

# *Pseudeuophrys* is a valid genus of the jumping spiders (Araneae, Salticidae)

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## Résumé

Le genre *Pseudeuophrys* est retiré de la synonymie d'*Euophrys* et rétabli sur la base de la structure de détail des organes génitaux. Six espèces sont ici attribuées au genre *Pseudeuophrys* (dont trois nouvelles combinaisons): *P. erratica* (Walckenaer, 1826), *P. lanigera* (Simon, 1871), *P. iwatensis* (Bohdanowicz & Prószyński, 1987), com. n., *P. obsoleta* (Simon, 1868), comb. n., *P. prinkipona* (Røwer, 1951), comb. n., et *P. vafra* (Blackwall, 1867). *Euophrys browningi* Millidge & Locket, 1955 et *Euophrys pictilis* (Simon, 1871) sont mises en synonymie de *P. obsoleta*. Une espèce, *Euophrys pasqualis* (O. P.-Cambridge, 1872), est également indiquée comme synonyme junior possible de *P. obsoleta*. *Euophrys difficilis* (Simon, 1868), est reporté dans le genre *Chalcoscirtus*. L'espèce mal connue *P. prinkipona* est redécrite sur la base de l'holotype. Toutes les espèces de *Pseudeuophrys* sont figurées; une clé illustrée et des diagnoses sont également données.

## Summary

The genus *Pseudeuophrys* is removed from synonymy with *Euophrys* and revalidated reasoning from the detailed structure of the genitalia thereof. Six species are here assigned to *Pseudeuophrys* (three new combinations involved): *P. erratica* (Walckenaer, 1826), *P. lanigera* (Simon, 1871), *P. iwatensis* (Bohdanowicz & Prószyński, 1987), com. n., *P. obsoleta* (Simon, 1868), comb. n., *P. prinkipona* (Røwer, 1951), comb. n., and *P. vafra* (Blackwall, 1867). *Euophrys browningi* Millidge & Locket, 1955 and *Euophrys pictilis* (Simon, 1871) are newly synonymised with *P. obsoleta*. One species, *Euophrys pasqualis* (O. P.-Cambridge, 1872), is additionally reported as an expected junior synonym of *P. obsoleta* as well. *Euophrys difficilis* (Simon, 1868), is first transferred to *Chalcoscirtus*. A poorly known species, *P. prinkipona*, is redescribed based on the holotype. All species of *Pseudeuophrys* are figured and diagnosed, with an illustrated key to them being provided as well.

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### Резюме

Род *Pseudeuophrys* извлечен из синонимии с *Euophrys* и его самостоятельность восстановлена на основе изучения детальной структуры гениталий. Шесть видов отнесены к роду *Pseudeuophrys* (включая три новые комбинации): *P. erratica* (Walckenaer, 1826), *P. lanigera* (Simon, 1871), *P. iwatensis* (Bohdanowicz & Prószyński, 1987), ком. н., *P. obsoleta* (Simon, 1868), ком. н., *P. prinkipona* (Røewer, 1951), ком. н., и *P. vafra* (Blackwall, 1867). *Euophrys browni* Millidge & Lockett, 1955 и *Euophrys pictilis* (Simon, 1871) впервые синонимизированы с *P. obsoleta*. Вид *Euophrys pasqualis* (O. P.-Cambridge, 1872) упоминается как еще один ожидаемый младший синоним *P. obsoleta*. *Euophrys difficilis* (Simon, 1868), впервые перенесен в род *Chalcoscirtus*. По голотипу переописан малоизвестный вид *P. prinkipona*. Даны рисунки и диагнозы всех видов *Pseudeuophrys*, в том числе и определительный ключ.

### Introduction

*Pseudeuophrys* was erected by DAHL (1912) for *Euophrys erratica* (sub *E. calida*), this proposal being later supported by PALMGREN (1943), TULLGREN (1944) and MILLER (1971). In his catalogue, RøEWER (1954) included for additional species into *Pseudeuophrys*, namely: *P. lanigera* (sub *P. bimaculata*), *P. difficilis*, *P. pictilis* and *P. vafra*. However, subsequent authors (e.g. FRANZIEWSKA, 1981; ROBERTS, 1985; PRÓSZYŃSKI, 1990; etc.) didn't support the Røewer's suggestion following the idea of Simon (1937) who had consistently considered *Euophrys* in a wide sense, when *P. erratica* and its closest relatives are treated only as a species group of *Euophrys* (*s. lat.*). Hence, *Pseudeuophrys* has so far been reported as a junior synonym of *Euophrys* (PRÓSZYŃSKI, 1990; PLATNICK, 1993).

Recently, when re-defining the genus *Talavera*, LOGUNOV (1992) has pointed out that the *erratica* species group is to be excluded from *Euophrys* and assigned to *Pseudeuophrys* described originally by DAHL (1912). Detailed study of the genitalia of the species included into the *erratica* group (*sensu* SIMON, 1937) has demonstrated that *Pseudeuophrys* has characteristics that justify the revalidation of the genus.

Thus, the main goals of the present paper are redefinition and redescription of the genus *Pseudeuophrys*, including a synopsis of and a key to the known valid species thereof. Additionally, a poorly known species, *Pseudeuophrys prinkipona* is redescribed based on the examination of its holotype. I have not posed the problem of revising all possible species of *Pseudeuophrys*, as this needs re-examining dozens of poorly known species currently included in *Euophrys* (*s. lat.*). Therefore, my main task has been to show that *Pseudeuophrys* is evidently to be a separate genus and thereby the original ideas of DAHL (1912) and RøEWER (1954) are correct.

### Material and methods

The work is based on both newly collected materials from different parts of Russia and neighbouring countries and on some museum collections. Specimens for this study were borrowed from or distributed among the following museums and personal collections:

AVG – Personal collection of A.V. GROMOV, Almaty, Kazakhstan.

ISE – The Zoological Museum of the Institute for Systematics and Ecology of Animals, Novosibirsk, Russia.

IZW – Institute of Zoology, Warsaw, Poland.

LON – British Museum (Natural History), London, England.

NHMB – Natural History Museum, Basel, Switzerland.

ZANM – Zoological Department, Natural History Museum, Wien, Austria.

ZISP – Zoological Institute, Russian Academy of Sciences, St. Petersburg, Russia.

ZMMU – The Zoological Museum of the Moscow State University, Moscow, Russia.

Abbreviations used in the text and figures:

a.s.l.: above sea level  
 BH: basal haematodocha  
 C: cymbium  
 CO: copulatory opening  
 d: dorsally  
 DH: distal haematodocha  
 E: embolus  
 FD: fertilisation duct  
 Fm: femur  
 ID: insemination duct  
 MS: median septum  
 Mt: metatarsus  
 pr: prolaterally  
 Pt: patella  
 R: receptacle  
 rt: retrolaterally  
 Rx: radix  
 Scl-1: sclerite 1  
 SD: seminal duct  
 SL: seam line  
 St: subtegulum  
 Tg: tegulum  
 TbA: tibial apophysis  
 v: ventrally.

For the leg spination, the system adopted is that used by ONO (1988). The sequence of leg segments in measurement data is as follows: femur+patella+tibia+metatarsus+tarsus. All measurements are in millimetres. A complete set of references is given for poorly known or recently described species only (e.g. *difficilis*, *iwatensis*, *prinkipona* etc.), other only the literature published from 1993, the date of publishing of the most recent arachnological catalogue (PLATNICK, 1993), are involved.

### Genus *Pseudeuophrys* Dahl, 1912

**Type species:** *Attus erraticus* Walckenaer, 1825, by subsequent designation of BONNET, 1955-1959.

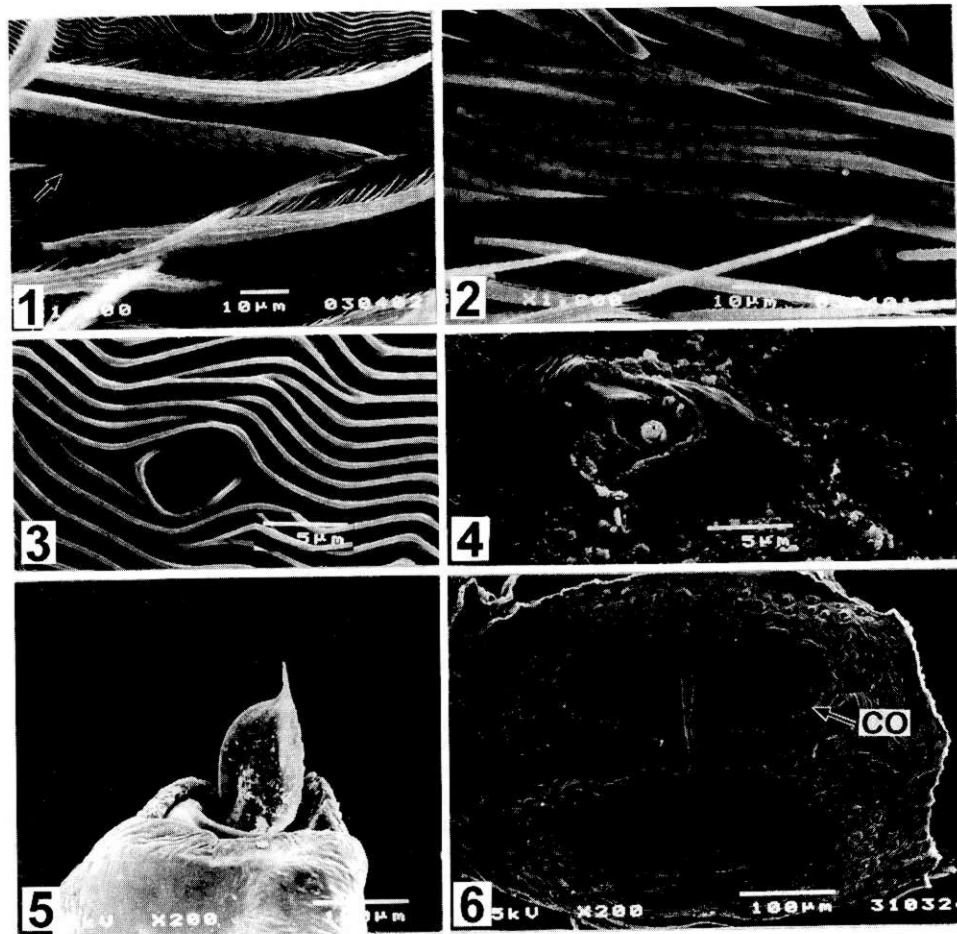
### Definition

Medium size spiders ranging from about 3.0 to 5.3 mm in length. Sexual dimorphism almost not marked.

*Carapace* usually high (fig. 7), yellow-brown to brown, black around eyes; fovea present. *Carapace* usually with a yellow stripe in the area of fovea. Eye field transverse rectangular, with its length 1.2-1.4 times smaller than width; quadrangle length between 41 and 48 per cent of carapace length. *Carapace* sparsely covered with narrow, simple scales (fig. 2). *Clypeus* low, vertical or backward sloping; its length 10 to 25 per cent of AME diameter. *Chelicerae* small or medium (in males); male *chelicerae* curved anteriorly and sometimes look like those of *Dictyna* species (figs 16-17); promargin with 2 small teeth, retromargin with 1 medium tooth (fig. 13). *Maxillae* rectangular, longer than wide, with an apical keel-shaped notch (figs 10-12); male *maxillae* differ from those of females by a stretched anterior-lateral angle (cf. figs 11 and 10 & 12). *Labium* triangular, with apex directed anteriorly. *Sternum* oval, anteriorly as if flattened (fig. 8-9).

*Abdomen* oval, 1.2-1.6 times longer than wide, yellow-brownish to brown, usually with longitudinal yellow (entire or interrupted) stripe. *Abdomen* covered with simple, narrow scales (fig. 1) like those of *carapace*; there are also sparse skin pores anteriorly on dorsum (arrowed in figs 1 & 3). Male dorsum either with an elongated, rectangular scutum (fig. 14), or without it (fig. 15).

*Legs* normal, usually yellowish to brownish with numerous brown rings; trichobotria simple (fig. 4). *Leg formula:* IV, I, III, II or IV, III, I, II; no differences

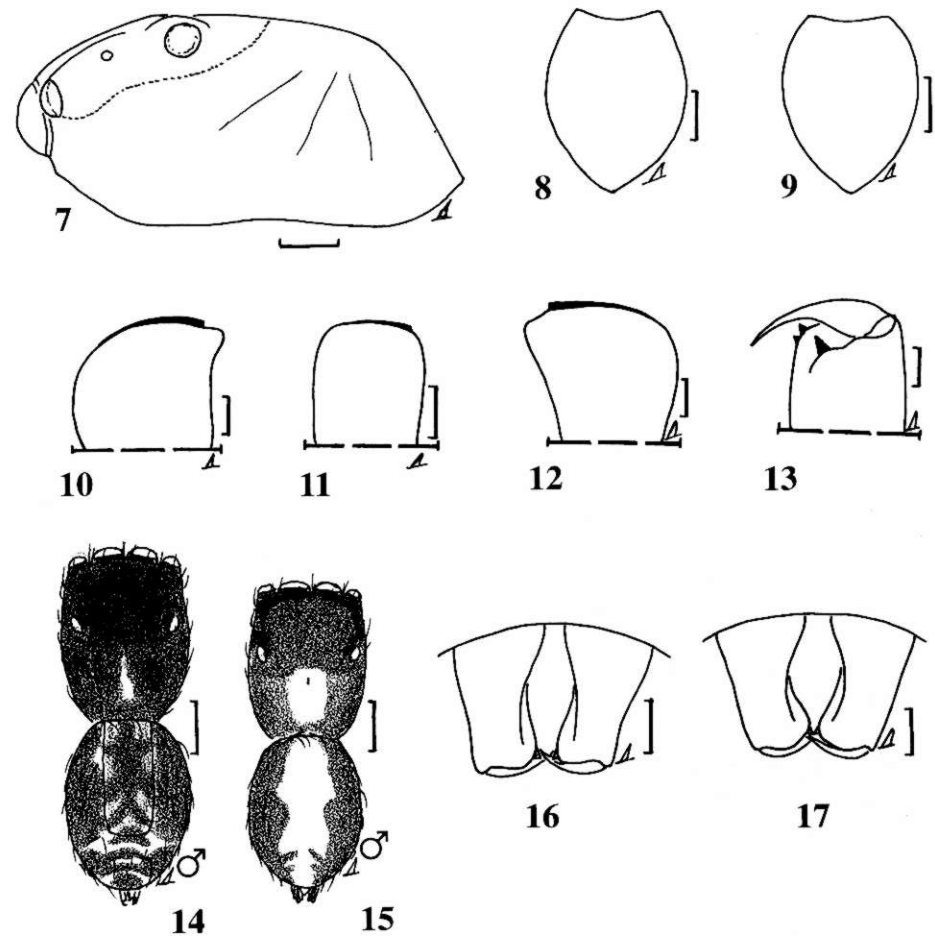


**Figures 1-6.** — Somatic and genitalic characters of *Pseudeuophrys erraticica*, Finland. 1, abdominal skin of female, pore arrowed. 2, carapace skin of female. 3, abdominal skin, pore, female. 4, trichobothrium, female. 5, embolar division of male palp. 6, epigyne.

between sexes. *Female palp*: common shape, spineless, without apical claw.

*Male palp*: cymbium simple (fig. 20); single and rather strong tibial apophysis always present (figs 20, 26, etc.); distal hematodocha well developed, sac-shaped when expanded (figs 18, 21); trajectory of sperm duct rather simple (figs 23, 24) in comparison with *Euophrys* (s. str.) (see LOGUNOV, 1992, figs 6-7); embolus ribbon-like or hook-like, its base usually plunged in a deep hollow (figs 5, 25-26);

embolus is joined to the tegulum by the distal haematodocha only (fig. 18); radix well marked; it represents either a separate sclerite (figs 19, 21), or is fused with the tegulum (if so, a seam line between the radix and the tegulum is easily seen, fig. 22: SL); an additional sclerite (figs 18-22; Scl-1) that may be either the lamella or the terminal apophysis (*sensu* MERRETT, 1963) is also present within the wall of the distal hematodocha.

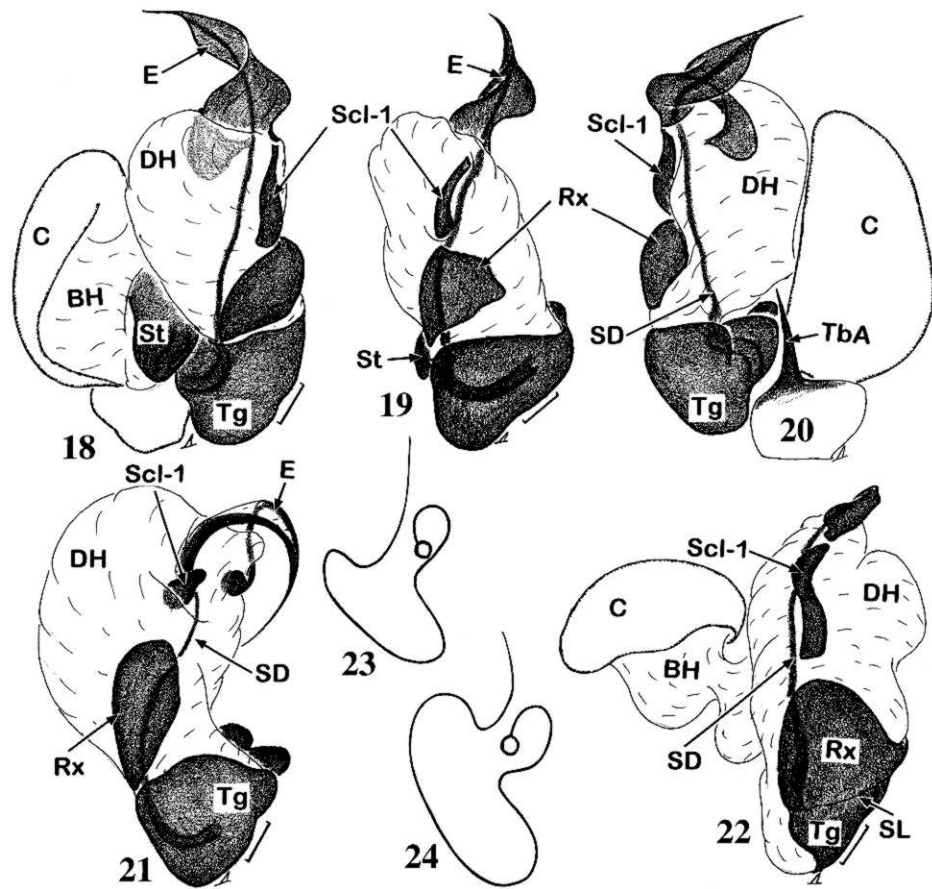


**Figures 7-17.** — Somatic characters of *Pseudeuophrys erraticica*, Pavlodar Area (7, 9, 12, 17), *Pseudeuophrys obsoleta*, Azerbaijan (8, 10, 11, 13, 14, 16) and *Pseudeuophrys vafra*, Crimean peninsula (15). — 7, male carapace, lateral view. 8, 9, male sternums 10, 12, male maxillae. 11, female maxilla. 13, female chelicera. 14, 15, male coloration. 16, 17, male chelicerae. — Scale bars: 7-9, 16-17, 0.25 mm; 10-12, 0.1 mm; 14-15, 0.5 mm.

*Female genitalia*. Epigyne simple, weakly sclerotized, with internal structures usually visible through the integument (figs 31, 33); a median septum present (fig. 6); copulatory openings represent transverse slits (figs 6, 33); insemination ducts simple, look like a pair of funnel-shaped transparent tubes

(figs 32, 34); spermathecae large, usually bean-shaped (figs 32, 34, 40, 42).

**Morphological notes.** The problem of the sclerite composition and homology in the palp of *Pseudeuophrys* is to be additionally discussed, especially regarding the two well-marked sclerites occurring within the wall of the distal haematodocha (figs 18-22). The closest to the tegu-



Figures 18-24. — Expanded male palpi of *Pseudeuophrys* spp. (18-22) and schematic course of sperm duct trajectory (23, 24). 18-20, 23, *P. erratica*, Pavlodar area. 21, 24, *P. obsolata*, Khakassia. 22, *P. iwatensis*, Khabarovsk Province. — Scale bar 0.1 mm.

lum sclerite has hereby been considered to be the radix (figs 19-20: Rx) because of two reasons. First, the seminal duct seems to be closely associated with the considered sclerite (figs 19, 21), this relation being usually treated as a marker of the radix (e.g. MERRETT, 1963; GRASSHOFF, 1968). Second, this is beyond doubts a true sclerite, not a tegular projection, which may be assumed to be the median apophysis (*sensu* CODDINGTON,

1990). Even in the cases when the radix and the tegulum are fused (fig. 22), the seam line between them are clearly seen (fig. 22: SL).

The second sclerite situated between the radix and the embolus (figs 18-22: Scl-1) is rather difficult to be homologised (that is why it has been named here only as the sclerite-1). Its position and elongated shape allow me to assume it could be the lamella (*sensu* MERRETT,

1963) or the terminal apophysis (*sensu* GRASSOFF, 1968). However, in more complicated spider palpi, e.g. those of Araneidae or Linyphiidae, not a single but several sclerites usually occur between the radix and the embolus (see MERRETT, 1963; GRASSHOFF, 1968; CODDINGTON, 1990). So, the problem of homology and identification of this sclerite should be postponed before more precise data on the fine structure of the salictic palp become available.

**Diagnosis.** *Pseudeuophrys* in fact belongs to the subfamily Euophryinae (*sensu* PRÓSZYŃSKI, 1976), but to the moment, its affinities are rather difficult to be described, as very few is known about the fine structure of genitalia in other euophryine genera. Among the Palaearctic genera, *Pseudeuophrys* seems to be close to *Saitis* Simon, 1876, as both genera show the embolus being situated in the apical hollow of the tegulum (see fig. 5). However, the latter genus differs in having the insemination ducts always adjoined each other, embolic tip often splitted and a pronounced ornamentation of the third legs, all these characters consistently absent in *Pseudeuophrys*.

**Distribution.** The area is Palaearctic, except the only finding of *Pseudeuophrys erratica* made in U.S.A., New Jersey, that is treated as a recent anthropogenic introduction (CUTLER, 1982, sub *Euophrys e.*).

### Key to species of *Pseudeuophrys*

1. Dorsum in both sexes with a wide yellow, longitudinal band (monochrome or with sparse, brownish patches along it)(fig. 15); males without marked scutum; genitalia as in figs 35, 36, 41, 42. . . . . *vafra*
1. Dorsum in both sexes with an interrupted, longitudinal pattern (never entire band)(fig. 14); males usually with marked dorsal scutum; genitalia otherwise. . . . . 2

- 2(1) Males. . . . . 3
2. Females. . . . . 6
- 3(2) Tibial apophysis moderately short, hook-shaped (fig. 38). . . . . *lanigera*
3. Tibia apophysis moderately long, straight (figs 26, 28, 30). . . . . 4
- 4(3) Embolus flattened and wide (ribbon-shaped), with needle-shaped apex (figs 5, 25, 27). . . . . 5
4. Embolus otherwise (fig. 29). . . . . *obsoleta*
- 5(4) Male palp as in figs 5, 25, 26. . . . . *erratica*
5. Male palp as in figs 27, 28. . . . . *iwatensis*
- 6(2) Receptacles constricted (figs 40, 55). . . . . 7
6. Receptacles not constricted (fig. 32, 34, 44). . . . . 8
- 7(6) Female genitalia as in figs 39, 40. . . . . *lanigera*
7. Female genitalia as in figs 54, 55. . . . . *prinkipona*
- 8(6) Insemination ducts directed to each others (fig. 34); epigyne as in fig. 33. . . . . 9
8. Insemination ducts subparallel (figs 32, 44); epigyne otherwise (figs 31, 43). . . . . 9
- 9(8) Female genitalia as in figs 31, 32. . . . . *iwatensis*
9. Female genitalia as in figs 43-50. . . . . *obsoleta*

### Synopsis of species

#### *Pseudeuophrys erratica* (Walckenaer, 1826)

(figs 1-7, 9, 12, 17-20, 24, 25, 26, 33, 34)

- Attus erraticus* WALCKENAER, 1826: 46 (D. males, females).
- Euophrys e.*: MAURER & HÄNGGI, 1990: 212.
- Euophrys e.*: LOGUNOV *et al.*, 1993: 103-106, figs 1-2 (males, females).



*Euophrys e.*: ROBERTS, 1995: 197 (males, females).

*Euophrys e.*: IKEDA, 1996: 26-29, figs 1-6 (males, females).

*Euophrys e.*: KROPF & HORAK, 1996: 92. For a complete set of references see RÆWER (1954), BONNET (1955-1959), NENILIN (1984, 1985), PRÓSZYŃSKI (1990) and PLATNICK (1993).

**Material.** — RUSSIA: 1 male (ISE), Tomsk Area, Tomsk env., Bogachovo, 28.06.1992, S.V. Lukiantsev; 3 females (ISE), SE Tuva, Khorumnug-Taiga Mt. Range, Shuurmak, 50°44'N, 95°19'E,

1100 m a.s.l., 20-22.06.1996, Y.M. Marusik; 1 male, 2 females (ZMMU), Stavropol Province, Pjatigorsk, Mashuk Mt., 600 m a.s.l., 29-31.05.1982, S.I. Golovatch; 4 females (ZISP), Krasnodar Province, Novorossiysk, Shirokaya balka, 5.08.1977, V.I. Ovtsharenko; 2 males, 4 females (ZISP), Caucasian Reservation, Guzeripl Mt, 650-1200 m a.s.l., 18.06-6.07.1976, V.I. Ovtsharenko; 1 female (ZMMU), Daghestan, Segokala Distr., Degva, 9.06.1982, S.I. Golovatch; 1 male (ISE), Chechnya, Grozny, July

1988, A. Ryabukhin. — AZERBAIJAN: 4 males, 3 females (ISE), Kakhshiy Distr., Ashagamalakh, 20.06.1977, P.M. Dunin; 2 males, 2 females (ISE), same distr., Vandam, 17.06.1986, P.M. Dunin; 1 male, 1 female (ISE), same locality, 600 m a.s.l., 20.07.1979, P.M. Dunin; 1 male (ISE), Kuba, Alytch, 1000 m a.s.l., 10.07.1984, P.M. Dunin; 1 female (ZMNU), Karabakh Mts, Ashkeran Distr., 6 km WNW of Dashbulag, near Badara, 850-900 m a.s.l., 2.05.1983, S.I. Golovatch; 1 male (ZMMU), same area, Aganos S of Lacin, 1100 m a.s.l., 30.04.1983, S.I. Golovatch; 1 female (ISE), Lenkoran Distr., Hirkanskiy Reservation, 3.07.1983, D.V. Logunov; 5 males, 2 females (ISE), same distr., Gaf-toni, 300 m a.s.l., 3-4.05.1985, P.M. Dunin; 1 female (ISE), Ismailly Distr., Kushendzha, 20.06.1986, P.M. Dunin; 1 male (ISE), same distr., Gazakend, 23.06.1986, P.M. Dunin; 7 males (ISE), 25-30 km NE of Shemakha, Pirkuli Reservation, 19-24.05.1984, D.V. Logunov. — GEORGIA: 1 male (ISE), 10-15 km E of Poti, Kolkhida Reservation, 11.04.1988, D.V. Logunov; 1 male, 1 female (ZMMU), Adzharia, Kintrish Reservation, Zeraboseli, 450-600 m a.s.l., 1-3.07.1981, S.I. Golovatch & J. Martens; 1 female (ISE), Batumi env., Zelyony Mys, 7.02.1982, D.V. Logunov; 3 males (ZMMU), NE of Poti, Chaladili, 13.04.1983, S.I. Golovatch; 2 males, 1 female (ISE), same locality, Patara-Poti, 11.04.1988, D.V. Logunov; 2 females (ZMMU), Surami (= Rikoti) Pass, 1000 m a.s.l., 14.04-17.05.1983, S.I. Golovatch. — ARMENIA: 3 females (ZMMU), Megri Distr., above Kuris, 1500 m a.s.l., 26.04.1983, S.I. Golovatch. — KAZAKHSTAN: 1 male (ZISP), Akmola Distr., Kokshetau Mts, 20.06.1957, V.P. Tyshchenko.

Other material studied, see in LOGUNOV *et al.* (1993).

**Diagnosis.** *Pseudeuophrys erratica* is closely related to *Pseudeuophrys iwaten-sis*, but can be distinguished by longer

and wider embolus in males (cf. figs 25 and 27) and structure of the spermathecae (cf. figs 32 and 34). See also key to species.

**Distribution.** Trans-Eurasian temperate species. It is important to note that some records of this species in China (e.g. PENG *et al.*, 1993) and Korea (e.g. PAIK, 1987) belong in fact to *P. iwaten-sis* (see below). Findings in U.S.A., New Jersey (CUTLER, 1982) are probably a recent introduction.

***Pseudeuophrys lanigera***  
(Simon, 1871)  
(fig. 37-40)

*Attus bimaculatus* SIMON, 1868: 585 (D. male, nec female; preocc. name).

*Attus satagenus* SIMON, 1868: 606 (D. male).

*Attus triangulifer* SIMON, 1968: 607 (D. male).

*Attus triangulifer*: SIMON, 1871: 169.

*Euophrys triangulifera*: SIMON, 1876: 196 (T. from *Attus t.*).

*Aelurillus tristis* DENIS, 1957: 290, fig. 14 (D. female).

*Phlegra variegata* DENIS, 1957: 287, figs 11-12 (D. female).

*Euophrys lanigera*: HĘCIAK & PRÓSZYŃSKI, 1984: 379-389, figs 15-24 (males, females, *Aelurillus tristis* and *Phlegra variegata* synonymised with *Euophrys lanigera*).

*Euophrys lanigera*: ROBERTS, 1985: 124, fig. 51d (males, females).

*Euophrys lanigera*: MAUER & HÄNGGI, 1990: 213.

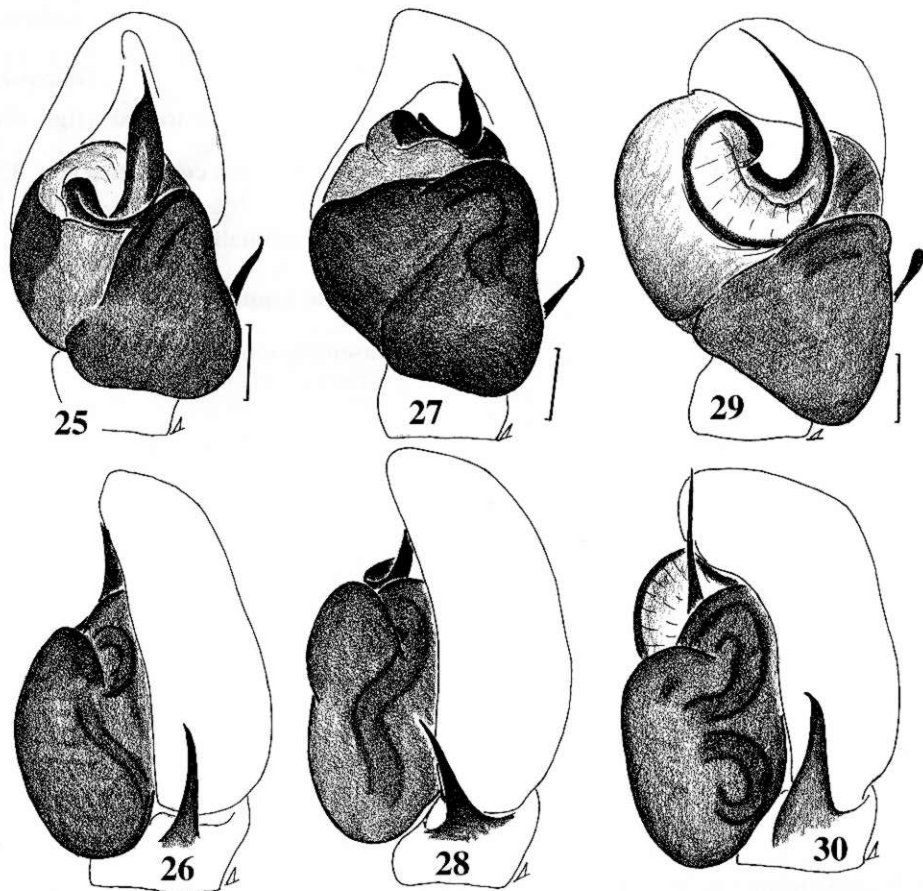
*Euophrys lanigera*: HELMER & NENTWIG, 1991: 498, fig. 1332 (male, female).

*Euophrys lanigera*: ROBERTS, 1995: 197-198 (male, female).

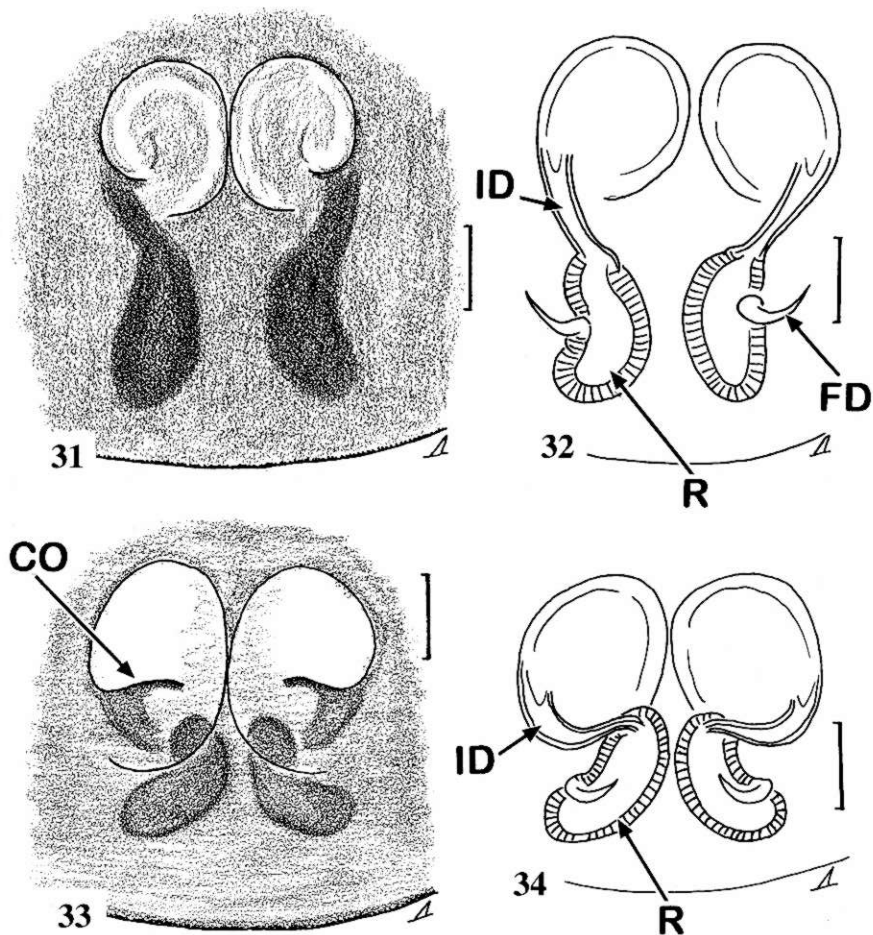
*Euophrys lanigera*: KROPF & HORAK, 1996: 93.

**Material.** — SWITZERLAND: 2 males, 1 female (NHMB, 2171a), "without label". — GEORGIA: 1 male (ISE), Tsagveri, 20-28.06.1982, E. Budris.

**Diagnosis.** *Pseudeuophrys lanigera* is most closely related to *Pseudeuophrys vafra*, but males can be easily separated by the curved tibial apophysis (fig. 38)



Figures 25-30. — Male palpi of *Pseudeuophrys erratica*, Azerbaijan (25, 26), *Pseudeuophrys iwaten-sis*, Khabarovsk Province (27, 28) and *Pseudeuophrys obsoleta*, Poland (29, 30). 25, 27, 29, ventral view. 26, 28, 30, lateral view. — Scale bar 0.1 mm.



Figures 31-34 — Female genitalia of *Pseudeuophrys iwatensis*, Khabarovsk Province (31, 32) and *Pseudeuophrys erratica* (33, 34), Georgia. 31, 33, epigyne. 32, 34, spermathecae. — Scale bar 0.1 mm.

and females by the constricted spermathecae (fig. 40). See also key to species.

**Distribution.** This is a typical European subboreal species (see PRÓSZYŃSKI, 1976, map 62), its easternmost locality lying in Georgia, the Caucasus (current data). FLANCZEWSKA (1981) reported this species from Bulgaria as *Euophrys* sp. 1 (FLANCZEWSKA's specimens re-examined).

***Pseudeuophrys iwatensis***  
(Bohdanowicz & Prószyński, 1987)  
comb. n.

(ex *Euophrys*)  
(figs 22, 27, 28, 31, 32)

*Euophrys iwatensis* BOHDANOWICZ & PRÓSZYŃSKI, 1987: 49-53, figs 18-26 (D. males, females).

*Euophrys i.*: LOGUNOV *et al.*, 1993: 106-107, figs 1-3 (males, females).

*Euophrys i.*: IKEDA, 1996: 29-31, figs 7-12 (males, females).

*Euophrys erratica* (nec Walckenaer, 1826): PAIK, 1987: 12-14, figs 40-54 (males, females).

*Euophrys erratica* (nec Walckenaer, 1826): PENG *et al.*, 1993: 54-55, figs 142-145 (males, females).

**Material.** — RUSSIA: 4 males, 6 females (ISE), The Russian Far East (=Primorie), Lazovsky Reservation, 28-31.05.1980, T.I. Oligier.

Other material studied, see in LOGUNOV *et al.* (1993).

**Diagnosis.** See comments under "diagnosis" of *Pseudeuophrys erratica*.

**Distribution.** Manchurian-Japanese subboreal species; it has been repeatedly recorder from the Russian Far East (LOGUNOV *et al.*, 1993, sub *Euophrys i.*), Japan (BOHDANOWICZ & PRÓSZYŃSKI, 1987, sub *Euophrys i.*; IKEDA, 1996, sub *Euophrys i.*), Korea (PAIK, 1987, sub *Euophrys erratica*, figs 40-54) and China (PENG *et al.*, 1993, sub *Euophrys erratica*, figs 142-145).

***Pseudeuophrys obsoleta***  
(Simon, 1868) comb. n.

(ex *Euophrys*)

(figs 8, 10-11, 13-14, 16, 21, 24, 29-30, 43-53)

*Attus obsoleta* SIMON, 1868: 595 (D. male, female).

*Euophrys obsoleta*: LOGUNOV *et al.*, 1993: 107-108, figs 1, 4 (males, females).

*Euophrys browningi* MILLIDGE & LOCKET, 1955: 163, fig. 3a, b, c (D. male); **new synonymy.**

*Euophrys browningi*: LOCKET, MILLIDGE & LA TOUCHE, 1958: 137, fig. 2c (female).  
*Euophrys browningi*: COOKE, 1962: 246, fig. 1 (female).

*Euophrys browningi*: LOCKET, MILLIDGE & MERRETT, 1974: 29, fig. 16a-d (males, females).

*Euophrys browningi*: ROBERTS, 1995: 198 (male, female).

*Attus pictilis* SIMON, 1871: 172 (D. male); **new synonymy.**

*Euophrys pictilis*: SIMON, 1876: 178, pl. 11, fig. 15 (male, T. from *Attus*).

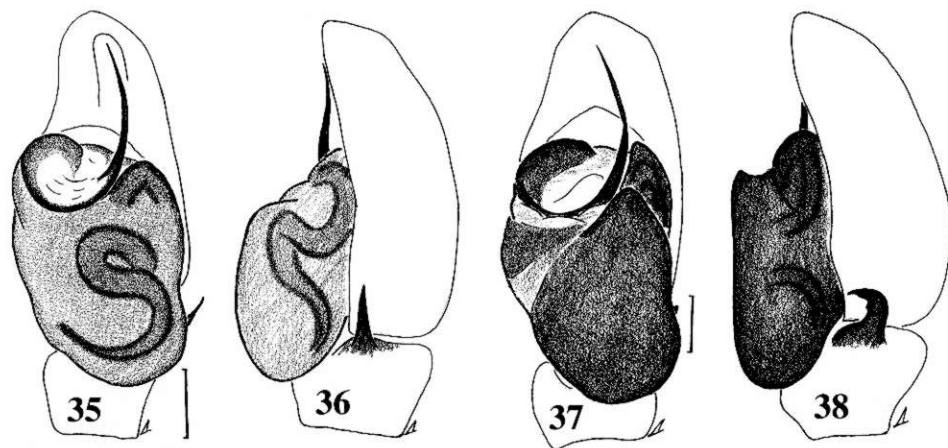
*Euophrys pictilis*: SIMON, 1937: 1180, 1253, figs 1851, 1852 (male).

*Euophrys pictilis*: SCHENKEL, 1938: 18, fig. 7 (male).

*Euophrys pictilis*: MILLER, 1947: 90, pl. 12, figs 10-12 (male, D. female).

For other references, see REWER (1954), BONNET (1955-1959), NENILIN (1984, 1985), PRÓSZYŃSKI (1990) and PLATNICK (1993).

**Material.** — POLAND: 2 males, 2 females (IZW), "Krakow, coll. W. Kulczyński". — ENGLAND: 1 female (LON, topotype of *Euophrys browningi*), "whelk shell, shingle street, Aug. 1956". — VOLGOGRAAD AREA: 6 males, 13 females (ISE), Frolovo, June 1993, Y.M. Marusik. — UKRAINE: 13 males, 29 females (ZISP), Taganrog Area, N-Karpovka and Novochoerkassk, 7.04.1913, S. Spassky; 1 male (ZMMU), Crimean Peninsula, Simferopol, 10.05.1981, V.A. Bragina; 1 male (ISE), near Dnepropetrovsk, 9.05.1977, A.A. Zyuzin. — DAGHESTAN: 3 females (ISE), Derbent, 20.05.1989, P.M. DUNIN. — AZERBAIJAN: 4 males, 4 females (ISE), 25-30 km NE of Shemakha, Pirkuli Reservation, 1800 m a.s.l., 27.05.1984, D.V. Logunov. — KAZAKHSTAN: 4 males, 4 females (ISE), Akmola Area, ca. 3 km S of Atbasar, 1-8.06.1995, A.V. Gromov; 1 male (ISE), same area, Marinovski Distr., Novoaleksandrovka, 6.05.1997, A.V. Gromov; 4 males, 5 females (ZMMU), Uralsk Area, Dzhanlybek, 29.05.1982, K.G. Mikhailov; 1 male (ISE), Taldy-Kurgan Area, Gvardeisk Distr., Bakchit, 9.05.1992, A.A. Feodorov & A.A. Zyuzin; 2 females (ISE), same area and district, 7 km E of Kospan, 18-20.06.1996, A.A. Zyuzin; 1 male, 1 female (ISE), 20 km S of Pavlodar, Zarya, Irtysh River Valley, 15.06.1992, O.V. Lyakhov; 1 female (ISE), same area, Lebjazhinsk Distr., 3 km NW of Montal, 5.07.1990, O.V. Lyakhov; 3 females (ISE) Turgai Area, Arkalyk Distr., S slope of Kokshetau Mt., 2-3.06.1995, A.V. Gromov; 2 males, 4 females (AVG), near Shymkent,



Figures 35-38. — Male palpi of *Pseudeuophrys vafra*, Portugal (35, 36) and *Pseudeuophrys lanigera*, Switzerland (37, 38). 35, 37, ventral view. 36, 38, lateral view. — Scale bar 0.1 mm.

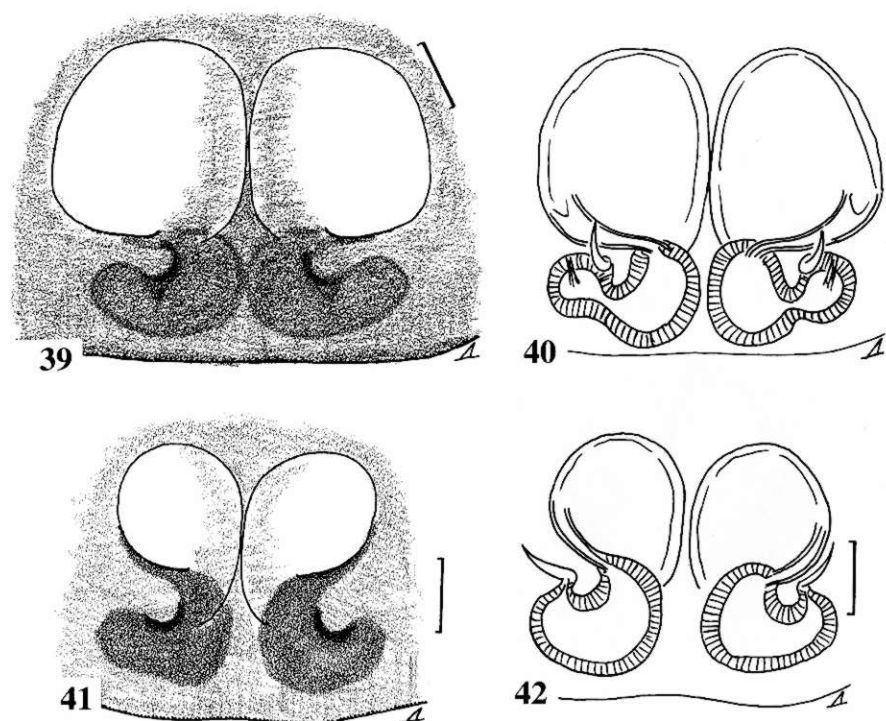
22.06.1993, A.V. Gromov; 1 female (AVG), near Agalyk, 10-17.07.1994, A.V. Gromov; 4 males, 1 female (AVG), 4 males, 2 females (ISE), Almaty, 28.05.1993-15.05.1997, A.V. Gromov; 1 female (ISE), Almaty env., Aksai Canyon, 28.08.1983; Y.M. Marusik; 16 males, 4 females (ISE), Almaty Area, Zhambyl Distr., Fabrichny, 29.04.1995-27.04.1997, A.A. Zyuzin; 1 male (AVG), S-Kazakhstan Area, Lenger Distr., ca. 5 km SE of Kaskasu, 20.06.1993, A.V. Gromov; 4 males, 2 females (ISE), near Zhambyl, 1.05.1993, A.A. Zyuzin; 3 males (AVG), ca. 2 km SE of Atbasar, 4-8.05.1997, A.V. Gromov. — UZBEKISTAN: 1 female (ISE), Syrdariya Area, highway Samarkand-Tashkent, left bank of Syrdariya River, 12.05.1990, A.A. Feodorov & A.A. Zyuzin; 1 female (ZMMU), Ak-sai, 15.09.1984, A.B. Nenilin. — KYRGHYZSTAN: 1 female (ISE), north bank of Issyk-Kul Lake, Tchop-Urjukty River Canyon, 14-24.06.1993, D.A. Milko; 4 males, 2 females (ZMMU), Karachaevskaya Grove, summer 1979, S.L. Zonshtein; 2 males (ISE), Sary-Chelek Reservation, 7 km S of Arkit, 20.06.1992, A.A. Zyuzin; 1 female (ZMMU), Dzhanghi-Pakhta,

10.06.1986, S.V. Ovtchinnikov. — TAJIKISTAN: 1 female (ISE), Hissarskiy Mt. Range, Kondara, 10.07.1988, S.V. Ovtchinnikov, 1 female (ISE), Pjandzh Distr., 7 km S of Zebon, 10.09.1989, A.V. Abramov; 1 male (ISE), Vanch env., 650 m a.s.l., 30.07.1978, A.A. Zyuzin.

Other material studied: see in LOGUNOV *et al.* (1993).

**Diagnosis.** *Pseudeuophrys obsoleta* is similar to *Pseudeuophrys erratica*, but differs in having a stronger embolus (cf. figs 25 and 29) in males, a heavier sclerotized median septum of epigyne (figs 43, 45, etc.) and otherwise structure of the spermathecae (cf. figs 44 and 34) in females.

**Notes.** *Euophrys browningi* was described by MILLIDGE and LOCKET (1955) from Shingle Street (Suffolk, England), the authors pointing out that "this species differs from *E. obsoleta*, male (Czech specimens), mainly in the slightly different form of the tibial apophysis" (MILLIDGE & LOCKET, 1955, p. 165). However, as is evident from the current study, the size and structure of male palpi in *Pseudeuophrys obsoleta* (embolus/tegulum length ratio, length and thickness of



Figures 39-42. — Female genitalia of *Pseudeuophrys lanigera* (39, 40) and *Pseudeuophrys vafra* (41, 42). 39, 41, epigyne. 40, 42, spermathecae.

the tibial apophysis, etc.) vary in rather wide limits (figs 51-53). Therefore, slight differences in the structure of tibial apophysis between *Euophrys browningi* and *Pseudeuophrys obsoleta*, as stated by MILLIDGE and LOCKET (1955), are inadequate to diagnose these species.

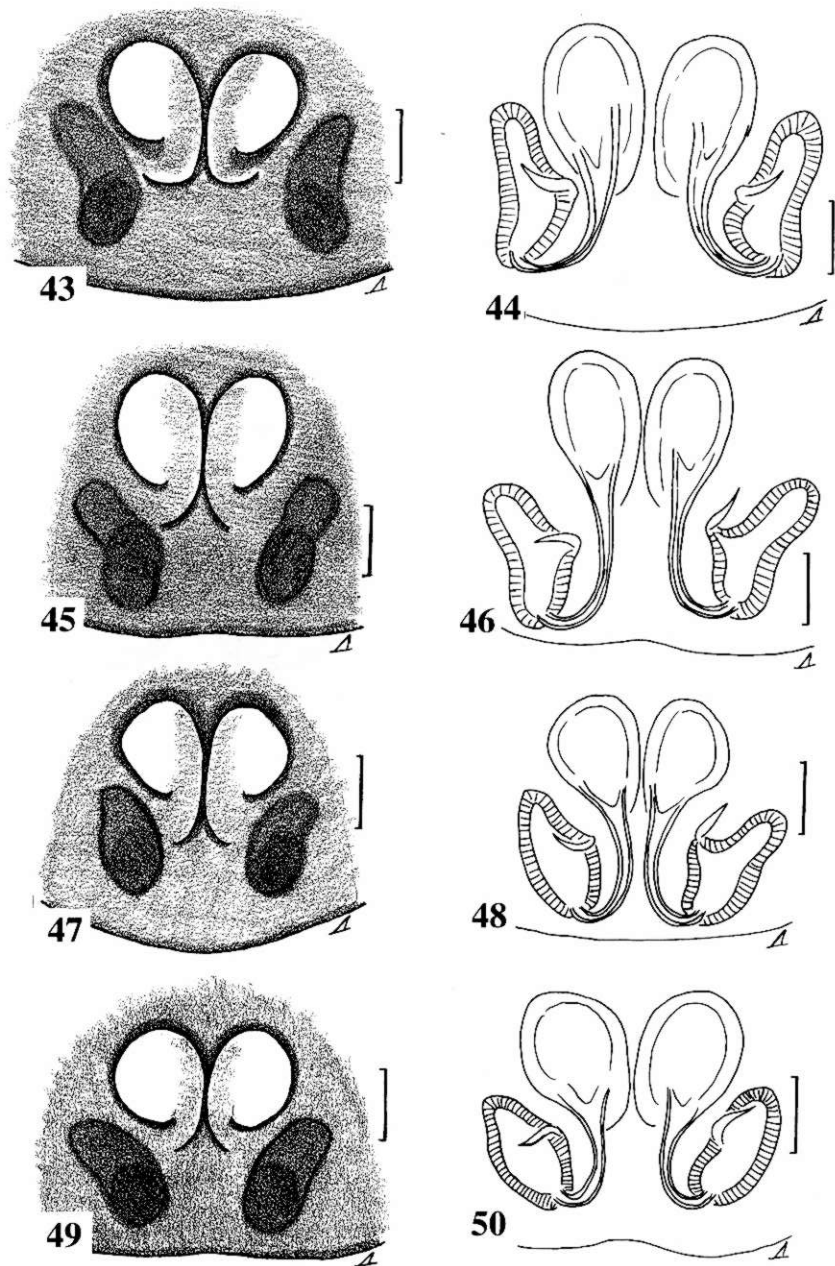
Furthermore, re-examining the female of *Euophrys browningi* (topotype, see description of LOCKET *et al.*, 1958) (figs 47-48), as well as study of numerous females of *Pseudeuophrys obsoleta* from different and distant localities, show the female genitalia to vary in wide limits as well (figs 43-46, 49, 50). So, taking into account the variability of the genitalia in both females and males of *Pseudeuophrys obsoleta*, it is safe to say that *Eu-*

*phrys browningi* is a junior synonym of *Pseudeuophrys obsoleta*.

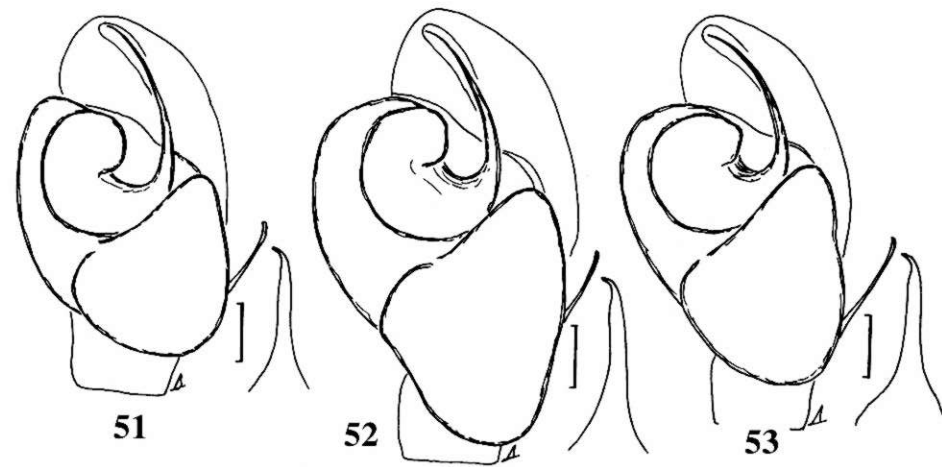
*Euophrys pictilis* is a poorly known species originally described from Corsica from a single male (SIMON, 1871, sub *Attus p.*). Judging from SIMON's figures (SIMON, 1937, figs 1851, 1852) and MILLER's redescription of *Euophrys pictilis* (see MILLER, 1947, pl. 12, figs 10-12), including the female thereof, this species name is doubtless a junior synonym of *Pseudeuophrys obsoleta*.

**Distribution.** European-Central-Asiatic species, distributed from England and France (Corsica) in the west (current data), easternmost to the Xinjiang-Uygur Province of China (HU & WU, 1989) and Tajikistan (current data). FLANCZEWSKA (1981) reported on this species from Bul-





Figures 43-50. — Female genitalia of *Pseudeuophrys obsolete* from different localities (epigyne left, spermathecae right). 43, 44, Pavlodar Area. 45, 46, Rostov Area. 47, 48, England, topotype of *Euophrys browningi*. 49, 50, Tajikistan. — Scale bar 0.1 mm.



Figures 51-53. — Variation of male palpi of *Pseudeuophrys obsolete*. 51, Pavlodar Area. 52, Azerbaijan. 53, Tajikistan. — Scale bar 0.1 mm.

garia as *Euophrys* sp. 2 (FLANCZEWSKA's specimens re-examined).

***Pseudeuophrys prinkipona***  
(Ræwer, 1951), comb. n.  
(figs 54-56)

*Euophrys pulchella* NOSEK, 1905: 146  
(D. female, holotype from the ZANM, examined; preocc. name).

*Euophrys pulchella*: PRÓSZYŃSKI, 1984:  
43 (female).

*Euophrys prinkipona* RÆWER, 1951: 452  
(female, replacement name).

**Material.** — TURKEY: 1 female (ZANM, No. 15.437, holotype), Prinkipo Island (Sea of Marmara), 5.05.1902, A. Penther.

**Diagnosis.** *Pseudeuophrys prinkipona* differs from all other *Pseudeuophrys* species in having chitinous "lids" on the epigyne (fig. 54) and a distinctive structure of the spermathecae (fig. 55).

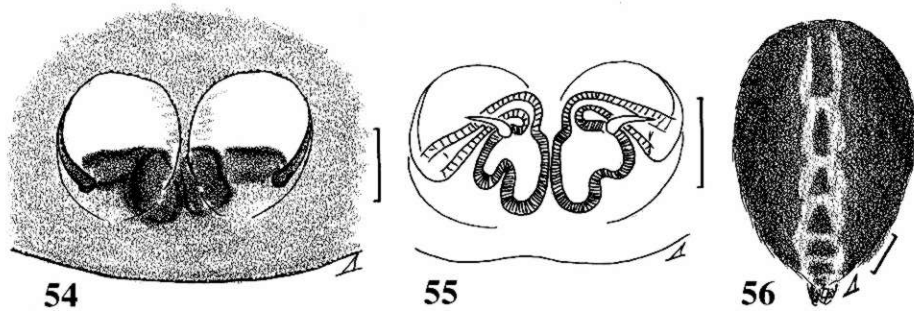
**Distribution.** The type locality only.

**Description.** Female (holotype). Measurements. Carapace 2.00 long, 1.30 wide, 0.88 high at PLE. Ocular area 0.98 long, 1.30 wide anteriorly and 1.20 wide posteriorly. Diameter of AME 0.38.

Abdomen 3.13 long, 2.20 wide. Cheliceral length 0.50. Clypeal height 0.13. Length of leg segments: leg I, femur 0.98, other segments absents; leg II, femur 0.95, patella 0.53, tibia 0.53, metatarsus 0.48, tarsus 0.35; leg III, femur 1.08, patella 0.60, tibia 0.65, metatarsus 0.80, tarsus 0.45; leg IV, femur 1.23, patella 0.55, tibia 0.88, metatarsus 0.98, tarsus 0.45. Leg spination. Leg I: femur d 0-1-1-1, other segments absent. Leg II: femur d 0-1-1-1; tibia pr 0-1, v 1-2-2ap; metatarsus v 2-2ap. Leg III: femur d 0-1-1-2; patella rt 0-1-0; tibia pr and rt 1-1; metatarsus 2-2ap. Leg IV: femur d 0-1-1-1; patella pr 0-1-0; tibia pr 1-1-1, rt 1-1, v 1-2ap; metatarsus pr and rt 1-1-2ap, v 1-0-2ap. Coloration. The holotype specimen is strongly damaged and faded. Carapace brownish yellow, with a median yellow stripe on its thoracic region. Sternum, maxillae, labium and chelicerae yellow. Abdomen: dorsum as in fig. 56, venter yellow. Book-lung covers and spinnerets brownish yellow. All legs yellow, with brownish femora. Epigyne and spermathecae as in figs 54-55.

Male unknown.





Figures 54-56. — Female genitalia and abdomen of *Pseudeuophrys prinkipona* (holotype from Turkey). 54, epigyne. 55, spermathecae. 56, abdomen, dorsal view. — Scale bar: 54, 55, 0.1 mm; 56, 0.5 mm.

***Pseudeuophrys vafra***  
(Blackwall, 1867)  
(figs 15, 35, 36, 41, 42)

*Salticus vafra* BLACKWALL, 1867: 205 (D. female).

*Attus finitimus* SIMON, 1868: 591 (D. males, females).

*Attus finitimus*: SIMON, 1871: 198.

*Euophrys finitima*: SIMON, 1876: 175 (male, female, T. from *Attus*).

*Euophrys finitima*: CHYZER & KULCZYŃSKI, 1891: 43, pl. 2, fig. 3 (male, female).

*Euophrys finitima*: LESSERT, 1910: 558, figs 233-235 (male, female).

*Attus maderianus* WARBURTON, 1892: 217, pl. 14, fig. 1 (D. female).

*Euophrys vafra*: SIMON, 1937: 1178, 1252, figs 1846-1848 (male, female).

*Euophrys v.*: MILLER, 1971: 141.

*Euophrys v.*: NENILIN, 1985: 130.

*Euophrys v.*: WUNDERLICH, 1987: 270.

*Euophrys v.*: MAURER & HÄNGGI, 1990: 214.

**Material.** — PORTUGAL: 2 males, 3 females (IZW), “Barro, leg. X. Hankiewicz, coll. W. Kulczyński”. — UKRAINE: 1 male, 1 female (ISE), Crimean Peninsula, Bakhtchisarai, 5-15.06.1993, S.V. Vasilenko. — ITALY: 1 male (IZW), “Goritzza, coll. W. Kulczyński” — SWITZERLAND: 1 female (NHMB, 5266), “without label”. — SPAIN: 1 male, 2 females (LON), The Balearic Islands,

Mallorca, 10 km NW of Alcudia, Puerto Pollensa, October 1968, D.J.C.

**Diagnosis.** See comments under “diagnosis” of *Pseudeuophrys lanigera*.

**Distribution.** This appears to be a South European (Mediterranean?) species (see PRÓSZYŃSKI, 1976, map 65), with its easternmost locality lying in the Crimean Peninsula, Ukraine (current data).

**Notes on some additional species**

***Chalcoscirtus difficilis***  
(Simon, 1868) comb. n.  
(ex *Euophrys*)

*Attus difficilis* SIMON, 1868: 590 (D. male, female).

*Attus d.*: SIMON, 1871: 198.

*Euophrys d.*: SIMON, 1876: 182 (male, female, T. from *Attus*).

*Euophrys d.*: SIMON, 1937: 1179, 1252, figs 1849, 1850 (male).

*Euophrys lundbladi*: SCHENKEL, 1938: 15, fig. 6 (female).

**Notes.** This species was described and then repeatedly reported from Mediterranean. REWER (1954) assigned this species to *Pseudeuophrys*. I has had yet no chance to re-examine the type specimens of *Attus difficilis*. However, the original and subsequent descriptions of *Euophrys difficilis* (e.g. SIMON, 1937, figs 1849, 1850) allow to diagnose this species as belonging to *Chalcoscirtus*. This suggestion is evidenced by the following peculiarities of the genitalia: apical position and shape (straight) of the embolus, shape of the tegulum, and especially by presence of the ventral, cone-shaped tibial apophysis, the latter character being usually treated as an important diagnostic feature of *Chalcoscirtus* (see MARUSIK, 1990).

***Euophrys pascualis***  
(O. P.-Cambridge, 1872)

*Salticus pascualis* O. P.-CAMBRIDGE, 1872: 334 (D. male).

*Euophrys pascualis*: PRÓSZYŃSKI, 1984: 43 (male, T. from *Salticus*).

**Notes.** This species was described from Palestine (present territory of Israel) by P.-CAMBRIDGE (1872) and, up to now, it has been known from a single male. Judging from PRÓSZYŃSKI’s figures of the holotype (PRÓSZYŃSKI, 1984: 43), this species indeed is a member of *Pseudeuophrys*. However, despite some differences in the structure of male palp (e.g. slightly narrower tibial apophysis) and coloration, this species seems to be a junior synonym of *Pseudeuophrys obsoleta*. The issue remains open before new materials of *Euophrys pascualis* are collected from the Near East.

**Acknowledgements**

I wish to express my thanks to the following persons who contributed specimens for this study: Dr A.A. Zyuzin and Mr A.V. Gromov (both from Almaty, Kazakhstan), Dr S.L. Zonshtein and Mr S.V. Ovtchinnikov (both from Bishkek, Kyrgyzstan). I am very obliged to Dr T. Kronstedt (Stockholm, Sweden) for the help in identifying some localities in West Europe, as well as Drs V.E. Efimik (Perm, Russia), K.G. Mikhailov (Mos-

cow, Russia), T. Kronstedt (Stockholm, Sweden), S. Koponen (Turku, Finland) and A.V. Abramov (St-Petersburg, Russia) for the help in getting rare arachnological literature. I am also grateful to Dr P. Lehtinen (Turku, Finland) who provided me with a possibility to work on the scanning electron microscope in his laboratory. My warmest thanks are due to Dr S. Koponen (Turku, Finland) for the hospitality during my staying at Turku at March-April 1995. Finally, many thanks to Dr W. Wesolowska who indicated a number of defects in the typescript, helping eliminate them. This work was partially supported by the INTAS project 94-3708, and the grant 25 from the Siberian Department of the Russian Academy of Sciences.

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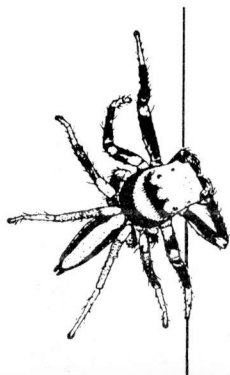
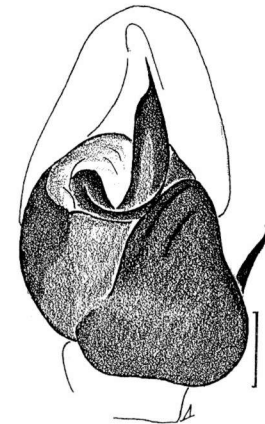


REVUE  
ARACHNOLOGIQUE

Tome 12, fasc. 11

paru le 30 juin 1998

Dmitri V. LOGUNOV, *Pseudeuophrys* is a valid genus  
of the jumping spiders (Araneae, Salticidae).



Dépôt légal: 3<sup>ème</sup> trimestre 1998

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