



ARTÍCULO:

New records of larval mites (Acari: Prostigmata: Erythraeidae, Eutrombidiidae, Trombidiidae) from Portugal and Spain

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ARTÍCULO:

New records of larval mites (Acari: Prostigmata: Erythraeidae, Eutrombidiidae, Trombidiidae) from Portugal and Spain

Ryszard Haitlinger

Abstract:

Leptus (Leptus) josifovi and *Eutrombidium sorbasiensis* are new records to the fauna of Portugal. *Leptus (L.) orthopterarum*, *Leptus (L.) mariae*, *Leptus (L.) killingtoni*, *Charletonia kaliksti* and *Eutrombidium trigonum* are new to the fauna of Spain.

Key words: Acari, Prostigmata, Erythraeidae, Eutrombidiidae, Trombidiidae, new records, Portugal, Spain.

Nuevas citas de ácaros (Acari: Prostigmata: Erythraeidae, Eutrombidiidae, Trombidiidae) para Portugal y España

Resumen:

Leptus (Leptus) josifovi y *Eutrombidium sorbasiensis* se citan por primera vez para la fauna de Portugal. *Leptus (L.) orthopterarum*, *Leptus (L.) mariae*, *Leptus (L.) killingtoni*, *Charletonia kaliksti* y *Eutrombidium trigonum* son nuevas para la fauna de España.

Palabras clave: Acari, Prostigmata, Erythraeidae, Eutrombidiidae, Trombidiidae, nuevas citas, Portugal, España.

Introduction

In Portugal, species of mites belonging to families Erythraeidae, Trombidiidae and Eutrombidiidae based on larvae are poorly known. Hitherto, 5 species have been found in Portugal: in the continental part *Porttrombidium sebastiani* Haitlinger, 2000; in Madeira: *Leptus (Leptus) millipedioides* Southcott, 1992, *Abrolophus benoni* (Haitlinger, 2002), *Abrolophus neobrevicollis* Zhang & Goldarazena, 1996 and in Azores *Leptus (Leptus) killingtoni* Turk, 1945 (McNeill & Treat, 1992, Southcott, 1992, Haitlinger, 2000, 2002a). In Spain these mites based on larvae are well known and 40 species have been recorded; 24 in the peninsular part of Spain: *Abrolophus neobrevicollis* Zhang & Goldarazena, 1996, *Grandjeanella multisetosa* Zhang & Goldarazena, 1996, *Grandjeanella haitlingeri* Goldarazena & Zhang, 1997, *Leptus (Leptus) akkus* Haitlinger, 1990, *Charletonia blascoi* Southcott, 1993, *Leptus (Leptus) mirenae* Haitlinger, 1994, *Erythraeus (Zaracarus) lancifer* Southcott, 1995, *Erythraeus (Erythraeus) southcotti* Goldarazena & Zhang, 1998, *Erythraeus (Zaracarus) preciosus* Goldarazena & Zhang, 1998, *Abalakeus lorestanicus* Saboori & Lachinani, 2003, *Allothrombium fuliginosum* (Hermann, 1804), *Allothrombium monochaetum* Goldarazena & Zhang, 1997, *Allothrombium pulvinum* Ewing, 1917, *Allothrombium triticium* Zhang & Norbakhsh, 1995, *Allothrombium mossi* Zhang & Norbakhsh, 1995, *Paratrombium welbourni* Goldarazena & Zhang, 1997, *Paratrombium megalochirum* (Berlese, 1910), *Trombidium brevimanum* (Berlese, 1910), *Trombidium cancelai* Robaux, 1967, *Trombidium holosericeum* (Linnaeus, 1758), *Trombidium mediterraneum* (Berlese, 1910), *Eutrombidium sorbasiensis* 2005 Mayoral & Barranco, 2004, *Alhamitrombium tetraseta* Mayoral & Barranco, and *Beronium laemostenis* Mayoral & Barranco, 2005; 5 species

from Balearic Islands: *Erythraeus (Erythraeus) picaforticus* Haitlinger, 2002, *E. (Zaracarus) southcotti*, *E. (Zaracarus) preciosus*, *Grandjeanella ainae* Haitlinger, 2002 and *Balaustium florale* Grandjean, 1947, and 11 species from Canary Islands (Tenerife, Gomera and La Palma): *Beronium veronicae* Haitlinger, 1994, *Erythraeus (Erythraeus) tinnae* Haitlinger, 1997, *Erythraeus (Zaracarus) fabiolae* Haitlinger, 1997, *Charletonia enghoffi* Southcott, 1991, *Allothrombium amiraeli* Haitlinger, 1997, *Abrolophus benoni* (Haitlinger, 2002), *Hauptmannia baardi* Haitlinger, 2004, *Balaustium barloventensis* Haitlinger, 2004,

Balaustium malpaisensis Haitlinger, 2004, *Pedroerythraeus ernesti* Haitlinger, 2004, *Eutrombidium verdense* Southcott, 1993 (Robaux, 1967, Southcott, 1991, 1992, 1993a, b, 1995, McNeill & Treat, 1992, Haitlinger, 1990, 1994a, b, 1997, 2002b, 2004, Goldarazena & Zhang, 1997a, b, 1998, Zhang & Goldarazena, 1996, Mayoral & Barranco, 2004a, b, c, 2005a, b). In this paper two new species for the fauna of Portugal and 5 species for the fauna of Spain were found.

Material and Methods

In Portugal, 40 larvae in September 1999 and 23 larvae in July 2003 were collected, 62 larvae were obtained from Orthoptera (Insecta), and 1 larva from Mantodea (Insecta). In Spain 3 larvae were collected in September 1999, 6 larvae in September 2000 and 55 in July 2003; 38 larvae were obtained from Orthoptera and 26 larvae from herbaceous plants. All specimens were collected by R. Haitlinger.

Results

FAMILY: Erythraeidae Robineau-Desvoidy, 1828

GENUS: *Grandjeanella* Southcott, 1961

Grandjeanella multisetosa Zhang & Goldarazena, 1996

MATERIAL. 1 larva (1.), 5.07.2003, Spain, Santa Eulalia (A Coruña, Galicia), from herbaceous plants. *G. multisetosa* is common in northern Spain; it was also found in Turkey and Croatia (Zhang & Goldarazena, 1996, Goldarazena *et al.*, 1999a, 2000, Haitlinger, 2004).

GENUS: *Leptus* Latreille, 1796

Leptus (Leptus) killingtoni Turk, 1945

MATERIAL. 1 l., 8.07.2003, Soto de Luina, N. Luearca (Asturias); 17 l., 9.07.2003, Campolongo, N. Ponteume (A Coruña, Galicia); 1 l., 9.07.2003, Deixebre, N. Santiago de Compostela (A Coruña, Galicia); all from herbaceous plants from Spain. Until now, this species was known only from Great Britain and Azores (Turk, 1945, Southcott, 1992, McNeill & Treat, 1992).

Because, metric data are only known for one specimen, measurements of the specimens from Spain are given in Table I. New record for Spain.

Leptus (Leptus) josifovi Beron, 1975

MATERIAL. 1 l., 11.07.2003, Portugal, Gartrelos, N. Braganca (Tras-Os-Montes); 1 l., 12.07.2003, Burga, N. Macedo de Cavaleiros (Trás-Os-Montes), 12.07.2003, both from undetermined Orthoptera species. *L. (L.) josifovi* hitherto was known from Bulgaria and Croatia (Beron, 1975, Haitlinger, 2004). This species is probably distributed in whole southern Europe. First record for Portugal.

Leptus (Leptus) mariae Haitlinger, 1987

MATERIAL. 1 l., 6.07.2003, Spain, Castrillo de Rucios, (Burgos, Castilla-León), from herbaceous plants. This species was known from Belgium, Poland, Holland and Italy. New record for Spain.

Leptus (Leptus) orthopterarum Beron, 1975

MATERIAL. 2 l., 5.07.2003, Spain, Tudela (Navarra) from undetermined Orthoptera species, on femur of leg III. The only one known specimen of *L. (L.) orthopterarum* was from Bulgaria (Beron, 1975). Metric data for specimens from Spain are in Table I. New record for Spain.

GENUS: *Charletonia* Oudemans, 1910

Charletonia kaliksti Haitlinger, 2003

MATERIAL. 2 l., Spain, Jaca (Huesca), 16.07.2003, from undetermined Orthoptera. This species was known only from 2 specimens from Rhodes (Greece), where it was obtained from *Aiolopus* sp. (Orthoptera: Acridiidae) (Haitlinger, 2003). Therefore, further measurements for this species are given in Table I. New record for Spain.

GENUS: *Erythraeus* Latreille, 1806

Erythraeus (Erythraeus) southcotti Goldarazena & Zhang, 1998

MATERIAL. 1 l., 5.07.2003, Spain, Santa Eulalia (A Coruña, Galicia), from herbaceous plants. It is a common species in Northern Spain (Navarra), associated with Homoptera and Heteroptera (Goldarazena & Zhang, 1998), known also from Balearic Islands (Mallorca) (Haitlinger, 2002).

Erythraeus (Zaracarus) preciosus Goldarazena & Zhang, 1998

MATERIAL. 1 l., 16.07.2003, Spain, Jaca (Huesca), from herbaceous plants. This species was known from two

localities in northern Spain and from Balearic Islands (Mallorca) (Goldarazena & Zhang, 1998, Haitlinger, 2002).

FAMILY: Trombidiidae Leach, 1815

GENUS: *Paratrombium* Bruyant, 1910

Paratrombium welbourni Goldarazena & Zhang, 1997

MATERIAL. 1 l., 8.07.2003, Spain, San Ciprian, N. Viveiro (Lugo, Galicia), from herbaceous plants. *P. welbourni* is known from many localities in Northern Spain (Goldarazena & Zhang, 1997, Goldarazena *et al.*, 1999b).

FAMILY: Eutrombidiidae Thor, 1935

GENUS: *Eutrombidium* Verdun, 1909

Eutrombidium sorbasiensis Mayoral & Barranco, 2004

MATERIAL. Spain, 3 l., 3.09.1999, Gibraleon (Huelva, Andalucía); 4 l., 15.07.2003, vicinity of Epila (Zaragoza, Aragón); 2 l., 4.07.2003, 6 km to north from El Grado, N. Barranco (Huesca, Aragón); 19 l., 5.07.

2003, Tudela (Navarra); 6 l., 4.09.2000, Sant Antonio, Ibiza, Balearic Islands, all from undetermined Orthoptera. Portugal, 1 l., 14.09.1999, Quriq (Alemtejo); 9 l., 14.09.1999, Evora (Alemtejo) from *Calliptamus* sp. (Catantopidae); 1 l., 14.09.1999 from *Calliptamus italicus* (Linnaeus, 1758); 12 l., 11.09.1999, Aire de Maire N. Fatima (Estremadura); 3 l., 15.09.1999, Portimão (Algarve) from *C. italicus*; 13 l., 15.09.1999, Portimão (Algarve) from *Oedipoda caerulescens* (Linnaeus, 1758); 1 l., 15.09.1999, Portimão (Algarve) from *Iris oratoria* (Linnaeus, 1758) (Mantodea); 19 l., 12.07.2003, Pinzio N. Guarda (Guarda); 2 l., 12.07.2003, Burga, N. Macedo de Cavaleiros (Trás Os Montes) from undetermined Orthoptera.

Eutrombidium trigonum (Hermann, 1804)

MATERIAL. 1 l., 16.07.2003, Spain, Jaca (Huesca, Aragón) from undetermined Orthoptera. Very common species in Europe. New record for Spain.

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Table I.

Metric data (in μm) for *Leptus (L.) killingtoni* Turk, 1945 (1), *Leptus (L.) orthopterarum* Beron, 1975 (2) and *Charletonia kaliksti* Haitlinger, 2003 (3).

	1 n=10	2	3		1	2	3
IL	362-806	640-654	1117-1543	3b*	50-58	50-52	36-42
IW	292-571	344-400	635-844	3b**			34-38
AW	72-78	90-98	48-52	PsFd	54-78	52-54	50
MW			54	PsGd	42-54		24-28
PW	86-90	118-122	60	TaI	114-126	156-162	144-150
AA	10-12	12	10-12	TiI	134-148	200-202	160-162
SB	14-16	14-18	14-16	GeI	100-108	130-132	128
ISD	50-56	74-76	58-64	TfI	66-70	88-94	84
L	90-104	122-124	58-64	BfI	72-84	100-104	92-94
W	96-102	126-130	66-72	TrI	44-50	54-56	48
AP	12-18	30-32	38-42	CxI	58-70	80-84	64
AAS	26-34	38-40	20-22	TaII	114-124	156-162	144-150
LN	22-28	22-26	14	TiII	120-130	162-174	136-142
AL	70-84	70	34-40	GeII	84-90	108-112	106-110
ML			36	TfII	62-80	80-92	68-76
PL	66-76	70-72	32-38	BfII	60-78	92	84
AM	40-50	54	60	TrII	42-54	56-58	44-52
S	62-72	76-78	70	CxII	80-90	90-92	60-62
DS	38-62	40-64	34-42	TaIII	110-122	146-152	146-150
GL	156-172	216-218	120-124	TiIII	164-176	218-234	200-202
1a	48-58	40	34-40	GeIII	92-106	122-126	128-130
2a	42-60	42-46	42	TfIII	72-78	106-108	104
1b	66-82	70-72	54	BfIII	76-90	106-110	100-102
2b*	38-44	34	40-58	TrIII	52-54	60	44-48
2b**			34-38	CxIII	72-84	80	62-68

* proximal seta, ** distal seta