKS.** Starega (1983) changed the former records of *nivosa* (sub *decorata*) in Poland to "*Micaria similis* Bösenberg" referring to an article from Finland (Lehtinen et al., 1979 - these specimens are in fact *nivosa*, Lehtinen, pers. comm.), thus we evaluate the published Polish records as *nivosa* too.

#### *Micaria palmgreni* Wunderlich, 1979

*Micaria palmgreni* Wunderlich, 1979: 280 (descr. ♀).

**REMARKS.** We have doubts in the validity of this species. Due to the swollen palpus and the assymetric vulva of the only known female (Wunderlich, 1979) we suppose it could be an abnormal specimen of another species. But we are not able to decide which.

**DISTRIBUTION.** Only known from Finland (Wunderlich, 1979) and not recorded there again (Lehtinen, pers. comm.).

#### *Micaria pulicaria* (Sundevall, 1831)

*Clubiona pulicaria* Sundevall, 1831: 33.

*Micaria pulicaria*; Wunderlich, 1979: 252 (descr. ♂, ♀); Mikhailov, 1988: 320; Platnick & Shadab, 1988: 7 (descr. ♂, ♀).

*Micaria albimana*; Wunderlich, 1994 (misidentification).

**MATERIAL EXAMINED.** SPAIN. Alava: Vilareal de Avila, 1 ♂, 30.III.1997, R. Bosmans leg. (CRB). Gerona: Bruguera, Col de Jou, 1 ♂, 8.VII.1991, R. Bosmans leg. (CRB); Puerta de Tosas, 1 ♂ 1 ♀, 10.VII.1991, R. Bosmans leg. (CRB). Valencia: Embalse de Cofrentes, 1 ♂, 3.IV.1996, R. Bosmans leg. (CRB). France. Alsace: Roseau N of Basle, "Petite Camargue Alsacienne" near the river Rhine, 3 ♂♂ 4 ♀♀ 3.V.-5.VII. 1994, 1 ♂ 4.-18.V.1995 (CTB), total record 31 ♂♂ 25 ♀♀ 1992, 1994-1996, B. Walther leg. GERMANY: NSG Essigberg W of Pforzheim, 1 ♀, Wunderlich leg. (Wunderlich, 1994: sub *M. albimana*). BELGIUM, GERMANY & SWITZERLAND: Numerous specimens in CRB and CTB.

**DISTRIBUTION.** Europe, Asia and North America (Platnick & Shadab, 1988; Wunderlich, 1979; Mikhailov, 1997; Song et al., 1999).

#### *Micaria rossica* Thorell, 1875

*Micaria rossica* Thorell, 1875: 112 (descr. ♂, ♀); Wunderlich, 1979: 308 (descr. ♂, ♀); Mikhailov & Fet, 1986: 176; Mikhailov, 1988: 326; Platnick & Shadab, 1988: 27 (descr. ♂, ♀); Mikhailov 1995: 54.

*Micaria scenica* Simon, 1878: 17; Wunderlich, 1979: 286.

**MEASUREMENTS.** ♀: total length 4.9; cephalothorax 1.74 long, 1.22 wide.

**MATERIAL EXAMINED.** ITALY. Piemonte: Val Varaita, Chianale, Col dell'Agnello, 1 ♀, 5.VIII.1980, R. Bosmans leg. (CRB).

**DISTRIBUTION.** North America, former USSR (Platnick & Shadab, 1988; Mikhailov, 1997) and in the some other European countries: Bulgaria, Romania, Poland, Austria, Switzerland, France (Alps only) (Deltshev, 1998; Fuhn & Oltean, 1970; Starega, 1983; Thaler, 1997; Wunderlich, 1979); cited from northern Italy by Pesarini (1995) which is confirmed here with a record from the Italian Alps.

*Micaria silesiaca* L. Koch, 1875

*Micaria silesiaca* L. Koch, 1875: 4; Wunderlich, 1979: 275 (descr. ♂, ♀).

*Micaria socialis* L. Koch, 1877: 188.

*Micaria montana* Kulczynski, 1881: 41.

*Micaria hospes* Kulczynski, 1881: 41.

*Micaria simplex* Bösenberg, 1902: 286 (descr. ♀); Reimoser, 1937: 94; Wunderlich, 1979: 293. n. syn.

**TYPE MATERIAL.** The type of *M. simplex* is not available (absent from the MNZHB, SMF, SMNS, ZMH).

**REMARKS.** The comparison of figures of the epigyne of *M. silesiaca* (Wunderlich, 1979; Roberts, 1998), with those of *M. simplex* by Bösenberg (1902), Reimoser (1937) and Wunderlich (1979) leads us to conclude, that most probably *simplex* is a synonym of *silesiaca*. Additionally in the last decades northern Germany (type locality of *simplex* is Hamburg) is well examined from an arachnological point of view (see Fründ et al., 1994) and it is not expected that a further *Micaria* species occurs in this region. Furthermore Lisken-Kleinmans recorded numerous specimen in Hamburg and nearby parts of Lower Saxony in 1988 (Lisken-Kleinmans, pers. comm.). Finally there are some doubtful records of Bösenberg's species in the Balkan Peninsula, including a record of *M. simplex* in Rumania (Braun, 1982).

**MATERIAL EXAMINED.** GERMANY. Bavaria: around Nördlingen, dry pastures, 8 ♂♂ 3 ♀♀, 16.V.1992-19.VII.1992, J. Sachteleben leg. (CTB); Erlangen-Tennenlohe, open sandy habitats, 6 ♂♂ 3.-20.VI.1996, 1 ♀ 20.VI-17.VII.1996, 1 ♀ 7.VIII.-4.IX.1996, C. Zahner leg. (CTB). Saxonia: Oberlausitz, near Lohsa, 2 ♂♂ 17.V.-16.VI.1999, T. Blick et al. leg. (CTB).

**DISTRIBUTION.** England, Central Europe (Wunderlich, 1979), coastal areas in South and Central Norway (Åkra, pers. comm.), former USSR until Central and South Siberia (Mikhailov, 1988, 1997) - records from China belong to *M. pulcherrima* (see Song et al., 1999).

*Micaria tripunctata* Holm, 1978

*Micaria tripunctata* Holm, 1978: 68; Wunderlich, 1979: 255 (descr. ♂, ♀); Platnick & Shadab, 1988: 10 (descr. ♂, ♀).

**DISTRIBUTION.** Swedish Lapland (Wunderlich, 1979), NW Russia until Eastern Siberia (Mikhailov, 1988, 1997), North America (Platnick & Shadab, 1988).

3. THE NEW GENUS *ARBORICARIA*

*Arboricaria* Bosmans n. gen.

**TYPE SPECIES.** *Micaria cyrnea* Brignoli, 1983.

**ETYMOLOGY.** All species included of which the ecological preferences are known are arboreal, hence the name *Arboricaria*, a contraction of arboreus and *Micaria*.

**DIAGNOSIS.** The new genus is very close to *Micaria* and differs by the more flattened, wider cephalothorax, the less spinate legs and the posteriorly truncate sternum. Males differ by the large tibial apophysis, bifid or curved (figs 25, 29, 33), the bulging bulbus and the absence of the median apophysis (figs 24, 28, 32), females by the large epigynal fossa with distinctly chitinised posterior margin (figs 26, 30, 34).

**DESCRIPTION.** Total length 1.8-2.9. Cephalothorax oval in dorsal view, relatively wide, gently narrowed at level of palpal insertion, cephalic and thoracic part flattened, posterior declivity gently sloping; from above, anterior row of eyes recurved, posterior row straight, from front, both rows of eyes slightly procurved; clypeal hight equal to diameter of anterior median eyes, median ocular quadrangle as long as wide in back, presence of bristles and scales, chelicerae and endites as in *Micaria*; sternum truncate posteriorly; leg formula 4123, leg spination pattern (only surfaces bearing spines listed) femora I-IV d 1-0-0, tibia III v 0-0-1 or 2, tibia IV v 0-1-1 or 2, metatarsi III-IV 0-0-1 or 2; abdomen and spinnerets as in *Micaria*; male palp with large retrolateral apophysis, curved or bifid, bulb compact and bulging, without median apophysis, embolus a simple pointed extension at prolateral side of bulb; epigyne with deep fossa, posterior margin, often also lateral margins, distinctly chitinised, spermathecae elongated oval, paramedian ducts curved anteriorly to lateral corners of fossa.

**ECOLOGY.** As *Micaria*, all included species are probably ant-eaters, and live in the bark of trees.

**INCLUDED SPECIES.** The type species *Arboricaria cyrnea* (Brignoli, 1983) n. comb., *Arboricaria sociabilis* (Kulczynski, 1897), n. comb., *Arboricaria subopaca* (Westring, 1861), n. comb., *Arboricaria brignolii* Bosmans & Blick n. sp. and *Arboricaria koeni* Bosmans n. sp. Wunderlich (1979) included these species in his *Micaria subopaca*-group.

**DISTRIBUTION.** Except one species (*A. subopaca*) the members of the genus occur in Mediterranean and Central Europe.

***Arboricaria cyrnea* (Brignoli, 1983) n. comb. (figs 24-27)**

*Micaria aurata*; Simon, 1878: 27 (descr. ♂, ♀); Simon, 1932: 974 {non: *M. aurata* (Canestrini, 1868), =*M. sociabilis*}.

*Micaria canestrinii*; Wunderlich, 1979: 292, ff. 37 a-d (descr. ♂) - misidentification: non *canestrinii* Roewer, 1951 = *A. sociabilis*.

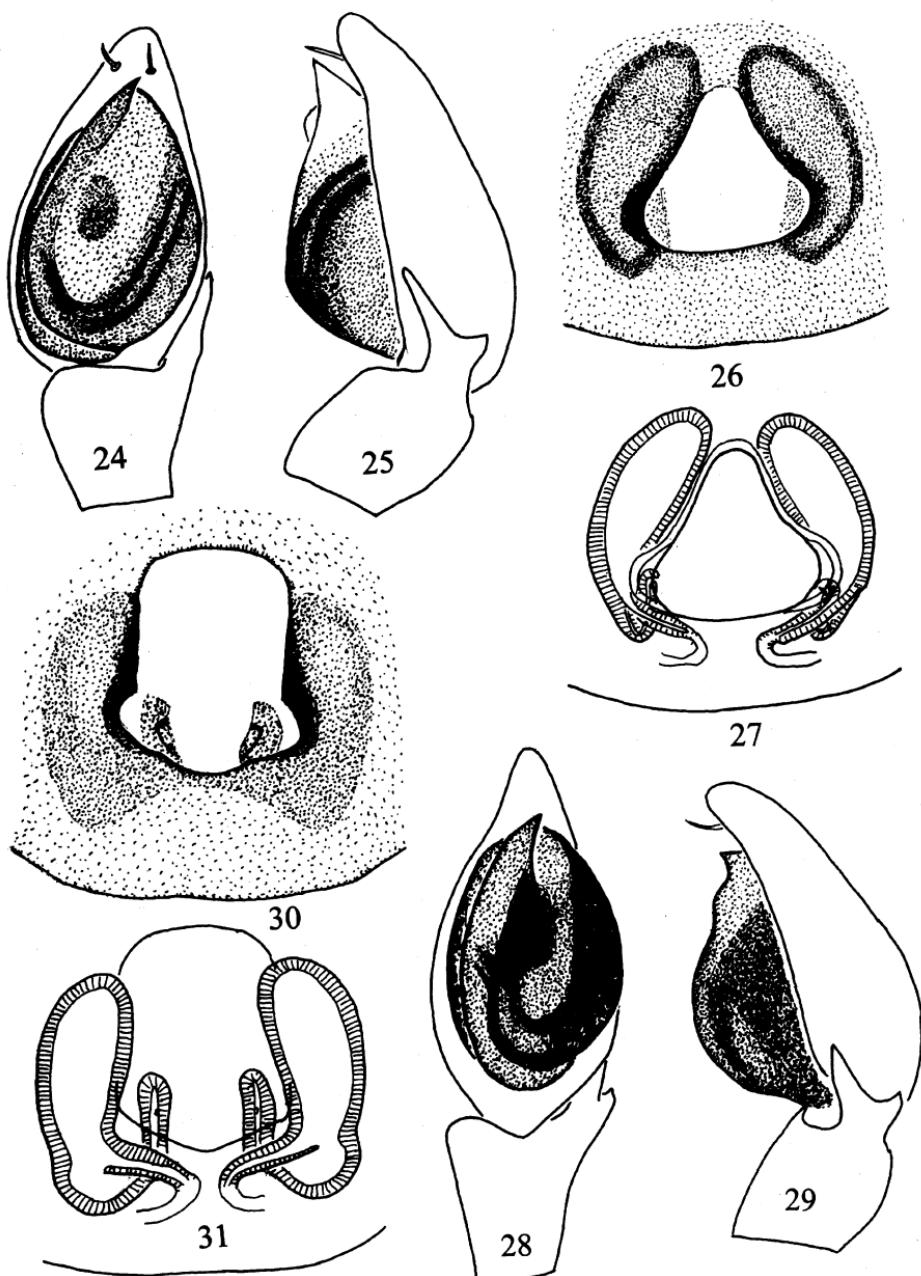
*Micaria cyrnea* Brignoli, 1983: 563 (descr. ♂); Hansen 1992: 96 (descr. ♀).

**MEASUREMENTS.** ♂: total length 1.8-2.6; cephalothorax 0.99-1.16 long, 0.73-0.86 wide; ♀: total length 2.2; cephalothorax 1.09 long, 0.74 wide.

♂ palp: figs 24-25; epigyne: fig. 26; vulva: fig. 27.

**MATERIAL EXAMINED.** ITALIA: Venezia: Sant'Elena, 1 ♂ 1 ♀, *Platanus* bark, I.1989, H. Hansen leg.

**DISTRIBUTION.** Corsica (Simon, 1878), Italy (Kritscher, 1969; Brignoli, 1983; Pesarini,



Figs 24-31. *Arboricaria cyrnea* (Brignoli): 24 - ♂ palp, ventral view; 25 - Idem, lateral view; 26 - Epigyne; 27 - Vulva. *Arboricaria brignolii* Bosmans & Blick n. sp.: 28 - ♂ palp, ventral view; 29 - Idem, lateral view; 30 - Epigyne; 31 - Vulva.

1991; Hansen, 1988, 1992); cited by Machado (1949) from Portugal but we believe that this concerns another species described further in this paper.

*Arboricaria sociabilis* (Kulczynski, 1897) **n. comb.**

*Micaria sociabilis* Kulczynski, 1897, in: Chyzer & Kulczynski, 1897: 254-255 (descr. ♂, ♀); Wunderlich 1979: 291 (descr. ♂, ♀).

*Micaria aurata* Canestrini, 1868: 193 (non Hentz, 1847).

*Micaria canestrinii* Roewer, 1951: 447 (nom. nov. pro *M. aurata* Canestrini).

**DISTRIBUTION.** France, Hungary, Kroatia (Wunderlich, 1979), Italy (Brignoli, 1983), Slovakia (Gajdos et al., 1999).

**REMARK.** According to the figures of epigyne and vulva, Wunderlich's citation (1979) from France, département du Var concerns another species (see note at *A. brignolii*).

*Arboricaria subopaca* (Westring, 1861) **n. comb.**

*Micaria subopaca* Westring, 1861: 336 (descr. ♂); Wunderlich, 1979: 290 (descr. ♂, ♀).

**MATERIAL EXAMINED.** BELGIUM. Limburg: Hechtel, 1 ♀, 1.V.1988, Marc Janssen leg. (CRB); Meeuwen, 1 ♂, 6.V.1990, M. Janssen leg. (CRB); GERMANY: Hesse: Frankfurt am Main, Stadtwald, bark of different tree species (alder, birch, beech, pine, spruce), 27 ♂♂ 16 ♀♀, 3.IV-31.V.2000, A. Malten leg. (12 ♂♂ 12 ♀♀ CRB).

**DISTRIBUTION.** Europe and large parts of Asian Russia (Wunderlich, 1979; Mikhailov, 1997). At the northern border of its distribution in Trondheim/Norway it is apparently restricted to walls of buildings (Åkra, pers. comm.).

*Arboricaria brignolii* Bosmans & Blick n. sp. (Figs 28-31)

*Micaria aurata*; Machado, 1949: 55 (misidentification).

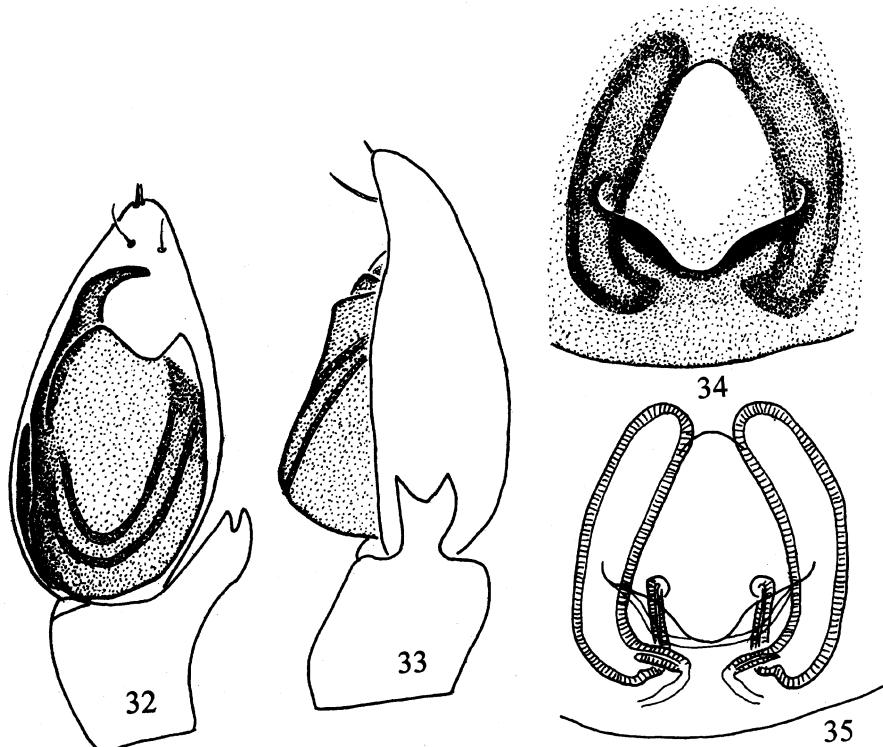
**TYPE MATERIAL.** Holotype ♂, paratype ♀ from Portugal, Algarve, Albufeira, 9.III.1992, P. Poot leg.; deposited in IRSNB.

**DIAGNOSIS.** Closely related to *A. cyrnea*; males of *A. cyrnea* have a more elongated tibial apophysis, and in lateral view a less bulging, angular bulbus, whereas females have a more or less rectangular epigynal fossa.

**ETYMOLOGY.** We describe this species in honour to Paolo Marcello Brignoli, who died much too early.

**REMARKS.** We believe that Machado's (1949) citation of *A. cyrnea* (as *Micaria aurata*) and Cardoso's (1999 unpubl.) *Micaria canestrinii* from Portugal concern both the presently described species. Wunderlich's *M. sociabilis* female from France/Var seems to be close to or probably identical with *M. brignolii*.

**DESCRIPTION.** Measurements: male: total length 2.4-2.8; cephalothorax 1.04-1.08 long, 0.78-0.82 wide. Colour: Cephalothorax reticulated, brown to reddish brown; margin, region of fovea and striae dark brown, cephalic part covered with white scales; legs: femora brown to dark brown with paler tips, other segments yellowish brown; abdomen



Figs 32-35. *Arboricaria koenii* Bosmans n. sp.: 32 - Male palp, ventral view; 33 - Idem, lateral view; 34 - Epigyne; 35 - Vulva

dark grey to black, rather densely covered with metallic scales, slightly constricted in the middle, before the constriction with some white tufts. Legs: Metatarsi I-II with row of stiff setae; spination: Mt III v 0-0-2; Ti IV v 0-0-1, Mt IV v 1-0-2. Palp (figs 28-29): Tibia with long apophysis, terminally split into two strong teeth of unequal size, the ventral one slender and twice as long as the dorsal one; bulbus bulging in lateral view, rounded; embolus relatively wide, slightly curved, terminally pointed. Female: Colour as in the male, with the abdomen hardly constricted. Measurements: total length 2.6-3.8; cephalothorax 1.02-1.08 long, 0.70-0.80 wide. Epigyne (fig. 30): With large, depressed fossa, with parallel margin in anterior half, and rounded in postero half. Vulva (fig. 31): With two large, elongate receptacula; paramedian ducts short, longitudinally oriented.

OTHER MATERIAL EXAMINED. None.

DISTRIBUTION. Only known from Portugal.

***Arboricaria koeni* Bosmans n. sp. (figs 32-35)**

TYPE MATERIAL. Holotype ♂ from Greece, Crete, Chania, in bark, 22.V.1994, K. Van Keer leg.; 1 ♂ paratype, same data; deposited in IRSNB.

DIAGNOSIS. Males resemble are easily distinguished from other *Arboricaria* species by the bifid tibial apophysis, as in the closely related *A. cyrnea* Brignoli, but in this species the two teeth of the apophysis are unequal; females have a similar, large depression which is triangular in *A. cyrnea* and rectangular in *A. koeni*.

ETYMOLOGY. The species is dedicated to its collector, Koen Van Keer, specialist in collecting spiders living in bark.

DESCRIPTION. Measurements: male: total length 2.4-2.6; cephalothorax 1.06-1.18 long, 0.80-0.86 wide. Colour: Cephalothorax reticulated, brown to reddish brown; margin, region of fovea and striae dark brown, cephalic part covered with white scales; legs: femora brown to dark brown with paler tips, other segments yellowish brown; abdomen dark grey to black, rather densely covered with metallic scales, slightly constricted in the middle, before the constriction with some white tufts. Legs: Metatarsi I-II with row of stiff setae; spination: Mt III v 0-0-2; Ti IV v 0-0-1, Mt IV v 1-0-2. Palp (figs 32-33): Tibia with long apophysis, terminally split into two strong teeth of about equal size; median apophysis absent; embolus relatively wide, slightly curved, terminally pointed. Female: Colour as in the male, with the abdomen hardly constricted. Measurements: total length 3.0; cephalothorax 1.15 long, 0.81 wide. Epigyne (fig. 34): With large, diamond-shaped fossa, with only the posterior margin chitinised. Vulva (fig. 35): With two elongate receptacula, preceeding and extending over the fossa; paramedian ducts directly curved in anterior direction to the copulation pores.

OTHER MATERIAL EXAMINED. GREECE. Peloponese: Lakonia: S. Githio, Mavrovouni, 1 ♂ 1 ♀ on tent in camping site in *Olea* orchard, probably fallen from the trees, 26.V.1998, R. Bosmans leg.

DISTRIBUTION. Only known from two localities in Greece, one in Crete and one in the southern Peloponese.

DISCUSSION

In the past, many *Micaria* species have been described, but many appeared to be synonyms. The synonymy is so complicated, that it is difficult to remain up to date. We therefore summarise a list of valid names, with their synonyms, in table 1, and a list of the synonymized species, with their valid names, in table 2. Species considered doubtful are listed in table 3, and species transferred to other genera are listed in table 4. We do not follow Platnick (1998) who considered several of the synonymies established by Wunderlich (1979) as *nomina dubia*.

Table 1. List of valid species which belong or belonged to *Micaria* in the Palaearctic region, with their synonyms.

Valid name	Synonym
<i>Micaria aenea</i> Thorell, 1871	<i>foveata</i> Strand, 1900; <i>norvegica</i> Sørensen, 1904, in: Strand 1904; <i>vandeli</i> Denis, 1950
<i>Micaria albovittata</i> (Lucas, 1846)	<i>cherifa</i> Jocqué, 1977; <i>nuptialis</i> O.P.-Cambridge, 1872; <i>rogenhoferi</i> Herman, 1879; <i>romana</i> L. Koch, 1866; <i>scintillans</i> O.P.-Cambridge, 1871; <i>spinulosa</i> Simon, 1878; <i>turcica</i> Drensky, 1915
<i>Micaria alpina</i> L. Koch, 1872	<i>breviuscula</i> Simon, 1878
<i>Micaria coarctata</i> (Lucas, 1846)	<i>albimana</i> O.P.-Cambridge, 1872; <i>chalybeia</i> Kulczynski, 1897; <i>formicaria</i> (Lucas, 1846) (non Sundevall); <i>lucasi</i> Thorell, 1871; <i>romana</i> Simon, 1878 (non L. Koch, 1866); <i>smaragdula</i> Simon, 1878
<i>Micaria constricta</i> Emerton, 1894	<i>eltoni</i> Jackson, 1922
<i>Micaria dives</i> (Lucas, 1846)	<i>armata</i> O.P.-Cambridge, 1874; <i>chlorophana</i> (C.L. Koch, 1845), nomen oblitum; <i>similis</i> Tschchenko, 1965; <i>splendidissima</i> L. Koch, 1872; <i>tyschchenkoi</i> Brignoli, 1983; <i>Micariolepis d.</i>
<i>Micaria fastuosa</i> (Lucas, 1846)	<i>judaeorum</i> Strand, 1915; <i>harmsi</i> Wunderlich, 1979; <i>pygmaea</i> Kroneberg, 1875; <i>todilla</i> Simon, 1878; <i>trochilus</i> Simon, 1890; <i>Micariolepis f.</i>
<i>Micaria formicaria</i> (Sundevall, 1831)	<i>constricta</i> L. Koch, 1876 (nomen nudum) (non Emerton, 1894)
<i>Micaria funerea</i> Simon, 1878	<i>movens</i> Simon, 1878
<i>Micaria gomerae</i> Strand, 1911	<i>gomerae grancanarensis</i> Wunderlich, 1979; <i>gomerae hierro Schmidt</i> , 1977; <i>gomerensis</i> Strand (after Bonnet 1957); <i>hierro Schmidt</i> , 1977
<i>Micaria lenzi</i> Bösenberg, 1899	<i>dahli</i> Bösenberg, 1899; <i>mutilata</i> Capriacco, 1935
<i>Micaria nivosa</i> L. Koch, 1866	<i>decorata</i> Tullgren, 1942; <i>littoralis</i> Palmgren, 1943; <i>radiata</i> L. Koch, 1866; <i>rossii</i> Strand, 1909; <i>similis strandi</i> Kolosvary, 1936
<i>Micaria pallipes</i> (Lucas, 1846)	<i>femoralis</i> Denis, 1966; <i>milleri</i> Wunderlich, 1979; <i>oceanica</i> Denis, 1964; <i>septempunctata</i> O.P.-Cambridge, 1872
<i>Micaria pulicaria</i> (Sundevall, 1831)	<i>nitens</i> Westring, 1861; <i>similis</i> Bösenberg, 1902
<i>Micaria pulcherrima</i> Capriacco, 1935	<i>pulcherrima flava</i> Capriacco, 1935; <i>sibirica</i> Danilov, 1993

Continue Table 1.

Valid name	Synonym
<i>Micaria rossica</i> Thorell, 1875	<i>berlandi</i> Schenkel, 1963; <i>centrocnemis</i> Kulczynski, 1885; <i>fagei</i> Schenkel, 1963; <i>hissarica</i> Charitonov, 1951; <i>lindbergi</i> Roewer, 1962; <i>modesta</i> Kroneberg, 1875; <i>pallens</i> Denis, 1958; <i>quinquenotata</i> Simon, 1895; <i>scenica</i> Simon, 1878; <i>shadini</i> Charitonov, 1951; <i>taiguica</i> Tu & Zhu, 1986
<i>Micaria silesiaca</i> L. Koch, 1875	<i>hospes</i> Kulczynski, 1881; <i>montana</i> Kulczynski, 1881; <i>socialis</i> L. Koch, 1877; <i>simplex</i> Bösenberg, 1902
<i>Arboricaria cyrnea</i> (Brignoli, 1983)	<i>Micaria aurata</i> auctores (non Hentz, 1847); <i>Micaria c.</i>
<i>Arboricaria subopaca</i> (Westring, 1861)	<i>Micaria albostriata</i> L. Koch, 1877; <i>Micaria humilis</i> Kulczynski, 1885; <i>Micaria subopaca</i>
<i>Arboricaria sociabilis</i> (Kulczynski, 1897)	<i>Micaria aurata</i> Canestrini, 1868 (non Hentz, 1847); <i>Micaria canestrinii</i> Roewer, 1951; <i>Micaria sociabilis</i>
<i>Aphantaulax cincta</i> (L. Koch, 1866)	<i>Micaria cincta</i>
<i>Aphantaulax corvina</i> (Simon, 1878)	<i>Micaria corvina</i>
<i>Aphantaulax seminigra</i> (Simon, 1878)	<i>Micaria albini</i> L. Koch, 1866 (preocc. in <i>Aphantaulax</i> )
<i>Aphantaulax trifasciata</i> (O.P.-Cambridge, 1872)	<i>Micaria trifasciata</i>
<i>Hitobia unifascigera</i> (Bösenberg & Strand, 1906)	<i>Micaria unifascigera</i> ; <i>Poecilochroa unifascigera</i>
<i>Castianeira ignea</i> (O.P.-Cambridge, 1872) (Corinnidae)	<i>Micaria ignea</i>
<i>Graptartia scabra</i> (Simon, 1878) (Corinnidae)	<i>Micaria scabra</i>
<i>Phrurolithus claripes</i> (Dönitz & Strand, 1906) (Liocranidae)	<i>Micaria claripes</i>
<i>Phrurolithus minimus</i> C.L. Koch, 1839	<i>Micaria rufescens</i> (Simon, 1864)
	(Liocranidae)

Four of the species at the end of table 1, which do not belong to *Micaria* (or *Arboricaria*) any more, are only known in one gender and from old descriptions and figures: *A. corvina* from Algier and Tunis (only ♂ is known), *A. trifasciata* from Syria (♀), *C. ignea* from Palestine (♀), *G. scabra* from Algeria and Morocco (♀). So these should be reexamined. This is necessary to do too with the species in table 5 and these few *Micaria* which have been described from outside the holarctic region (see table 6). Additionally is to remark, that Bonnet (1957) lists some fossil spiders in the genus.

In table 2 the synonyms within *Micaria* and *Arboricaria* are listed from the view of the synonyms.

Table 2. List of synonyms in the genera *Micaria* and *Arboricaria* in the palearctic region, with their valid names.

Synonym	Valid name
<i>albimana</i> O.P.-Cambridge, 1872	<i>coarctata</i> (Lucas, 1846)
<i>albostriata</i> L. Koch, 1877	<i>Arboricaria subopaca</i> (Westring, 1861)
<i>armata</i> O.P.-Cambridge, 1874	<i>dives</i> (Lucas, 1846)
<i>aurata</i> auctores (non Hentz, 1847)	<i>Arboricaria cyrnea</i> (Brignoli, 1983)
<i>aurata</i> Canestrini, 1868 (non Hentz, 1847)	<i>Arboricaria sociabilis</i> (Kulczynski, 1897)
<i>berlandi</i> Schenkel, 1963	<i>rossica</i> Thorell, 1875 (?; cfr. Wunderlich, 1979)
<i>breviuscula</i> Simon, 1878	<i>alpina</i> L. Koch, 1872
<i>canestrinii</i> Roewer, 1951	<i>Arboricaria sociabilis</i> (Kulczynski, 1897)
<i>centroc nemis</i> Kulczynski, 1885	<i>rossica</i> Thorell, 1875
<i>chalybeia</i> Kulczynski, 1897	<i>coarctata</i> (Lucas, 1846)
<i>cherifa</i> Jocqué, 1977	<i>albovittata</i> (Lucas, 1846)
<i>chlorophana</i> (C.L. Koch, 1845) (nomen oblitum)	<i>dives</i> (Lucas, 1846)
<i>constricta</i> L. Koch, 1876 (nomen nudum) (non Emerton, 1894)	<i>formicaria</i> (Sundevall, 1831)
<i>dahli</i> Bösenberg, 1899	<i>lenzi</i> Bösenberg, 1899
<i>decorata</i> Tullgren, 1942	<i>nivosa</i> L. Koch, 1866
<i>eltoni</i> Jackson, 1922	<i>constricta</i> Emerton, 1894
<i>fastuosa</i> (C.L. Koch, 1835)	<i>fulgens</i> (Walchenaer, 1802)
<i>fastuosa</i> (Lucas, 1846)	<i>pygmaea</i> Kroneberg, 1875
<i>fagei</i> Schenkel, 1963	<i>rossica</i> Thorell, 1875
<i>femoralis</i> Denis, 1966	<i>pallipes</i> (Lucas, 1846)
<i>formicaria</i> (Lucas, 1846) (non Sundevall, 1831)	<i>coarctata</i> (Lucas, 1846)
<i>foveata</i> Strand, 1900	<i>aenea</i> Thorell, 1871
<i>gomerae grancanariensis</i> Wunderlich, 1979	<i>gomerae</i> Strand, 1911
<i>gomerae hierro</i> Schmidt, 1977	<i>gomerae</i> Strand, 1911
<i>harmsi</i> Wunderlich, 1979	<i>pygmaea</i> Kroneberg, 1875
<i>hierro</i> Schmidt, 1977	<i>gomerae</i> Strand, 1911
<i>hissarica</i> Charitonov, 1951	<i>rossica</i> Thorell, 1875
<i>hospes</i> Kulczynski, 1881	<i>silesiaca</i> L. Koch, 1875
<i>humilis</i> Kulczynski, 1885	<i>Arboricaria subopaca</i> (Westring, 1861)
<i>judaeorum</i> Strand, 1915	<i>pygmaea</i> Kroneberg, 1875
<i>lindbergi</i> Roewer, 1962	<i>rossica</i> Thorell, 1875
<i>littoralis</i> Palmgren, 1943	<i>nivosa</i> L. Koch, 1866
<i>lucasi</i> Thorell, 1871	<i>coarctata</i> (Lucas, 1846)
<i>milleri</i> Wunderlich, 1979	<i>pallipes</i> (Lucas, 1846)
<i>modesta</i> Kroneberg, 1875	<i>rossica</i> Thorell, 1875
<i>montana</i> Kulczynski, 1881 (non <i>montana</i> Emerton, 1890 = <i>pulicaria</i> )	<i>silesiaca</i> L. Koch, 1875
<i>movens</i> Simon, 1878	<i>funerea</i> Simon, 1878
<i>mutilata</i> Caporiacco, 1935	<i>lenzi</i> Bösenberg, 1899
<i>nitens</i> (C.L. Koch, 1839)	<i>pulicaria</i> (Sundevall, 1831)
<i>norvegica</i> Sørensen, 1904	<i>aenea</i> Thorell, 1871

Continue Table 2.

Synonym	Valid name
<i>nuptialis</i> O.P.-Cambridge, 1872	<i>albovittata</i> (Lucas, 1846)
<i>oceanica</i> Denis, 1964	<i>pallipes</i> (Lucas, 1846)
<i>pallens</i> Denis, 1958	<i>rossica</i> Thorell, 1875 (?; cfr. Wunderlich, 1979)
<i>praesignis</i> L. Koch, 1867	<i>coarctata</i> (Lucas, 1846)
<i>pulcherrima flava</i> Caporiacco, 1935	<i>pulcherrima</i> Caporiacco, 1935
<i>pulicaria strandi</i> Kolosvary, 1936	<i>nivosa</i> L. Koch, 1866
<i>quinquenotata</i> Simon, 1895	<i>rossica</i> Thorell, 1875
<i>radiata</i> L. Koch, 1866	<i>nivosa</i> L. Koch, 1866
<i>rogenhoferi</i> Herman, 1879	<i>albovittata</i> (Lucas, 1846)
<i>romana</i> L. Koch, 1866	<i>albovittata</i> (Lucas, 1846)
<i>romana</i> Simon, 1878 (non L. Koch, 1866)	<i>coarctata</i> (Lucas, 1846)
<i>rossii</i> Strand, 1909	<i>nivosa</i> L. Koch, 1866
<i>scenica</i> Simon, 1878	<i>rossica</i> Thorell, 1875
<i>scintillans</i> O.P.-Cambridge, 1871	<i>albovittata</i> (Lucas, 1846)
<i>septempunctata</i> O.P.-Cambridge, 1872	<i>pallipes</i> (Lucas, 1846)
<i>shadini</i> Charitonov, 1951	<i>rossica</i> Thorell, 1875
<i>sibirica</i> Danilov, 1993	<i>pulcherrima</i> Caporiacco, 1935
<i>similis</i> Bösenberg, 1902	<i>pulicaria</i> (Sundevall, 1831)
<i>similis</i> Tyschchenko, 1965 (non Bösenberg, 1902)	<i>dives</i> (Lucas, 1846)
<i>similis strandi</i> Kolosvary, 1936	<i>nivosa</i> L. Koch, 1866
<i>simplex</i> Bösenberg, 1902	<i>silesiaca</i> L. Koch, 1875
<i>smaragdula</i> Simon, 1878	<i>coarctata</i> (Lucas, 1846)
<i>socialis</i> L. Koch, 1877	<i>silesiaca</i> L. Koch, 1875
<i>spinulosa</i> Simon, 1878	<i>albovittata</i> (Lucas, 1846)
<i>splendidissimus</i> L. Koch, 1872	<i>dives</i> (Lucas, 1846)
<i>taiguica</i> Tu & Zhu, 1986	<i>rossica</i> Thorell, 1875
<i>todilla</i> Simon, 1878	<i>pygmaea</i> Kroneberg, 1875
<i>trochilus</i> Simon, 1890	<i>fastuosa</i> (Lucas, 1846)
<i>turcica</i> Drensky, 1915	<i>albovittata</i> (Lucas, 1846)
<i>tyschchenkoi</i> Brignoli, 1983	<i>dives</i> (Lucas, 1846)
<i>vandeli</i> Denis, 1950	<i>aenea</i> Thorell, 1871

So there remain only very few doubtful species within *Micaria*, where seem to be no chance to solve them. These are listed in table 3.

Table 3. List of doubtful palaearctic *Micaria* species

Species	Type locality	Status	Reference
<i>Micaria exilis</i> Canestrini, 1868	Italy	nomen dubium	Brignoli, 1983
<i>Micaria fausta</i> Karsch, 1881	Libya	incertae sedis	Present paper

In table 4, all palaearctic *Micaria* species are listed, with selected references to papers with good figures and identification characters.

Table 4. List of valid palaearctic *Micaria* and *Arboricaria* species with references for their identification

Species	Reference to identification	unknown gender
<i>Micaria aborigenica</i> Mikhailov, 1988	Mikhailov, 1988: 330, figs 23-24	♂
<i>Micaria aenea</i> Thorell, 1871	Wunderlich, 1979: 271-274, figs 5, 26a-d, 48a-b; Platnick & Shadab, 1988: 30-32 figs 66-69; Mikhailov & Marusik, 1996: 102, figs 33-34, 38-39	
<i>Micaria albovittata</i> (Lucas, 1846)	Present paper. Wunderlich, 1979: 260-262, figs 9 a-c, 20 a-d, 42 a-f; Roberts, 1998: 129-130; Song et al., 1999: 453, figs 264G, 265I (all sub <i>M. romana</i> )	
<i>Micaria alpina</i> L. Koch, 1872	Wunderlich, 1979: 281, 183, figs 31 a-d, 54 a-d; Platnick & Shadab, 1988: 18-19, figs 30-33; Ono, 1994: 184, figs 5-8; Mikhailov & Marusik, 1996: 101-102, figs 29-30, 36; Roberts, 1998: 126	
<i>Micaria alxa</i> Tang, Urita, Song & Zhao, 1997	Tang & al., 1997: 13-15, figs a-d.; Song et al., 1999: 452, figs 263H, Q	
<i>Micaria belezma</i> Bosmans n. sp.	Present paper	♀
<i>Micaria bonneti</i> Schenkel, 1963	Danilov, 1997: 114, figs 1c-d; Song et al., 1999: 452, figs 264A	♂
<i>Micaria coarctata</i> (Lucas, 1846)	Present paper; Wunderlich, 1979: 264-266, figs 22 a-f, 44 a-e (sub <i>M. albimana</i> )	
<i>Micaria constricta</i> (Emerton, 1894)	Wunderlich, 1979: 279-280, figs 30a-d, 52a-c (sub <i>M. eltoni</i> ); Platnick & Shadab, 1988: 14-15, figs 18-21	
<i>Micaria dives</i> (Lucas, 1846)	Present paper; Wunderlich, 1979: 287-290, figs 1, 34a d, 58a-c; Roberts, 1998: 130; Song et al., 1999: 452, figs 264B, M	
<i>Micaria fastuosa</i> (Lucas, 1846)	Present paper; Wunderlich, 1987: 245, figs 664a-e (sub <i>M. pygmaea</i> )	
<i>Micaria formicaria</i> (Sundevall, 1831)	Wunderlich, 1979: 266-269, figs 4 a-b, 23 a-b, 45 a-c; Roberts, 1998: 129; Song et al., 1999: 452, figs 264C, N	
<i>Micaria fulgens</i> (Walckenaer, 1802)	Wunderlich, 1979: 259, figs 19a-d, 41a-b; Roberts, 1998: 129	
<i>Micaria funerea</i> Simon, 1878	Wunderlich, 1979: 263-264, figs 21a-g, 43a-d	
<i>Micaria gomerae</i> Strand, 1911	Wunderlich, 1987: 247-248, figs 655a-c	
<i>Micaria guttigera</i> Simon, 1878	Wunderlich, 1979: 269-270 ff. 11, 24a-d, 46a-c	

Continue Table 4.

Species	Reference to identification	unknown gender
<i>Micaria guttulata</i> (C.L. Koch, 1839)	Wunderlich, 1979: 273-274, figs 27a-d, 49; Roberts 1998: 127	
<i>Micaria japonica</i> Hayashi, 1985	Hayashi, 1985: 21-24, figs 1-9; Namkung et al., 1995: 40-41, figs 1-4	
<i>Micaria kopetdagensis</i> Mikhailov, 1986	Mikhailov, 1988: 327-328, figs 13-19	
<i>Micaria lenzi</i> Bösenberg, 1899	Wunderlich, 1979: 277-279, figs 6, 29a, 51a-c; Mikhailov & Marusik, 1996: 102, figs 31-32, 37; Roberts, 1998: 127-128; Song et al., 1999: 452, figs 264D, O	
<i>Micaria mongunica</i> Danilov, 1997	Danilov, 1997: 114, figs 1a-b	♂
<i>Micaria nivosa</i> L. Koch, 1866	Wunderlich, 1979: 256-259, figs 12, 18a-e, 40a-d	
<i>Micaria pallipes</i> (Lucas, 1846)	Present paper; Mikhailov & Fet, 1986: 178, figs 2 b c; Wunderlich, 1979: 307-308, figs 69 a-e (sub <i>M. septempunctata</i> )	
<i>Micaria palmgreni</i> Wunderlich, 1979	Wunderlich, 1979: 280, figs 14, 53a-b	♂
<i>Micaria pulcherrima</i> Caporiacco, 1935	Danilov, 1993: 429-431, figs 4-7; Song et al., 1999: 452-453, figs 264E, P (sub <i>pulcherrina</i> )	
<i>Micaria pulicaria</i> (Sundevall, 1831)	Wunderlich, 1979: 252-255, figs 3a-i, 16a-f, 38a-d; Platnick & Shadab, 1988: 7-10, figs 2-5; Roberts, 1998: 128-129; Song et al., 1999: 453, figs 264F, Q	
<i>Micaria pygmaea</i> Kroneberg, 1875	Present paper; Wunderlich, 1987: 245, figs 664 a-e (sub <i>M. pygmaea</i> )	
<i>Micaria rossica</i> Thorell, 1875	Wunderlich, 1979: 308, figs 70a-c, 286-287, figs 33a-e, 57a-e (sub <i>M. scenica</i> ); Platnick & Shadab, 1988: 27-29, figs 58-61; Mikhailov & Marusik, 1995: 101, figs 27-28, 35; Song et al., 1999: 453, figs 264H, 265J	
<i>Micaria silesiaca</i> L. Koch, 1875	Wunderlich, 1979: 275-275, figs 8, 28a-d, 50a-c; Roberts, 1998: 128	
<i>Micaria tarabaevi</i> Mikhailov, 1988	Mikhailov, 1988: 329, figs 20-22	♀
<i>Micaria triguttata</i> Simon, 1884	Wunderlich, 1979: 270-271, figs 13, 25 a-d, 47 a-b	
<i>Micaria tripunctata</i> Holm, 1978	Wunderlich, 1979: 255-256, figs 17a-c, 39; Platnick & Shadab, 1988: 10-11, figs 6-9	
<i>Micaria tuvensis</i> Danilov, 1993	Danilov, 1993: 428-429, figs 1-3; Song et al., 1999: 453, fig. 264I	♂
<i>Arboricaria brignolii</i> Bosmans & Blick n. sp.	Present paper	

Continue Table 4.

Species	Reference to identification	unknown gender
<i>Arboricaria cynea</i> (Brignoli, 1983)	Present paper; Wunderlich, 1979: 292, figs 37 a-d (sub <i>Micaria canestrini</i> ); Hansen, 1992: 96-97, fig. 2 (sub <i>Micaria cynea</i> )	
<i>Arboricaria koeni</i> Bosmans n. sp.	Present paper	
<i>Arboricaria sociabilis</i> (Kulczynski, 1897)	Wunderlich, 1979: 291-292, figs 7, 36b, 60a (sub <i>Micaria</i> ) [remark: figs 60b-c probably another species, see above]	
<i>Arboricaria subopaca</i> (Westring, 1861)	Wunderlich, 1979: 290-291, figs 35a-e, 59; Roberts, 1998: 127 (both sub <i>Micaria</i> )	

Finally we give a list of *Micaria* species of uncertain validity. These species should be included in future revisions. They are listed in table 5.

Table 5. Palaearctic *Micaria* species of uncertain validity

Species	Type locality	Known gender
<i>Micaria aciculata</i> Simon, 1895	Russia/Asia: Altai in South Siberia	♂
<i>Micaria braendegardi</i> Denis, 1958	Afghanistan	♀
<i>Micaria connexa</i> O.P.-Cambridge, 1885	China: Yarkand/East Turkestan	♂ & ♀
<i>Micaria pallida</i> O.P.-Cambridge, 1885	China: Yarkand/East Turkestan Subadult	subadult ♂
<i>Micaria violens</i> Olinger, 1983	Russia/Asia: Continental Southern Far East	♂

Table 6. *Micaria* species described from outside the holarctic region

Valid name	Synonym	known gender	Origin
<i>Micaria chrysia</i> (Simon, 1910)	<i>Micariolepis chrysia</i>	♀	Africa: Namibia
<i>Micaria croesia</i> L. Koch, 1873		subadult ♀	Australia: New S-Wales
<i>Micaria inornata</i> L. Koch, 1873		♂	Australia
<i>Micaria siniloana</i> Barrión & Litsinger, 1995		♀	Philippines
<i>Micaria tersissima</i> Simon, 1910		♂	Africa: Namibia
<i>Castianeira soyauxi</i> (Karsch, 1879) (Corinnidae)	<i>Micaria soyauxi</i>	♀	Africa: Congo
<i>Prodidomus saharanpurensis</i> (Tikader, 1982) (Prodidomidae)	<i>Micaria saharanpurensis</i>	♀	India

Some general conclusions are:

1. Due to the small number of specimens, intraspecific variation was insufficiently known, hence the abundance of synonyms.
2. By the present paper, the status of all formerly described *Micaria* species of the west-palearctic region (Europe and North Africa) is nearly cleared.
3. Almost all *Micaria* species appear to have large distribution patterns, including some holarctic ones.
4. The members of the new genus *Arboricaria* are all arboreal, possibly with smaller distribution areas but the distribution data of most species are still very limited (the only species with a large distribution area is *A. subopaca*).
5. *Micaria* seems to be restricted to the holarctic region. The species described from other regions are herewith supposed to belong to other genera.

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PLATNICK N.I., 2000 - The world spider catalog (Fam. Gnaphosidae Pocock, 1898). Last updated sept. 17, 2000. Internet: <http://research.amnh.org/entomology/spiders/catalog81-87/inex.html>

The publication of a new edition of Platnick's catalog of the Gnaphosidae of the world interfered with the publication of the present paper. In view of this new catalog, a large part of the remarks given for each species could be reconsidered, which was however impossible. Only minor, but important changings or additions have been incorporated.

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