

Middle European *Euophrys* C. L. Koch, 1834 (Araneae: Salticidae)—one, two or three genera?

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Summary

The genus *Euophrys* from Britain and Central Europe (excluding the Mediterranean) is redefined. Of seventeen species analysed, only *E. frontalis* (Walckenaer, 1802) and *E. herbigrada* (Simon, 1871) are proposed to represent *Euophrys* (*sensu stricto*). Genus *Pseudeuophrys* is reinstated to include four European species. Six species are listed in *Talavera*. The relationships between the three genera and their distribution are discussed. The status of three species has still to be clarified.

Introduction

Euophrys is one of the largest and yet one of the most poorly known genera in the Salticidae. Prószyński (1990) and Platnick (1993) listed over 130 nominal species from Europe, Asia, Africa, the Americas, and the Pacific islands. In its present sense, however, the genus is a mixture of many groups of unrelated species, frequently included on the basis of small size and some convergent similarities in genitalic pattern (coiled base of embolus, meandering spermathecae), one-chambered and round or oval spermathecae—characters which are quite common in salticids and are found even in distantly related subfamilies/groups (Żabka, 1995).

We are not yet able to draw general conclusions on the relationships between various groups of “*Euophrys*” species: this will not be possible until the majority of the world’s species are revised. For the time being, we can only concentrate on local groups of species, such as the European fauna.

According to recent Central European and British catalogues, keys and local faunistic lists (Merrett *et al.*, 1985; Maurer & Hänggi, 1990; Prószyński, 1990, 1991; Gajdoš & Svatoň, 1993; Buchar & Růžicka, 1995; Starega, unpubl.), fourteen good salticid species are included in *Euophrys*. Their generic status has been the

subject of informal discussion for years, but in the majority of papers *Euophrys* is still the only genus considered.

Logunov (1992) was the first to review the position of some Palaearctic species. He suggested limiting the genus *Euophrys* to the *frontalis* species group and excluding *E. erratica*, *E. lanigera* and *E. obsoleta*. Logunov also transferred *E. aequipes* (O. P.-Cambridge, 1871), *E. monticola* Kulczyński, 1884 and *E. thorelli* Kulczyński, 1891 to *Talavera*. Recently two other species, *E. petrensis* C. L. Koch, 1837 and *E. westringi* (Simon, 1868), were excluded and added to the *Talavera* list (Żabka, 1997; Żabka & Kupryjanowicz, 1997).

In 1912 F. Dahl erected the genus *Pseudeuophrys* for *E. erratica* (Walckenaer, 1826) (= *P. callida*). Some authors (e.g. Tullgren, 1944) followed Dahl, but most of them did not accept his proposal. In 1997 Żabka included *E. obsoleta* (Simon, 1868) in *Pseudeuophrys*. Two other species, *E. browni* (Millidge & Locket, 1955) and *E. lanigera* (Simon, 1871), are added here, *browni* being of unclear status. [Roewer (1954) was the first to transfer *E. bimaculata* (= *E. lanigera*) to *Pseudeuophrys*.] The verified list of the three genera considered here will be given by Prószyński (in prep.).

Character	<i>Euophrys</i>	<i>Pseudeuophrys</i>	<i>Talavera</i>
body length (mm)	3–5	2.5–5	2.5–3
thorax much lighter than eye field	–	–	+
tibial apophysis present	+	+	–
bulbus $\pm$ as wide as long	–	+	$\pm$
bulbus with posterior lobe	+	$\pm$	–
distal haematodocha exposed	+	–	+
bulbus with anterior sclerite	–	$\pm$	+
bulbus with anterior pocket	–	+	–
embolus base coiled	+	+	$\pm$
spermathecae round or oval	+	–	+
spermathecae elongate	–	+	–
insemination ducts narrow	$\pm$	$\pm$	+

Table 1: Comparison of characters of Central European and British species of *Euophrys*, *Pseudeuophrys* and *Talavera*.

Central European and British species listed hitherto in *Euophrys*, after Prószyński (1990) and Platnick (1993):

1. *E. aequipes* (O. P.-Cambridge, 1871)
 2. *E. aperta* Miller, 1971
 3. *E. browningi* Millidge & Locket, 1955
 4. *E. erratica* (Walckenaer, 1826)
 5. *E. frontalis* (Walckenaer, 1802)
 6. *E. herbigrada* (Simon, 1871)
 7. *E. lanigera* (Simon, 1871)
 8. *E. milleri* Brignoli, 1983
 9. *E. molesta* O. P.-Cambridge, 1912
 10. *E. monticola* Kulczyński, 1884
 11. *E. obsoleta* (Simon, 1868)
 12. *E. petrensis* C. L. Koch, 1837
 13. *E. thorelli* Kulczyński, 1891
 14. *E. westringi* (Simon, 1868)
- E. aperta* Miller, 1971 = *Talavera monticola* (Kulczyński, 1884)
- E. milleri* Brignoli, 1983—probably *Talavera* but type specimens are not available
- E. molesta* O. P.-Cambridge, 1912—probably *E. herbigrada* (Simon, 1971)

Proposed taxonomic status of Central European and British species listed hitherto in *Euophrys*, doubtful species excluded:

Genus *Euophrys* C. L. Koch, 1834

1. *E. frontalis* (Walckenaer, 1802)
2. *E. herbigrada* (Simon, 1871)

Genus *Pseudeuophrys* Dahl, 1912

1. *P. browningi* (Millidge & Locket, 1955) (= *P. obsoleta*?)
2. *P. erratica* (Walckenaer, 1826)
3. *P. lanigera* (Simon, 1871)
4. *P. obsoleta* (Simon, 1868)

Genus *Talavera* Peckham & Peckham, 1909

1. *T. aequipes* (O. P.-Cambridge, 1871)
2. *T. monticola* (Kulczyński, 1884)
3. *T. petrensis* (C. L. Koch, 1837)
4. *T. thorelli* (Kulczyński, 1891)
5. *T. westringi* (Simon, 1868)

Genus *Euophrys* C. L. Koch, 1834

Euophrys C. L. Koch, 1834: 7–8. Logunov *et al.*, 1993: 101–124.

Type species: *Aranea frontalis* Walckenaer, 1802.

Diagnosis: Spiders 3–5 mm long. Thorax as dark as eye field or only slightly lighter. Abdomen with light mosaic pattern on dark grey background. Male palpal tibia with thin and long apophysis, bulbus much longer than wide and with posterior lobe, spermophore meandering, embolus base coiled and set on distal haematodocha, spermathecae oval or round.

Selected bibliography: Galiano, 1962; Wanless, 1975; Żabka, 1980; Prószyński, 1991; Logunov, 1992; Logunov *et al.*, 1993; Peng *et al.*, 1993; Ikeda, 1996; Żabka, 1997.

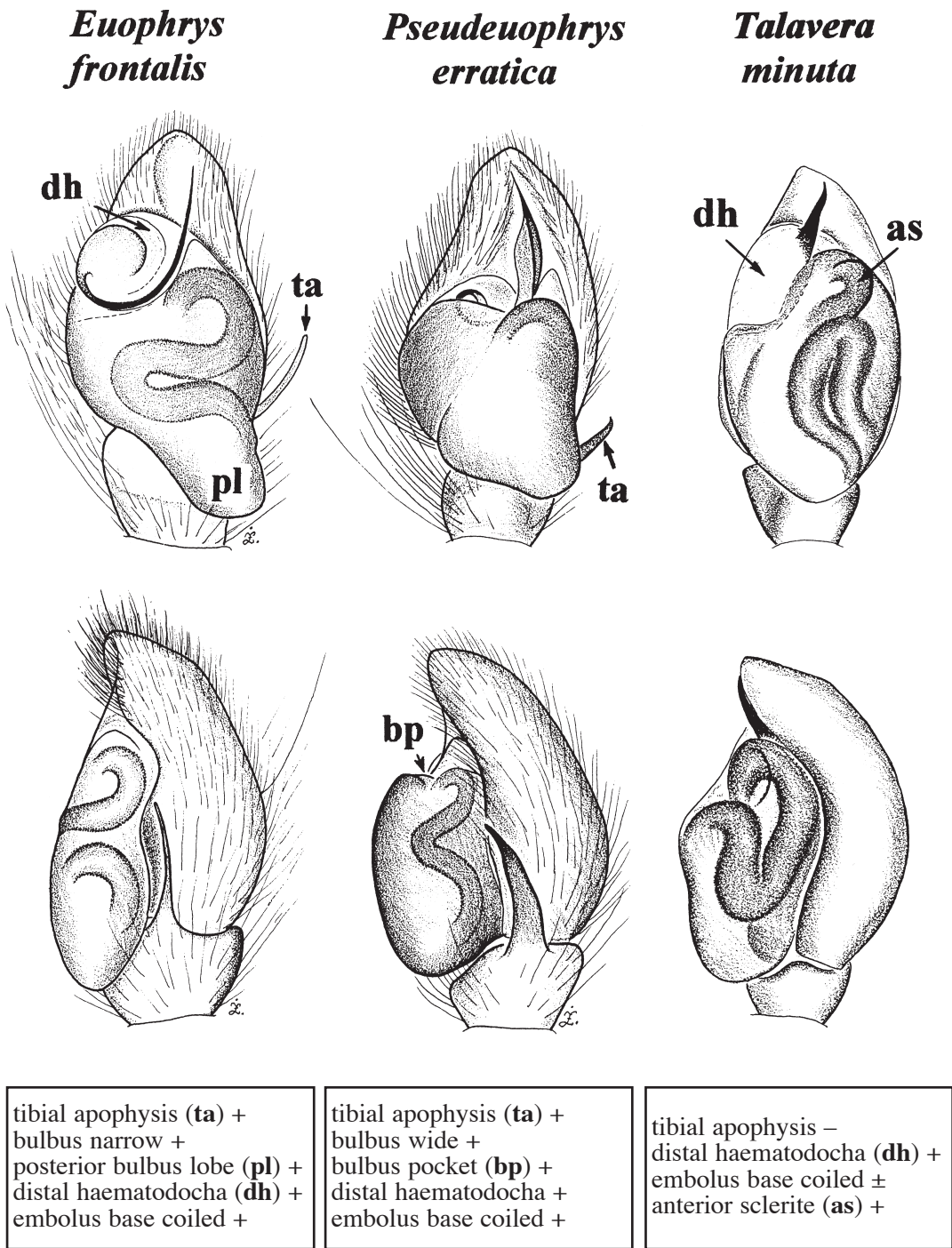


Fig. 1: Comparison of male characters of *Euophrys*, *Pseudeuophrys* and *Talavera*, based on type species.

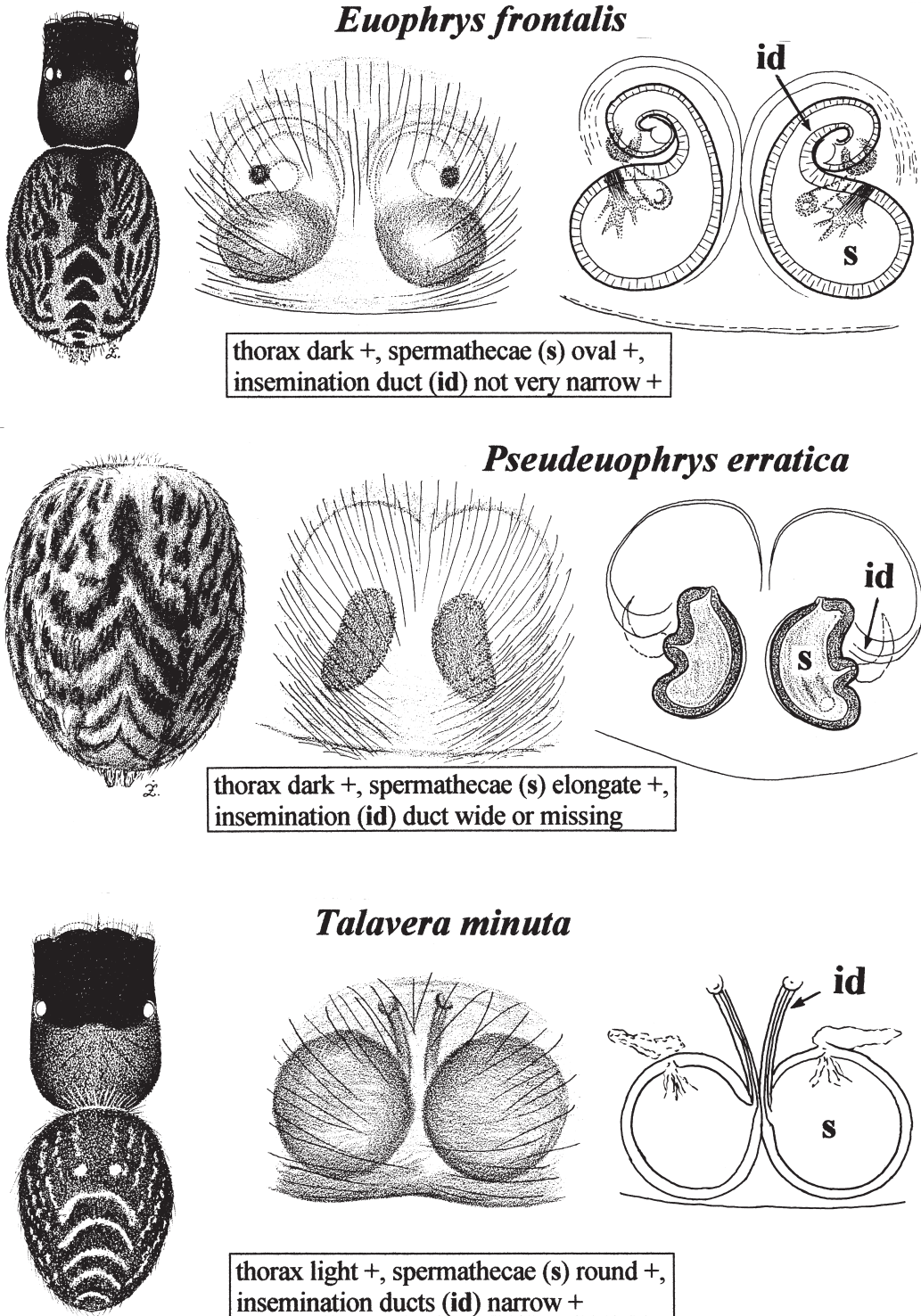


Fig. 2: Comparison of female characters of *Euophrys*, *Pseudeuophrys* and *Talavera*, based on type species.

Genus *Pseudeuophrys* Dahl, 1912

Pseudeuophrys Dahl, 1912: 387, 589.

Type species: *Attus erraticus* Walckenaer, 1826.

Diagnosis: Spiders 2.5–5 mm long. Abdomen with mosaic of light spots on dark background. Bulbus wider than in *Euophrys* (as wide as long), with anterior pocket, posterior lobe less distinctive than in *Euophrys* or missing. Distal haematodocha not as distinctive as in *Euophrys* and *Talavera*. Embolus long and massive, coiled at its base. Tibial apophysis wider than in *Euophrys*. Spermathecae elongate, in some species constricted.

Selected bibliography: Bohdanowicz & Prószyński, 1987; Matsuda, 1991; Prószyński, 1991; Logunov, 1992; Logunov *et al.*, 1993; Peng *et al.*, 1993; Ikeda, 1996; Żabka, 1997.

Genus *Talavera* Peckham & Peckham, 1909

Talavera Peckham & Peckham, 1909: 378. Logunov, 1992: 75–82.

Type species: *Icius minutus* Banks, 1895.

Diagnosis: Body length 2.5–3 mm. Thorax distinctly lighter than eye field. Tibial apophysis missing. Bulbus massive, bag-like, with anterior sclerite. Embolus shorter than in *Euophrys* and *Pseudeuophrys*, set at the top of large distal haematodocha.

Selected bibliography: Prószyński, 1991; Logunov, 1992; Logunov *et al.*, 1993; Wunderlich, 1993; Ikeda, 1996; Żabka, 1997; Żabka & Kupryjanowicz, 1997.

Remarks on distribution and relationships

The morphological characters and distribution of the genera analysed prove their close relationships. Although different in details, all share a common epigyne and palpal organ pattern. At least two Palaearctic species of *Talavera* and one of *Pseudeuophrys* show intermediate characters to *Euophrys*. The embolus of *T. aequipes* and *T. petrensis* is coiled at its base. The former species additionally has a small tibial process, probably a rudimentary apophysis. In *P. lanigera* the bulbus and female genitalia are also slightly similar to those of *Euophrys*.

Of the three genera analysed, *Euophrys* has the widest distribution—from Holarctic to

Oriental, Afrotropical and Neotropical regions, though precise species numbers and their distribution requires comprehensive study. So far, *frontalis* seems the only obvious species group to represent *Euophrys* and is mostly found in eastern Palaearctic.

Of nine *Talavera* species, only one is known from North America, from both lowland and mountain localities. Others are of Palaearctic distribution. Logunov (1992) stated *Talavera* to be a boreo-montane genus, although *Talavera* is really found mostly in mountains, peat bogs and tundra-like habitats. *T. aequipes* (showing intermediate morphological characters) also occurs in dry and sunny places all over Europe and from many localities in Asia. *T. monticola*, which was believed to be exclusively montane, has also been discovered in lowland habitats (Żabka, 1997; Hajdamowicz, in prep.).

The genus *Pseudeuophrys* is now represented by five Palaearctic species: *P. lanigera* and *P. iwataensis* comb. nov. being found in its western and eastern parts, respectively, and *P. erratica* and *P. obsoleta* of wider distribution (Matsuda, 1991; Logunov *et al.*, 1993). As mentioned above, *P. browni* may be a synonym of *P. obsoleta*.

Acknowledgements

Professor H. W. Levi (Cambridge, USA), Dr P. Merrett (Dorset, UK) and Mr P. Harvey (Essex, UK) provided comparative specimens of *Talavera* and *Pseudeuophrys*. Dr D. V. Logunov (Novosibirsk, Russia) is acknowledged for fruitful discussions and suggestions over the years of our co-operation.

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