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Redescriptions of one *Aelurillus* and two *Phlegra* species
(*Araneae, Salticidae*) from Spain

[With 24 figures in the text]

Abstract. *Phlegra semiglabrata* (SIMON, 1868) is redescribed and reclassified into the genus *Euophrys* C. L. KOCH, 1834. *Aelurillus tristis* DENIS, 1957 and *Phlegra variegata* DENIS, 1957 are synonymised with *Euophrys lanigera* (SIMON, 1871).

Acknowledgements. Type specimens of *Aelurillus tristis*, *Phlegra variegata* and *Phlegra semiglabrata* were lent to us by Mr. M. HUBERT, Muséum National d'Histoire Naturelle, Paris; comparative specimens of *Euophrys lanigera* by Dr. E. KIERYCH, Institute of Zoology, Polish Academy of Sciences, Warsaw. We wish to express our thanks to above mentioned persons and institutions. The present paper is a part of the Polish Academy of Sciences Research Project MR. II. 6.

The three studied nominal species are very poorly known, these of DENIS from types only, their faulty descriptions apparently preventing further identification. Of the three, *Phlegra semiglabrata* could justify misidentification by having stripped external appearance, however not typical for *Phlegra*. Its genital organs are very special, with some characters typical for *Euophrys* and other unusual (internal structure of epigyne, shape of tibia and tibial apophysis in male). Other characters in all three species are like in *Euophrys* — clypeus very narrow (low), — equalling approximatively to one-fifth of eyes I median diameter (which is identical in *Euophrys frontalis*, whereas in type species of two other genera — *Phlegra fasciata* and *Aelurillus v-isignatus* — it amounts to about there-fifths).

The line touching dorsal rims of eyes I is straight, in *Aelurillus* and *Phlegra* bent upwards. Lateral walls of cephalothorax almost vertical and owing to

that cephalothorax is only slightly broader than eyes III; in *Aelurillus* and *Phlegra* the lateral walls are less steep and the cephalothorax is distinctly broader than eyes III.

Euophrys semiglabrata (SIMON, 1868), **comb. n.**

Attus semiglabratus SIMON, 1868: 561;

Phlegra semiglabrata: SIMON, 1871 et auct. seq.

Material: 1♂ — lectotype (new); 4♂♂, 4♀♀ — paralectotypes, 2 juv. ♂ — "902. *Phl. semiglabrata* E. S. Astur., Portug., La Rhuñe" — coll. E. SIMON, MNHN, Paris.

Description of male

Dorsal aspect. Cephalothorax and abdomen with distinct stripes, (Fig. 9) differing from those published by SIMON 1937, f. 1960 by opposite order of light and dark stripes. Cephalothorax yellowish brown with brownish black eye field. Thorax with light median stripe, followed laterally by brown stripes, beyond which the colouration is lighter until near ventral edges where it is darker mottled. The anterior end of light median stripe extends over posterior part of eye field making a light triangular spot. Cephalothorax covered with brown setae and fine adpressed whitish setae. Length of cephalothorax (two specimens measured) 1.85–1.77, length of eye field 0.71–0.71, width of eye field I 1.14–1.07, width of eye field III 1.07–0.99, width of cephalothorax at eyes III 1.35 mm. Abdomen with three brown stripes (Fig. 9), the median of which turning posteriorly into a chain of triangles and short transversal lines, the lateral ones consist of diagonal darker lines separated by narrow diagonal lighter lines. There is indistinct yellowish scutum near the anterior apex of abdomen. Abdomen covered with fine adpressed whitish setae, besides there are some stronger and longer brown setae arranged diagonally, and some stouter brown setae on the apex. Spinnerets fawn. Length of abdomen 1.85–1.85. Legs brown with lateral surfaces of femora darker, tarsi yellow. Length of segments of legs (lectotype and paralectotype specimens): I: 0.36–0.36 + 0.50–0.50 + 0.71–0.71 + 0.64–0.64 + 1.07–1.13 = 3.28–3.34; II: 0.36–0.36 + 0.50–0.50 + 0.57–0.64 + 0.64–0.64 + 1.07–1.07 = 3.14–3.21; III: 0.43–0.43 + 0.71–0.78 + 0.64–0.57 + 0.50–0.50 + 1.07–1.13 = 3.35–3.41; IV: 0.43–0.50 + 0.85–0.92 + 0.85–0.85 + 0.64–0.71 + 1.14–1.13 = 3.91–4.11 mm.

Frontal aspect. Clypeus yellowish brown with sparse whitish setae near ventral edge. Chelicerae brown, light brown apically, with fine whitish setae on surface. Pedipalps brown with cymbium and lateral surfaces of tibia darker.

Ventral aspect. Sternum dark yellow mottled brown, coxae slightly paler. Patellae and tibiae I with ventral row of light brown setae, similar rows on femora of pedipalps and much less distinct on tibiae II.

Palpal organ with embolus twisted into a single coil of a spiral, characteristic for *Euophrydinae*. However, that coil is pushed forward and well seen in antero-ventral position, in normal ventral position it is partly hidden by expanded thin apex of bulb, resembling slightly that in *Phlegra* (Figs. 1–3). This arrangement resembles somewhat invisible externally but coiled embolus of *Phlegra festiva* (C. L. KOCH, 1834) (= *Aelurillus festivus*), hidden between bulb and cymbium, as shown on M. HARM 1977 f. 14 b. One may speculate on possible morphologically intermediate conditions, but the material is not sufficient for too far reaching conclusions.

Description of female

Dorsal aspect. External appearance resembling the male, with abdomen lighter (Figs. 10–11). The stripes on abdomen less distinct, possibly due to poorer preservation. Spinnerets yellowish. Length of cephalothorax 1.92–2.19, length of eye fields 0.64–0.78, width of eye field I 1.21–1.28, width of eye field III 1.14–1.21, width of cephalothorax at eyes III 1.49–1.49, length of abdomen 2.41–2.41 mm.

Frontal view. A row of long white setae beneath eyes I, which are also surrounded by whitish scales. Chelicerae light yellow.

Ventral aspects. Sterum convex, whitish yellow, coxae darker, chelicerae yellowish brown, labium and maxillary plates yellow white tipped. Abdomen ventrally greyish fawn with indistinct brownish dots. Legs ventrally yellowish brown with femora light yellow. Length of segments of legs: I: $0.43-0.36+0.57-0.57+0.71-0.64+0.64-0.64+1.06-0.92 = 3.41-3.12$; II: $0.36-0.36+0.57-0.50+0.64-0.57+0.64-0.64+0.92-0.78 = 3.12-2.81$; III: $0.50-0.43+0.71-0.71+0.64-0.64+0.64-0.64+1.21-1.06 = 3.62-3.48$; IV: $0.57-0.50+0.85-0.99+0.92-0.85+0.71-0.64+1.42-1.28 = 4.47-4.26$ mm.

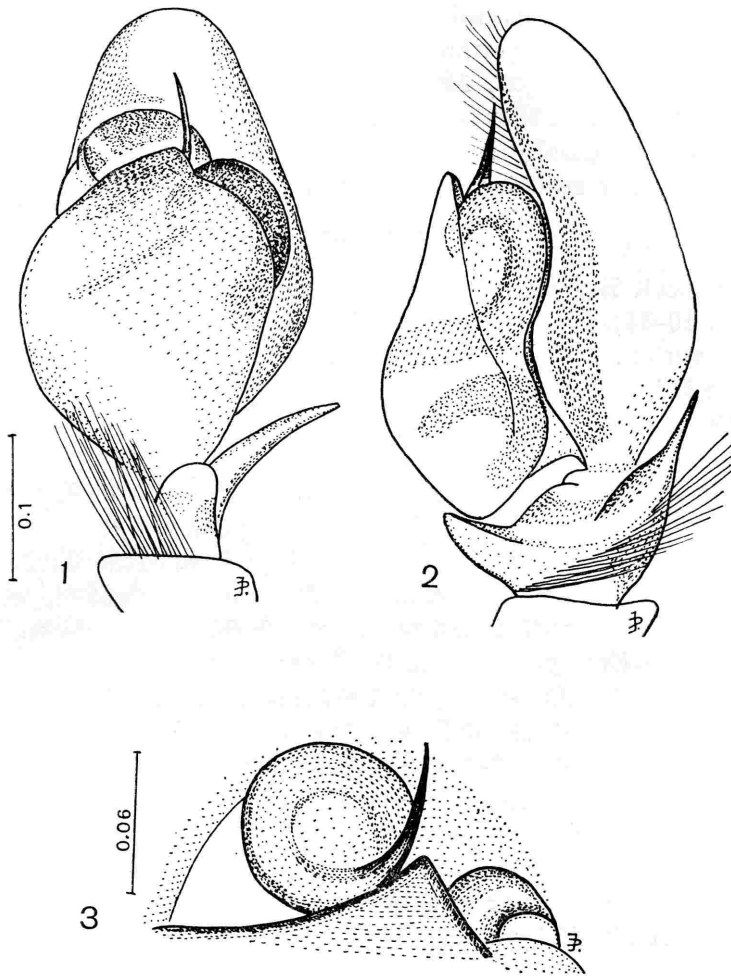
Epigyne. The external appearance rather *Euophrys*-like, the spermathecae are very special and cannot be compared with any European species, the relative position of openings and spermathecae could be compared with general diagram of these structures in *Phlegra*, but the details are not comparable (Figs. 4–8)

Euophrys lanigera (SIMON, 1871)

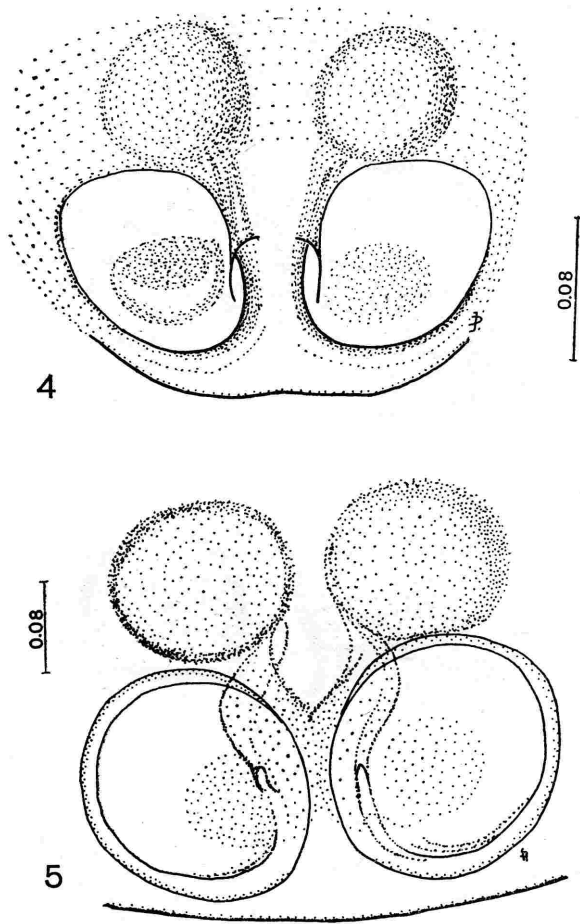
Aelurillus tristis DENIS, 1957: 290, f. 14, **syn. n.**

Phlegra variegata DENIS, 1957: 287, ff. 11–12, **syn. n.**

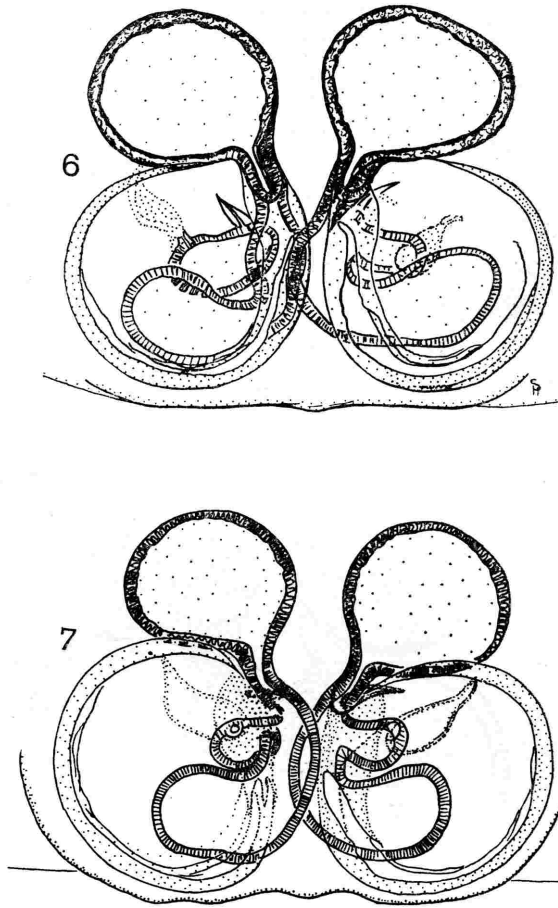
Material: 1♀ – lectotype (new), 1♀ – paralectotype, 3 juv. – “*Aelurillus tristis* DENIS, Sierra Nevada: Muleyacen, 3460 m, H. JANETSCHKE leg.” – coll. MNHN, Paris; 1♀ – holotype – “*Phlegra variegata* DENIS, type, Sierra Nevada: Peñones de San Francisco, H. JANETSCHKE leg.” – coll. MNHN, Paris; 9♂♂, 8♀♀ – in three samples – “*Euophrys lanigera* (SIM.) det. J. PRÓSZYŃSKI”, “France: (a) limestone rocks near Fontaine de Vaucluse, Dept. Vaucluse; (b) stone strewn valley among limestone rocks, on stones – same area as above, both samples 14–15. V 1966; (c) Camping in Gap, Dept. Hautes Alpes, 24. V 1966”. All three samples leg. M. and J. PRÓSZYŃSCY – coll. IZ PAN, Warszawa.



Figs. 1-3. *Euophrys semiglabrata* — lectotype of *Phlegra semiglabrata*, palpal organ: ventral (1), lateral (2) views and coiled embolus in antero-ventral view (3).



Figs. 4-5. *Euophrys semiglabrata* — paralectotypes of *Phlegra semiglabrata*, epigyne variation.



Figs. 6-7. *Euophrys semiglabrata*: internal structure of epigyne shown on Figs 4-5, differences in shape of the small median vesicle may be due to different position.

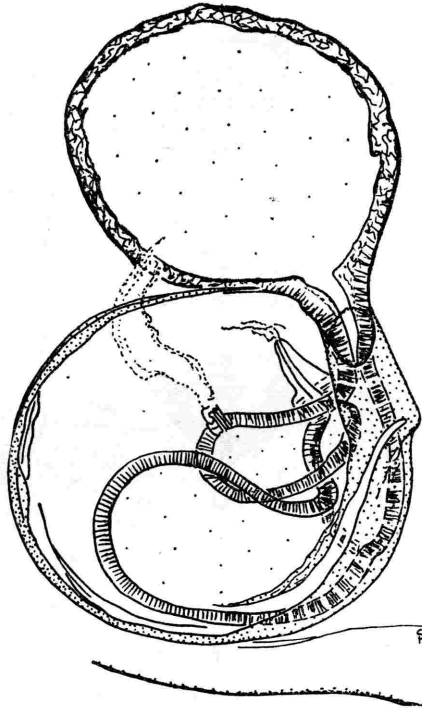
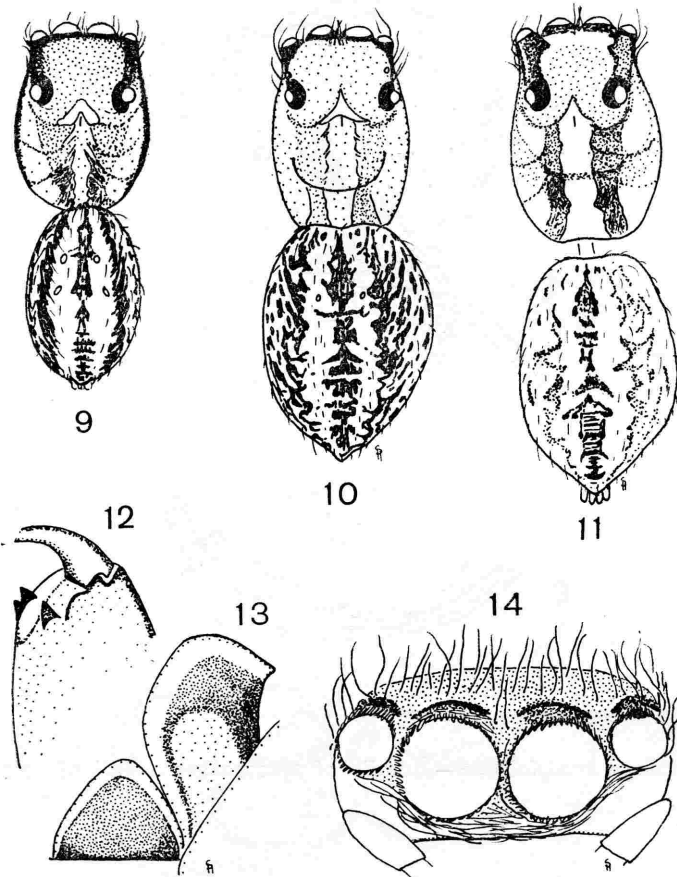
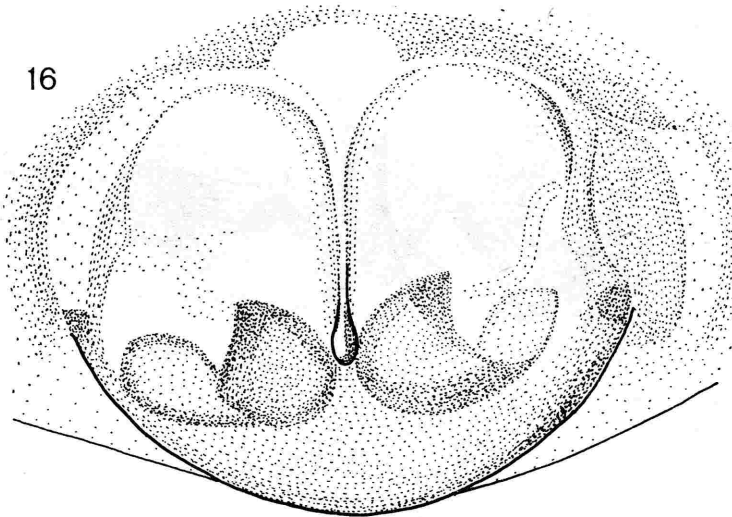
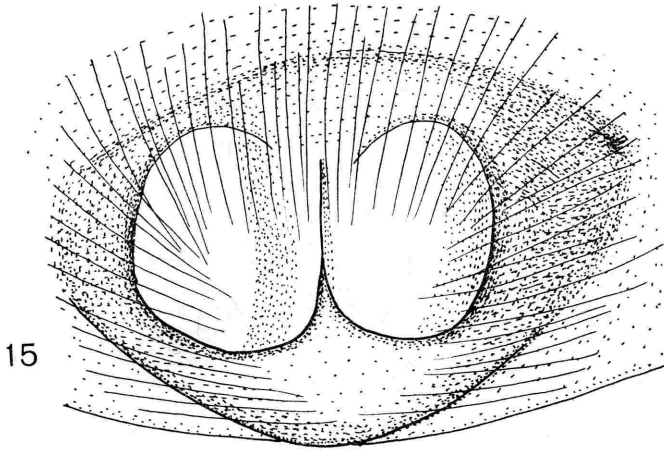


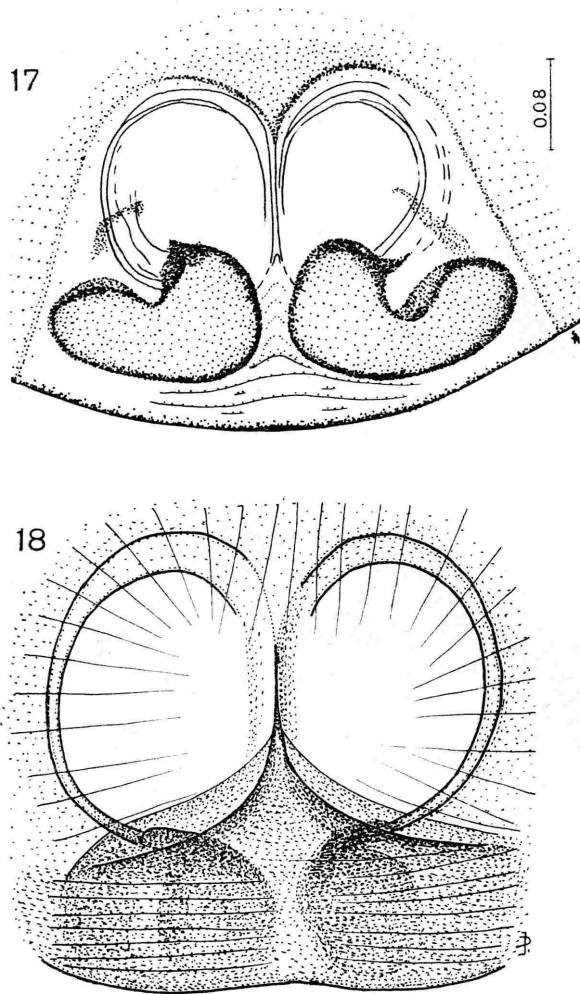
Fig. 8. *Euophrys semiglabrata* — details of spermatheca (half of epigyne only).



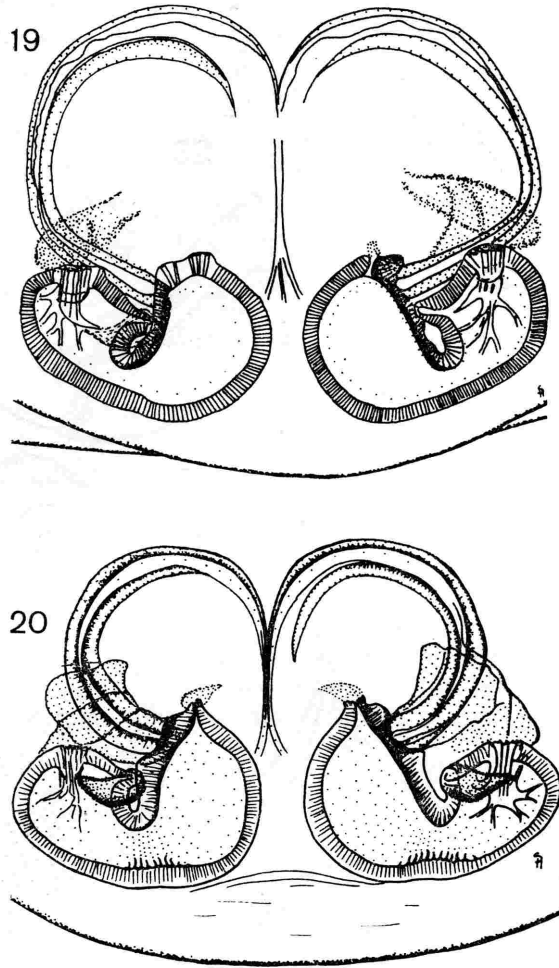
Figs. 9–14. *Euophrys semiglabrata* — external appearance (9–11), cheliceral dentition, maxillary plate in ♂ (13) and frontal aspect (14) (paralectotypes ♀♀ — 10–12, 14, lectotype ♂ — 9, 13).



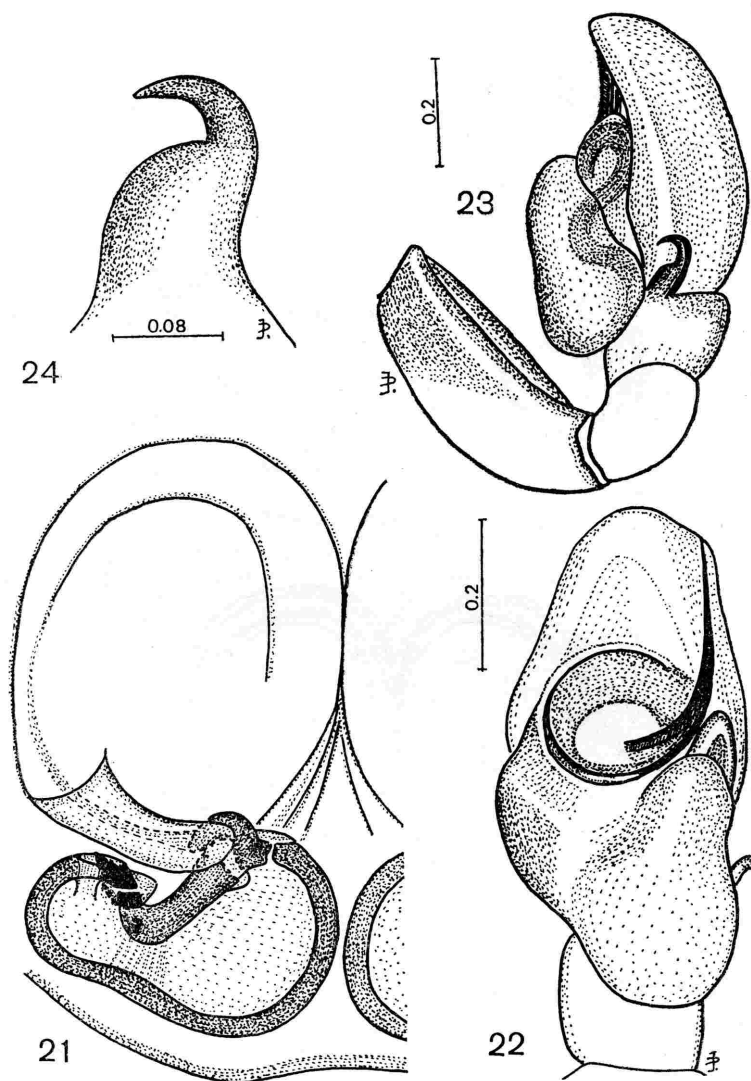
Figs. 15–16. Epigyne in *Euophrys lanigera* — lectotype (16) and paralectotype (15) of *Aelurillus tristis*.



Figs. 17–18. Epigyne in *Euophrys lanigera* – specimen from France (18) and the holotype of *Phlegra variegata* (17).



Figs. 19–20. Internal structure of epigyne in *Euophrys lanigera* — paralectotype of *Aelurillus tristis* (19) and holotype of *Phlegra variegata* (20) (temporary preparations in clove oil).



Figs. 21–24. *Euophrys lanigera*, specimens from France. 21 – internal structure of epigyne, note opening of canal and its junction with spermatheca, also two pores to accessory gland (Canada Balsam preparation, stained in Chlorazol Black E); 22 – palpal organ ventral view; 23 – pedipalp of ♂ – note darkening of basal part of femur; 24 – tibial apophysis, high magnification.

Description of females

Dorsal aspect. Cephalothorax blackish brown, eye field blackish or black, covered with whitish setae. Abdomen dark grey, densely covered with whitish setae, which in some specimens form variable and indistinct pattern. The type of *Ph. variegata* was once dried and its colouration cannot be analysed. Legs uniformly brown in *Ae. tristis* and indistinctly grey-dotted, its tarsi apically yellowish. There are indistinct traces of darker annulation on legs III–IV on tibia and metatarsus. This character seems to differ from *E. lanigera* specimens from France, which have distinct annulation of legs and yellowish tarsi. We wish to call attention to some difference in characters in these three groups of specimens generally, they may reflect some populational variation, which may be increased by geographical and altitudinal differences. However, the material we have is not sufficient for such analyses.

Frontal aspect. Eyes surrounded with white setae, clypeus brown with sparse white "beard", Chelicerae brown.

Ventral aspect. Sternum brown, labium and maxillary plates brown white tipped. Chelicerae posteriorly yellowish in *Ph. variegata*, in remaining specimens brown. Ventral surface of abdomen greyish brown, spinnerets lateral grey, internal paler.

Epigyne. Similar in all specimens but not very distinct, with visibility of various parts depending on sclerotisation, which in this species may vary considerably and gives different pictures (Figs. 15–18). The internal structure of epigyne is more uniform but there are also some differences in shape of anterior chamber of spermatheca, its proportions to the posterior one and in proportions of the whole spermatheca to the white oval field (Figs. 19–21). These differences, however, do not suggest separate specific status of the studied forms.

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STRESZCZENIE

[Tytuł: Redeskrpeja jednego gatunku rodzaju *Aelurillus* i dwóch rodzaju *Phlegra* (*Araneae*, *Salticidae*)]

Zbadanie typów opisowych *Phlegra semiglabrata* (SIMON, 1868) spowodowało przeniesienie tego gatunku do rodzaju *Euophrys* C. L. KOCH, 1834. *Aelurillus tristis* DENIS, 1957 i *Phlegra variegata* DENIS, 1957 okazały się identyczne z *Euophrys lanigera* (SIMON, 1871).

РЕЗЮМЕ

[Заглавие: Переописание одного вида из рода *Aelurillus* и двух из рода *Phlegra* (*Araneae*, *Salticidae*) из Испании]

Исследование типовых экземпляров *Phlegra semiglabrata* (SIMON, 1868) было причиной перенесения этого вида в род *Euophrys* C. L. KOCH, 1834. *Aelurillus tristis* DENIS, 1957 и *Phlegra variegata* DENIS, 1957 оказались идентичными с *Euophrys lanigera* (SIMON, 1871).
