

Taxonomic notes on a collection of jumping spiders from Sudan (Araneae, Salticidae)

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Summary

A new species, *Icius steeleae* sp. n. (♂♀), from Sudan is diagnosed, figured and described. The male of *Mogrus mirabilis* Wesolowska & van Harten, 1994 is described for the first time. *Evarcha cara* Wesolowska & van Harten, 1994 is synonymised with *Hyllus dotatus* (Peckham & Peckham, 1903). New faunistic records for 10 salticid species from Sudan and Egypt are also provided.

Introduction

The salticid fauna of northern Africa, particularly of the areas included in the Palaearctic Region, remains poorly studied. This short paper describes a small collection of Salticidae taken mostly from the ecoregion Jebel Marra located in Sudan (the Southern Kordufan). The Jebel Marra is volcanic in origin, reaching heights over 3,000 m a.s.l. and supporting dry woodland vegetation surrounded by Sahel *Acacia* wooded grassland and deciduous bushland. A few specimens taken from other Sudanese and Egyptian localities are also considered. In total, eleven species, of which one is new to science, are treated in the present work.

The studied specimens are deposited in two museums: BMNH=Department of Entomology, Natural History Museum, London (Ms J. Beccaloni); and ZMHU=Zoological Museum of Helsinki University, Helsinki, Finland (Dr J. Terhivuo). Abbreviations used in the text: D=described; d=dorsal, pr=prolateral, rt=retrolateral, v=ventral. For the leg spination the system and terminology adopted is that used by Ono (1988). The sequence of leg measurements is as follows: femur+patella+tibia+metatarsus+tarsus. All measurements are in mm.

Survey of species

Cyrba ocellata (Kroneberg, 1875)

Comments: This is a widespread, Pantropical species, known from the Australasian and Oriental Regions, and extending northwards as far as Central Asia (Turkmenistan and Uzbekistan) (see Logunov & Rakov, 1998).

Material: SUDAN: 1♀ (BMNH), Kulme [c. 12°34'N, 23°37'E; 1107 m a.s.l.], Darfur, Brit. Sudan, 30 July–14 September 1925, Rear Adm. H. Lynes.

Heliophanus (Helafricanus) fascinatus Wesolowska, 1986

Comments: *Heliophanus fascinatus* has been recorded from Central Africa, from Zaire to Botswana

(Wesolowska, 1986: map 922); the record from Sudan is therefore the most northerly locality for the species.

Material: SUDAN: 2♂ (BMNH), “The Anglo-Egyptian Sudan” [most probably the locality is Jebel Marra (volcano), c. 12°57'N, 24°16'E; 3000 m a.s.l.], April 1932 (Nos. 181, 184), Miss Mary Steele.

Icius steeleae sp. n. (Figs. 3–6)

Type material: Holotype ♂ (BMNH), Sudan, Jebel Marra (volcano) [c. 12°57'N, 24°16'E], W. Darfur, “the Anglo-Egyptian Sudan”, April 1932 (No. 110), Miss Mary Steele. Paratypes: 1♂ 1♀ (BMNH), same data.

Etymology: The species is dedicated to the collector, Miss Mary Steele.

Diagnosis: This new species differs from all the described *Icius* species known to me by the strong and very long tibial apophysis (Fig. 4) and the long, heavily chitinised spermathecae (Fig. 6). Of the illustrated species, *I. angustatus* (Lucas, 1846) from Algeria seems to possess a similar epigyne, but the spermathecae are clearly different (cf. Prószyński, 1987: 64); the latter species is listed by Platnick (2003) as a *nomen dubium*.

Distribution: The type locality only.

Description: *Male* (holotype): Carapace 2.15 long, 1.43 wide, 0.75 high at PLE. Ocular area 1.10 long, 1.29 wide anteriorly, 1.34 wide posteriorly. Diameter of AME 0.43. Abdomen 2.08 long, 1.23 wide. Cheliceral length 0.73. Clypeus not expressed. Length of leg segments: I 1.45+0.85+1.23+0.88+0.50; II 0.85+0.50+0.63+0.58+0.34; III 1.01+0.48+0.60+0.70+0.40; IV 1.15+0.50+0.83+0.83+0.45. Leg spination: I: Fm d 0-1-1-1; Tb v 0-0-1-1; Mt v 1-1ap. II: Fm d 0-1-1-2; Mt v 1-2ap. III: Fm d 0-1-1-3; Tb pr and rt 0-1; Mt pr and rt 1ap, v 2ap. IV: Fm d 0-1-1-2; Mt pr, rt and v lap. Coloration: Carapace flat, red-brown, rugose, covered with light (yellowish) adpressed scales. Black around eyes. Clypeal margin with sparse fringe of short, straw-coloured scales. Sternum yellow. Maxillae, labium and chelicerae brownish. Abdomen greyish yellow, strongly wrinkled and apparently faded, without marked colour pattern on dorsum. Book-lung covers and spinnerets yellow. Legs I longer and stronger than others, brownish, with patellae, tibiae, metatarsi and tarsi covered with erect yellowish hairs. Legs II–IV of usual configuration, yellow. Palps yellow brownish. Palpal structure as in Figs. 3–4.

Female (paratype): Carapace 2.25 long, 1.45 wide, 0.88 high at PLE. Ocular area 1.16 long, 1.30 wide anteriorly, 1.40 wide posteriorly. Diameter of AME 0.46. Abdomen 2.33 long, 1.10 wide. Cheliceral length 0.65. Clypeus not expressed. Length of leg segments: I 1.14+0.66+0.80+0.68+0.40; II 0.88+0.53+0.60+0.53+0.33; III 1.03+0.48+0.63+0.75+0.40; IV 1.28+0.55+0.90+0.95+0.43. Leg spination: I: Fm d 0-1-1-1; Tb v 0-2-1ap; Mt v 2-2ap. II: Fm d 0-1-1-2; Mt v 1-0-2ap. III: Fm d 0-1-1-2; Mt 3ap. IV: Fm d 1-1-1; Mt pr, rt and v lap. Coloration as in male, except: carapace and clypeal margins densely covered with white scales; dorsum with pale brown colour pattern of two longitudinal bands;

palps yellow; legs I not as strongly developed, but stronger than rest of legs. Epigyne and spermathecae as in Figs. 5–6.

***Hyllus dotatus* (Peckham & Peckham, 1903)** (Figs. 1–2)

Habrocestum dotatum Peckham & Peckham, 1903: 239, pl. 27, fig. 6 (D♂♀; type series in Museum of Comparative Zoology, Harvard University, Cambridge, USA; not examined).

Hyllus dotatum: Clark, 1974: 17 (transferred from *Habrocestum*).

Evarcha cara Wesołowska & van Harten, 1994: 22–25, figs. 50–51 (D♀; ♀ holotype in Musée Royal de l'Afrique Centrale, Tervuren, Belgium; not examined). **New synonymy.**

Hyllus corniger Wesołowska & van Harten, 1994: 43, figs. 93–95 (D♂; ♂ holotype in Musée Royal de l'Afrique Centrale, Tervuren, Belgium; not examined).

Evarcha dotata: Wesołowska & Russell-Smith, 2000: 23, figs. 29–36 (transferred from *Hyllus*).

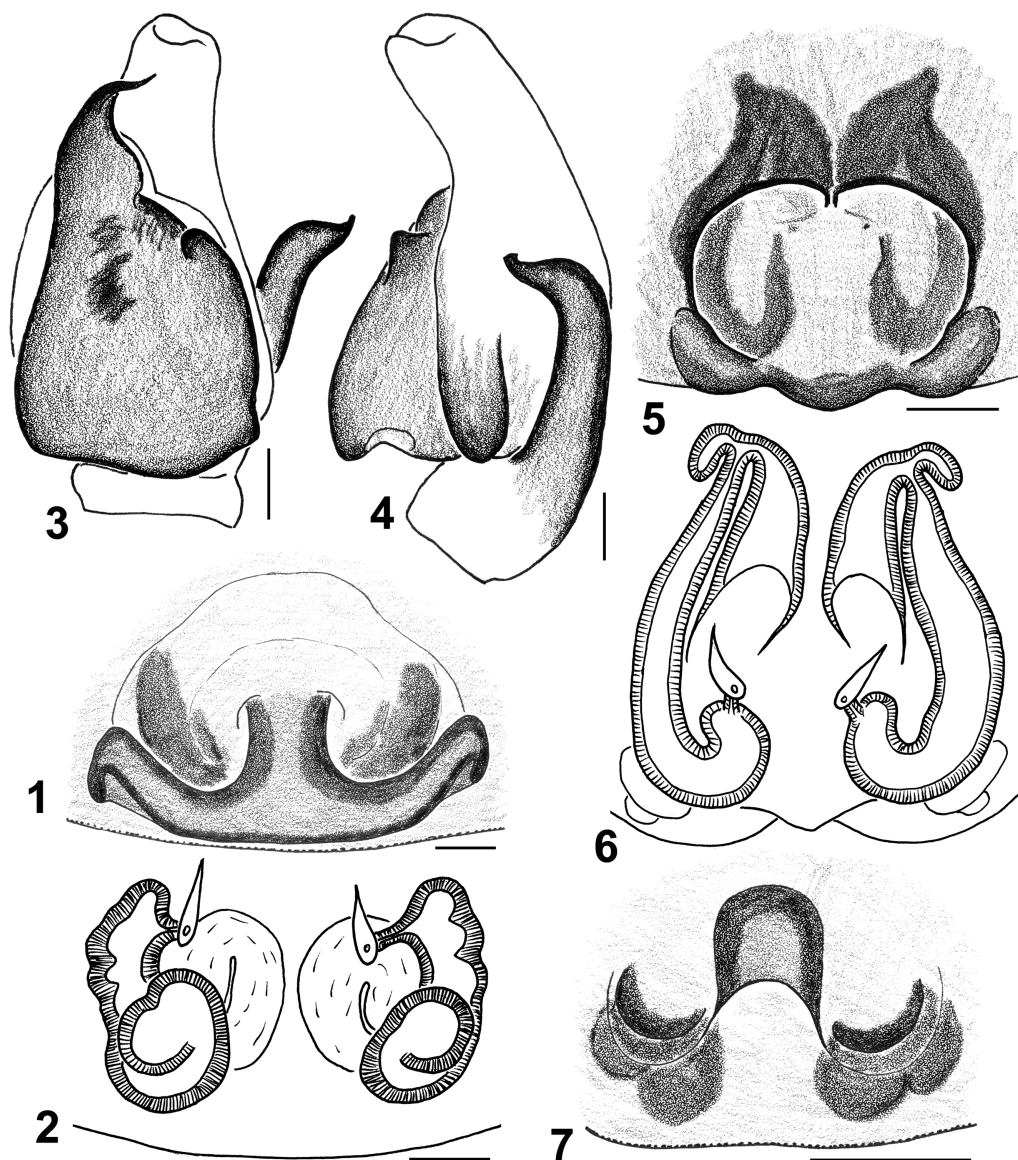
For a complete set of references see Platnick (2003: sub *Evarcha dotata*).

Comments: This is a widespread Afrotropical species known from South Africa to Yemen and reported under

many different names, but most often as *Evarcha dotata* (see Platnick, 2003). Thus, the record from Sudan represents one of the most northern localities of the species.

Evarcha cara was described from Yemen from a single female (Wesołowska & van Harten, 1994). It is obvious from the original figures (op. cit., 1994: figs. 50–51) that the structure both of the epigyne and especially of the spermathecae is identical to that of *Hyllus dotatus* (cf. Figs. 1–2). Moreover, the latter species was already recorded from Yemen under the name *Hyllus corniger* Wesołowska & van Harten, 1994 (for further comments on this fact see Wesołowska & Russell-Smith, 2000: 23) and can be considered well-established in that country.

The species does not belong with *Evarcha*, as it possesses a membranous embolar structure (terminal apophysis?) in the male palp and well marked hair-pencils beneath the posterior median eyes in both sexes (see Wesołowska & Russell-Smith, 2000: figs. 31, 33); these characters are absent from true *Evarcha*. Therefore, I agree with Clark (1974: 17) and consider this



Figs. 1–7: **1–2** *Hyllus dotatus* (Peckham & Peckham, 1903). **1** Epigyne; **2** Spermathecae, dorsal view. **3–6** *Icius steeleae* sp. n. (♂ holotype and ♀ paratype). **3** Male palp, ventral view; **4** Ditto, retrolateral view; **5** Epigyne; **6** Spermathecae, dorsal view. **7** *Pellenes iforhasorum* Berland & Millot, 1941, epigyne. Scale lines=0.1 mm.

species a member of *Hyllus* rather than *Evarcha*. The taxonomic relations of Afrotropical and Oriental species of *Hyllus* will be studied separately.

Material: SUDAN: 1♀ (BMNH), Jebel Marra (volcano) [c. 12°57'N, 24°16'E; 3000 m a.s.l.], W. Darfur, Anglo-Egyptian Sudan, April 1932 (No. 197), Miss Mary Steele.

***Menemerus congoensis* Lessert, 1927**

Comments: According to the recent revision (Wesołowska, 1999), this is a widespread Afrotropical species known from South Africa to Ethiopia, but not recorded in Western Africa. It is very likely that the male of the very closely related species *M. eburensis* Berland & Millot, 1941, which is distributed in West Africa, was mistakenly matched with its female (Wesołowska, 1999), so the records of the latter species may partly belong to *M. congoensis*. The finding of *M. congoensis* in Sudan is its most northerly record.

Material: SUDAN: 1♂ (BMNH), “the Anglo-Egyptian Sudan” [most probably the locality is Jebel Marra (volcano), c. 12°57'N, 24°16'E; 3000 m a.s.l.], April 1932 (No. 197), Miss Mary Steele.

***Menemerus animatus* O. Pickard-Cambridge, 1876**

Comments: This is a widespread Mediterranean species known from Northern Africa and already reported from Sudan (Wesołowska, 1999).

Material: SUDAN: 1♂ (BMNH), Sobath, 1 February 1914, W. P. Lowe.

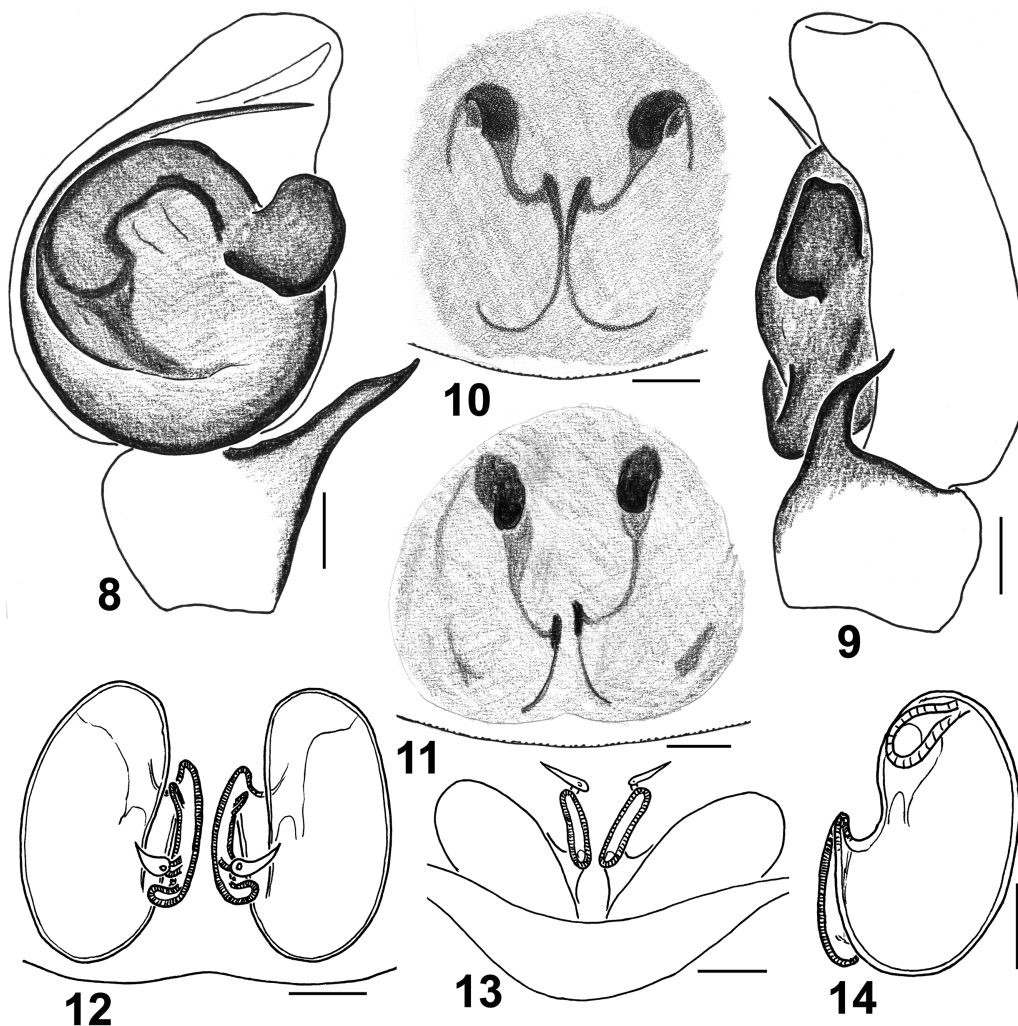
***Mogrus mathisi* (Berland & Millot, 1941)**

Comments: This is a rare species recorded hitherto from Senegal, Niger, Saudi Arabia, Yemen and Tanzania (Wesołowska, 2003); this species was earlier known under the name *M. dillae* Prószyński, 1989 (Prószyński, 1989; Wesołowska & van Harten, 1994; Wesołowska & Russell-Smith, 2000).

Material: SUDAN: 1♀ (BMNH), Kulme [c. 12°34'N, 23°37'E; 1107 m a.s.l.], Darfur, Brit. Sudan, 30 July–14 September 1925, Rear Adm. H. Lynes.

***Mogrus mirabilis* Wesołowska & van Harten, 1994 (Figs. 8–14)**

Mogrus mirabilis Wesołowska & van Harten, 1994: 58–59, figs. 119–121 (D♀; ♀ holotype in Musée Royal de l’Afrique Centrale, Tervuren, Belgium; not examined).



Figs. 8–14: *Mogrus mirabilis* Wesołowska & van Harten, 1994. 8 Male palp, ventral view; 9 Ditto, retrolateral view; 10, 11 Epigyne; 12 Spermathecae, dorsal view; 13 Ditto, posterior view; 14 Ditto, ventral view. Scale lines=0.1 mm.

Diagnosis: The male of this species is described here for the first time (Figs. 8–9). It is most similar to those of *M. antoninus* Andreeva, 1976 from Central Asia, *M. frontosus* (Simon, 1871) from Corsica and *M. logunovi* Prószyński, 2000 from Jordan and Israel, but can be distinguished by the position of the bulging tegular apophysis (at 3 hours in *M. mirabilis* (Fig. 8) and at 11 hours in related species) and especially by the bent and sharp tibial apophysis, which is clearly smaller in related species.

The female of *M. mirabilis* is unusual and easily recognisable by having sac-like, swollen insemination ducts and narrow bean-shaped receptacles (Figs. 12, 14). Of the described *Mogrus* species, *M. sinaicus* Prószyński, 2000, known from Egypt and Saudi Arabia, is similar and virtually identical to *M. mirabilis*. Despite tiny differences in the structure of the receptacles (cf. Prószyński, 2000: figs. 91–92), the epigynes of both species are identical. The same is true for the three unnamed female specimens from Saudi Arabia illustrated by Prószyński (1989: figs. 30, 34, 36). Furthermore, the female from Egypt (Siwa Oasis) named by Prószyński (2003: figs. 436–438) as *M. fulvovittatus* is doubtless *M. mirabilis* as well (cf. Figs. 12–14). Thus, it is almost certain that *M. mirabilis* is a relatively widespread and variable species, whereas the names *M. sinaicus* and *M. fulvovittatus* should probably be treated as its junior synonyms. I postpone a formal synonymy until more material, especially males, which are rarer and less variable in *Mogrus*, have been collected and studied.

Comments: The species *M. dalmasi* Berland & Millot, 1941, described from Mali (Aguelhock in the area of Adrar des Iforhas; 19°28'N, 0°52'E), is very similar to *M. mirabilis* and seems to be its senior synonym, as well as that of *M. sinaicus* and *M. fulvovittatus* (see above). However, as illustrated by Berland & Millot (1941: fig. 7A), the epigyne of *M. dalmasi* might possess a kind of narrow median “septum”, which is definitely absent from *M. mirabilis*. The taxonomic relationships of these species need further study.

Distribution: Yemen, Egypt, Saudi Arabia and Sudan.

Description: **Male:** Carapace 2.38 long, 1.70 wide, 1.08 high at PLE. Ocular area 1.08 long, 1.53 wide anteriorly, 1.63 wide posteriorly. Diameter of AME 0.45. Abdomen 2.50 long, 1.53 wide. Cheliceral length 0.78. Clypeal height 0.19. Length of leg segments: I 1.28+0.73+0.88+0.78+0.53; II 1.23+0.73+0.73+0.68+0.50; III 1.70+0.75+0.60+0.91+0.58; IV 1.45+0.63+0.89+0.95+0.55. Leg spination: I: Fm d 0-1-1-4; Pt pr and rt 0-1-0; Tb pr 1-1-2, rt 0-1-0, v 1-1-1; Mt pr and rt 1-1ap, v 2-2ap. II: Fm d 0-1-1-5; Pt pr and rt 0-1-0; Tb pr 1-1-1, rt 1-1, v 1-1-1ap; Mt pr and rt 1-1ap, v 2-2ap. III: Fm d 1-1-5; Pt pr and rt 0-1-0; Tb d 1-0, pr and rt 1-2, v 1-0-2ap; Mt d 1-0, pr and rt 1-2ap, v 2-2ap. IV: Fm d 1-1-3; Pt pr and rt 0-1-0; Tb d 1-0, pr and rt 1-1-1, v 1-0-2ap; Mt d 1-0, pr and rt 1-2ap, v 2-2ap. Coloration: Carapace brownish yellow, with wide yellow marginal stripes. Black around eyes. Clypeus yellowish, covered with sandy-coloured scales. Sternum, maxillae and labium yellow. Chelicerae brownish. Abdomen:

dorsum greyish yellow, with wide broken longitudinal brownish band; sides and venter yellow. Book-lung covers and spinnerets yellow. All legs yellow, covered with straw-coloured hairs. Palps yellow, but bulbus brownish. Palpal structure as in Figs. 8, 9.

Female: See Wesołowska & van Harten (1994). Epigyne and spermathecae as in Figs. 10–14.

Material: SUDAN: 1♂ 3♀ (ZMHU), Sharta, W. Halfa Distr., 7 April 1964, M. Meinander.

Myrmarachne kiboschensis Lessert, 1925

Comments: This is a widespread species known from the Afrotropical and Oriental Regions (Platnick, 2003). The record in Egypt is the most northern locality for the species.

Material: EGYPT: 1♀ (BMNH), “Cairo, Jickeli”.

Pellenes iforhasorum Berland & Millot, 1941 (Fig. 7)

Comments: This identification is provisional, as *Pellenes* species are difficult to distinguish from the females and many of the described *Pellenes* species, especially from the Mediterranean and N. Africa, remain poorly known (often from single sexes only). *Pellenes iforhasorum* was described from a single female from Mali (Aguelhock in the area of Adrar des Iforhas; 19°28'N, 0°52'E) by Berland & Millot (1941). My identification is based on the original figures by the latter authors (op. cit.: fig. 11).

The original label with the studied female did not contain an exact locality, but it is likely to be the Jebel Marra (volcano), the site where the collector (Miss Steele) took most of her spider specimens on the same date. It is the second record of the species after its original description and the most eastern locality for it.

Material: SUDAN: 1♀ (BMNH), “the Anglo-Egyptian Sudan” [most probably the locality is Jebel Marra (volcano), c. 12°57'N, 24°16'E; 3000 m a.s.l.], April 1932 (No. 181), Miss Mary Steele.

Thyene imperialis (Rossi, 1846)

Comments: This is a widespread subtropical species distributed from the Canaries throughout the Mediterranean and southern part of Central Asia to China in the east. In Africa, the species was already recorded from Mali (Bamako; 12°40'N, 7°59'W) by Berland & Millot (1941). The latter authors also recorded it from Guinea (Kindia), Côte d'Ivoire (as Batié, apparently it is now Beuna) and Burkina (Ouagadougou); these localities are the most south-western records for *T. imperialis*.

Material: SUDAN: 3♂ (BMNH), Jebel Marra (volcano) [c. 12°57'N, 24°16'E; 3000 m a.s.l.], W. Darfur, Anglo-Egyptian Sudan, April 1932 (Nos. 181, 140), Miss Mary Steele.

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Beccaloni (BMNH) and Dr Juhani Terhivuo (ZMHU). Dr Wanda Wesołowska (Wrocław, Poland) kindly provided me with unpublished information on a new species of *Icius* from Ethiopia. Finally, many thanks to anonymous referees who indicated a number of errors and defects in the typescript, helping eliminate them.

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Agroeca dentigera Kulczyński, 1913, a liocranid spider new to Britain (Araneae, Liocranidae)

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Summary

The liocranid spider *Agroeca dentigera* Kulczyński, 1913 is described and illustrated as new to Britain, and its habitat and distribution are discussed.

Introduction

In 1989, a single female of what was then believed to be the endangered *British Red Data Book* liocranid spider *Agroeca lusatica* (L. Koch) was taken in a pitfall trap at Ynyslas Dunes, part of the Dyfi National Nature Reserve, Ceredigion, West Wales, among a sample of 100 specimens of *Agroeca proxima* (O. P.-Cambridge) from fixed dune habitat (Fowles, 1994). *Agroeca lusatica* is a widely distributed species in continental Europe, but it is known in Britain only from Sandwich Dunes, Kent,

where it was first found in 1938 and is known to be well established (Merrett, 1991).

The area at Ynyslas Dunes was visited again in 2001 and 2002, in an attempt to find further specimens. A total of 75 man-hours were spent searching, by C. Felton, S. Judd and G. Knight, at 20 potentially suitable locations across the 97 ha dune system, on 31 October and 1 November 2001 and on five separate days between 11 September–11 October 2002. Seven grids of five pitfall traps each were also set between 12–25 September and between 25 September–10 October 2002. Very little is known about the biology of *A. lusatica* in Britain (Merrett, 1991), so recording effort was guided by a note on the occurrence of that species on a Danish dune system (Bøggild, 1975), where it was collected from a very dense area of 6–8 m² of marram grass, *Ammophila arenaria* (L.), at the south foot of a high hill of wind-blown sand.

Five specimens of *Agroeca* (4♀ and 1♂), distinguished in the field by their dark brown appearance, as opposed to the more orange tone of the common *A. proxima*, were found by C. Felton on 10 October 2002, in a sheltered, south-facing hollow on the side of an east-west fixed dune, situated at a right angle to the coast. Initially, these were assumed to be *A. lusatica*. However, the pronounced longitudinal dark markings on the carapace and the form of the genitalia closely fitted descriptions of *Agroeca dentigera* Kulczyński, and this identification was later confirmed by P. Merrett. Subsequent examination of the original female taken in 1989 showed that this was also *A. dentigera*, so the record

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