

## *Euophrys thorelli* Kulczyński (Araneae: Salticidae), a salticid spider recently found in Britain

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### Summary

Both sexes of the salticid spider *Euophrys thorelli* Kulczyński are described from British material. Its known distribution and ecology are also described and its taxonomic affinities discussed.

### Introduction

In the summer of 1987, a study was initiated of certain aspects of the environmental impact of construction work for the Channel Tunnel. During the course of this investigation three species of spider previously unknown in Britain were recorded. One of these, *Minicia marginella* (Wider), has already been described from the Kentish material (Snazell, 1991). Another species, represented by a single female, was a small salticid spider which was not assignable to any species from Britain or nearby Europe. The specimen was taken in a D-Vac vacuum net sample from chalk grassland at Castle Hill, near Folkestone, Kent on 19 June 1989. This specimen was subsequently identified as *Euophrys thorelli* Kulczyński, a species known previously from central Europe, southern Scandinavia and north-western Asia. Some two years later the site was revisited and one further adult female and an adult male taken by grubbing. The description of both sexes is based on the British material.

### *Euophrys thorelli* Kulczyński, 1891 (Figs. 1–4)

*Euophrys thorelli* Kulczyński, 1891: 44.

*E. thorelli*: Tullgren, 1944: 39; Roewer, 1954: 1178; Bonnet, 1956: 1890; Thaler, 1981: 124; Logunov *et al.*, 1993: 121.

### Male

*Total length*: 1.9 mm. *Carapace*: Length 1.0 mm, width 0.7 mm. Dark olive-brown with darker radiating striae and dark lateral and posterior margins. Cephalic region very dark brown to black. Sparse white hairs posteriorly and laterally. Some fine white hairs within ocular quadrangle. Single strong dorsally curved spine on centre of clypeus. *Eyes*: OQ broader than long and parallel sided. All anterior eyes fringed, at least dorsally, with white hairs. *Chelicerae*: Pale olive-brown. One small tooth on posterior edge of fang groove, two small teeth of unequal size on anterior edge. *Sternum*: Mid olive-brown. Scutiform with few sparse hairs. *Legs*: 3 ≈ 4, 1, 2. All femora grey-brown. Tibia, metatarsus and tarsus I all grey-brown with faint darker striae and annulations. Tibiae, metatarsi and tarsi II–IV pale yellow-grey with dark annulations. Strong ventral spines on all tibiae, dorsal and lateral spines distally on

metatarsi III and IV. All legs with strong claw tufts. *Abdomen*: Dark grey-brown with many small pale spots and bars, arranged dorsally into indistinct chevrons. Sparsely covered with white hairs. Antero-dorsally with many strong curved hairs, both dark and white. *Palp* (Figs. 1, 2): Cymbium yellow-brown with some pale hairs. No tibial apophysis.

### Female

*Total length*: 2.3–2.5 mm. *Carapace*: Length 1.0–1.2 mm, width 0.7–0.9 mm. As in male, but a little lighter in colour. *Eyes, chelicerae and sternum*: As in male. *Legs*: 3 ≈ 4, 1, 2. All legs pale yellow. Femora with dark striae and annulations. Tibiae, metatarsi and tarsi with dark annulations, spines as in male but somewhat stronger. *Abdomen*: As in male, but lighter in colour and markings even more indistinct. *Palps*: Tibiae and tarsi markedly tumid. Pale yellow with strong hairs on ventral and prolateral surfaces of tarsi. *Epigyne* (Fig. 3): Single suboval pit or atrium present anterior to spermathecae. *Vulva*: Fig. 4.

### Occurrence

Outside Britain, there are a few, very scattered, records of *E. thorelli* from central and eastern Europe, southern Scandinavia and north-western Asia. It seems likely that it forms part of the Caspian zoogeographical faunal element (De Lattin, 1967). It was originally described from a female from Hegyalja in eastern Hungary on the northern edge of the Pannonian Basin (Chyzer & Kulczyński, 1891), and has since been recorded from southern Poland (Prószyński & Starega, 1971), the Schwäbian Alps (Wunderlich, 1974), various parts of the former USSR from the Caucasus in the west (Ovtsharenko, 1978) to Novosibirsk in the east and as far south as Kirghizia (Logunov *et al.*, 1993) and Turkestan (Charitonov, 1936). It has also been found in parts of southern Scandinavia (Tullgren, 1944; Lohmander, 1944; Palmgren, 1972). However, it was not until 1981 that the male was described from specimens taken near Innsbruck, Austria (Thaler, 1981). The species described as *E. thorelli asiatica* from Tadjikistan (Charitonov, 1951; Andreeva, 1976) in fact belongs to the genus *Chalcoscirtus* (Marusik, 1990).

The first British specimen, an adult female, was taken in a D-Vac vacuum insect net sample from a steep, south-facing slope of chalk grassland close to the top of Castle Hill, north of Folkestone, Kent (Grid ref. TR 213368) on 19 June 1989. A further female and a male were taken on 7 June 1991 while grubbing among vegetation in approximately the same area.

The grassland in the sample area was typical of that found all along the Folkestone escarpment. It is predominantly CG4 *Brachypodium pinnatum* grassland according to the National Vegetation Classification (Rodwell, 1992) with much of the area falling into the CG4b, *Centaurea nigra-Leontodon hispidus* subcommunity. The plants most commonly found in this grassland community were *Brachypodium pinnatum* (L.) Beauv.

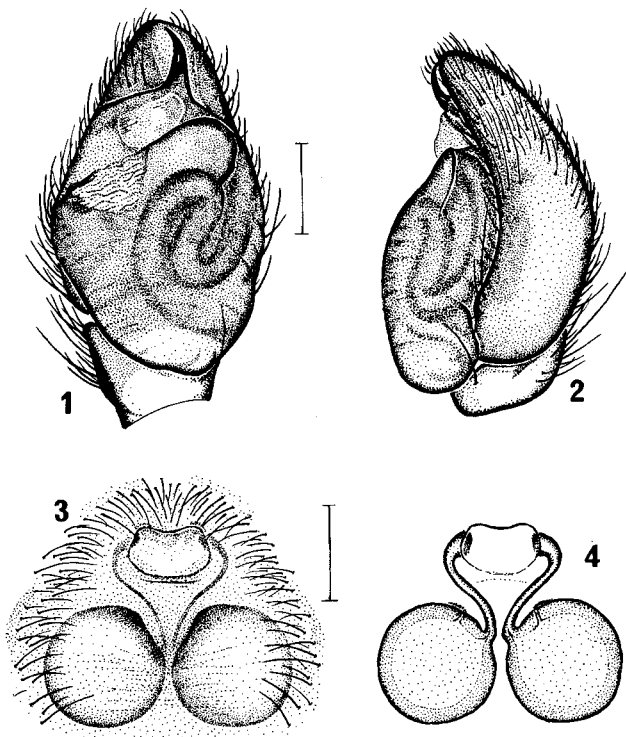
*E. aequipes* and *E. petrensis* in the newly-erected genus *Talavera* Logunov, 1992.

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Figs. 1–4: *Euophrys thorelli* Kulczyński. **1** Left male palp, ventral view; **2** Left male palp, ectal view; **3** Epigyne; **4** Vulva. Scale lines=0.1 mm.

(Tor-grass), *Festuca rubra* L. (Red Fescue), *Carex flacca* Schreber (Glaucous Sedge), *Dactylis glomerata* L. (Cock's-foot), *Sanguisorba minor* Scop. (Salad Burnet), *Plantago lanceolata* L. (Ribwort Plantain), *Pimpinella saxifraga* L. (Burnet-saxifrage), *Centaurea nigra* L. (Common Knapweed), *Arrhenatherum elatius* (L.) Beauv. ex J. & C. Presl (False oat-grass), and *Lotus corniculatus* L. (Common Bird's-foot trefoil). Towards the top of the slope, in the area where the spiders were found, the flora was somewhat richer in species.

The Austrian specimens were taken from a steep slope of stony heath at between 600–750 m on the Martinswand, while those from Finland occurred in “pine forests of the *Calluna* type”.

#### Taxonomic affinities

The conformation of the male palp, in particular the shape of the embolus, suggests that the closest congener of *E. thorelli* is *E. aperta* Miller, 1971 from Czechoslovakia. A similar palpal arrangement is also seen in *E. monticola* Kulczyński from sub-alpine regions of the Tatra, the western Carpathians and the Tirol. The most similar British species is *E. aequipes* (O.P.-Cambridge). Logunov *et al.* (1993) include *E. thorelli*,