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New species and new records of ant-eating spiders from Mediterranean Europe (Araneae: Zodariidae)

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Abstract. The following new Zodarion species are described from Italy: Zodarion pantaleonii Bosmans & Pantini spec. nov., both from Sardinia, Z. montesacrense Bosmans spec. nov. and Z. valentii Bosmans, Loverre & Addante spec. nov., both from Puglia, Z. valentii also occurs in Sicily. Zodarion spec., described from Greece in 2009, is the unknown female of Zodarion zorba Bosmans, 2009. Zodarion gracilitibiale Denis, 1934 is new for Italy. New records for 43 other European Zodarion species are presented.

Keywords: distribution, faunistics, Greece, Italy, new species, Zodarion

Zusammenfassung. Neue Arten und Neunachweise Ameisen fressender Spinnen aus dem mediterranen Europa (Araneae: Zodariidae). Folgende neue Zodarion-Arten werden aus Italien beschrieben: Zodarion pantaleonii Bosmans & Pantini spec. nov., und Z. pseu-donigriceps Bosmans & Pantini spec. nov., beide von Sardinien, Z. montesacrense Bosmans spec. nov. und Z. valentii Bosmans, Loverre & Addante spec. nov., beide aus Apulien, Z. valentii kommt auch auf Sizilien vor. Zodarion sp., 2009 aus Griechenland beschrieben, ist das unbekannte Weibchen von Zodarion zorba Bosmans, 2009. Zodarion gracilitibiale Denis, 1934 ist neu für Italien. Neue Funde 43 weiterer europäischer Zodarion-Arten werden präsentiert.

The genus Zodarion Walckenaer, 1833 has a Palaearctic distribution and currently consists of 163 species (World Spider Catalog 2018). Especially the Mediterranean region appears to be rich in species of this genus. In the western part (Iberian Peninsula), 32 species have been reported (Bosmans 1994, Pekár et al. 2003, Pekár & Cardoso 2005). In the Central Mediterranean region (France, Italy) 19 species have been reported (Bosmans 1997) and in the Balkans 42 species (Bosmans 2009). In the present contribution, four new species are described including new distribution data for 43 other species.

Material and methods

Most of the material was collected by the first author during different collecting trips to the Mediterranean region. The material from Sardinia is the result of a project on faunal studies in Sardinia and was collected by M. Verdinelli and A. Sassu. The material from Greece originates from fieldwork included in a faunistic project (SPIDOnetGR, ARISTEIA II Programme, NSRF 2007–2013) lead by M. Chatzaki. A few colleagues sent material for identification, and these data are included as well.

Specimens were examined and illustrated using a Nikon SMZ1270 stereomicroscope. Further details were studied using an Olympus CH-2 stereoscopic microscope with a drawing tube. Photographs were taken with a Moticam 5MP camera attached to a Realux stereoscopic microscope. Somatic morphology measurements were taken using a scale reticule in the eyepiece of the stereo microscope and are in mm. Measurements of the legs are taken from the dorsal side. Taxonomic descriptions follow the format of Bosmans (1994, 1997, 2009).

Left structures of palps are depicted. Eye measurements were excised using sharpened needles. These were then transferred to clove oil for examination under the microscope. Male palps were detached and transferred to glycerol for examination under the microscope. Later, palps and epigynes were returned to 70 % ethanol.

Type material and important reference material is deposited in different museums as listed in the descriptions of the species, the other material is deposited in the collection of the collectors or in one of the collections listed below.

Collections

BMNH British Museum of Natural History, London, UK
CAR-S Collection Anthony Russell-Smith
CKT Collection Konrad Thaler
CNR Istituto per lo Studio degli Ecosistemi, Sassari, Italy
CRB Collection Robert Bosmans
CSP Collection Stano Pekár
DiSSPA Department of Soil, Plant and Food Sciences, University of Bari “A. Moro”, Italy
KBIN Koninklijk Belgisch Instituut voor Natuurwetenschappen, Belgium (L. Baert)
MCSNB Museo Civico di Scienze Naturali, Bergamo, Italy
NBCL Naturalis Biodiversity Centre, Leiden, the Netherlands (P. van Heldingen)
NHMC Natural History Museum of Crete, Greece
SMF Senckenberg Museum, Frankfurt am Main, Germany (P. Jäger)

Abbreviations

Legs: Co, Fe, Pa, Ti, Mt, Ta = coxa, femur, patella, tibia, metatarsus, tarsus

Eyes and their position: AM = anterior median eyes; diameter taken as base for all other calculations, always = 1.0; the absolute diameter is given between brackets. AL, PM, PL = anterior lateral eyes, posterior median and posterior lateral eyes; diameters expressed as fraction of AM diameter. a, b, c, d = distance between eyes: a = AM-AM, b = AM-AL, c = PM-PM, d = PM-PL, all expressed as fraction of AM diameter. MOQ = median ocular quadrangle, AW = anterior width, PW = posterior width, L = length

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Results

Description of new species

Zodarion montesacrense Bosmans spec. nov. (Fig. 1a–e)

Type material. Holotype ♂ from Italy, Puglia, Gargano, Mattinata, Monte Sacro (N41°45' E16°02'), 24.IV.2011, P. J. van Helsdingen leg.; deposited in NBCL.

Etymology. The name of the species is derived from the type locality, adjective. Zodarion montesacrense

Diagnosis. This small Zodarion species is a member of the pusio group as defined by Bosmans (1997) and is closely related to Zodarion emarginatum (Simon, 1873). The species is easily distinguished by the terminally bifid tibial apophysis of the male palp.

Description. Measurements: Male: Total length 1.54; prosoma 0.82 long 0.62 wide. Colour (Fig. 1a): The holotype is recently moulted and the natural colours are not fully developed yet. Prosoma pale yellowish, margin, foveal spot and anastomosing striae darkened and eye region black; opisthosoma dark sepia, venter and oval spot above spinnerets whitish.

Eyes: AM = 1 (0.69); AL = PL = 0.47; PM = 0.5; a = 0.38; b = d = 0.19; c = 1; d = 0.3; MOQ: AW = 0.91PW; L = 0.87 PW. Opisthosoma: with a row of 17 spines before the spinnerets, not much thicker than the normal hairs.

Palp (Fig. 1b–e): Tibial apophysis longer than the tibia's diameter with short pointed dorsal apophysis a longer, slightly curved, terminally incised median apophysis and a shorter rounded ventral apophysis; median apophysis reversed U-shaped, distal branch pointed and longer than basal branch; embolus gradually narrowing, with tip pointed, in antero-ventral view with distinct concavity.

Female: Unknown.

Distribution. Only known from the type locality in Puglia (Italy). The species was mentioned as Zodarion sp. in IJland et al. (2012).

Zodarion pantaleonii Bosmans & Pantini spec. nov. (Fig. 2a–n)

Type material. Holotype ♂, 4 ♂♂, 6 ♀♀ paratypes from ITALY, Sardinia, Medio Campidano, Guspinu, Montevuccio, Piccalinna (N39°33’24’’ E8°34’06’’), Mediterranean maquis, 5 ♂♂ 18.V.–3.VI.2009, 2 ♂♂ 3.–15.VI.2009, 4 ♂♂ 15.–30.VI.2009, pitfall traps, A. Sassu and M. Verdinelli leg. Deposition: holotype ♂, 2 paratypes ♂♂, 4 paratypes ♀♀ in MCSNB, 1 ♂, 1 ♀ paratypes in CRB.

Other material examined. ITALY: Sardinia: Medio Campidano, Arbus, Ingurutosu, Narcauli 200 m a.s.l. (N39°30’53’’E8°29’33’’), garrigue, 1 ♂ 5.–19.V.2009, pitfall traps, A. Sassu and M. Verdinelli leg. (MCSNB); Guspinu, Montevuccio, Piccalinna (N39°33’24’’, 8°34’06’’) Mediterranean maquis, 1 ♂ 18.V.–3.VI.2009, 7 ♂♂ 3.–15.VI.2009, 2 ♀♀ 30.VI.–13.VII.2009 (MCSNB).

Etymology. The species is dedicated to Roberto Pantaleoni, Director of CNR, Istituto per lo Studio degli Ecosistemi Sassi which supports and promotes faunistic studies in Sardinia.

Diagnosis. Zodarion pantaleonii spec. nov. belongs to the italicum group of Zodarion. Males differ from other species in this group by the distal branch of the median apophysis being twice as long as the basal branch, equal to slightly longer in all other species (Fig. 2i); females by the trapezoid median plate in the epigyne (Fig. 2j–k).

Description. Measurements: Male: Total length 2.0–2.4; prosoma 1.02–1.21 long, 0.71–0.90 wide. Female: Total length 2.7–2.8; prosoma 1.22–1.24 long, 0.84–0.86 wide. Colour (Fig. 2a–c): Prosoma yellowish brown with darkened eye region and greyish brown anastomosing striae; patellae pale yellowish, femora yellowish orange with pale base, other segments orange brown; opisthosoma sepia, venter for a small or greater part whitish.

Eyes: AM = 1 (0.1); AL = 0.5; PM = 0.5; PL = 0.6; a = 0.5; b = 0.2; c = 1.3; d = 0.3; MOQ: AW = 1.1PW; L = 0.9 PW. Opisthosoma: With a row of 10–22 bristles before the spinnerets, thicker and only slightly longer than the scattered hairs on the rest of the venter; in several specimens many bristles have been lost and in the two females only one and three bristles are present.

Palp (Fig. 2d–g): Tibial apophysis elongated, slightly curved, longer than the tibia's diameter, narrow from its base, with small denticule at prolateral margin, terminally strongly pointed; median apophysis with distal branch longer than basal branch, strongly pointed terminally; embolus abruptly narrowing in distal third, terminally strongly pointed.

Epigyne (Fig. 2j–k): With relatively large trapezoid median plate, clear white, contrasting with the lateral and anterior borders of the epigyne.

Vulva (Fig. 2l–n): Spermathecae oval, separated by twice their diameter.

Distribution. Probably an endemic species of Sardinia (Italy).
Zodarion pseudonigriceps Bosmans & Pantini spec. nov.
(Fig. 3a–m)

**Type material.** Holotype ♂, 11 paratype ♀♀, 2 paratype ♀♀ from ITALY, Sardinia, Medio Campidano, Guspinì, Montevecchio, Piccalina 260 m a.s.l. (N39°33’24” E8°34’06”), Mediterranean maquis, 5.–18.V.2009, pitfall traps, A. Sassu and M. Verdinelli leg. Deposition: ♂ holotype, 10 ♀♀ paratype in MCSNB, 1 ♀ ♀ paratype in CRB, 1 ♀ ♀ paratype in CNR.

**Other material examined.** ITALY: Sardinia, Medio Campidano, Arbùs, Ingurtosu, Narcauli 120 m a.s.l. (N39°30’53” E8°29’33”), Mediterranean maquis, 1 ♀ 8.–22. IX.2009, pitfall traps, A. Sassu and M. Verdinelli leg. (MCSNB).

**Etymology.** The specific name refers to the close relationship to Zodarion nigriceps (Simon, 1873).

**Diagnosis.** Zodarion pseudonigriceps spec. nov. belongs to the italicum group. By the needle-like tibial apophysis (Fig. 3 f, g) the male is very close to Z. nigriceps, also occurring in Sardinia but this species has a bicoloured contrasting prosoma. Females are distinguished by the simple trapezoidal plate in the epigyne (Fig. 3 j, k).

**Description.** Measurements: Male (n = 4): Total length 2.5–2.8; prosoma 1.02–1.45 long, 0.72–1.02 wide. Female (n = 3): Total length 3.0–3.2; prosoma 1.38–1.64 long, 1.02–1.17 wide.

**Colour.** (Fig. 3a–c): Prosoma yellowish brown, clypeus and two stripes converging towards the fovea grey; patellae pale yellowish, femora yellowish orange with pale base, other segments orange brown; opisthosoma dark sepia with large, elongate postero-dorsal whitish spot, venter whitish.

**Eyes large:** AM = 1 (0.1); AL = 0.5; PM = 0.6; PL = 0.6; a = 0.5; b = d = 0.4; c = 1.8; MOQ: AW = 1.1 PW; L = 1.1 PW.

**Opisthosoma with a row of 14–15 bristles before spinnerets, more than twice as wide as normal hairs.***

**Palp (Fig. 3d–i):** All palps are expanded, so drawings show the bulb and the median apophysis in an abnormal position. Tibial apophysis needle-like as long as the tibia’s diameter with subterminal bend forming an angle of 30° with base of the tibial apophysis; median apophysis relatively small, basal branch slightly shorter than the pointed distal branch; embolus with relatively broad base gradually narrowing with blunt tip.

**Epigyne (Fig. 3 j–k):** With trapezoidal median plate.

**Vulva (Fig. 3l–m):** Spermathecae small and rounded, separated by more than 5 times their diameter.

**Distribution.** Probably an endemic species of Sardinia (Italy).
**Type material.** Holotype ♂, 3 paratypes ♀♀, 3 paratypes ♂♂ from ITALY, Puglia, Bari, Valenzano N41°01'19" E16°53'15''), 122 m a.s.l., pitfalls in abandoned olive grove, 24.VIII.2010, P. Loverre leg. Deposition: MCSNB.

**Comparative material examined.** Zodarion algiricum (Lucas, 1846): ALGERIA: 3 ♀♀ (MNHN AR 1540). ALGERIA: Alger: El Harrach, jardin de l’Institut national d’Agronomie, 25 m, 24 ♀♀, 5 ♂♂, 25.I.-22.VI.1983, and 175 males 61 females, 16.V.1985–1.VI.1986, pitfalls in park, R. Bosmans leg. (CRB).

**Other material examined.** 3 ♀♀, misidentified as Zodarion algiricum, together with 3 ♂♂ of Z. algiricum (MNHN AR 1540); probably from Sicily (ITALY). ITALY: Puglia: Bari district, Valenzano, 124 m a.s.l. (N41°01'23" E16°54'19"), olive grove, 1 ♂, 4.VIII.2010, P. Loverre leg.; 62 ♀♀, 42 ♂♂, 24.VIII.2010, P. Loverre leg.; 2 ♀♀, 7.IX.2010, P. Loverre leg.; 1 ♂, 18.I.2011,
Fig. 4a–l: a–f. Zodarion valentii Bosmans, Loverre & Addante spec. nov. a. Male palp of holotype, ventral view; b. Idem, retrolateral view; c. Male palp, ventral view (Col. Simon, probably from Sicily); d. Idem, retrolateral view; e. Epigyne of paratype, ventral view; f. Idem, vulva. g–i. Zodarion affine (Simon, 1870) (Spain); g. Male palp, ventral view; h. Idem, retrolateral view; i. Epigyne, ventral view. j–l. Zodarion algiricum (Lucas, 1846) (Algeria); j. Male palp, ventral view; k. Idem, retrolateral view; l. Epigyne, ventral view
Zodariidae from Mediterranean Europe

P. Loverre leg.; 2 ♀♀, 17.II.2011, P. Loverre leg.; 8 ♀♀, 14 ♂♂, 24.III.2011, P. Loverre leg.; 4 ♀♀, 12 ♂♂, 7.IV.2011, P. Loverre leg.; 3 ♀♀, 2 ♂♂, 7.IV.2011, P. Loverre leg. (CSP); 7 ♀♀, 6 ♂♂, 20.IV.2011, P. Loverre leg.; 2 ♀♀, 1 ♂, 24.IV.2011, P. Loverre leg.; 7 ♀♀, 9 ♂♂, 11.V.2011, P. Loverre leg.; 5 ♀♀, 3 ♂♂, 27.V.2011, P. Loverre leg.; 6 ♀♀, 2 ♂♂, 10.VI.2011, P. Loverre leg. Bari district, Conversano, Gravina di Monignore, 117 m a.s.l. (N41°00'31" E17°07'12"), Mediterranean scrub, 1 ♂, 22.II.2011, R. Addante leg.; 1 ♂, 5.V.2011, R. Addante leg.; 5 ♀♀, 2 ♂♂, 30.V.2011, R. Addante leg.; 2 ♂♂, 1.VIII.2011, R. Addante leg.; 3 ♀♀, 7.IX.2011, R. Addante leg. Bari district, Conversano, Sassano Lake, 194 m a.s.l. (N40°58'07" E17°05'50"), 1 ♂, 5.V.2011, R. Addante leg.; 1 ♂, 30.V.2011, R. Addante leg.; 1 ♂, 4.VII.2011, R. Addante leg. All the material was collected by pitfall traps and deposited in DiSSPA.

Comments. Studying the Simon collection in the MNHN, the first author examined a tube labelled ‘Zodarion algiricum Alger AR1540’. It contained material of two closely related species. The first species (three males) is identical to the abundant material of Z. algiricum collected by the first author near Alger (see: Comparative material examined). In the same tube, 3 other males are identical to the material collected by P. Loverre in Puglia. It is well known that Simon used to mix material from different localities in the same tube, so it can be assumed that these males are from Sicily, mentioned as a locality of Z. algiricum by Simon (1870). Other localities mentioned for Z. algiricum (Morocco, South Spain) must also be doubted.

The male palp and epigyne of Z. algiricum are quite different from the palp and epigyne of Z. valentii, as can be seen in Fig. 4j–l. A detailed redescription of Z. algiricum is in preparation. All existing figures of this species are erroneous.

Etymology. The specific name derives from the Latin name Valenti, referring to the village of Valenzano, in which the type specimens were collected.

Diagnosis. Zodarion valentii spec. nov. is closely related to Z. affine (Simon, 1870) from the south of Spain. Males differ by the longer tibial apophysis and the longer, oblique lateral groove in Z. affine (Fig. 4c–d versus 4g–h). Moreover, the length of the whole tibia, including tibial apophysis, is only half the length of cymbium, whereas in Z. affine it reaches about three quarters. Females differ by the sausage-shaped postero-median depression in the epigyne of Z. valentii (Fig. 4e), nearly separated into two depressions in Z. affine (Fig. 4i). The species is quite different from Z. algiricum (Fig. 4j–l).

Description. Measurements (n = 6): Male: Total length 2.2–3.0; prosoma 1.02–1.30 long 0.95–1.12 wide.

Color: Prosoma yellowish clypeus and two oblique stripes converging towards the fovea grey; chelicerae sternum and legs pale yellowish; opisthosoma dorsally dark grey posteriorly; chelicerae sternum and legs dark grey posteriorly; venter also whitish.

Eyes: AM = 1 (0.1); AL = 0.9; PM = 0.45; PL = 0.8; a = 0.8; b = 0.55; c = 235; d = 0.7; MOQ: AW = 0.80 PW; L = 0.95 PW.

Pulc (Figs 4a–d, 5b–d): Tibia twice as long as wide with large apophysis separated from the basal part by an oblique groove; distal part with anterior and posterior knob in ventral view recurved in antero-lateral direction; median apophysis reversed U-shaped distal part more slender than basal part; embolus straight terminally rounded at retrolateral side accompanied by a shorter tooth.

Epigyne (Figs 4e, 5c): With large, sausage-shaped postero-median depression.

Phenology. Adults were collected all through the year, including winter. Their number peaked in July.

Distribution. Italy (Puglia and Sicily).

New records of European Zodarion species

Zodarion algarvense Bosmans, 1994
Zodarion algarvense Bosmans, 1994: 120, figs 10–12, 87–88 (descr. ♂♀).

Material examined. PORTUGAL: Setúbal: Alcochete NW, 37 ♂♂, 4 ♀♀, pitfalls in salt marsh, 14.–22.IV.2013, R. Bosmans leg. (CB).

Distribution. Until now only known from one locality in the Algarve in Portugal (Bosmans 1994), and here cited much more to the north from Setúbal.

Zodarion arachnaio Bosmans, 2009
Zodarion arachnaio Bosmans, 2009: 266, figs 128–129, 158–159 (descr. ♂♀).

Fig. 5a–e: Zodarion valentii Bosmans, Loverre & Addante spec. nov. a. Male holotype, dorsal view; b. Male palp, lateral view; c. Idem, ventral view; d. Idem, dorsal view; e. Epigyne, ventral view.
Material examined. GREECE: Peloponnisos: Argolis: Achladokambos (N37°32'44'' E22°31'10''), 1000 m, 1 ♂, under stones, 26.IV.2016 (CRB).

Distribution. Until now, only known from Argolida in the Peloponnosis. A second locality in the same region is presented.

Zodarion aurorae Weiss, 1982 (Fig. 6a–b)
Zodarion aurorae Weiss, 1982: 77, figs 1–8, figs 10–12 (descr. ♂, ♀); Bosmans 2009: 229, figs 35–36, 62–63 (descr. ♂, ♀).

Material examined. ROMANIA: Tulcea: Letea, 1 ♂, 28.V.1998, P.J. van Helsdingen leg. (NBCL).

Description of male palp. The type material of this species was not available, so it could not be redescribed by Bosmans (2009). Furthermore, the male palp figured by Weiss (2002) was expanded, which does not facilitate a correct identification. A recently collected male allows us to present new figures of the male palp. The tibial apophysis is elongated, more than twice as long as wide, gradually narrowing with median bend; tegulum bulging, with rounded boss; median apophysis with wide base, distally with terminal and prolateral tooth (Fig. 6a).

Distribution. Until now the species was only known from Galati in the Moldovia province in Romania. It is here also cited in Letea in the Tulcea province in the Danube delta.

Zodarion beroni Komnenov & Chatzaki, 2016
Zodarion beroni Komnenov & Chatzaki, in Komnenov et al., 2016: 41, figs 97–111 (descr. ♂, ♀).

Material examined. GREECE: Makedonia Chalkidiki, Sithonia, Elia Nikitís, 1 ♂, pitfalls in Pinus forest with maquis, 10.V.2017, R. Bosmans leg. (CRB).

Zodarion aurorae Weiss, 1982: 77, figs 1–8, figs 10–12 (descr. ♂, ♀); Bosmans 2009: 229, figs 35–36, 62–63 (descr. ♂, ♀).

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Zodarion aurorae Weiss, 1982: 77, figs 1–8, figs 10–12 (descr. ♂, ♀); Bosmans 2009: 229, figs 35–36, 62–63 (descr. ♂, ♀).

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Zodarion beroni Komnenov & Chatzaki, 2016
Zodarion beroni Komnenov & Chatzaki, in Komnenov et al., 2016: 41, figs 97–111 (descr. ♂, ♀).

Material examined. GREECE: Makedonia Chalkidiki, Sithonia, Elia Nikitís, 1 ♂, pitfalls in Pinus forest with maquis, 10.V.2017, R. Bosmans leg. (CRB).
Distribution. Previously only known from the Coimbra district, here first cited from mountainous areas in the north east of Portugal.

Zodarion diatretum Denis, 1935
Zodarion diatretum, Denis 1935a: 66, figs 11–12, 16 (descr. $\delta$, non $\varphi$ = Z. pseudoelegans).
Zodarion diatretum; Bosmans 1997: 127, figs 36–38, 101–102, 137 (descr. $\delta$, $\varphi$).

Material examined. SPAIN: Murcia: Alhama de Murcia W, Sierra de la Espuña, 3 $\delta\delta$, 1 subadult $\delta$, at night in open Pinus forest, 4.IV.2010, S. Huber & A. Schönhofer leg. (SMF); between Mazarrón and La Pinilla; 3 $\delta\delta$, 3 $\varphi\varphi$, 30.X.1999, J. van Keer leg. (CRB).

Distribution. This species occurs in Almería and Murcia and there are some doubtful citations from Alicante and Tarragona (Bosmans 1997). Two new localities in Murcia are added here.

Zodarion elegans (Simon, 1873)

Enyo elegans Simon, 1873: 56 (descr. $\delta$, $\varphi$).
Zodarion elegans; Bosmans 1997: 267, figs 1–3, 77–78 (descr. $\delta$, $\varphi$).

Material examined. ITALY: Abruzzo: Teramo: Roseto degli Abruzzi, Parco della Tenuta Mazzarosa 11 $\delta\delta$, 25 $\varphi\varphi$, 4.VII.–30.VII.2007, pitfalls, R. Fabbri leg. (MCSNB); Puglia: Foggia: Mattinata Lido, 1 $\delta$, stones in camping site, 9.VI.2002, R. Bosmans leg. (CRB). Toscana: Livorno: Isola di Pianosa, 1 $\delta$, 21.IX.1955 (SMF), 3 $\delta\delta$, 7 $\varphi\varphi$, 13.VI.1966, P. Tongiorgi leg. (MCSNB). Sardegna: Nuoro: Siniscola, Santa Lucia, 1 $\delta$, pitfalls in Pinus forest, 19.–26.IV.2003, F. Magnati, P. Pantini leg. (MCSNB); Oristano: Cabras W, Punta är Arutas, 1 $\delta$, in Quercus litter, 14.IV.2014 (CRB). SPAIN: Balearic Islands: Menorca: Es Castell, Cala San Esteban, 2 $\delta\delta$, 1 subadult $\delta$, 30.X.1970, D. J. Clarke leg. (BMNH).

Distribution. NE Spain, SE France, Corsica, Italy, Croatia and Tunisia. Firstly recorded here on the Balearic Islands from Menorca.

Zodarion emarginatum (Simon, 1873)

Enyo emarginata Simon, 1873: 61 (descr. $\delta$, $\varphi$).
Zodarion emarginatum; Bosmans 1997: 276, figs 20–21 (descr. $\delta$); Bosmans 2009: 221 (descr. $\delta$).

Material examined. GREECE: Peloponissos: Achaia: Kalogria, 2 $\delta\delta$, pitfalls in closed dunes, III.2006, Anastasiou leg. (SMF); Oros Panachaiko, 3 $\delta\delta$, 7 $\varphi\varphi$, 13.VI.2006, P. Tongiorgi leg. (MCSNB). Sardinia: Nuoro: Siniscola, Santa Lucia, 1 $\delta$, pitfalls in Pinus forest, 19.–26.IV.2003, F. Magnati, P. Pantini leg. (MCSNB); Oristano: Cabras W, Punta är Arutas, 1 $\delta$, in Quercus litter, 14.IV.2014 (CRB). SPAIN: Balearic Islands: Menorca: Es Castell, Cala San Esteban, 2 $\delta\delta$, 1 subadult $\delta$, 30.X.1970, D. J. Clarke leg. (BMNH).

Distribution. The south of France, Corsica, Malta and Greece. This is the second record in Sardinia and Italy. 

Zodarion evvoia Bosmans, 2009
Zodarion evvoia Bosmans 2009: 267, figs 130–131 (descr. $\delta$).

Material examined. GREECE: Thessalia: Magnisia: Portaria, 2 $\delta\delta$, pitfalls in phrygana, 24.IV.–28.VI.2014, Kaltzas leg. (CRB).

Distribution. This species was only known from the island Evvoia and is cited here also in Thessalia. It is the second locality for the species.

Zodarion frenatum Simon, 1884
Zodarion frenatum Simon 1884: 336 (descr. $\delta$).
Zodarion frenatum; Bosmans 1997: 271, figs 12–13, 85–86 (descr. $\delta$, $\varphi$); Bosmans 2009: 286, figs 192–193, 198–199 (descr. $\delta$, $\varphi$).

Material examined. GREECE: Attiki: Methana, Kaimeni Chora NE (N37°36’38” E23°20’23”), 350 m, 1 $\varphi$, grassland and hedges, 22.IV.2016 (CRB). Macedonia: Kozani: 6.5 km S. Siatista, 1 $\delta$, pitfalls, 2.VII.2014, Anastasiou leg. (NHMC). Peloponissos: Arkadia: Krio Brissi SE, Profitis Ilia chapel (N36°35’51” E22°38’52”), 480 m 1 $\varphi$, stones in small Quercus forest, 24.IV.2016 (CRB). Sterea Elada: Aitolokarmania: Styilia, 2 $\varphi\varphi$, 28.III.2006, A. Schönhofer leg. (SMF). Thraki: Evros: Kelempek Ms, near Neda, 1 $\varphi$, 7.V.1968, O. van Helsen leg. (SMF). ITALY: Campania: Salerno: Contursi Terme, fiume sele, 100 m, 1 $\delta$, 2.VIII.2000, M. Valle leg. (MCSNB).

Distribution. Italy, Bulgaria, Greece, Albania, Macedonia and Turkey. A common species all over Greece.

Zodarion germanicum (C. L. Koch, 1837)
Lucia germanica C. L. Koch, 1837: 20 (descr. $\delta$, $\varphi$).
Zodarion germanicum; Bosmans, 2009: 273, figs 16–17, 87–88, map 2.

Material examined. HUNGARY: Tolna: Simontornyà, 1 $\delta$, C. Roewer leg. (SMF).

Distribution. Central Europe.

Zodarion gracilitibiale Denis, 1933
Zodarion gracilitibiale Denis, 1933: 270, figs 107 (descr. $\delta$); Bosmans 1997: 270, figs 4–5 (descr. $\delta$); Dierkens 2011: 86, figs 1–2 (descr. $\varphi$).

Material examined. ITALY: Puglia: Bari, Valenzano, 115 m, 4 $\delta\delta$, 4 $\varphi\varphi$, pitfall traps in olive grove, 24.VIII.2010, R. Adlange leg. (MCSNB, CRB).

Distribution. The male was described from the Var Departement in France (Denis 1933), and redescribed by Bosmans (1997). The female was first discovered by Dierkens (2011) from the nearby Bouches du Rhone department. It is here cited for the first time in Puglia, Italy.

Zodarion graecum (C. L. Koch, 1843)
Enyo graeca C. L. Koch, 1843: 811 (descr. $\delta$, $\varphi$).
Zodarion graecum; Bosmans, 2009: 261, figs 124–125, 154–155 (descr. $\delta$, $\varphi$).

Material examined. CROATIA: Splitko-Dalmatinska: Blakovo, Best, 1 $\varphi$, stones in grassland, 5.IX.2009, A. Schönhofer leg. (SMF). GREECE: Attiki: Oros Parnitha, 20 $\delta\delta$, 14 $\varphi\varphi$, pitfalls, 3.V.–6.IX.2005, Anastasiou leg. (NHMC). Macedonia: Grevena: Anoixi, 10 $\delta\delta$, 1 $\varphi\varphi$, pitfalls, 17.VI.–8.VIII.2014, Anastasiou leg. (NHMC). Kozani: Siatista, 6.5 km SE, 1 $\varphi\varphi$, pitfalls, 29.VI.–4.VII.2014, Anastasiou leg. (NHMC). Thesaloniki: Lake Koronia, 2 $\varphi\varphi$, pitfalls, 28.VI.–26.VII.2012, Navarrete leg. (NHMC). Peloponissos: Achaia: Kalogria, 12 $\delta\delta$, 12 $\varphi\varphi$, pitfalls, V.–VIII.2006, Anastasiou leg. (NHMC); Oros Erimanthis, 1600m, 2 $\delta\delta$, 2 $\varphi\varphi$, pitfalls, without date, Anastasiou leg. (NHMC); Oros Panachaiko, 3 $\delta\delta$, 1 $\varphi\varphi$, pitfalls, 7.VI.–4.VIII.2008, Anastasiou leg. (NHMC). Argolis: Epidauros ruins, 330 m, 1 $\delta$, stones in Pinus forest 21.IV.2016 (CRB). Arkadia: Krio Brissi, SE Profitis Ilia chapel, 480 m, 1 $\delta$, stones in small Quercus forest, 24.IV.2016 (CRB); Me-
galopoli, 1 ♂, pitfalls, 28.VI.–12.VII.2009, Anastasiou leg. (NHMC); Oros Chelmos, 5 ♂♂, pitfalls, 7.–20.VI.2008, Anastasiou leg. (NHMC); Oros Mainalo, 1600m, 2 ♂♂, 1 ♂, pitfalls, 3.VII.–4.VIII.1996, Anastasiou leg. (NHMC).

Ielia: Lapithas, 1 ♂, pitfalls, 1.–15.VI.2009, Anastasiou leg. (NHMC). Lakonía: Oros Taigetos, 6 ♀♀, pitfalls, 6.VII.1997, Anastasiou leg. (NHMC). Sterea Elada: Aitolo-Akarnania: Acheoloos, 1 ♂, pitfalls, 9.IV.–5.VI.2014, Anastasiou leg. (NHMC). Thessalia: Magnisia: Agios Onoufrios, 16 ♂♂, 2 ♀♀, pitfalls, 23.IV.–28.VI.2014, Anastasiou leg. (NHMC); Kouri, 7 ♂♂, 2 ♀♀, pitfalls, 28.VI.–2.VII.2009, Anastasiou leg. (NHMC); Mikrothives, 5 ♂♂, 5 ♀♀, pitfalls, 23.IV.–29.VI.2014, Anastasiou leg. (NHMC).

**Distribution.** SE Europe, Lebanon and Israel. One of the commonest *Zodarion* species in Greece.

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**Zodarion granulatum** Kulczyński, 1908

*Zodarion granulatum* Kulczyński 1908: 59 pl. 2, figs 4, 10 (descr. δ); Bosmans 2009: 275, fgs 170–171, 178–179 (descr. δ, Ψ).

**Material examined.** GREECE: Attiki: Methana, Kaimeni Chora (N37°37′2″ E23°19′35″), 200 m litter and stones in *Pinus* forest, 22.IV.2016 (CRB). Crete: Chania: Lefka Ori, 1 ♂, 8.VI.1991 (NHMC). Lasithi: Kefalovrissi spring, Kalamafka, 1 ♀, sieving litter, 30.III.2007, A. Schönhofer leg. (SMF). Peloponnisos: Arkadia: Kriovrissi SE, Profitis Ilias chapel (N36°35′51″ E22°58′52″), 480 m, 1 ♂, stones in small *Quercus* forest, 24.IV.2016 (CRB).

**Distribution.** Greece, Turkey, Cyprus, Lebanon and Israel. One of the species in Greece.

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**Zodarion hamatum** Wiehle, 1964

*Zodarion hamatum* Wiehle 1964: 641 (descr. δ); Wunderlich 1980: 116 (descr. Ψ); Bosmans 1997: 283, fgs 53–56, 111–112 (descr. δ, Ψ).

**Material examined.** ITALY: Friuli Venezia Giulia: Udine: Drenchia, Paciuch, 370 m, 1 ♂, 25.V.1996, P. Pantini, M. Vallegle leg. (MCSNB). Toscana: Firenze: Near Londa, 1 ♂, river meadow, 11.IV.2006, A. Schönhofer leg. (SMF). Veneto: Padova: Teolo, San Rocco, 140 m, 2 ♀♀, pitfalls in *Fagus* forest, 27.III.–12.VI.2003 (MCSNB).

**Distribution.** N Italy, Slovenia, Croatia.

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**Zodarion baueri Brignoli, 1984**

*Zodarion baueri* Brignoli, 1984: 312, fgs 40 (descr. ♀); Bosmans 2009: 251, fgs 92–95, 144–145 (descr. δ, Ψ).

**Material examined.** GREECE: Attiki: Athens, Akropoli, 2 ♀♀, VI.1926, Roewer leg. (SMF). Macedonia: Florina: Prespes, 9 km SW Agios Georgenos, 3 ♂♂, pitfalls in oak forest, 24.VI.–29.VI.2014, Nentwig coll. and leg. (CRB, NHMC). Grevena: Anoixi, 1 ♂, pitfalls in oak forest, 24.VI.–8.VIII.2014, Kaltsas & Mettouris leg. (CRB). Thessalonike: Lake Koronia, 1 ♂, pitfalls in shrub pasture, 28.VI.–23.VII.2012, Navarrete leg. (NHMC).

**Distribution.** Continental Greece, Macedonia and recently also in Bulgaria (Naumova et al. 2017). New Greek records in Attiki and Macedonia are added.

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**Zodarion jozefienae** Bosmans, 1994: 120, fgs 7–9 (descr. δ not Ψ, = *Z. styliferum*); Pekár, Cardoso & Meierrose, 2003: 391, fgs 8, 13–14, 23, 31 (descr. δ, Ψ).

**Material examined.** GREECE: Macedonia: Florina: Prespes, 9 km SW Agios Georgenos, 3 ♂♂, pitfalls in oak forest, 24.VI.–29.VI.2014, Nentwig coll. and leg. (CRB, NHMC). Grevena: Anoixi, 1 ♂, pitfalls in oak forest, 7.VII.–8.VIII.2014, Kaltsas & Mettouris leg. (CRB). Thessalonike: Lake Koronia, 1 ♂, pitfalls in shrub pasture, 28.VI.–23.VII.2012, Navarrete leg. (NHMC).

**Material examined.** SPAIN: 1 ♂, labelled ‘Spanien, coll. Franz, sp. 961’, and 1 ♀, 1 subadult labelled ‘Spanien, coll. Franz, sp. 658’, without further information (SMF). Cádiz: Medina Sidonia NW, 160 m, 1 ♂, stones in grassland, 3.IV.1997, R. Bosmans leg. (CRB). Málaga: El Churro, 1 ♂, stones along rivulet, 10.IV.1999, R. Bosmans leg. (CRB); Periana, Cortijo Blanco, 1 ♀, under stones in rough grassland, 21.X.1993 (CAR-S); Valle de Abdalajis, pitfalls in degraded *Quercus suber* forest, 1 ♂, 15.IV.1999, R. Bosmans leg. (CRB).

**Comments.** The first author examined two tubes present in the SMF with an unidentified male and female from an unknown locality in Spain (‘sp. 961, male, sp. 658, female’). The male palpal bulb is identical to the one of *Z. isabellinum*, but the tibia has a strange supplementary basal tooth on the aepiphysis (cfr. Fig. 6c–d, compared with Fig. 6e–f). Until further material is discovered, and also because the exact locality is unknown, this is considered an abnormality in the male palp.

**Distribution.** In Spain known from the southern provinces Alicante, Cádiz, Granada and Málaga. The new records are within the known distribution area of the species.

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**Zodarion italicum** (Canestrini, 1868)

*Enyo italicum* Canestrini, 1868: 196 (descr. ♀).

**Zodarion italicum** Bosmans 1994: 284, fgs 57–60, 113–114, map 11 (descr. δ, Ψ).

**Material examined.** BELGIUM: Oost-Vlaanderen: Gent Dampoort, 16 ♂♂, 8 ♀♀, pitfalls along railroad slope, 19.IV.–1.VIII.2006, R. Bosmans leg. (CRB). GERMANY: Baden-Württemberg: Kaisersruhl, 1 ♂, sieving litter in *Fagus* forest, 7.X.2005, J. Martens & A. Schönhofer leg. (SMF). ITALY: Emilia Romagna: Ferrara: Mesola, Bosco della Fasanara, 2 ♂♂, pitfalls in *Quercus* forest, 23.V.–16.VI.2013, R. Fabbri leg. (MCSNB); Mesola Bosco della Mesola, Parco Duchessa 2 ♂♂, pitfalls in *Quercus* forest, 23.V.–16.VI.2013, R. Fabbri leg. (MCSNB). Parma: Bedonia, Passo di Montevacà, 800 m, 2 ♂♂, pitfalls, IX.1991.–V.1992, G. Buttarelli, R. Cerbino, P. Pantini, M. Vallegle leg. (MCSNB); Ravenna: Mezzano vasche dell’ex zuccherificio, 28 ♀♀, 10 ♀♀, pitfalls, 27.V.–3.VII.2006. R. Fabbri, Pezzi leg. (MCSNB). Lombardia: Brescia: Erbusco, Montorfano N side, 300 m, 1 ♂, pitfalls, 2.–29. IV.2010, W. Zucchelli leg. (MCSNB); Colognate, Montorfano 1 ♂, 5.V.2012, P. Pantini, L. Vergani leg. (MCSNB).

**Distribution.** France, Great Britain, Belgium, Germany, Switzerland, Italy, Slovenia and Croatia.

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**Zodarion jezofeniae** Bosmans, 1994

*Zodarion jezofeniae* Bosmans, 1994: 120, fgs 7–9 (descr. δ not Ψ, = *Z. styliferum*); Pekár, Cardoso & Meierrose, 2003: 391, fgs 8, 13–14, 23, 31 (descr. δ, Ψ).

**Material examined.** SPAIN: Cáceres: Torrejón el Rubio, 1 ♂, 2 ♀♀, pitfalls, 7.VII.1996, U. Stengele leg. (CRB); Talaván, Finca el Baldio, 11 ♂♂, 19 ♀♀, pitfalls, 7.VII.1996, U. Stengele leg. (CRB).

**Distribution.** Described from Faro in Portugal and Huelva in Spain (Bosmans 1994), later cited by Pekár et al. (2003) from Beja and Évora in Portugal. From Spain further cited from Toledo (Morano 2001), Ciudad Real (Barriga et al. 2006) and Málaga (Lecigne 2012).
Zodariidae from Mediterranean Europe

Zodarion konradi Bosmans, 2009

Zodarion konradi Bosmans, 2009: 268, figs 132–133, 160–161 (descr. δ, Ψ).

Material examined. GREECE: Attiki: Oros Parnitha, 13 δ, 2 Ψ, pitfalls, 3.V.–10.VIII.2005, Anastasiou leg. (NHMC). Peloponnisos: Arkadia: Megalopoli, 32 δ, 10 Ψ, pitfalls, 1.VI.–12.VII.2009, Anastasiou leg. (NHMC). Ilia: Lapithas, 1 Ψ, pitfalls, 28.VI.–12.VII.2009, Anastasiou leg. (NHMC). Korinthia: Sofiko NW, 420 m (N37°48′30″ E23°1′47″), in litter near church yard, 21.IV.2016 (CRB). Messinia: Oros Taigetos, 2 δ, 6 Ψ, pitfalls, 1.VI.–28.VI.2005, Anastasiou leg. (NHMC).

Distribution. Only known from Greece.

Zodarion macabado Denis, 1939

Zodarion macabado Denis, 1939: 90, figs 1–4 (descr. δ, Ψ); Bosmans 1994: 135, figs 71–73, 125–126 (descr. δ, Ψ).

Material examined. PORTUGAL: Lisbon: Abelheira, Mosquiera da Cima, 1 δ, 1 Ψ, 17.V.2001, G. Télfer leg. (CRB). Viana do Castelo: Britelo NW, 160 m, 1 δ, 1 Ψ, litter at edge of Quercus forest, 4.V.2017, R. Bosmans leg. (CRB). SPAIN: Pontevedra: Puerto de Fuentefria, 1 Ψ, litter in Pinus forest, 13.VI.1994, R. Bosmans leg. (CRB).

Distribution. In Portugal, this species was known from the districts Braga, Porto, Viana do Castelo and the Azores, in Spain from Alicante, Madrid, Santander and Vila Real. The species is recorded for the first time in the districts Lisbon in Portugal and Pontevedra in Spain.

Zodarion maculatum (Simon, 1870)

Enyo maculata Simon, 1870: 146 (descr. Ψ).

Zodarion maculatum; Denis 1935b: 67, figs 79–80 (descr. δ, Ψ); Bosmans 1994: 127, figs 39–41, 103–104 (descr. δ, Ψ).

Material examined. PORTUGAL: Faro: Salema, Boca do Rio, 1 δ, 7 Ψ, stones in ruins, 14.II.2006, R. Bosmans leg. (CRB); Burgau, 1 δ, stones bordering fields, 15.II.2006, R. Bosmans leg. (CB). SPAIN: Alicante: Crevilente, 2 δ, stones in wasteland, 8.IV.1998, R. Bosmans leg. (CRB). Balearic Islands: Ibiza: Sant Carles de Peralta E., Cala Boix, 15 m, 1 δ, 1 Ψ, sieving litter in Pinus forest, 15.IV.2018, R. Bosmans leg. (CRB).

Distribution. In Portugal known from Faro, Évora, Lisbon and Setúbal (Bosmans 1994; Pekár et al. 2011), in Spain from Alicante, Almeria, Cádiz and Málaga (Bosmans 1994) and one record more in the north in Zaragoza (Melic 2000). The species is new to Ibiza and the Balearic Islands, the other new records all fall within its known distribution area.

Zodarion merlijni Bosmans, 1994

Zodarion merlijni Bosmans, 1994: 127, figs 33–35 (descr. Ψ); Pekár et al. 2003, figs 24, 32 (descr. δ).

Material examined. SPAIN: Almeria: Cabo de Gata, 4 δ, 4 Ψ, litter in tamarisk marsh, 9.IV.1998, R. Bosmans leg. (CRB). Balearic Islands: Ibiza: Ses Salines, 1 δ, pitfalls in salt marsh, 15.IV.2018, R. Bosmans leg. (CRB).

Distribution. This species is only known from Spain (Almeria, Málaga, Murcia and Mallorca). The species is new for Ibiza and a second locality in Almeria is given.

Zodarion modestum (Simon, 1870)

Enyo modesta Simon, 1870: 145 (descr. δ).

Zodarion modestum; Denis 1933: 555 (descr. δ, Ψ); Bosmans 1994: 136, figs 79–80, 131–132 (descr. δ, Ψ).

Material examined. SPAIN: Cádiz: San Roque Torre Guadiano, 1 δ, 1 Ψ, on slopes to the coast, 4.IV.1997, R. Bosmans leg. (CRB). Granada: Atelbéitar near Pitres, 1 δ, under stones in garden, 11.IX.2010 (CAR-S); between Atelbéitar and Buzquistar, 1 δ, under stones along path, 11.IX.2010 (CAR-S); Bubión, 1 δ, K. De Smet leg. (CRB). Málaga: Valle de Abdalajis, 425 m, 24.VI.2014, 10 Ψ, pitfalls in degraded Quercus suber forest, 10.IV.1997, R. Bosmans leg. (CRB).

Distribution. The species is currently known from the Spanish provinces Almería, Cádiz, Málaga, Murcia and Sevilla. New records are given in Cádiz, Granada and Málaga.

Zodarion morosum Denis, 1935

Zodarion morosum; Denis 1935b: 78, figs 22–24 (descr. δ, Ψ); Bosmans 2003: 236, figs 20–22, 54–55 (descr. δ, Ψ).

Material examined. GREECE: Ipeiros: Ioannina: hill of Perama cave, 1 δ, 12.VIII.2009, S. Huber & A. Schönhofer leg. (SMF). Makedonia: Chalkidi: Sithonia, Elia Nikitis, 1 δ, 12.VI.–6.VIII.2014, pitfalls, Anastasiou leg. (NHMC). Florina: Agios Germanos, 1 δ, 1 Ψ, pitfalls, 24.VI.–29.VI.2014, Anastasiou leg. (NHMC); Kozani: Aiani 2.5 km NW, pitfalls, 2.VII.2014, Anastasiou leg. (NHMC); Xanthi: Kastoria 6.5 km SE, 1 δ, pitfalls, 29.VI.–4.VII.2014, Anastasiou leg. (NHMC). Thessalia: Larisa: Tempe Valley, 1 δ, Platanus forest, 21.III.1963, Kinzelbach leg. (SMF). Thraki: Evros: near Maronia, 1 δ, under stones, 18.VIII.2009, S. Huber & A. Schönhofer leg. (SMF); Dionoi, 1 δ, dry stream valley, 18.VIII.2009, S. Huber & A. Schönhofer leg. (SMF).

Distribution. Bulgaria, Greece, Albania, Macedonia, Turkey and Ukraine.

Zodarion murphyorum Bosmans, 1994

Zodarion murphyorum; Bosmans 1994: 129, figs 42–44, 105–106 (descr. δ, Ψ).

Material examined. SPAIN: Almeria: El Pozo de los Frailes (N36°47′17″ W02°06′48″), 70 m, night catch, 19.X.2017, S. Huber leg. (CRB).

Distribution. Until now only known from the Spanish province Almeria.

Zodarion musarum Brignoli, 1984

Zodarion musarum Brignoli, 1984: 315, figs 48–49 (descr. Ψ); Bosmans 2009: 230, figs 40–43, 66–67 (descr. δ, Ψ).

Material examined. GREECE: Attiki: Oros Parnitha, 78 δ, 41 Ψ, pitfalls, 3.V.–24.VIII.2005, Anastasiou leg. (NHMC). Makedonia: Grevena: Anoixi, 10 δ, 12 Ψ, pitfalls in oak forest, 17.VI.–8.VIII.2014, Anastasiou leg. (NHMC); Zakas 3.2 km E., 1 δ, pitfalls, 1.VI.–15.VII.2014, Anastasiou leg.
(NHMC). Peloponnisos: Achaia: Oros Chelmos, 27 ˚δ, 7 ˚φ, 10.VII.–2.VII.1998, 70 ˚φ, 4 ˚φ, 7.VI.–4.VII.2008, pitfalls, Anastasiou leg. (NHMC). Oros Panachaiiko, 11 ˚δ, 4 ˚φ, pitfalls, 7.VI.–4.VIII.2008, Anastasiou leg. (NHMC). Arkadia: Mainalo E., 93 ˚δ, 11 ˚φ, pitfalls, 6.VI.–1.VIII.2008, Anastasiou leg. (NHMC). Kardia: Mainalo W., 4 ˚δ, 4 ˚φ, pitfalls, 6.VI.–19. VII.2008, Anastasiou leg. (NHMC); Megalopoli, 299 ˚δ, 55 ˚φ, pitfalls, 1.VI.–15.VI.2009, Anastasiou leg. (NHMC). Ilia: Lapithas, 37 ˚δ, 4 ˚φ, pitfalls, 15.VI.–28.VII.2009, Anastasiou leg. (NHMC); Messinia: Taigetos, 55 ˚δ, 18 ˚φ, pitfalls, 1.VI.–22.VII.2009, Anastasiou leg. (NHMC). Tes-salia: Magnisia: Afetia, 1 ˚δ, 1 ˚φ, pitfalls, 24.IV.–29.VI.2014, Anastasiou leg. (NHMC); Portaria, 1 ˚φ, pitfalls, 24.VI.–28. VI.2014, Anastasiou leg. (NHMC).

Distribution. Greece. The species is very abundant in the highlands of the Peloponnisos.

Zodarion noordami Bosmans, 2009

Zodarion noordami Bosmans, 2009: 256, figs 104–107, 111, 150–151 (descr., ˚φ).

Material examined. GREECE: Peloponnisos: Achaia: Kalogria, 1 ˚δ, pitfalls in oak forest, V.2006, 1 ˚δ, pitfalls in pine forest, VI.2006, Anastasiou leg. (NHMC & CRB).

Distribution. Until now, this species was only known from its type locality in Fokida, Sterea Ellada in Greece (Bosmans 2009). The species appears to occur also in the Peloponnisos.

Zodarion olibridense Wunderlich, 1973

Zodarion olibridense Wunderlich, 1973, figs 11–13 (descr. ˚δ); Lazaro 2007: 133 (descr. ˚δ); Bosmans 2009: 256, figs 108–111, 150–151 (descr. ˚φ).

Material examined. GREECE: Peloponnisos: Achaia: Oros Erimonthis, 1600 m, 31 ˚δ, pitfalls, 11.VII.–11.X. 1997, Anastasiou leg. (CRB, NHMC).

Distribution. This species is known from Bulgaria, Croatia, Macedonia, the north of Greece (Bosmans 2009) and the Czech Republic (Krejčí et al. 2017). The new locality in the Peloponnisos expands its distribution in Greece far to the south.

Zodarion pseudolegans Denis, 1933

Zodarion marginiceps pseudolegans Denis, 1933: 555 (descr. ˚φ).

Zodarion pseudolegans; Bosmans 1994: 124, figs 22–26, 95–96 (elevated to species rank).

Material examined. SPAIN: Barcelona: El Bruc, 350 m, 1 ˚δ, stones in maquis, 9.IV.1997, R. Bosmans leg. (CRB); Sant Pere de Riudebitlles, 1 ˚δ, stones bordering fields, 3.VIII.2000, R. Bosmans leg. (CRB); Sant Quint de Mediona, 330 m, 1 ˚δ, stones bordering fields, 4.VIII.2000, R. Bosmans leg. (CRB). Castellon: L’Alcra N., 30.V.2010, 2 ˚φ, stones at wall, S. Huber & A. Schönhofer leg. (SMF). Girona: La Jonquera, 110 m, stones in maquis, 1 ˚φ, 9.IV.1997, R. Bosmans leg. (CRB).

Distribution. Known from Barcelona, Girona, Huesca and Tarragona in Spain and the neighbouring Pyrénées Orientales in France. New localities in Barcelona and Girona are added here.

Zodarion pusio Simon, 1914

Zodarion pusio Simon, 1914: 229, 235 (descr. ˚δ, non ˚φ); Bosmans 1997: 274, figs 18–19, 89–90 (descr. ˚φ).

Material examined. ITALY: Sardinia: Tottubella SW., 50 m, 5 ˚δ, 23 ˚φ, pitfalls in Cistus maquis, 12.–19.IV.2014, R. Bosmans leg. (CRB).

Distribution. Coastal areas of France, Italy, Croatia and Bosnia and Herzegovina.

Zodarion rubidum Simon, 1914

Zodarion rubidum Simon, 1914: 233 (descr. ˚δ, ˚φ);

Bosmans 1997: 277, figs 30–32, 95–96, 101–102 (descr. ˚φ).

Material examined. CZECH REPUBLIC: Znojmo: near Znojmo catacombs, 1 ˚δ, under stones, 26.VIII.2015 R. Bosmans leg. (CRB). ITALY: Lombardia: Bergamo: Sorisole, Gres, 1 ˚φ, 5.IX.1998, Maretti leg. (MCSNB). SPAIN: Girona: Collado d’Ares, 1 ˚φ, 2.VIII.2000, R. Bosmans leg. (CRB).

Distribution. Zodarion rubidum is one of the spider species that enlarged its distribution area considerably recently. Only in 1973 it was cited for the first time outside of France from Austria (Wunderlich 1973). In his revision of the genus, Bosmans (1997) gave further records in NE Spain, Italy, Belgium, Germany, Switzerland, Hungary, the Czech Republic and Slovakia. Since then, the species expanded its range to Danmark (Scharff et al. 2007), Poland (Rozwalka & Gosik 2006), Slovenia (Kuralt & Kostanjšek, 2016), South-East Ukraine (Ponomarev et al. 2016) and Southern European Russia (Ponomarev et al. 2017).

Zodarion segurense Bosmans, 1994

Zodarion segurense Bosmans, 1994: 118, figs 4–6, 83–84, 134 (descr. ˚δ, ˚φ).

Material examined. SPAIN: Málaga: between Coin and Mijas, 1 ˚δ, stones in small Pinus plantation, 10.IV.1998, R. Bosmans leg. (CRB).

Distribution. Known from the Spanish provinces Cádiz, Granada and Málaga.

Zodarion spinibarbar Wunderlich, 1973

Zodarion spinibarbar Wunderlich, 1973: 173, figs 4–10 (descr. ˚δ, ˚φ); Bosmans 2009: 244, figs 72–75, 136–137.

Material examined. GREECE: Crete: Chania, Meskla, 1 ˚φ, VI.1926, Roewer leg. (SMF); Kournas, 1 ˚φ, no further data (SMF); Machia, 1 ˚φ, stones in pine forest, 24.III.2007, A. Schönhofer leg. (SMF). Iraklio: Pirgos E., Mesara plain,
Zodariidae from Mediterranean Europe

2 ♂, stones in open pine forest, 1.IV.2007, A. Schönhofer leg. (SMF). Lasithi: Sitia 1 ♂, under stones, A. Schönhofer leg., 31.III.2007, 1 ♀, stones in grassland, 21.III.1958, H. Kahman leg. (SMF).

Distribution. An endemic species of Crete (Greece).

### Zodarion styliferum (Simon, 1870)

*Enyo stylifera* Simon, 1870: 104 (descr. ♂, ♀).

**Zodarion styliferum**; Bosmans 1994: 118, 1–3, 81–82 (descr. ♂, ♀).

**Material examined.** PORTUGAL: Évora: Monforte S., 260 m, 2 ♀♀, stones in *Eucalyptus* forest, 8.IV.1996 (CRB); Mourão, 180 m, 2 ♀♀, stones in castle, 24.V.2007 (CRB); Portalegre, 460 m, 1 ♂, stones in grassland in open *Quercus suber* forest, 9.IV.1996 (CRB); Villa Velha de Ródão, 130 m, 1 ♂, ♀, stones in olive grove, 9.IV.1996 (CRB). Faro: Salena, Boca de Rio, 40 m, 1 ♂, stones in ruins, 14.II.2006 (CRB); Ribeira do Almargem, 5 m, 1 ♂, stones at border of river, 19.II.2006 (CRB). Lisbon: Porto Alto, 15 m, 5 ♂♂, 2 ♀♀, pit-falls in *Quercus suber* forest, 14.–22.IV.2016 (CRB). Madeira: Lombada Velha, Ponta do Pargo, 4♂♂, 30.IV.2008, T. Grootaert leg. (CRB). Setúbal: Lagoa de Melides, 3 m, 1 ♂, litter in river mouth, 15.IV.2013 (CRB). SPAIN: Cáceres: Conquista de la Sierra, 1 ♂, 14.IV.1994 (CRB); Monfrague, Río Almonte, 8 ♀♀, 15.IV.1994 (CRB); Talaván, Finca el Baldio, 6 ♀♀, 6 ♀♀, 24.VII.1996, U. Stengele leg. (CRB). Badajoz: Peñarroya, 1 ♂, 3 ♀♀, 12.IV.1994 (CRB); Embalse de la Serena, 1 ♂, 12.IV.1994 (CRB); Córdoba: Alcolea, 1 ♂ 2 ♀♀, 10.IV.1994 (CRB). Burgos: Pancorbo, 655 m, 1 ♂, stones in maquis, 30.III.1997 (CRB). Granada: La Calahorra, 1250 m, 1 ♂ 2 subadult ♀♀, stones on slopes to castle, 5.IV.1996 (CRB); Puerto Camacho, 1230m, 1 ♂, stones in *Pinus* forest, 6.IV.1997 (CRB); Rambla del Bambil, 900m, 5 ♂, 5 ♀♀, stones in small *Quercus ilex* bushes, 11.IV.1999 (CRB). Jaén: Puerto de Tes-tar, 750 m, 1 ♂, stones in clearing in *Pinus* forest, 12.IV.1999 (CRB). León: Villanueva de las Manzanas, 1 ♂, 12.Ⅷ.1994 (CRB). Málaga: Alozaina N., 250 m, 2 ♀♀, stones in *Quercus ilex* forest, 11.IV.1998 (CRB); between Periana and Ventas de Zafarraya, Cortijo Blanco, 1 ♂, stones in rocky fallow, 30.X.1993 (CAR–S). Orense: Larouco, 1 ♂, 12.Ⅷ.1994 (CRB). Segovia: Casla W., 1100 m, 4 ♀♀, stones in grassland, 30.III.1997 (CRB). Tarragona: Santa Magdalena de Pulpis, 150 m, 1 ♂, stones in maquis, 7.IV.1998 (CRB). Toledo: Talaverla de la Nueva, 370 m, 1 ♂, litter in riverine forest along Tejo, 1.Ⅶ.1994 (CRB).

**Distribution.** The commonest species in the Iberian Peninsula, also occurring in Madeira.

### Zodarion tboi Nosek, 1905

*Zodarion tboi* Nosek, 1905: 128, fig. 10 (descr. ♀).

**Material examined.** GREECE: Crete: Iraklio: 1 ♂, stone grassland, H. Kahman leg. (SMF); Gouves, 1 ♂, 5.V.2009, H. Eckl leg. (SMF). Makedonia: Florina: Agios Germanos, 6 ♀♀, pit-falls, 24.VI.–29.VI.2014, Anastasiou leg. (NHMC). Kozani: Siatsita 6 km SE, 2 ♂♂, 3 ♀♀, pit-falls, 29.VI.–22.VI.2014, Anastasiou leg. (NHMC). Peloponnisos: Arkadia: Oros Mainalo, 1 ♂, pit-falls, 6.VI.–22.VI.2008, Anastasiou leg. (NHMC).

**Distribution.** Balkans, Turkey, Caucasus, Lebanon and Cyprus.

### Zodarion vankeerorum Bosmans, 2009

*Zodarion vankeerorum* Bosmans, 2009: 259, figs 116–119.

**Material examined.** GREECE: Peloponnisos: Arkadia: Oros Mainalo West, 1 male, pit-falls at forest line, 6.VI.–22.VI.2008, Anastasiou leg. (CRB).

**Distribution.** Until now only known from Attiki in Greece, here also cited from Arkadia in the Peloponnisos.

### Zodarion zorba Bosmans, 2009

*Zodarion zorba* Bosmans, 2009: 260, figs 120–123 (descr. ♀). Sznietar et al. 2015: 248.

**Material examined.** GREECE: Ipeiros: Ioanina: Metsovo, Kataras pass, 1 ♀, 18.IX.1995, Knoflach & Thaler leg. (CKT). Konitsa: Aaos gorge, 550 m, 1 ♀, 9.IX.1996, Knoflach & Thaler leg. (CKT). Makedonia: Florina: Karies 4.7 km S., 2 ♂♂, 1 ♀, pit-falls, 24.VI.–29.VI.2014, Anastasiou leg. (NHMC); Prespes, Agios Germanos 9 km SW, 3 ♂♂, 1 ♂, pit-falls, 24.VI.–29.VI.2014, Anastasiou leg. (NHMC). Grevena: Antrakha, 1 ♀, pit-falls, 16.VI.–8.VIII.2014, Anastasiou leg. (NHMC). Ziaxas 3.2 km NE, 18 ♂♂, 5 ♀♀, pit-falls, 29.VI.–7.VII.2014 (NHMC); Ziaxas, Perivoli 4.3 km S, 1 ♂, pit-falls, Anastasiou leg., 23.VII.2014 (NHMC). Imathia: Vermio, 2 ♂♂, pit-falls, 24.VI.–7.VIII.2014 (NHMC). Kozani: Kastania, 11 ♂♂, pit-falls, 17.VI.–9.VIII.2014 (NHMC). Pieria: Ryaka, 3 ♂♂, pit-falls, Anastasiou leg., 14.VI.–10.VIII.2014 (NHMC). Peloponnisos: Arkadia: Mainalo W., 77 ♂♂, 8 ♀♀, pit-falls, 6.VI.–1.VIII.2008, Anastasiou leg. (CRB, NHMC). Thessalia: Larisa: Delta Pineio, 3 ♂♂, 2 ♀♀, pit-falls, 18.VI.–9.VIII.2014, Anastasiou leg. (NHMC).

**Comments.** The species described as *Zodarion sp.* by Bosmans (2009) appears to be the unknown female of *Zodarion zorba*. It is closely related to *Z. blagoevi* Bosmans, 2009 and *Z. epierez* Brignoli, 1984 and differs by the trapezoid median plate in the epigyne, surrounded by a much larger pale area. The species was recently also cited from Hungary (Sznietar et al. 2015).

**Distribution.** This species was described from the Oros Aro-nia, province Achaia in the Peloponnisos. Here it is cited in large numbers on the Oros Mainalo in the nearby province Arkadia, but also much more to the north in Makedonia and Thessalia.

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