

A review of the genus *Euophrys* C. L. Koch in Siberia and the Russian Far East (Araneae: Salticidae)

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The species of the genus *Euophrys* (*s. lat.*) in Siberia and the Russian Far East are described and differentiated. Color differences have proven to be reliable in distinguishing species in the *E. frontalis* group which have very similar genitalia. Currently 11 species of the genus are recorded: in the *E. erratica* group *E. erratica* (Walckenaer), *E. iwatensis* Bohdanowicz and Prószyński, and *E. obsoleta* (Simon); in the *E. frontalis* group *E. flavoater* (Grube), *E. frontalis* (Walckenaer), *E. proshynskii* sp. n., *E. uralensis* sp. n., and *E. sp.*; in the *E. petrensis* group *E. aequipes* (O. P.-Cambridge), *E. petrensis* C. L. Koch, and *E. thorelli* Kulczyński.

1. Introduction

The presence of the spider genus *Euophrys* C. L. Koch in Siberia was first noted by Grube (1861), who described *Euophrys flavoater* from the environs of Nikolayevsk-na-Amure. This species was redescribed by Prószyński (1971), and later it was erroneously synonymized by him (Prószyński 1979) with *E. frontalis*. In 1895, Kulczyński found two more species; *E. erratica* and *E. frontalis* that were subsequently included by Kharitonov (1932) in his catalogue. The last two species have been repeatedly recorded from Siberia and the Far East (Prószyński 1976, 1979, Dunin 1984, Nenilin 1985, Izmaylova 1988,

Marusik 1988 and others). However, the reliability of the identifications in some cases needs to be verified for the following reasons.

First, the new species, *Euophrys iwatensis*, closely related to *E. erratica*, was recently described from Japan (Bohdanowicz & Prószyński 1987). Later *E. iwatensis* was found by us in the Maritime Province of Russia. Moreover, it is known that some earlier identifications of *E. erratica* from the Far East really are *E. iwatensis* (i.e., Prószyński 1979, figs. 64–68).

Second, Siberian materials determined as *Euophrys* “*frontalis*” have turned out to be heterogeneous and contain three species of which two are new to science.

Finally, *E. flavoater* erroneously synonymized with *E. frontalis* (Prószyński 1979) is a separate species. It is found in many localities in Siberia (Fig. 1). Also females have been collected for the first time.

In this paper we summarize new information about Siberian spiders in the genus *Euophrys* (*s. lat.*).

2. Material

We are considering the genus *Euophrys* in the broad sense (see Simon 1937), with the understanding that this question is still undecided. As an example, the former opinion that *E. erratica* is classified in the genus *Pseudeuophrys* Dahl (see Dahl 1926, Palmgren 1943, Tullgren 1944), seems to be reasonable. The congeners of the “*petrensis*” group are strongly similar to those of the genus *Talavera*, and they should be included in this genus (for more details see Logunov 1992b). These problems need to be considered separately, and they are not discussed further.

We also assume the group’s division proposed by Simon (1937). Full descriptions of the species groups are given below. The composition of these groups is limited to Siberian species only, i.e. the ones we examined for this paper.

This study covers the territory from the Urals in the west to the Maritime Province and upper Kolyma river in the northeast, along the north margins of Kazakhstan, Mongolia and China in the south (Fig. 1).

In the analysis of species distribution Gorodkov’s typology (Gorodkov 1984) has been used.

Material for this work includes the authors’ collections that have been made in different Siberian localities as well as smaller ones that were donated to us by Mr. O. V. Lyakhov, Mr. Y. P. Krasnobayev, Mr. D. K. Kurenshchikov, Dr. A. M. Basarukin, Dr. E. P. Bessolitsyna, Dr. M. T. Shternbergs, Dr. K. Yu. Eskov, Dr. S. P. Bukhkalov, Dr. S. N. Danilov, and Mr. S. L. Eshyunin. Collections of the following museums have been examined: Zoological Museum of the Biological Institute (BI), Novosibirsk; Zoological Museum of the Moscow State University (ZMMU), Moscow; Zoological Institute of the Russian Academy of Sciences (ZIL), St. Petersburg; Zoology Department of Perm State Uni-

versity (PSU), Perm; and the Institute for Biological Problems of the North, Russian Academy of Sciences (IBPN), Magadan.

The material studied consists of over 220 specimens of the genus *Euophrys* from Siberia belonging to 11 species.

One species, *E. iwatensis*, was found in the Russian fauna for the first time; two species, *E. proshynskii* sp. n. and *E. uralensis* sp. n., are described as new. Type material has been distributed among the collections of the IBPN, ZMMU, BI, ZIL and PSU. Other material is in the personal collection of Dr. B. Cutler (BCC).

Abbreviations used in the text are:

AME	diameter of the anterior medial eyes		
W-1	width ocular field 1		
W-3	width ocular field 3		
L	length ocular field		
d.	dorsally	v.	ventrally
pr.	prolaterally	rt.	retrolaterally
ap.	apically.		

All measurements are in mm.

3. Taxonomic value of characters

Species of the genus *Euophrys* are rather difficult to distinguish, especially in the “*frontalis*” species group. Genitalic structures in males and females in the “*frontalis*” group are often not enough to separate different species. From our study, the color differences in the species of the “*frontalis*” group are very stable and can be used as specific characters. The species of this group can definitely be distinguished in the males only. The main differences are:

- Palpal features (coloration of femur, hair cover, elongation of the tegulum);
- Leg I characters (coloration and presence/absence of fringe);
- Coloration of prolateral side of leg II;
- Coloration of legs III and IV;
- Clypeus features (covered/bare with white/other color hairs);
- Coloration of hairs surrounding eye row I;
- Presence/absence of ventral scutum (this character is present in *E. frontalis* and *E. petrensis*, but is absent in other Siberian species).

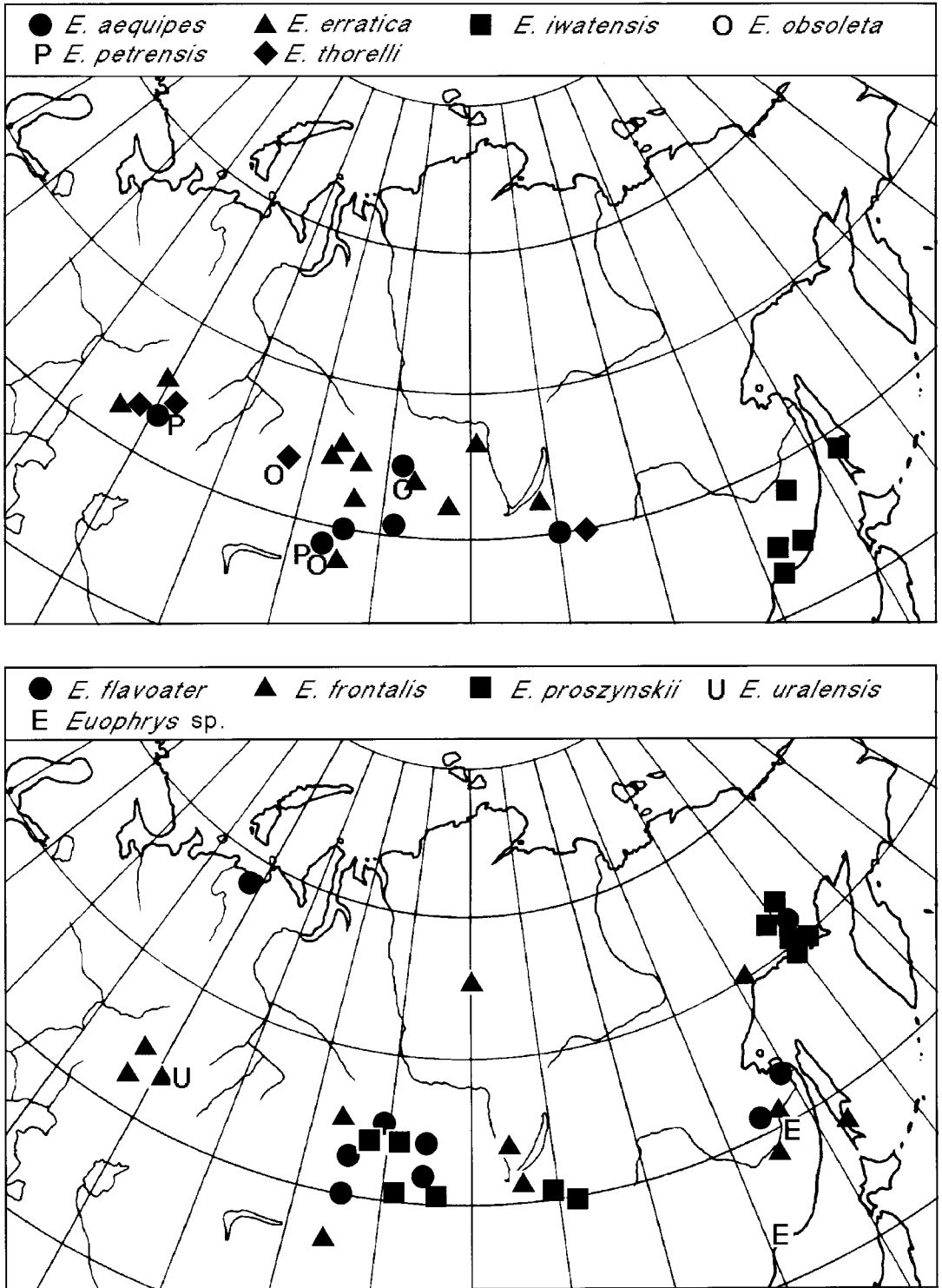


Fig 1. Localities where *Euophrys* has been found in Siberia and the Russian Far East.

Together these characters present a unique appearance and must be involved both in the diagnosis and descriptions of species in the “*frontalis*” group.

Females in the “*frontalis*” group are almost indistinguishable. The only possible differences which may be utilized are the size, form and placement of spermathecae and insemination ducts; and sometimes, the coloration of the opisthosoma, and of leg I and palps. The significance of the accessory glands that was earlier recorded by Zabka (1985) and Prószyński (personal comm.) is not clear. In all cases, if a difference in spermathecae was found, there were differences in the structure of accessory glands. When such differences in the spermathecae were absent, position and structure of accessory glands did not help in discrimination. This situation was found in the study of the differences between the females of *E. proszynskii* sp. n., *E. monadnock* Emerton, and *E. uralensis* sp. n., i.e. the species having spermathecae of the same size. Therefore, in this paper we are assuming that the characters of accessory glands are of subordinate significance in comparison with the significance of the spermathecae.

Two characters are worth mentioning: twisting of the insemination ducts, and placement of the sclerotized strips (“lids”) (arrowed in Fig. 8C) that screen copulatory openings. Our study shows that these characters have minimum taxonomic value. The degree of duct twisting is directly related to the positions of the “lids” which it is usually dependent on. Moreover, the morphology of the “lids” is a very variable character that can vary within the same species (see Figs. 10C and 12C). In both of these cases the compared specimens were taken from the same collection samples. Therefore, unlike the opinion of Prószyński (personal comm.) we do not attach any taxonomic import to the two characters mentioned above. Further, the foregoing convinces us that it is not possible to draw any taxonomic conclusions, including descriptions of new species, on the basis of the study of a single female in the “*frontalis*” species group.

In other species groups of *Euophrys* (“*erratica*”, “*petrensis*”) males and females are easily separated by genitalic characters (at least within Siberia).

4. Species

The “*erratica*” species group

The “*erratica*” species group includes those species in which males have a long, rather wide, palpal tibial apophysis bent at the tip and a strong hook-like embolus that is situated in a deep pocket of the tegulum (Figs. 2A, B). Females have oval, distinctly curved spermathecae with relatively short insemination ducts (Figs. 2C, D). Epigynum usually poorly sclerotized and covered with long hairs. Three Siberian species are included in this group, *E. erratica*, *E. obsoleta* and *E. iwatensis*.

Euophrys erratica (Walckenaer, 1825)

Fig. 2

Material examined: 1♂ (Zoological Museum, Turku University), Novosibirsk Area, Akademgorodok, 16.06–4.08.1963 (H. Hippa); 1♂ (BI), Novosibirsk Area, Toguchin Distr., Kotorovo Vill., Summer 1987 (M. Bordovitsyna); 1♀ (BI), same area, Novosibirsk Distr., Koltsovo Vill., 23.08.1987 (D. Logunov). 1♀ (BI), Altai, Teletskoye Lake, Artybash Vill., 12–14.06.1990 (A. Barkalov). 1♀ (BI), Kemerovo Area, Kuzedeyevsk Distr., Gornaya Shoria, 25.05.1948 (leg. ?). 1♂, 1♀ (ZIL), Krasnoyarsk Area, Boguchan Distr., Chunoyar Research Station, Sosnovka River, 18.06.1980 (D. Verzhutsky); 2♂ (BI), 1♂, 8♀ (IBPN), same locality, July 1984 (E. Bessolitsyna); 2♀ (BI), Yermakovskoye Distr., 14 km SW of Tanzybei Vill., 400–500 m, 13.07.1990 (D. Logunov); 6♀ (BI), same district, 4–5 km S of Tanzybei Vill., Mutnaya River, 380 m, 26.06.1990 (D. Logunov); 2♂ (BI), same district, Abakan-Kyzyl Road, 180th km, 1000–1200 m, 21.08.1988 (D. Grodnitsky). 1♂ (BI), Tuva, Todzha Distr., Azas Reserve, Karatysh River, 5.09.1987 (Y. Krasnobayev). 1♂ (BI), Buryatia, environs of Ulan-Ude City, 24.07.1990 (M. Shternbergs). 2♂, 2♀ (PSU), Perm Area, Baseg Reserve, South Baseg, 11.08.1986 (S. Syunin).

Comparative material: 3♀ (Zool. Mus. Warszawa), Bulgaria, Strandra: Malko Târnova, Swietlity las debowy bez podszycia, 31.05.1966 (V. Bekov et W. Staręga); 1♂ (BI), Russia, Stavropol Area, Caucasus Grozny City, July 1988 (A. Ryabukhin).

Diagnosis: *E. erratica* is closely related to *E. iwatensis*. Males can be distinguished by the larger embolus, and females by morphology of the spermathecae (Figs. 2C, D).

Description: *Measurements* (males/females). Carapace: length 1.90–2.05/1.75–2.08, width 1.42–1.50/1.13–1.42, height 0.88–1.03/0.75–0.88.

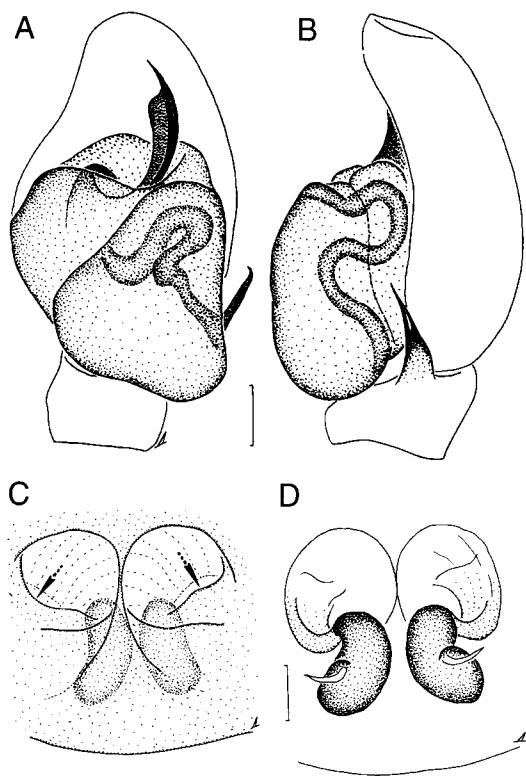


Fig. 2. *Euophrys erratica*. Novosibirsk area. — A male palpus, ventral view, B retrolateral view. — C epigynum. — D female internal genitalia. Scale bar 0.1 mm.

Opisthosoma: length 1.10–1.20/1.26–1.36, width 0.86–0.96/0.94–1.07. L 0.90–0.93/0.73–0.98, W-1 1.20/1.05–1.25, W-3 1.13/1.00–1.20. AME 0.35/0.30–0.38. Clypeus height 0.08–0.13/0.03–0.05. Cheliceral length 0.70–0.85/0.53–0.58. Leg I: 1.30–1.43/0.78–1.08+0.75–0.85/0.48–0.65+0.95–1.03/0.45–0.58+0.45–0.73/0.38–0.50+0.50/0.35–0.38. Leg II: 1.00–1.13/0.75–1.00+0.60–0.63/0.38–0.58+0.60–0.68/0.43–0.53+0.55–0.58/0.33–0.48+0.43–0.45/0.35. Leg III: 1.20–1.28/0.90–1.18+0.58–0.65/0.45–0.60+0.70–0.75/0.50–0.63+0.68–0.78/0.50–0.70+0.48/0.40–0.50. Leg IV: 1.20–1.35/0.98–1.30+0.58–0.85+0.83–0.93/0.65–0.93+0.53–0.58/0.40–0.53. *Leg spination*: Males. Leg I: femur d. 0-1-1-2; tibia v. 1-2-2; metatarsus v.2-2. Leg II: femur d. 1-1-2; tibia pr. 0-1, v. 1-2-2; metatarsus pr. 1-1, v. 2-2. Legs III and IV: femur d. 0-1-1-3; tibia pr. and rt. 1-1, v.1-2ap; metatarsus pr. and rt. 2-2ap, v.2-2ap.

Females. Leg I: femur d. 0-1-1-2; tibia v. 2-2-2ap; metatarsus v. 2-2. Leg II: femur d. 0-1-1-2; tibia pr. and v. 1-2-2ap; metatarsus v. 2-2. Leg III: femur d.0-1-1-2; patella rt. 1; tibia pr. and rt. 0-1-0, v. 1-1; metatarsus pr. 2-2ap, v. 2ap, rt. 2ap. Leg IV: femur d. 0-1-1-1; tibia pr. and rt. 0-1, v. 1-1; metatarsus pr., rt. and v. 1-2-ap. *Coloration*: Males. Carapace brown, clypeus yellowish-brown, eye field black, covered with white hairs. Sternum, maxillae and chelicerae brownish. Opisthosoma grey-brown. Dorsum with scutum and faintly visible, color markings composed of white spots and stripes. Anterior of opisthosoma covered with white hairs. Book-lung covers yellowish, spinnerets grey-brown. Leg I completely brown. Legs II–IV brown, but tarsi and distal parts of metatarsi yellowish. Dorsal sides of patellae II–IV yellowish as well. Palp: femur, patella and tibia yellow-cream colored; cymbium and bulb dark-brown. Females. Carapace dark-brown with medial yellow oblong spot and a pair of yellow stripes on side. Eye field covered with white hairs. Sternum brownish. Labia and maxillae brownish with yellow apex. Chelicerae light-brown. Opisthosoma grey-brown, dorsum with yellow spots and angular transverse lines posteriorly. Sometimes, owing to numerous yellow marks, the opisthosoma appears spotted. Spinnerets grey-brown. Book-lung covers yellow. Palps yellow, but dark specimens have brown band in the basal part of femur. All legs yellow with numerous brown bands. Epigynum faintly visible from the outside, usually covered with long dark hairs (see Roberts 1985, fig. 51b). Palp, epigynum and vulva are shown in Fig. 2.

Distribution: European-Baikal range, from Europe (Palmgren 1943, Tullgren 1944 in both as *Pseudeuophrys callida*; Prószyński 1976, Flanczewska 1981, Roberts 1985) through the South Urals (Esyunin 1991, Pakhorukov & Efimik 1988, Polyaniin & Parkhorukov 1988), east to Tuva (Logunov 1992a) and Buryatiya (our data). It has also been found in New Jersey, USA on anthropogenic structures, and is probably a recent introduction (Cutler 1982).

Remarks: Tullgren (1944) has recorded *E. erratica* as *Pseudeuophrys*. However, judging by his drawings, his material contained two species: females (Tullgren 1944, fig. 57) are *E. erratica*, but males (Tullgren 1944, figs. 58, 59) belong to

an unknown species that is closely related to *E. frontalis*. The records of *E. erratica* for the Maritime Province (Prószynski 1979, figs. 64–68, Nenilin 1985) and Korea (Paik 1987, figs. 40–54) really apply to *E. iwatensis* (see below). Apparently, Kulczynski (1895) also recorded *E. iwatensis* as *E. erratica*.

Habitat: This species lives on the trunks and in the crowns of conifers (firs, cedars, pines). Females make nests under bark on tree trunks. Nests contained one cocoon with 19–24 eggs (N=3). The specimens from Bulgaria were collected in an oak forest.

Euophrys iwatensis Bohdanowicz and Prószynski, 1987

Fig. 3

Material examined: 5♂ 2♀ (BI), 1♂, 1♀ (BCC), Khabarovsk Prov., 20 km SE of Khabrovsk, Bolshehekhtsyrski Reserve, 100–250 m, 2–22.06. 1987 (D. Logunov). 1♀, (BI), Maritime Prov., Sredni Bikin River, 1–5.06. 1977 (Y. Shibnev). 1♀ (BI), Sakhalin Area, Furugel' ma Island, 18.07. 1985 (M. Shternbergs); 1♀ (BI), Sakhalin Island, Makarov Distr., Tsapko, 2.08 1987 (A. Basarukin).

Diagnosis: This species is closely related to *E. erratica*, but can be easily separated by the smaller size of the embolus “ringlet” in males (Figs. 3A, B) and by the position of the female spermathecae (Figs. 3C, D). It is not possible to distinguish males of these species by coloration (*E. iwatensis* a little darker). However, females have differences in coloration of femur I and carapace. *E. iwatensis* has a completely brown femur I, and *E. erratica* has a yellow femur with two brown bands on the ends of the segment. The carapace of *E. iwatensis* is unicolorous brown, but the carapace of *E. erratica* has a medial yellow spot and two longitudinal stripes on the sides.

Description: Measurements (males/females). Carapace: length 2.05–2.18/1.85–2.13, width 1.50/1.33–1.45, height 0.90–1.00/0.80–0.88. Opisthosoma: length 1.90–2.08/2.53–3.13, width 1.58–1.80/2.00. L 0.88–0.93/0.90–0.95, W-1 1.25–1.30/1.20–1.28, W-3 1.15–1.20/1.15–1.25. AME 0.35–0.38/0.35–0.38. Clypeus height 0.10/0.08. Cheliceral length 0.65–0.70/0.60–0.68. Leg I: 1.25–1.48/1.00–1.08+0.75–0.90/0.55–0.65+

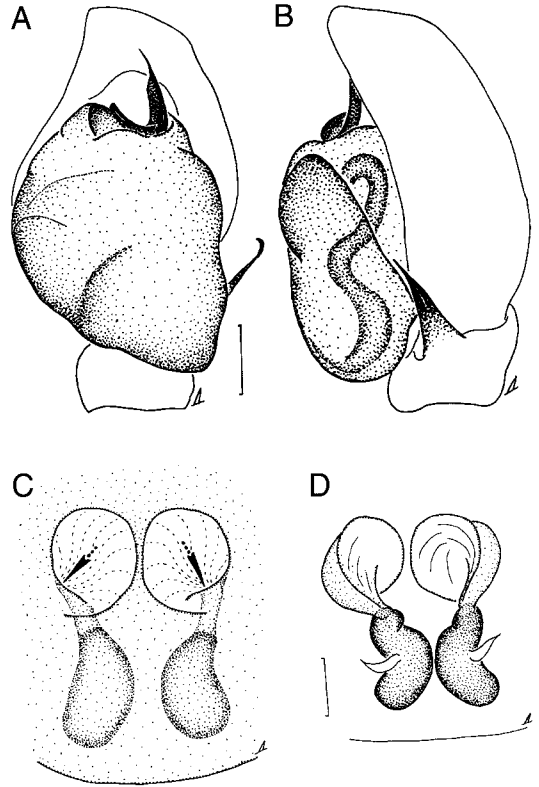


Fig. 3. *Euophrys iwatensis*. Khabarovsk Prov. — A male palpus, ventral view, B retrolateral view. — C epigynum. — D female internal genitalia. Scale bar 0.1 mm.

0.95–1.10/0.60–0.73+0.68–0.73/0.50+0.45–0.53/0.38–0.43. Leg II: 0.90–1.13/0.95–1.00+0.60–0.63/0.53–0.63 0.60–0.70/0.53–0.60+0.55–0.58/0.50+0.43–0.45/0.33–0.43. Leg III: 1.18–1.38/1.15–1.30+0.60/0.53–0.65+0.63–0.70/0.63–0.73+0.75–0.85/0.68–0.78+0.40–0.50/0.45–0.50. Leg IV: 1.20–1.35/1.23–1.40+0.60–0.63/0.53–0.58+0.75–0.85/0.75–0.88+0.85–0.93/0.75–1.00+0.48–0.53/0.53. **Leg spination.** Males. Leg I: femur d. 0-1-1-2; tibia v. 2-2-2; metatarsus v. 2-2-2; metatarsus v. 2-2. Leg II: femur d. 0-1-1-2; tibia pr. 0-1, v. 1-2-2ap; metatarsus pr. 1-1, v. 2-2. Leg III: femur d. 0-1-1-2; patella rt. 1; tibia pr. 0-1, rt. 1-1, v. 1-2ap; metatarsus pr. and rt. 1-2ap, v. 2-2ap. Leg IV: femur d. 0-1-1-2; patella rt. 1; tibia pr. and rt. 1-1, v. 1-2ap; metatarsus pr. and rt. 1-2ap, v. 2-2ap. Females. Leg I: femur d. 0-1-1-2; tibia v. 2-2-2; metatarsus v. 2-2. Leg II: femur d. 1-1-2; tibia pr. 0-1, v. 1-2-2; metatarsus

pr. 1-1ap, v. 2-2ap. Leg III: femur d. 1-1-2; patella rt. 1; tibia pr. and rt. 1-1, v. 1-1ap; metatarsus pr. and rt. 1-2ap, v. 2-2ap. Leg IV: femur d. 1-1-1; patella rt. 1; tibia pr. and rt. 0-1, v. 1-1ap; metatarsus pr., rt. v. 1-2ap. *Coloration*. Males. Very dark spider. Carapace and opisthosoma completely dark brown. Opisthosoma with dorsal scutum. The front margin of opisthosoma without white hairs. All legs dark brown, only tarsi II-IV and distal parts of metatarsi yellow. Palp: femur, patella and tibia yellowish with brownish tinge, covered with white hairs; cymbium and bulb dark-brown. Palp shown in Figs. 3A, B. Females. Carapace dark-brown, eye field black. Sternum, maxillae, labium and chelicerae dark-brown. Opisthosoma: dorsum grey-brown, with yellow color markings on posterior (yellow spots and transverse angle lines); venter yellow-brown. Book-lung covers yellow-grey. Legs yellowish with numerous dark-brown bands, but femora of legs I and II are completely dark brown. Palps yellow with brown femur (sometimes only basal part of femur is brown). Epigynum and vulva shown in Figs. 3C, D.

Distribution: Only in the Far East (Fig. 1), these are the first records from Russia. *E. iwatensis* was described from Japan (Bohdanowicz & Prószyński 1987). Prószyński (1979, figs. 64-68) and Paik (1987, figs. 40-54) have erroneously described it as *E. erratica* from the Maritime Province and Korea respectively. *E. iwatensis* is also known from China (Yin, Chang, unpublished data). This species seems to be vicariant with European-Baikal *E. erratica*.

Habitat: *E. iwatensis* lives in litter of lowland deciduous and mixed forests of the Far East.

Euophrys obsoleta (Simon, 1868)

Fig. 4

Material examined: 2♀ (BI), Pavlodar Area, environs of Pavlodar Town, 27.06. 1990 (O. Lyakhov); 1♀ (BCC), same locality, 30.08. 1989 (O. Lyakhov); 2♀ (BI), 20 km N of Pavlodar Town, Irtysh River Valley, 18.06. 1990 (O. Lyakhov); 1♀ (BI), Khakassia, Altai Distr., 40 km SE of Bely Yar Vill., 3-5 km E of Novorossiyskoye Vill., Beryozovskoye Lake, 350-380 m, 22-23.06. 1990 (D. Logunov); 2♂ (BCC), same locality, 17 km E of Novorossiyskoye Vill., Yenisey River Valley, 350 m, 24.06. 1990 (D. Logunov).

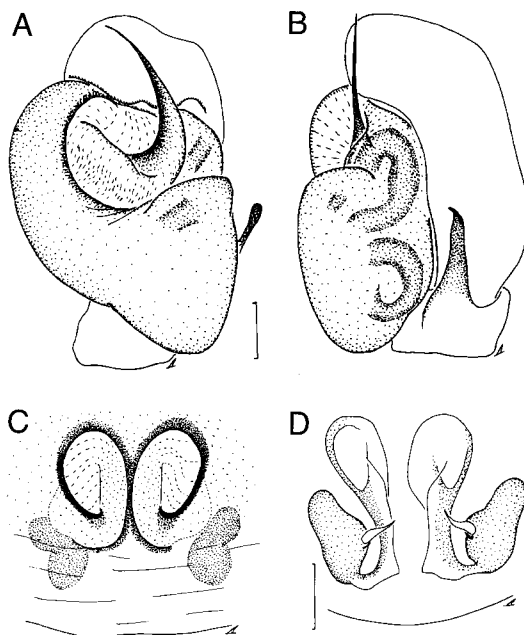


Fig. 4. *Euophrys obsoleta*. Khakassia. — A male palp, ventral view, B retrolateral view. — C epigynum. — D female internal genitalia. Scale = 0.1 mm.

Comparative material: 2♂, 2♀ (Zool. Mus. Warszawa, coll. of W. Kulczynski), sub "791", Poland, Kraków, 46/51. u.

Diagnosis: *E. obsoleta* is closely related to *E. erratica*. Differences are: the stronger embolus (Figs. 4A, B) in *E. obsoleta* and the structure of the spermathecae (Figs. 4C, D).

Description: *Measurements* (males/females). Carapace: length 1.74/1.83, width 1.21/1.26, height 0.79/0.73. Abdomen: length 1.42/1.71, width 1.23/1.40. Eye field: L 0.80/0.79, W-1 1.09/1.16, W-3 1.04/1.13. AME 0.34/0.36. Clypeus height 0.07/0.07, chelicerae length 0.54/0.50. Leg I: 1.21/0.90+0.60/0.47+0.76/0.53+0.56/0.43+0.40/0.37. Leg II: 0.84/0.81+0.41/0.47+0.51/0.46+0.47/0.43+0.37/0.37. Leg III: 1.01/1.03+0.47/0.49+0.53/0.53+0.63/0.59+0.47/0.37. Leg IV: 1.03/1.07+0.46/0.53+0.67/0.71+0.73/0.74+0.46/0.46. *Leg spination*. Males. Leg I: femur d. 0-1-1-2; tibia v. 1-1-2; metatarsus v. 2-2. Leg II: femur d. 0-1-1-2; tibia pr. 0-1, v. 1-2-2ap; metatarsus pr. 2ap, v. 1-1ap. Leg III: femur d. 0-1-1-3; patella rt. 1; tibia pr. and rt. 1-1, v. 0-1-1ap; metatarsus pr. and rt. and v. 1-2ap. Leg IV: femur d. 0-1-1-1; patella rt. 1; tibia pr. and rt. 1-

1, v. 1-1-1ap; metatarsus pr. rt. and v. 1-2ap. Females. Leg I: femur d. 0-1-1-2; tibia v. 2-2-2; metatarsus v. 2-2. Leg II: femur d. 0-1-1-2; tibia pr. 0-1, v. 1-2-2; metatarsus v. 2-2. Leg III: femur d. 0-1-1-3; patella rt. 1; tibia pr. and rt. 1-1, v. 1-2ap; metatarsus pr. and rt. 2-2ap, v. 2ap. Leg IV: femur d. 0-1-1-2; patella rt. 1; tibia pr. and rt. 1-1, v. 1-2ap; metatarsus pr. and rt. 2-2ap, v. 2ap. *Coloration*. Males. Carapace dark brown, with yellow oval medial spot, black around eyes. Clypeus and eye field covered with sparse white hairs. Sternum, maxilla, labium and chelicera light yellow brown. Opisthosoma: dorsum brownish, posterior third with longitudinal row of white spots and transverse lines; venter light brown. Book-lung covers yellow, spinnerets light brown. Legs I and II brown, only metatarsi and tarsi of both legs yellowish. Legs III and IV bicolored, yellow with brown bands. Palp: femur, patella and tibia yellowish; cymbium and bulb brownish. Palp is shown in Figs. 4A, B. Females. Carapace brown, covered with thin white hairs. Eye field darker, black around eyes. There is a medial and two lateral yellow stripes on the carapace, but dark specimens have a brown carapace. Sternum, labium, maxillae and chelicerae light yellow-brown. Opisthosoma: dorsum brownish with medial interrupted yellow stripe and transverse lines. Dark specimens with completely brown opisthosoma. Venter of opisthosoma lighter, usually yellowish. Book-lung covers and spinnerets greyish. Palps yellow. Legs yellow with brown rings. Epigynum and vulva shown in Figs. 4C, D.

Distribution: European-Siberian-middle-Asiatic, from Europe (Prószyński 1976, map 58) south to Alma-Ata Area (Spassky & Shnitnikov 1937) and Kirghizia (Nenilin 1984a, b, east to East-Kazakhstan Area (Prószyński 1976, map 58) and Khakassia (our data) (see Fig. 1). In China this species has been taken in the Xinjan Uygur area (Hu & Wu 1989).

Habitat: This species has been collected in deciduous forest litter in valleys.

The “*frontalis*” species group

The “*frontalis*” species group consists of the following Siberian species: *E. frontalis*, *E. flavoater*,

E. prozyskii sp. n., *E. uralensis* sp. n., *E. sp.* Males have a number of distinctive characters, namely: very thin tibial apophysis (Fig. 6); bulb structure similar, both in form and in size; thin loop-like embolus (Figs. 8A, B); leg I often with fringe composed of flat black hairs (Fig. 5). Females have a similar strong structure of genitalia; gonopores are covered with sclerotized strips (“lids”) (Figs. 8C, 10C); rounded spermathecae and twisting insemination ducts (Figs. 8D, E, 10D, E). In addition, the coloration of leg I, palps and, sometimes, legs II and IV is significant enough to be used as taxonomic characters of species (see above, Figs. 5–7).

Euophrys flavoater (Grube, 1861)

Figs. 5–9

Material examined: 1♂ (ZIL), Yamalo-Nenets Region, the Polar Urals, Sob’ River Valley, 15 km W of Khary Vill., Rayyz Mt., 13.07.1982 (A. Tanasevitch). 1♂ (BI), Altai Area, Koksa Distr., Kucherlak Lake, 1800–2000 m, 27.07.1978 (B. Zakharov); 1♂ (BI), Turochanski Distr., Sodra Lake, 5.09.1977 (B. Zakharov). 3♀ (BI), Khakassia Area, Shyra Distr., 1 km S of Kommunar Vill., 1300–1400 m, 23.07.1990 (D. Logunov). 2♂ (BI), Tuva, Piy-Khemski Distr., West Sayany, Kurtushybinski Mt. Range, 10 km NW of Shyvilig Vill., 1100–1200 m, 7.07.1990 (D. Logunov); 6♂ (BI), same district, 5–7 km NW of Sesslerig Vill., 1000–1100 m, 24.07.1989 (D. Logunov); 1♂ (BI), 2♀ (BCC), same locality, 1400–1500 m, 25.07.1989 (D. Logunov). 1♂ (*Holotypus*) (Zool. Museum Wroclaw), Khabarovsk Province, “Nikolajevsk-nad-Amuren, leg. L. J. Schrenck”; 4♀ (BI), same province, Verkhnye Bureinsk Distr., Mogdy River, 950 m, 15.08.1988 (D. Kurenschikov). 2♂, 3♀ (BI), Magadan Area, Upper Kolyma flow, Kontaktovy Spring, 147°30’E, 61°40’N, Summer 1988 (S. Bukhhalo).

Diagnosis: *E. flavoater* is very closely related to the North American *E. monadnock* and the new *E. uralensis* sp. n. The main differences are enumerated in Table 3 and are shown in Figs. 6–7. *E. flavoater* differs from *E. frontalis* and *E. prozyskii* sp. n. as follows: males have bicolored legs (the first pair is black, the second orange), the absence of clumps of white hairs on the cymbium and palpal tibia (palp of *E. flavoater* is covered with thick orange hairs). For more details see Table 1. Females of all species are very hard to separate. Females of *E. flavoater* differ from those of *E. frontalis* by the spermathecal

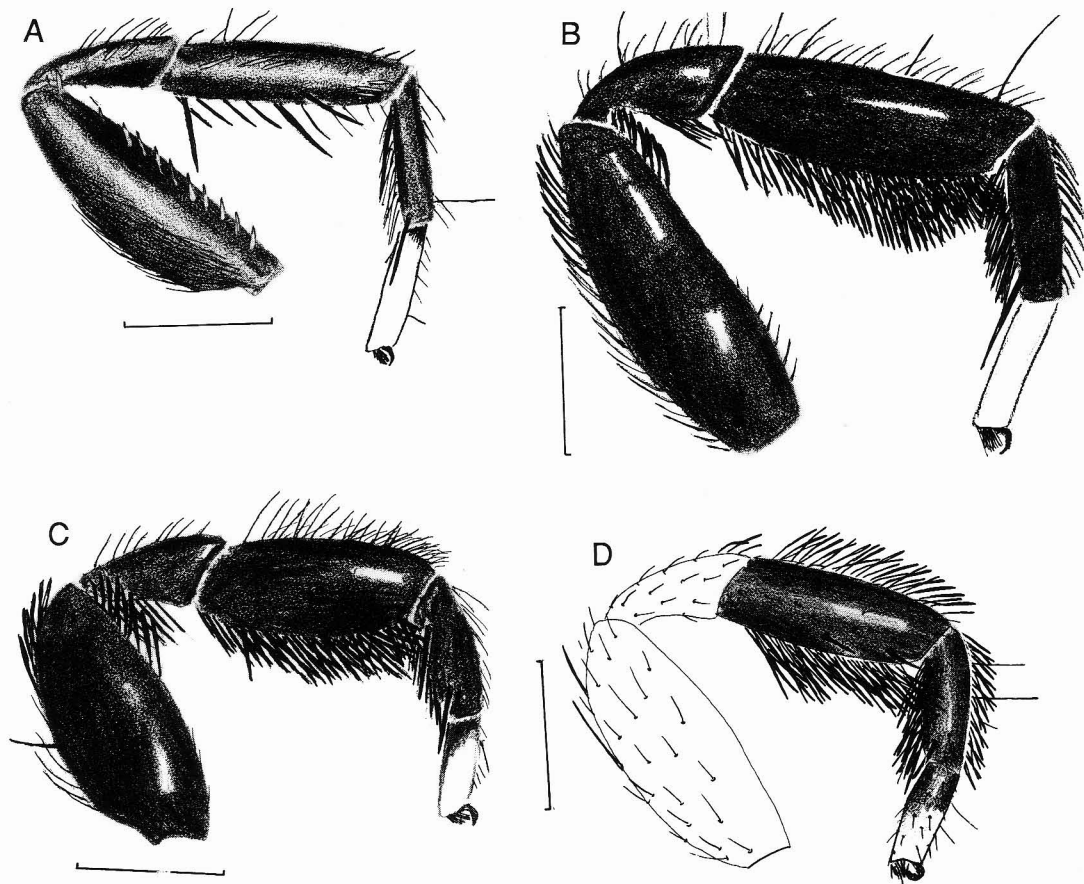


Fig. 5. Retrolateral view of right leg I in males of the *Euophrys frontalis* group. — A. *E. frontalis*. Khabarovsk area. — B. *E. flavoater*. Magadan area. — C. *E. proszynskii*. Magadan area. — D. *E. sp.* Khabarovsk area. Scale bar 0.5 mm.

form that is hardly elongated and by the larger loops of the introductory ducts. In comparison with the females of *E. proszynskii* sp. n. females of *E. flavoater* can be easily recognized by the larger size of spermathecae (see Figs. 8C–E). The brown patella and tibia of leg I distinguish females of *E. flavoater* from those of both *E. frontalis* and *E. proszynskii* (unfortunately, this character is poorly distinguished in young specimens).

Description: Measurements (males/females). Carapace: length 1.77–1.86/1.79–1.94, width 1.17–1.31/1.24–1.37, height 0.80–0.82/0.73–0.80. Opisthosoma: length 1.79–2.00/2.25–2.88, width 1.17–1.29/1.65–2.05. Eye field: L 0.86–0.66/0.89–0.86, W-1 1.11–1.21/1.09–1.16, W-3 1.09–1.16/1.09–1.11. AME 0.36/0.33. Clypeus height

0.14/0.07–0.11, cheliceral length 0.51/0.36–0.57. Leg I: 1.11–1.16/0.87–0.90+0.57–0.63/0.47–0.54+0.77–0.83/0.47–0.53+0.57–0.59/0.44–0.47+0.44–0.50/0.23–0.33. Leg II: 0.93–1.03/0.84–0.90+0.53–0.57/0.47–0.50+0.57–0.59/9.43–0.50–0.47–0.53/0.41–0.44+0.43–0.44/0.31–0.40. Leg III: 1.14–1.26/0.96–1.06+0.50–0.60/0.43–0.51+0.66–0.77/0.53–0.64+0.70–0.77/0.46–0.64+0.43–0.48/0.39–0.46. Leg IV: 1.31–1.49/1.14–1.23+0.49–0.59/0.51–0.56+0.97–1.13/0.86–0.99+1.03–1.14/0.83–1.00+0.56–0.60/0.51–0.53. **Leg spination.** Males. Leg I: femur d. 0-1-1-1; tibia v.1-2-1ap; metatarsus v.2-2. Leg II: femur d. 0-1-1-1; metatarsus v.2-2. Leg III: femur d.0-1-1-2+2pr.; patella rt. 1; tibia pr. and rt. 1-1-1, v.1-2ap; metatarsus pr. and rt. 1-2ap, v.2-2ap. Leg IV: femur d.0-1-1-1-2; patella rt.1-2. Fe-

Fig. 6. Retrolateral view of palpi in males of the *Euophrys frontalis* group. — A *E. flavoater*. Tuva. — B *E. uralensis*. South Urals. — C *E. monadnock*. Canada. Scale = 0.5 mm.

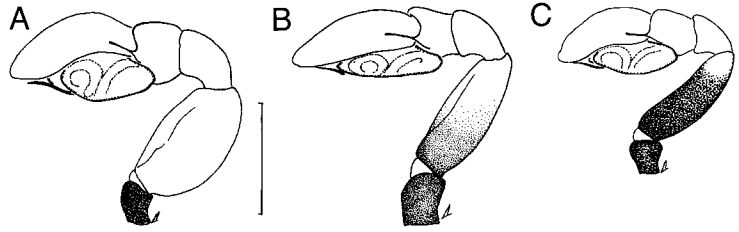
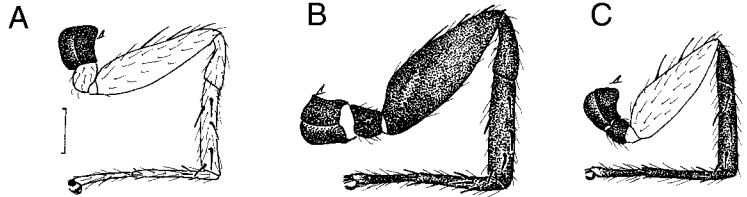


Fig. 7. Prolateral view of left leg IV in males of the *Euophrys frontalis* group. — A *E. flavoater*. Tuva. — B. *E. uralensis*. South Urals. — C. *E. monadnock*. Canada. Scale bar 0.5 mm.



males. Leg I: femur d.0-1-1-2; tibia v.2-2-2; metatarsus v.2-2. Leg II: femur d.0-1-1-2; tibia v.0-1-1ap; metatarsus v.2-2. Leg III: femur d.0-1-1-2; patella rt.1; tibia pr. and rt.1-1-1, v.1-1ap; metatarsus pr. and rt.2-3ap. Leg IV: femur d.0-1-1-2; patella rt.1; tibia pr. and rt.1-1-1ap, v.0-1-1ap; metatarsus pr. and rt.1-1-2ap, v.1ap. **Coloration.** Males. Carapace dark-brown, eye field black. AME surrounded by red hairs. Sternum, maxillae, labium, chelicerae and coxae dark-brown, abdomen dark grey with two longitudinal light stripes on dorsum (Fig. 9C). Light colored specimens have distinct reticulate markings. Dorsum with scutum. Spinnerets dark-grey. Palps and legs III and IV bright-orange in living specimens, but yellow in alcohol. Legs I and II dark-brown, but tarsi yellow. Palps covered with orange hairs. Legs covered with black hairs. Leg I with fringe of black flat hairs (Fig. 5B). Palp structure is shown in Figs. 6A, 8A, B. Females. Carapace yellow, eye field black, AME surrounded by white hairs. Sternum yellow. Maxillae, labium and chelicerae orange. Opisthosoma grey with yellow reticulate markings. Book-lung covers yellowish with brownish margins. Spinnerets greyish. All legs yellow, but sides of patella, tibia and metatarsus of leg I brown. Sometimes leg I is completely brown. Epigynum and vulva are shown in Figs. 8C–E.

Distribution: Siberian range (Fig. 1), from the Polar Urals south-east to Tuva and Khakassia, east to Khabarovsk Province, north-east to the

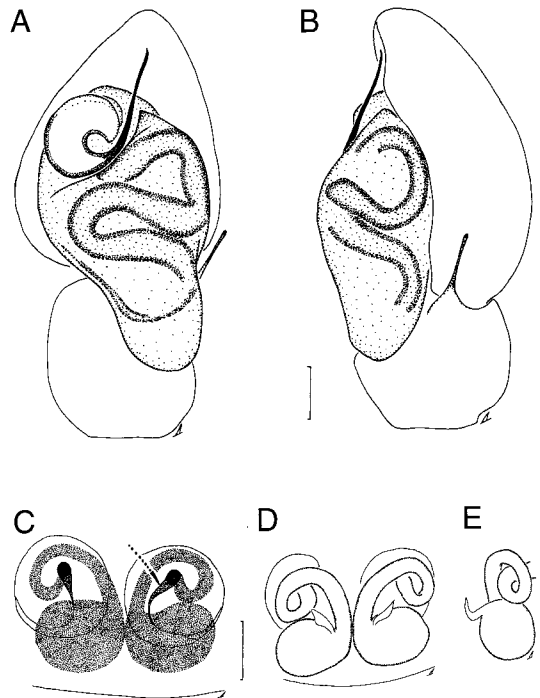


Fig. 8. *Euophrys flavoater*. Magadan area. — A male palp, ventral view, B retrolateral view. — C epigynum. — D female internal genitalia. — E side view of spermathecae and insemination duct. Scale bar 0.1 mm.

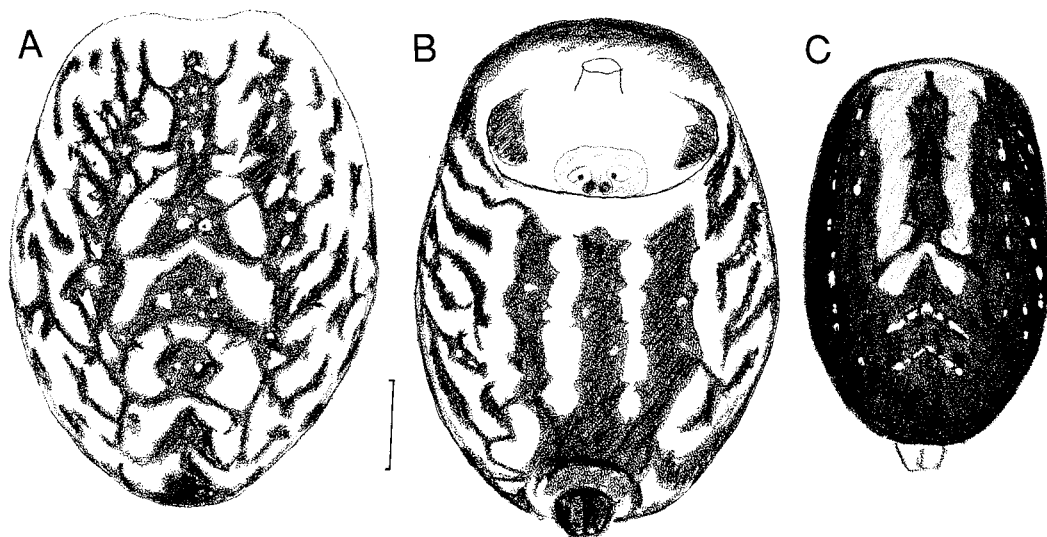


Fig. 9. *Euophrys flavoater*. Magadan area. Opisthosoma. — A female, dorsal view, B ventral view. — C male, dorsal view. Scale bar 0.5 mm.

Upper Kolyma river basin. *E. flavoater* was described by Grube (1861) from the environs of Nikolayevsk-na-Amure (Khabarovsk Province). It was redescribed by Prószyński (1971). It was also recorded in the Amur Area (Azheganova & Stenchenko 1977) as *Attus flaviator*-misspelling). Tanasevitch (1985) mentioned this species as *E. frontalis* from the Polar Urals (material of Tanasevitch examined, see above).

Remarks: This species was erroneously synonymized with *E. frontalis* (Prószyński 1979). However, investigation of the holotype of *E. flavoater* has confirmed the separate status of this species (see also diagnosis).

Habitat: *E. flavoater* is found in litter of mixed forests, where it can be found on moss with dry leaves.

Euophrys frontalis (Walckenaer, 1802)

Figs. 5, 10, 11

Material examined: 1♂ (PSU), Perm Area, Kishert' Distr., Preduralye Forestry, 14.08.1988 (T. Gridina). 1♂ (PSU), Chelyabinsk Area, Troitsk Distr., Troitsk Reserve, Summer 1986 (E. Polyenin). 1♂ (BI), Buryatia, Kabansk Distr., Beregovaya, 21.06.1983 (S. Danilov). 2♂, 6♀ (BI),

Khabarovsk Province, 20 km SE of Khabarovsk City, Bol'shekhekhtsyrski Reserve, 100–200 m, 2–22.06.1987 (D. Logunov); 4♀ (BI), environs of Komsomol'sk-na-Amure City, July 1985 (N. Ryabinin); 4♀ (BI), Verkhne Bureinsk Distr., Mogdy River, 950 m, 15.07.1988 (D. Kurenschikov); 4♂ (ZMTU), Novosibirsk Area, Akademgorodok, 16.06–4.08.1963 (H. Hippa); 2♀ (ZMMU), Okhotsk Distr., down flow of Ulya River, Gyrybykan, 20.08–15.09.1986 (I. Sukatchova). 1♂ (BI), Sakhalin Area, Aniva Distr., environs of Novoaleksandrovsk Town, 9.07.1989 (A. Basarukin).

Comparative material: Many specimens of both sexes from Finland, Poland, Germany and European part of the former USSR.

Diagnosis: All Siberian material of *E. frontalis* corresponds well with European specimens, and there are no differences both in coloration (leg I, hairs surrounding eye row I, etc.) and in the structure of the genitalia. *E. frontalis* is closely related to *E. proszynskii* sp. n. and *E. flavoater*. The main differences from the first species are enumerated in Table 2, from the second in Table 1.

Description: *Measurements* (males/females). Carapace: length 1.44–1.74/1.67–1.73, width 0.99–1.24/1.14–1.23, height 0.64–0.77/0.67–0.77. Opisthosoma: length 1.16–1.67/2.090–2.14, width 0.90–1.22/1.50–1.64. Eye field: L 0.69–0.84/0.73–0.86, W-1, 0.93–1.07/1.04–1.11, W-3

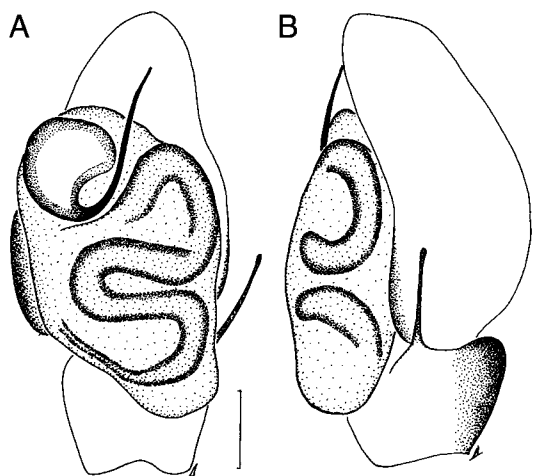


Fig. 10. *Euophrys frontalis*. Khabarovsk area. — A male palpus, ventral view, B retrolateral view. — C epigynum. — D female internal genitalia. — E side view of spermathecae and insemination duct. Scale bar 0.1 mm.

0.96–1.17/1.09–1.16. AME 0.29–0.33/0.32–0.33. Clypeus height 0.07–0.09/0.07–0.10, chelicerae length 0.39–0.43/0.46–0.47. Leg I: 0.77–0.96/0.86–0.89+0.43–0.44/0.50–0.51+0.53–0.67/0.53–0.57+0.37–0.57, 0.43–0.46+0.36/0.33–0.36. Leg II: 0.71–0.86/0.77–0.86+0.41–0.44/0.43–0.44+0.40–0.51/0.43–0.46+0.34–0.44/0.36–0.40+0.29–

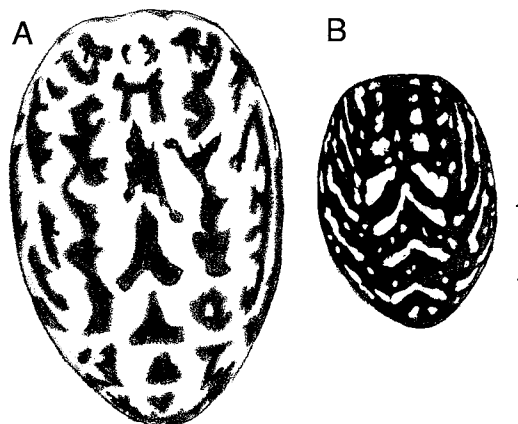


Fig. 11. *Euophrys frontalis*. Khabarovsk area. Opisthosoma, dorsal view. — A female, B male. Scale bar 0.5 mm.

0.36/0.30–0.34. Leg III: 0.81–1.04/0.89–0.97+0.39–0.43/0.46–0.50+0.47–0.60/0.51–0.54+0.50–0.69/0.57–0.71+0.31–0.40/0.36–0.37. Leg IV: 0.90–1.16/1.07–1.14+0.41–0.43/0.47–0.50+0.61–0.81/0.77–0.81+0.64–0.86/0.80–0.81+0.39–0.46/0.43–0.46. *Leg spination*. Males. Leg I: femur d.0-1-1-12; tibia v.1-2-2; metatarsus v.2-2. Leg II: femur d.0-1-1-2; tibia v.1-1-1; metatarsus pr.2ap, v.2-2. Leg III: femur d.0-1-1-3; patella rt.1; tibia pr.1-1, rt.1 1-1-1, rt.1-1-1, v.1-1ap; metatarsus pr. and rt.1-2ap, v.2-2ap. Leg IV: femur d.0-1-1-2; tibia pr.1-1, rt.1-1-1, v.1-2ap; metatarsus pr.2-0-2ap, rt. 1-1-2ap, v.1-1ap. Females. Leg I: femur d.1-1-1; tibia v.2-2-2; metatarsus v.2-2. Leg II: femur d.1-1-1; tibia v.1-1-1; metatarsus v.2-2. Leg III: femur d.0-1-1-2; tibia pr. and rt.1-1, v.1-1ap; metatarsus pr. and rt.2-2ap, v.1-2ap. Leg IV: femur d.1-1-1; tibia pr. and rt.0-1-1, v.1-1-2ap or 1-0-2ap; metatarsus pr. 2-0-2ap, rt.1-1-2ap, v.1-0-1ap. *Coloration*. Males. Carapace brownish, eye field and clypeus dark-brown, almost black. Eyes of row I surrounded by red hairs. Clypeus covered with red hairs. There are sparse white hairs on sides of carapace. Sternum, labium and maxillae yellow with greyish tinge. Sternum covered with white hairs. Chelicerae dark-brown. Opisthosoma yellow, dorsum with grey net colour markings. Scutum present both on dorsum and on venter. Booklung

covers and spinnerets greyish. Leg I brown, with light stripes on sides (Fig. 5A), and tarsus I yellow. Leg II yellow, but with dark brown prolateral stripe. Sometimes femur II brown on retrolateral side also. Legs III and IV completely yellow, with distal dark-brown bands on tibia and patella. Palp structure shown in Figs. 10A, B. Females. Carapace yellow with brown edge. Eye field brownish, black around eyes. Eyes of row I surrounded by white hairs. Opisthosoma light yellow with grey reticulate markings, and covered with grey hairs. Booklung covers and spinnerets greyish. Epigynum poorly sclerotized, its structure very variable (Figs. 10C). Vulva shown in Figs. 10D, E.

Distribution: Trans-Eurasian range from Europe through Siberia, east to the Far East, south to East-Kazakhstan Area and China. In Siberia (Fig. 1) it has been recorded from the South Urals (Pakhorukov 1985, Pakhorukov & Efimik 1988, Polyanin & Pakhorukov 1988: as *E. maculata*), East-Kazakhstan Area (Prószyński 1976, map 53), Evenkiya (Eskov 1986, 1988), Buryatia (Danilov 1989), Irkutsk Area (Izmailova 1989) and Khabarovsk Province (Kulczyński 1895, Kharitonov 1932, Dunin 1984, Nenilin 1985). *E. frontalis* has also been found in China (Zhou & Song 1988).

Remarks: The presence of *E. frontalis* in the Maritime Province (Prószyński 1979, Dunin 1984) and Korea (Paik 1985), in our opinion, needs to be verified. Apparently, another species, closely related to *E. frontalis*, lives there. Its males differ from true *E. frontalis* by the yellow coloration of the femur and patella of leg I (Fig. 5D), white thick hairs on the clypeus and the absence of clumps of white hairs on the cymbium and palpal tibia, and in females by the smaller size of spermathecae. We are describing this species as *Euophrys* sp. (see below).

Records from the Magadan area (Marusik 1988) belong to *E. prozysniskii* sp.n. (see below).

Records from Middle Asia (Nenilin 1984a, 1985) are erroneous. Examination of Nenilin's material from Middle Asia (ZIL) which was identified by him as *E. frontalis* without doubt belong to some other species (at least two). The problem of *Euophrys* in Middle Asia calls for special attention.

Habitat: *E. frontalis* is a common resident of litter in mixed and deciduous forests.

Euophrys prozysniskii sp. n.

Figs. 5, 12, 13

Material examined: *Holotype* 1♂ (ZMMU), Magadan Area, Ten'kinski Distr., Upper Kolyma flow, foothills of Bol'shoi Annachag Mt. Range, Sibit-Tyellakh River Basin, Aborigen Research Station, Summer 1987 (Yu. Marusik). *Paratypes*: Khakassia: 2♂ (BI), Shira Distr., 3–5 km E of Shira Vill., Itkul' Lake, 21–22.07.1990 (D. V. Logunov); 5♂, 21♀ (BI), same district, 1 km S of Kommunar Vill., 1300 m, 23.07.1990 (D. Logunov). Tuva: 2♂ (BI), Tes-Khemski Distr., 20 km NW of Khol'-Oozhu., 2000m, 8–9.07.1989 (D. Logunov); 2♀ (BI), Mongun-Taiga Distr., Upper Barlyk River flow, confluence with Onachy River, 6.06.1990 (O. Lyakhov). Magadan Area: 4♂, 2♀ (BI), same locality as holotype one, Summer 1987 (Yu. Marusik); 1♀ (BI), same locality, 31.05.1983 (Yu. Marusik); 1♂ (BI), 1♂ 1♀ (ZMMU), same locality, 24.07.1984 (Yu. Marusik); 1♀ (BI), same locality, June 1983 (Yu. Marusik); 33♀ (ZMMU), same locality, summer 1986 (Y. Marusik); 1♂ 1♀ (BCC), same locality, summer 1985 (Yu. Marusik); 3♂ (BI), same locality, 3–23.07.1983 (A. Avershyn); 9♂ 2♀ (BI), Upper Kolyma flow, Kontaktovy Spring, 147°30'E, 61°40'N, Summer 1988 (S. Bukhhalo); 1♂ 2♀ (BI), same locality, Summer 1987 (S. Bukhhalo); 4♀ (BI), Upper Kolyma flow, foothills of Bol'shoi Annachag Mt. Range, Kyunnebel'yakh River Basin, 13.07.1987 (Y. Marusik); 1♀ (BI), 2♀ (ZMMU), 50 km N of Ust'-Omchug, Detrin River Basin, Vakhanka River Valley, 5–14.08.1984 (K. Eskov); 1♀ (BI), Magadan, Nagayevskaya Bay, 26.08.1987 (Yu. Marusik); 6♀ (ZMMU), 29 km N of Magadan, Snezhnaya Dolina Vill., Summer 1986 (Yu. Marusik); 19♀, 1 juv. (IBPN), Magadan Area, Ola River upper flow, Bulum Spring, 700–1000m, 17.08.1992 (Yu. Marusik). Buryatia: 1♂ (not paratype, palpless) (BI), Bichura Distr., Okinoklyuchi Vill., 28.05.1983 (S. Danilov).

Diagnosis: *E. prozysniskii* sp. n. is very similar to *E. frontalis*, *E. uralensis* sp. n. and *E. flavoater*. The distinguishing characters from *E. frontalis* are given in Table 2. It differs from *E. uralensis* sp. n. by brown palps, from *E. flavoater* by brown palps and brown legs III and IV (Figs. 6–7). Females of *E. prozysniskii* cannot be easily distinguished from the last two species (see diagnosis of *E. flavoater*).

Etymology: The species is named after the well-known Polish arachnologist, Prof. Jerzy Prószyński, who has successfully worked on Salticidae for over 30 years.

Description: *Measurements* (males/females). Cephalothorax: length 1.73–2.10/1.69–1.97, width 1.20–1.42/1.16–1.33, height 0/70–0.97/0.81–0.87. Opisthosoma: length 1.76–2.00/2.61–3.08, width 1.1901.40/1.77–2.13. Eye field: L 0.73–0.94/0.79–0.84, W-1 1.04–1.14/1.06–1.10,

Table 1. Differences between *E. frontalis* and *E. flavoater*.

<i>E. frontalis</i>	<i>E. flavoater</i>
Males	
Opisthosoma with ventral scutum	Opisthosoma without such scutum
Cymbium and patella of palp with clumps of long white hairs	Entire palp, including cymbium, covered with orange hairs
Bulb underneath is weakly elongated and narrow	Bulb underneath is noticeably elongated and narrow
Leg I brown, legs II–IV yellow	Legs I, II brown, legs III, IV orange
Sternum and coxae yellow	Sternum and coxae brown
Females	
Tibia I yellow	Tibia I brownish
Spermathecae oval, elongated	Spermathecae rounder and larger than those of <i>E. frontalis</i>

Table 2. Differences between *E. prozysniskii* and *E. frontalis*.

<i>E. prozysniskii</i>	<i>E. frontalis</i>
Males	
Clypeus covered with thick white hairs	Clypeus without such hairs
Eyes of row I bordered by white hairs	Eyes of row I bordered by red hair
Sternum dark-brown	Sternum yellow
All legs dark-brown	Leg I brown, other legs yellow
Leg I with fringe of thick flat hairs (Fig. 5C)	Leg I without such fringe (Fig. 5A)
Opisthosoma ventrally dark	Opisthosoma ventrally light
Dorsal scutum	Both dorsal and ventral scutum
Segment of palp and cymbium dark-brown Femur covered with dorsal white hairs. Cymbium covered with black bristles.	Patella, tibia and cymbium of palp yellow; on dorsal side brownish. Patella, tibia and basal part of cymbium covered with dorsal bunches of long white hairs.
Protuberant base of embolus	Flat base of embolus
Females	
Spermathecae small (Fig. 12D)	Spermathecae large, transverse (Fig. 10D)

Table 3. Differences between *E. monadnock*, *E. flavoater* and *E. uralensis*.

<i>E. monadnock</i>	<i>E. flavoater</i>	<i>E. uralensis</i>
Males		
Femur of palp dark brown with yellow tip (Fig. 6C)	Femur of palp completely yellow (orange in living specimens, Fig. 6A)	Femur of palp half light brown (Fig. 6B)
Palpal femur covered with brownish hairs	Palpal femur covered with thick red hairs	Palpal femur covered with white hairs
Palpal femur not swollen (Fig. 6C)	Palpal femur swollen (Fig. 6A)	Palpal femur not swollen (Fig. 6B)
Legs III and IV bicolored; femur yellow (red-orange in living specimens), remaining segments dark-brown (Fig. 7C)	Legs III and IV unicolored, yellow (orange in living specimens) (Fig. 7A)	Legs III and IV unicolored, dark-brown (Fig. 7B)
Clypeus without white hairs	Clypeus without white hairs	Clypeus and front side of chelicerae covered with thick white hairs
Tarsus I yellow	Tarsus I yellow	Tarsus I half dark-brown
Females		
Spermathecae relatively small (Fig. 14D)	Spermathecae relatively large (Figs. 8D)	Spermathecae relatively small (Fig. 15D)
Patella, tibia, and metatarsus of leg I brownish	Patella, tibia and metatarsus of leg I brownish	Patella, tibia and metatarsus of leg I yellow

Table 4. Differences between *Euophrys* sp. and *E. frontalis*.

<i>E. sp.</i>	<i>E. frontalis</i>
Clypeus covered with thick white hairs	Clypeus without hairs
Eyes of row I bordered by white hairs	Eyes of row I bordered by red hairs
Femur and patella of leg I yellow, femur swollen (Fig. 5D)	Femur and patella of leg I brown, femur not swollen (Fig. 5A)
Tibia and metatarsus of leg I with thick fringe of flat hairs (Fig. 5D)	Leg I without fringe
Dorsal scutum only	Both dorsal and ventral scutum
Leg II completely yellow	Leg II with proteral wide black stripe
Femur of palp yellow (see also Proszynski, 1979)	Femur of palp brownish

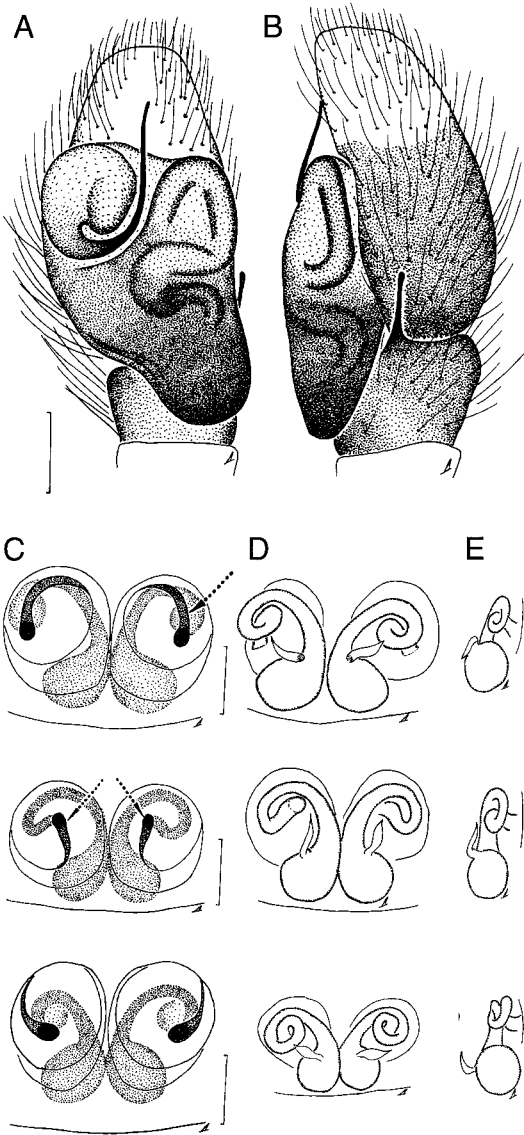


Fig. 12. *Euophrys prozysniskii*. Magadan area, and Tuva (lower female). Arrows point to sclerotized rims. — A male palpus, ventral view, B retrolateral view. — C epigynum. — D female internal genitalia. — E side view of spermathecae and insemination duct. Scale bar 0.1 mm.

W-3 1.03–1.17/1.07–1.17. AME 0.30–0.31/0.30–0.31. Clypeus height 0.14–0.16/0.09–0.10, chelicerae length 0.50–0.63/0.49–0.53. Leg I: 0.97–1.13/0.91–0.96+0.51–0.63/0.54–0.56+0.67–0.77/0.51–0.56+0.43–0.51/0.41–0.43+0.34–0.37/

0.33–0.34. Leg II: 0.87–0.97/0.83–0.90+0.46–0.61/0.47–0.51+0.50–0.60/0.43–0.47+0.40–0.50/0.40–0.41+0.34–0.40/0.31–0.36. Leg III: 1.01–1.19/0.97–1.03+0.51–0.57/0.50–0.57+0.56–0.67/0.51–0.54+0.61–0.69/0.57+0.43–0.44/0.37–0.43. Leg IV: 1.14–1.36/1.17–1.27+0.50–0.61/0.54–0.56+0.80–0.97/0.8100.86+0.83–1.04/0.84–0.91+0.51–0.54/0.47–0.50. *Leg spination*. Males. Leg I: femur d.0-1-1-1ap; tibia v.2-2-2; metatarsus v.2-2. Leg II: femur d.0-1-1-2; tibia v.1-1; metatarsus v.2-2. Leg III: femur pr. 0-1, d.1-1; patella rt.1; tibia pr.2-1, rt.1-1, v.1-1ap; metatarsus pr. and rt.1-2ap, v.2-2ap. Leg IV: femur d.0-1-1-1-2; tibia pr. 1-1-1, rt. 1-1-2, v.1-1ap; metatarsus pr.1-2ap, rt.1-1-2ap, v.1-2ap. Females. Leg I: femur d.0-1-1-1+1pr.; tibia v.2-2-2; metatarsus v.2-2. Leg II: femur d.0-1-1-1+1pr.; tibia v.0-1-1 or 1-1-1; metatarsus v.2-2. Leg III: femur d.0-1-1-2; patella rt.1; tibia pr. and rt.1-1, v.1-1ap; metatarsus pr.1-2ap, rt.2-2ap, v.1-2ap. Leg IV: femur d.1-1-1; patella rt.1; tibia pr.1-1-1, rt.0-1-1, v.1-2ap; metatarsus 2-2ap, rt.1-1ap, v.1-2ap. *Coloration*. Males. Carapace light-brown or dark-brown (in Khakassian specimens). Eye field usually black. Clypeus covered with thick white hairs. Sternum, labium, maxillae and coxae brown or dark brown. Chelicerae red brown. Abdomen grey or dark-grey with white reticulate markings. Dark specimens have almost no markings. Dorsal scutum only, about half length of abdomen. Book-lung covers brownish, spinnerets grey. Legs dark-brown with yellow patellae. Femur I usually lighter than other segments, red-brown. Legs and abdomen thickly covered with dark hairs. Leg I with fringe of thick flat hairs (Fig. 5C). Palp dark-brown with dorsal bunch of white hairs on femur. Palp is shown in Figs. 12A, B. Females. Carapace yellow, eye field brown, eyes bordered with white hairs, sometimes sides of carapace brownish. Maxillae, labium and chelicerae yellow. Opisthosoma greyish with yellow reticulate markings. Book-lung covers and spinnerets greyish. Legs and chelicerae yellow, only tibia, metatarsus and tarsus of leg I brownish. Epigynum and vulva shown in Figs. 12C–E.

Distribution: Siberian range, from the south of central Siberia (Khakassia, Tuva) north-east to Magadan Area (Fig. 1). *E. prozysniskii* sp. n. was erroneously mentioned by Marusik (1988)

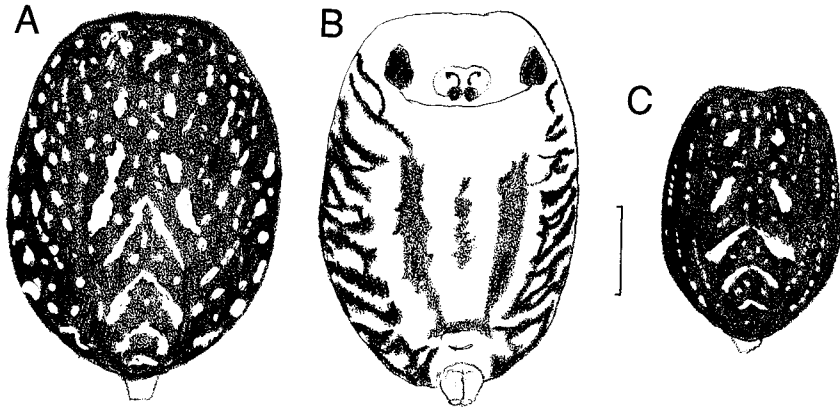


Fig. 13. *Euophrys prozysniskii*. Magadan area. Opisthosoma. — A female, dorsal view, B ventral view — C male, dorsal view. Scale bar 0.5 mm.

in Magadan Area as *E. frontalis*, and as *Euophrys* sp. in Tuva (Logunov 1992a).

Habitat: This species is primarily associated with xerophytic biotopes; such as mountain-rock or slope steppes in Tuva. In the Magadan Area, it occurs on south exposed slopes, in dry meadows, on relict steppe, in screes and stony plots in mountain stony tundra. However, in Khakassia this species has been collected in the same environment from mountain-rock tundra.

Euophrys uralensis, sp. n.

Figs. 6, 7, 15

Material examined: *Holotype* 1♂ (ZMMU, Ta-4659), Chelyabinsk Area, Troitsk Distr., Troitsk Reserve, 30.05.1984 (Ryabinina). *Paratypes*: 3♂, 1♀ (PSU), together with holotype; 1♀ (ZMMU, Ta-4660), same locality, 14.07.1984 (S. Eshunin); 1♂ (BI-1413), Caucasus, Azerbaijan, Shemakha Distr., Pirkulinski State Reserve, 1800 m alt., 27.05.1984, (D. V. Logunov).

Diagnosis: *E. uralensis* sp. n. is easily distinguished from *E. frontalis* and *E. prozysniskii* by the unicolored red palp. It resembles *E. flavoater* and *E. monadnock* more. The main differences between them are given in Table 3 (see also Figs. 6–7). These species demonstrate a rare situation whereby salticid species have ornamented third and fourth legs by which they can be separated. This ornamentation is also well known in the New World genera *Corythalia* and *Habronattus* and the Old World genus *Saitis*.

In addition, males of *E. uralensis* differ from the other species by greater body size. Females of all three species are difficult to distinguish and the characters often are feebly demarcated.

Etymology: This species is named after the Ural Mountain Range, where the holotype was found.

Description: Measurements (males/females). Carapace: length 1.78–2.53/1.58–1.83, width 1.15–1.69/1.15–1.23, height 0.75–0.98/0.73. Abdomen: length 1.75–2.33/2.18, width 1.30–1.63/1.50. Eye field: L 0.75–1.00/0.83, W-1 1.00–1.18/1.05, W-3 1.05–1.30/1.08. AME 0.28–0.35/0.30. Clypeus height 0.13–0.18/0.13, chelicerae length 0.50–0.70/0.45. Leg I: 1.03–1.53/0.90+0.58–0.78/0.53+0.55–1.00/0.55+0.45–0.70/0.38+0.38–0.55/0.33. Leg II: 0.90–1.25/0.83+0.45–0.78/0.50+0.48–0.73/0.48+0.43–0.58/0.38+0.38–0.55/0.38. Leg III: 0.95–1.35/0.98+0.48–0.65/0.50+0.53–0.78/0.50+0.58–0.77/0.55+0.35–0.55/0.33. Leg IV: 1.15–1.55/1.20+0.50–0.75/0.55+0.78–1.13/0.78+0.88–1.15/0.85+0.45–0.55/0.45. Leg spination. Males. Leg I: femur d.0-1-1-2; tibia v.1-2-2; metatarsus v.2-2. Leg II: femur d.0-1-1-2; tibia pr.0-1, v.1-2ap; metatarsus pr.1ap, v.2-2. Leg III: femur pr. 0-0-1-1, d.0-1-1-2; patella rt.1; tibia pr. and rt.1-1, v.1-2ap; metatarsus pr. and rt.1-2ap, v.2-2ap. Leg IV: femur d.0-1-1-3; patella rt.1 tibia pr. and rt.1-1-1, v.1-2ap; metatarsus pr.2-2ap, rt.1-1-0-1-2ap, v.2-2ap. Females. Leg I: femur d.0-1-1-2; tibia v.2-2-2; metatarsus v.2-2. Leg II: femur d.0-1-1-

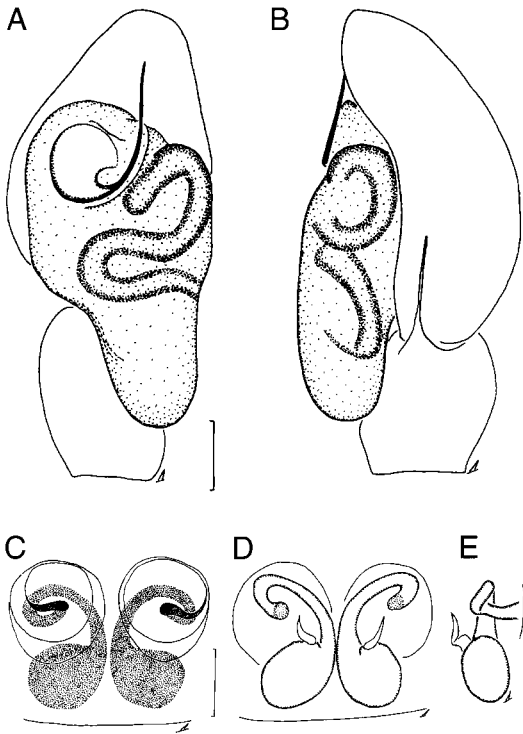


Fig. 14. *Euophrys monadnock*. Canada. — A male palpus, ventral view, B retrolateral view. — C epigynum. — D female internal genitalia. — E side view of spermathecae and insemination duct. Scale bar 0.1 mm.

2; tibia pr. 0-1, v.1-1-1; metatarsus pr.1ap, v.2-2. Leg III: femur d.0-1-1-2, pr.0-1-1; tibia pr. and rt.1-1; metatarsus pr. and rt. 1-2ap, v.2-2ap. Leg IV: femur d.0-1-1-1; tibia pr. and rt.1-1-1, v.1-2ap; metatarsus pr.2-2ap, rt.1-1-2ap, v.2-2ap. *Coloration*. Males. Carapace dark brown, eyes bordered by black. Clypeus and front side of chelicerae covered with white hairs. Sternum, maxillae, labia and chelicerae brown. Opisthosoma grey-brown, dorsum with small scutum. Book-lung covers yellow, spinnerets greyish-brown. Palp yellow, basal part of femur brownish (Fig. 6B). All legs unicolored brown, but tarsal tips yellow. Femur and tibia of leg I with fringe of thick flat hairs. Palpal structure shown in Figs. 15A, B. Females. Light colored, body yellow, eye field brown. Eye field and clypeus covered with light hairs. Opisthosoma yellow with greyish reticulate markings. Palps and all

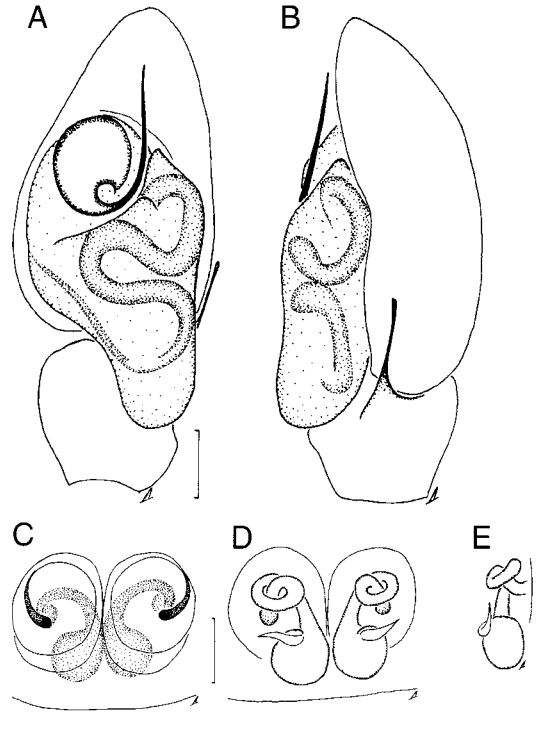


Fig. 15. *Euophrys uralensis*. Chelyabinsk area. — A male palpus, ventral view, B retrolateral view. — C epigynum. — D female internal genitalia. — E side view of spermathecae and insemination duct. Scale bar 0.1 mm.

legs yellow, but patella, tibia and metatarsus of leg I with brownish tinge. Epigynum and vulva shown in Figs. 15C–E.

Distribution: East Caucasus, South Urals (Fig. 1).

Habitat: This species has been collected in mixed-grass steppe.

Euophrys sp.

Material examined: 1♂ (BI), Amur River, 409 km from Khabarovsk, 22.06.1988 (D. Kurenshchikov).

Distribution: Maritime Province of the Russian Far East, Japan and Korea.

Remarks: This species is well distinguished from *E. frontalis* by peculiarities of the coloration (see Table 4). Taking into account the taxonomic significance of color characters in the “*frontalis*”

species group, including the diagnoses of species, it can be stated that *Euophrys* sp. is a new species. However, the specimen received is missing the palps and without this crucial character we have chosen not to formally describe it at this time.

Prószyński (1979, figs. 69–74), apparently recorded this species as *E. frontalis*, but he also pointed out the differences between these specimens and *E. frontalis* in coloration of leg I and palpi. These differences are the same as we have enumerated above. To judge from Prószyński's drawings, *Euophrys* sp. also differs from *E. frontalis* in the location of the seminal ducts in the palpi and the smaller size of the spermathecae. The specimens found by Dunin (1984, figs. 6–7) from the Maritime Province may also belong to this species. Based on the material available, we are hesitant to describe this species. As more specimens accumulate, it should become possible to name it.

The “*petrensis*” species group¹

Spiders of this group differ from those of other species groups by the small body size, absence of tibial apophysis in the male palp, large spermathecae and very thin, thread-like insemination ducts in the female vulva (Figs. 16E, 17D, 18E). The “*petrensis*” species group includes three Siberian species, *E. petrensis*, *E. aequipes* and *E. thorelli*.

Euophrys aequipes (O. Pickard-Cambridge, 1871)

Fig. 16

Material examined: 1♂, 2♀ (PSU), Chelyabinsk Area, Troitsk Distr., Troitsk Reserve; 1♀ (PSU), same locality, 11.07.1974 (Golovashkina); 1♀ (PSU), same locality, 12.07.1989 (S. Esyunin); 1♀ (PSU), same locality, 11.07.1981 (leg ?). 1♀ (BI), East-Kazakhstan Area, Zaisan Distr., Saur Mt. Range, Karaungur River, Kenderlyk River basin, 1800 m, 19.06.1990 (K. Eskov). 1♀ (BI), Khakassia, Altai Distr., 40 km SE Bely Yar Vill., 15–17 km E of Novorossiyskoye Vill., 380–400 m, 23–24.06.1990 (D. Logunov); 1♂ (ZMTU), Altai, Bertkum, south slope, 2000 m,

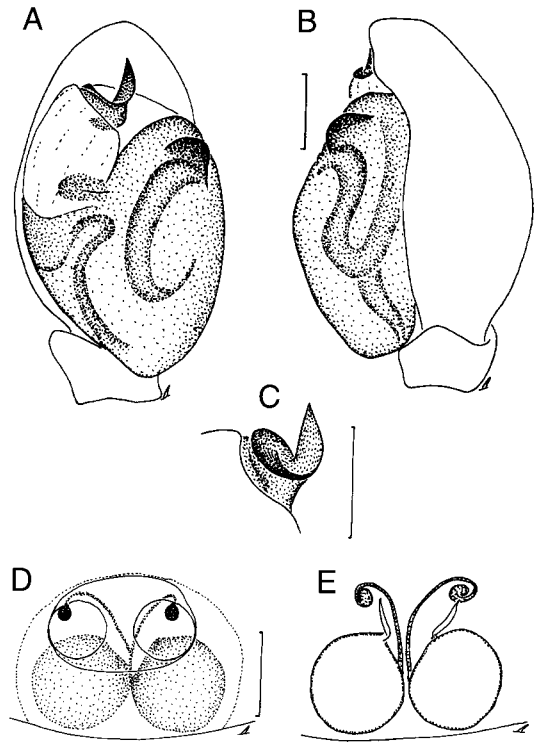


Fig. 16. *Euophrys aequipes*. Chelyabinsk area. — A male palpus, ventral view, B retrolateral view, C embolus. — D epigynum. — E female internal genitalia. Scale bar 0.1 mm.

9–13.07.1983 (H. Hippa). 1♂ (BI), Tuva, mongun-Taiga Distr., 5 km SE of Mugur-Aksy Vill., 2000 m, 11.06.1990 (O. Lyakhov). 1♀ (BI), Chita Area, Kyra Distr., Sokhondo State Reserve, 1350 m alt. 8–9.06.1991 (D. Logunov).

Diagnosis: This species can be easily separated from all species except *E. petrensis* by the bands on the legs and small size. *E. aequipes* differs from *E. petrensis* by the smaller size of the embolus and its location (Figs. 16A–C) and by the poorly sclerotized epigynum and vulval structure (Figs. 16D, E).

Description: *Measurements* (male/female). Carapace: length 1.31/1.21, width 0.94/0.80, height 0.54/0.47. Opisthosoma: length 1.23/1.44, width 0.94/1.04. Eye field: L 0.54/0.51, W-1 0.77/0.69, W-3 0.77/0.69. AME 0.30/0.20. Clypeus height 0.04/0.04, chelicerae length 0.29/0.31. Leg I: 0.66/0.56+0.37/0.30+0.44/0.33+0.31/0.29+ 0.27/0.21. Leg II: 0.57/0.49+0.30/

¹Note added in proof: At present, it is clear that the congeners of this group should be included in the genus *Talavera* (see Logunov 1992b).

0.29+0.36/0.27+0.31/0.20+0.23/0.19. Leg III: 0.74/0.67+0.34/0.30+0.40/0.36+0.41/0.33+0.31/0.21. Leg IV: 0.77/0.69+0.36/0.27+ 0.50/0.44+0.44/0.43+0.34/0.27. *Leg spination*. Males. Leg I: femur d.1-1-2ap; tibia v.1-2-2ap; metatarsus v.2-2. Leg II: femur d.1-1-2ap; tibia v.0-1-0; metatarsus v.2-2. Leg III: femur d.1-1-3ap; patella rt. 1; tibia d.1-0, pr. and rt. 1-1, v.1-1ap; metatarsus pr. and rt.1-2ap, v.2-2ap. Leg IV: femur d.1-1-1; tibia pr. and rt.1-2ap, v.1-2ap. Female. Leg I: femur d.1-1-2ap; tibia v.1-2-2ap; metatarsus v.2-2. Leg II: femur d.1-1-1ap; tibia v.0-1; metatarsus v.2-2. Leg III: tibia pr. and rt.0-1, v.0-1-0; metatarsus pr.1-2ap, rt.2ap, v.1-2ap. Leg IV: femur d.0-0-1-1; tibia pr. and rt.0-1, v.0-1-0; metatarsus pr. and rt.1-2ap, v.1-2ap. *Coloration*. Male. Carapace orange, in basin part brownish. Eye field dark-brown. The eyes of row I bordered with white hairs, clypeus covered with sparse white hairs. Sternum brown with anterior yellow spot. Maxillae, labium and chelicerae yellow. Opisthosoma: dorsum dark-brown, venter yellow with brownish spots. Booklung covers yellow, spinnerets brownish. Coxae of all legs yellow, the remaining segments yellow with distal brownish bands. Leg I is darkest, the prolateral sides of all segments black. Palp yellow, bulb brownish. The palpal structure is shown in Figs. 16A–C. Female. Coloration corresponds to that of the males, but lighter. Sternum yellow, venter of opisthosoma, yellow as well. Brown bands on legs are thinner. Palp yellow. Epigynum and vulva shown in Figs. 16D, E.

Distribution: European, Siberian and middle Asiatic range (Fig. 1), from Europe east to Tuva, south and south-east to Kirghizia, and China (Hu & Wu 1989). In Siberia it was recorded earlier in the South Urals (Pakhorukov & Efimik 1988, Polyenin & Pakhorukov 1988, Shternbergs 1977). The occurrences in the Maritime Province (Nenilin 1984b, 1985), need to be confirmed.

Habitat: *E. aequipes* occurs in grasslands and in steppes.

Euophrys petrensis C. L. Koch, 1837

Fig. 17

Material examined: 1♀ (BI), East-Kazakhstan Area, environs of Zaisan Town, Canyon of Dzhenimey River, 2–

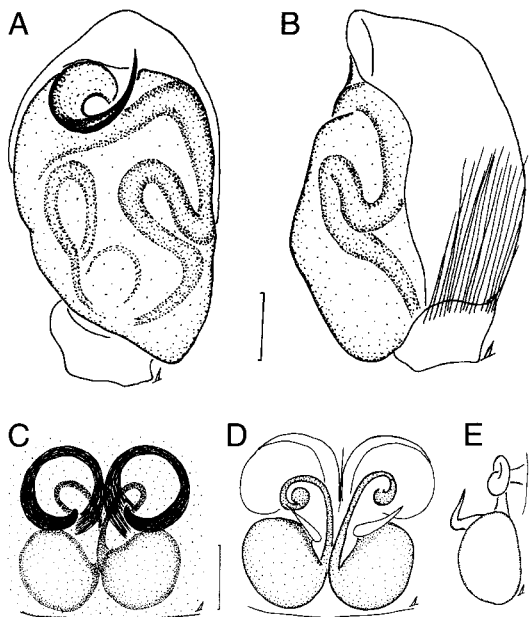


Fig. 17. *Euophrys petrensis*. Perm area. — A male palpus, ventral view, B retrolateral. — C epigynum. — D female genitalia, internal view. — E side view of spermatheca. Scale bar 0.1 mm.

4.06.1990 (K. Eskov); 1♂, 2♀ (BI), 1♂, 3♀ (PSU), Perm Area, Basegi Reserve, North Basegi, 24.07.1984 (S. Esyunin).

Diagnosis. *E. petrensis* is similar to *E. aequipes* and *E. thorelli*. The reliable distinguishing characters are: the form and position of the male embolus (Figs. 17A, B), the size and form of the spermathecae and insemination ducts in females (Fig. 17D), and the strongly sclerotized “rings” of the epigynum (Figs. 17C, D).

Description: *Measurements* (males/females). Carapace: length 1.53–1.68/1.31–1.63, width 1.10–1.23/0.97–1.09, height 0.66–0.71/0.54–0.70. Abdomen: length 1.58–1.63/1.71–2.07, width 1.10–1.15/1.29–1.54. Eye field: L 0.64–0.67/0.60, W-1 0.91–0.93/0.86–0.90, W-3 0.87–0.94/0.83–0.93. AME 0.23–0.24/0.25–0.26. Clypeus height 0.09–0.10/0.06–0.07, chelicerae length 0.53–0.60/0.34–0.44. Leg I: 0.86–0.91/0.69–0.77+0.47–0.49/0.37–0.46+0.51–0.66/0.43–0.46+0.47–0.53/0.33–0.37+0.27–0.34/0.27–0.30. Leg II: 0.73–0.80/0.61–0.71+0.40–0.48/0.36–0.41+0.43–0.51–

0.36–0.40+0.40–0.46/0.39–0.31+0.29/0.29–0.30. Leg III: 0.91–1.10/0.90–1.00+0.49–0.50/0.44–0.50+0.56–0.66/0.49+0.53–0.59/0.49–0.51+0.34–0.39/0.30–0.34. Leg IV: 1.00–0.87+0.41–0.46/0.41–0.47+0.59–0.64/0.50–0.66+0.54–0.63/0.60+0.36–0.43/0.36–0.39. *Leg spination*. Males. Leg I: femur d.1-1-1; tibia v.1-2-2ap; metatarsus v.2-2ap. Leg II: femur d.1-1-2; tibia v.0-1-1ap; metatarsus v.2-2. Leg III: femur d.1-0-2-2; tibia d.2-0, pr. and rt.0-1, v.1-2ap; metatarsus pr. and rt.1-2ap, v.2-2ap. Leg IV: femur d.1-1-2; tibia pr.0-1, rt.1-1, v.2-2ap; metatarsus pr.2-2ap, rt.1-1-2ap, v.2ap. Females. Leg I: femur d.1-1-2; tibia v.1-2-1ap or 1-2-2ap; metatarsus v.2-2ap. Leg II: femur d.0-1-2; tibia v.1-1; metatarsus v.2-2. Leg III: femur 4ap; tibia pr. and rt.1-1, v.1-0; metatarsus pr.1-2ap, rt.2ap, v.1-2ap. Leg IV: femur d.1-1-1; tibia rt.0-1, v.0-1-0; metatarsus pr. and rt. and v.1-2ap. *Coloration*. Males. Carapace orange with brownish tinge on basal part and on sides. Eye field black. Clypeus orange, covered with thick red hairs. Sternum brownish. Maxillae, labium and chelicerae orange. Opisthosoma unicolored, dark-grey. There is only a ventral scutum. Book-lung covers yellowish, spinnerets dark-grey. All legs dark-grey, almost black, but tibiae, metatarsi and tarsi of legs III and IV with noticeable thin yellow rings. Palp as in Figs. 17A, B. Females. Carapace dark-brown, eye field black. Clypeus brown, eyes of row I bordered with white hairs. Sternum and chelicerae brown. Maxillae and labium brown with yellow tips. Opisthosoma unicolored dark-brown. Book-lung covers and spinnerets brown. Palp: femur dark-brown, the remaining segments yellow. Legs: femora of all legs brown, the remaining segments yellow with wide brown bands. Epigynum and vulva as in Figs. 17C–E.

Distribution. European, Siberian and middle Asiatic range (Fig. 1), similar to that of *E. thorelli* and *E. obsoleta*. This species has been recorded from Europe (Palmgren 1943, Tullgren 1944, Prószyński 1976, Flanczewska 1981, Roberts 1985) and the European part of the former USSR (Kharitonov 1932, Tyshchenko 1971). It has also been found in the South Urals (Pakhorukov 1985, Pakhorukov & Efimik 1988, Eshyunin 1991) and in Middle Asia (Nenilin 1985, Logunov, unpublished data).

Habitat: Specimens were collected from rock slopes (Perm area) and slope steppe (East Kazakhstan).

Euophrys thorelli Kulczynski, 1891

Fig. 18

Material examined: 1♀ (PSU), Chelyabinsk Area, Troitsk Distr., Troitsk Reserve, 23.06.1975 (Sayenko). 1♀ (BI), Novosibirsk Area, environs of Krasnoyorka Vill., 7.07.1989 (A. Alekseyev). 1♂ (BI), Perm Area, Gornozavodsk Distr., Basegi Reserve, Severnyi Basegi Mountain, lichen tundra, 09.07.1990 (S. Eshyunin). 1♀ (BI), Chita Area, Kyra Distr., Sokhondo State Reserve, 13.06.1991 (D. Logunov).

Diagnosis: *E. thorelli* is very similar to *E. aequipes*, but females can be easily separated by the presence of a transverse sclerotized comb (Figs. 18D, E) and the position of the insemination ducts. Males have a very distinctive embolic structure (Figs. 18A–C), which is similar to representatives of the genus *Talavera*.

Description: *Measurements* (male/females). Carapace: length 1.29/1.17–1.31, width 0.90/0.83–0.96, height 0.56/0.44–0.61. Opisthosoma: length 1.36/1.57–1.60, width 0.94/1.11–1.26. Eye field: length 0.40/0.51–0.59, W-1 0.70/0.51–0.66+0.29–0.33+0.29–0.36+0.23–0.26, W-3 0.71/0.76–0.81. Leg I: 0.60+0.31+0.37+0.29+0.23. Leg II: 0.51+0.31+0.29+0.26+0.23. Leg III: 0.68+0.31+0.39+0.36+0.29/0.66–0.73+0.29–0.34+0.36–0.41+0.33+0.38+0.26–0.29. Leg IV: 0.53+0.29+0.40+0.40+0.30/0.69–0.71+0.29–0.31+0.44–0.50+0.41–0.43+0.33. *Leg spination*. Male. Leg I: femur d.0-1-1-1; tibia v.1-1-1; metatarsus v.2-2. Leg II: femur d.1-1-1; tibia pr.0-1, v.0-1-1; metatarsus v.2-2. Leg III: femur d.1-1-4; tibia pr. and rt.1-1, v.1-2ap; metatarsus pr., rt. and v.1-2ap. Leg IV: femur d.1-1-1; tibia pr. and rt.1-1, v.1-2ap; metatarsus pr.1-2ap, rt.1-1-2ap, v.1-2ap. Female. Leg I: femur d.1-1-1; tibia v.1-2-2; metatarsus v.2-2. Leg II: femur d.1-1-1; tibia v.1-1-1; metatarsus v.2-2. Leg III: femur d.1-0-1-2; tibia pr. and rt. 1-1, v.1-0; metatarsus pr. and rt.2ap, v.1-2ap. Leg IV: femur d.1-1-1; tibia rt.0-1, v.0-1-0; metatarsus pr.2ap, rt. and v.1-2ap. *Coloration*. Male. Carapace brownish, covered with white hairs. Eye field black. Sternum brownish. Maxillae, labium and chelicerae yellow-brownish. Opisthosoma grey-

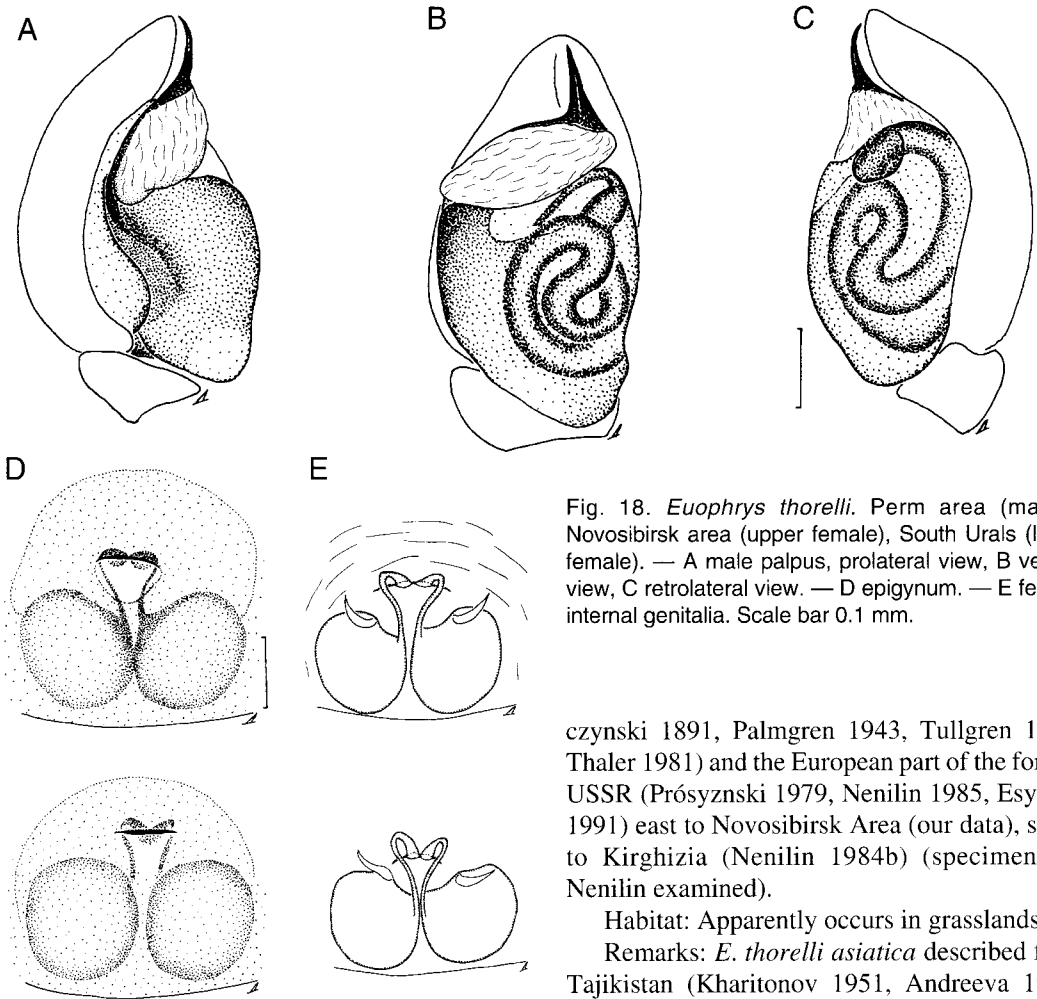


Fig. 18. *Euophrys thorelli*. Perm area (males), Novosibirsk area (upper female), South Urals (lower female). — A male palpus, prolateral view, B ventral view, C retrolateral view. — D epigynum. — E female internal genitalia. Scale bar 0.1 mm.

czynski 1891, Palmgren 1943, Tullgren 1944, Thaler 1981) and the European part of the former USSR (Prószyński 1979, Nenilin 1985, Esyunin 1991) east to Novosibirsk Area (our data), south to Kirghizia (Nenilin 1984b) (specimens of Nenilin examined).

Habitat: Apparently occurs in grasslands.

Remarks: *E. thorelli asiatica* described from Tajikistan (Kharitonov 1951, Andreeva 1976) really belongs to the genus *Chalcoscirtus* (Marusik 1990).

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ish-brown, including spinnerets. Book-lung covers yellow. Legs brownish with yellow rings. Palp structure shown in Figs. 18A–C. Female. Carapace yellow-brown with dark veins, covered with thin light hairs. Eye field dark-brown. Sternum yellow with greyish tinge. Maxillae and labium yellow. Chelicerae yellow-brownish. Opisthosoma yellow with dorsal markings composed of grey transverse stripes. Book-lung covers yellow, spinnerets brownish. Area around spinnerets also brownish. Palp yellow, but femora brownish. Legs yellow with numerous brown rings on the distal ends of the segments. Epigynum and vulva shown in Figs. 18D, E.

Distribution: European, Siberian and middle Asiatic range, from Europe (Chyzer & Kul-

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