Delimitation of Mediterranean genus *Iberattus* gen. n., with comments on genus *Saitis* (Araneae: Salticidae)*1*

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**Abstract**

The paper delimits *Iberattus* gen. n. from France, Portugal and Spain and discusses classification of *Saitis imitans*, both species characterized by possession of a rare, three-chambered spermathecae. In the methodological layer paper is a test of the proposed new research protocol, including a shift to macrophotography of live specimens, whenever possible.

**New informal subgroup:** SAITEAE Prószyński

**New genera:** *Iberattus* gen. n.

**Overdue nomenclatorical correction:**

**Nomenclatorical changes:**

*Euophrys semiglabrata* (Simon, 1868) = *Iberattus semiglabratus* (Simon, 1868) comb. n.

**Species pending transfer to new genera:**


**Key words:** diagnostic research protocol, diagnostic macrophotographs, Mediterranean Salticidae, Australian Salticidae, *Iberattus* gen. n., *Saitis imitans*, genus *Saitis*.

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Introduction

The paper analyses two little known European species of EUOPHRYINES, listed now by World Spider Catalog as *Euophrys semiglabrata* (Simon, 1868) and *Saitis imitatus* (Simon, 1868). Their current classification is based on general appearance and shape of palps, the latter being characteristic for the whole group of genera EUOPHRYINES (according to Prószyński (2017), (Euophryini according to Maddison, 2015)), but devoid of characters linking them with known genera. Current genus placement cannot be sustained, however, because both species differ from the above mentioned genera by the most important genus character - internal structure of epigyne (Figs 1Q, S-T and 2C-D, N respectively). Their spermathecae consists of three interconnected chambers, while typical spermatheca in EUOPHRYINES is single and ball shaped. Both species were originally described in the genus *Attus* Walckenaer, 1805, later transferred to *Euophrys* C.L. Koch, 1834. Out of these *Euophrys semiglabrata* is hereby placed in the new genus of its own - *Iberattus semiglabrata* (Simon, 1868) comb. n., the other was transferred by Dobroruka (2004) to *Saitis* Simon, 1876, as "*Saitis* imitatus" (Simon, 1868), where it apparently does not belong, but is temporarily left, pending further research. "*Saitis* imitatus" resembles *Iberattus semiglabrata* by multi-chambered spermatheca, somewhat analogous to the non-EUOPHRYINES genus *Habrocestum* Simon, 1876 (Fig. 2R), the existing documentation, however, is insufficient to include it into *Iberattus*.

Material and Methods

The paper follows methodology of "pragmatic classification" proposed by Prószyński (2016a, 2017) and practiced by Prószyński, Lissner, & Schäfer (2018) "Taxonomic survey of the genera *Euophrys*, *Pseudeuophrys* and *Talavera*, with description of *Euochin* gen. n. (Araneae: Salticidae) and with proposals of a new research protocol", *Ecologica Montenegrina* 18: 24-74. which postulates identification of Salticidae by direct comparison of either specimens, drawings and photographs (whichever is possible), complemented now by experience of Jørgen Lissner, Aart Noorden, Pierre Oger and by Michael Schäfer in macrophotography of live spiders, which revolutionizes diagnostics but requires deep change in collecting procedures. The present paper is based on data of literature, supported by own experience of authors, with a shift to color macrophotographs of live specimens, whenever possible. The original descriptions are provided in form of facsimiles, enclosed at the end of the paper (Figs 5-8). The decision on separating the species is prompted by the pioneer study of spermathecae of *I. semiglabrata* (Figs 1Q, S-T) by Hęciak & Prószyński (1984), confirmed by recent photographs by, Noorden, Oger and Schäfer (Figs 1F and 2D), as well as a sketch by Dobroruka (Fig. 2N).

The assessment of similarities and differences, necessary for classification, require plotting comparative charts of pictures of characters and photos, arranged by similarities and including all relevant taxa.

In difference to tradition established in XIX century by Simon and his contemporaries, identification and classification of spiders could be easier and faster done by concentration on a few characters only, preliminarily selected as practical and reliable. Such test on 4800 recognizable species of Salticidae (Prószyński, 2016a - http://www.peckhamia.com/salticidae/Subfamilies/) pointed at utility of palps and internal structure of epigyne, further addition of macrophotographs of live specimens to the diagnostic tools is strongly indicated by a success of collection of macrophotographs (for instance that of M. Schäfer). This is well demonstrated by comparative plate of characters in a few *Euophrys* species (Fig. 7 in Prószyński, Lissner, & Schäfer (2018)).

Taxonomy

**Gen. Iberattus gen. n. Prószyński, 2018**

*Figure 1*

**Type species.** *Attus semi-glabratus* Simon, 1868 [="Euophrys" semiglabrata (Simon, 1868) = *Iberattus semiglabratus* (Simon, 1868) comb. n.].

**Etymology.** Name created by combination of letters Iber[-ian Peninsula]-attus, derived from Iberian Peninsula and the synonymic genus name *Attus*, commonly used in the past for these spiders.
Remarks. Premises for the present delimitation of a new genus were documented by Hęciak & Prószyński (1984), who proved that palp, epigyne and internal structure of epigyne of *Attus semi-glabratus* does not agree with both *Phlegra* Simon, 1876 and *Euophrys* C. L. Koch, 1834 (see facsimiles of descriptions by Simon – Fig, 8) they have also noted analogy of the multi-chambered spermatheca to that structure in *Habrocestum* Simon, 1876 (Fig. 2R - which, however, does not belong to EUPHRYINES). With these considerations, species *semiglabrata* was left provisionally ("provision" lasting 34 years, as it turned out) in the genus *Euophrys*, pending more research. There are obvious resemblances in spermathecae with "*Saitis* imitatus" (Figs 2B-C, M-N), but interpretation of these requires better documentation of the latter species.

Diagnosis. *Euophrys* like spider (Figs 1A-D), recognizable by internal structure of epigyne. (Figs 1Q, S-T) reflected in part also in external appearance of epigyne - Figs 1F, P, R), strikingly different from *Euophrys* and closely related genera (compare Figs 2O-Q). Palp (Figs 1E, G-I) is obviously EUPHRYINES like, but pointing out generic characters on it require further comparative research. Change of dorsal color pattern after preservation in alcohol is as profound as in *Euophrys*, so may take place also as rapidly (Prószynski et al, 2018c: 44).

Description. General appearance and pulps have some similarities to *Euophrys* (see facsimiles of the original descriptions - Fig, 5, below), but multichambered spermatheca excludes closer proximity. Looking at epigyne alone, possible placement is indicated by anterior position and proportions of translucent chambers of spermathecae, in front of epigynal "windows" (Figs 1P-T), the detailed documentation of internal structures of epigyne (Figs 1 Q, S-T) suggests relationship with little known multichambered genera discovered in tropical areas.

Distribution. *I. semiglabrata* has been reported from a few localities in Portugal, Spain, France, the issue of conspecificity of these specimens was not discussed, but there may be more species, misidentified or not yet discovered. The scarcity of information on several genera is presumably due to poor exploration of arachnofauna of Mediterranean, more relevant species could be possibly found in southern Mediterranean countries of Africa and Near East (Prószyński, 2003).

Composition. Type and heretofore the only known species - *Iberattus semiglabratus* (Simon, 1868).
Figure 1. Diagnostic characters of *Iberattus semiglabratus* documented by color macrophotographs (A-F) and diagnostic drawings (G-M). A - live male, B-C - color pattern of a male, in different stage of fading during preservation, D - color pattern of preserved female, E - palp, F - epigyne, G-I - palp, J - dorsal pattern of preserved male, K - cheliceral dentition, L - frontal view of male, note reduction of clypeus, M-N - dorsal pattern of preserved two females, O - male by Barrientos et al., P-T - epigyne and internal structure of epigyne in two females.


*Iberattus semiglabratus* (Simon, 1868) comb. n.

**Figure 1**

*Attus semi-glabratus* Simon, 1868b: 561 (Dm).

*Phlegra semiglabrata* Simon, 1937: 1221, 1267, f. 1957-1959 (m, Df).

*Euophrys lundbladii* Schenkel, 1938b: 15, f. 6 (f, provisional name only).

*Euophrys semiglabrata* Hęciak & Prószyński, 1984a: 378, f. 1-14 (Tmf from *Phlegra*).

*Habrocestum semiglabratum* Prószyński, 2009a: 320, f. 62 (f, no justification provided for any generic transfer).

*Euophrys semiglabrata* Barrientos et al., 2014: 36, f. 15-17 (mf).

*Euophrys semiglabrata* Lecigne, 2017: 34, f. 10G-I (m). ([Synonyms listed after Word Spider Catalog](https://arachno.piwigo.com/index/?/category/1232-euophrys_semiglabrata) (Figs 1A-G)).

**Type species.** *Attus semi-glabratus* Simon, 1868 [= *Iberattus semiglabratus*(Simon, 1868)].

**Material.** Lectotype male, paralectotypes: 4 males and 4 females, original collection label is: "902. Phl. [egra] semiglabrata E. S. Astur., Portug., la Rhune" - collection Simon - MNHN-Paris (lectotype designated by Hęciak & Prószyński (1984)).

Other documentation used: color photographs in photogalerie of Pierre Oger ([https://arachno.piwigo.com/index/?/category/1232-euophrys_semiglabrata](https://arachno.piwigo.com/index/?/category/1232-euophrys_semiglabrata)) (Figs 1A-G).

**Remarks.** In spite of renewed interest in latest time (Barrientos et al., 2014, Lecigne, 2017) the species remains little known, apparently due to its rarity and cryptic coloration (Fig. 1A) but also to radical lost of natural coloration of live specimen (Fig. 1B) during preservation (Figs 1C-D), which hampers recognition in the field.

**Diagnosis.** Live male has black carapace with eyefield light reflecting, apparently due to iridescent scales, and whitish scales making median thoracal streak and marginal lines, abdomen is dark gray with two parallel, thin black streaks. Palps of the EUOPHRYINES type (Figs 1E, G-I). Epigyne with a pair of posterior "windows" and a pair of round translucent darker spots in front of them (Figs 1F, P, R), spermathecae three chambered (Figs 1Q, S-T).

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Description. Facsimile of the detailed description (Fig. 6) is demonstrated below, in the section "Appendix-facsimiles". Body coloration of live male specimen dark (Fig. 1A), carapace with light reflecting eyefield and whitish median streak indistinct and ending before posterior end of the carapace, abdomen cryptic colored - gray, with brown shade and indistinct, still darker pattern. Palps is shown on Figs 1E, G-I. Epigyne with a pair of posterior "windows" and a pair of round translucent darker spots in front of them (Figs 1F, P, R), spermathecae three chambered (Figs 1Q, S-T).

Distribution. Males from Rasmalhos (Portugal) and Escaut - Pyrénées atlantiques (France), female from 64 Bielle, Turon de la Técouère (France). Matching of sexes and conspecificity not verified.

Nomenclatorical correction
Name "Euophrys lundbladiii" Schenkel, 1938: 15, f. 6 (Fig. 7) was not described but proposed by Schenkel conditionally, as a replacement for specimen identified provisionally by him as "Euophrys difficilis[?]", to be substituted if the species would appear new. It appeared that the species was not new, but misidentified "Phlegra" semiglabrata, so provision by Schenkel never become valid. Roewer (1954: 1175) apparently decided to introduce order and implemented Schenkel's provision, without reason and authority to do that. Name Euophrys "lundbladi" Schenkel, 1938 never become available (in the nomenclatorical sense) because there was never such species described and there is no type specimen to be connected with. Therefore: Euophrys lundbladi Roewer (1945[1955]: 1175) should be considered nomen nudum (see Fig. 7).

Informal subgroup of genera SAITEAE (sensu Prószyński)

Remarks. Informal group of genera EUOPHRYINES is so large (800 to 1000 species according to various classifications) that any subdivision is welcomed, providing that is based on clear cut, well noticeable diagnostic characters. The difficulty is that EUOPHRYINES are relatively uniform group, with little diversity of genitalic characters, so even if some genera are standing out, one does not know where to place remaining. Morphological and behavioral features seem to separate "third leg gesturing" genera into informal subgroup SAITEAE from the "first leg gesturing "Euophrys, which could be considered as a nucleus of another, delimited subgroup EUOORYDEAE (Prószyński et al., 2018c: 34), while a hundred of other genera are pending classification into their subgroups within EUOPHRYINES. The present, incomplete subdivision job may constitute, perhaps, some small progress in setting modern system of Salticidae, but that still leaves hundreds of other species pending their grouping inside EUOPHRYINES.

Reference species. Attus barbipes Simon, 1868 = Saitis barbipes (Simon, 1868).

Etymology. There were no subgroups rank yet in the Pragmatic Classification of Prószyński (2017), the proposed names of subgroups follows directly Simon's (1901-1903) groups, like Saiteae [ending -eae]² containing a number of genera considered now unrelated, but later synthesized into subfamilies by Petrunkevitch (1928). It may help to subdivide too large groups of genera into more convenient, smaller units. The names of subgroups, groups and supergroups are written by Prószyński in capital letters to distinguish them from similar names used by other authors in different meaning and having different contents.

² Simon's group Saiteae contained a number of genera, considered now unrelated, placed directly within "unidentati" Salticidae (EUOPHRYINES were not delimited yet) and characterized by following chain of hierarchically arranged characters: "...1) Posterior margin of the cephalothorax and the pedicel invisible from above, covered by the abdomen. All coxae on both sides contiguous; 6) Inferior margin of the chelicerae with a strong conical tooth. 9) Tibia and patella of the third pair of legs longer (or at least not shorter) than the tibia and patella of the fourth pair of legs. 10) Ocular quadrangle large. Small eyes of the second row not much closer to the anterior laterals. Posterior legs with numerous strong spines; 13) Labium not longer than its width at the base. Sternum short, not attenuated in front, and broadly truncate... " (translation from Latin by H. D. Cameron and D. P. Wijesinghe (1977) PECKHAMIA: 3(1)). Delimitation of this subgroup is preceded by creation of another subgroup, containing genus Euophrys described in another paper by Prószyński et al. (2018: 44). Arachnologist disliking classification based on palps and internal structures of epigyne can return to the above classification, well tested in practice during over a century.
Diagnosis. Characterized by peculiar behavior of gesturing with third legs during courtship/recognition dances, unique among Salticidae (Figs 3M-M6). Morphologically they differs by "bottleneck brush" of striking long setae, in many species black, contrasting with intensively white tarsus of that leg (Figs 3A-C). In contrast, legs I are slender, light (often light bluish) with five thin black lines at joints of segments. The coloration of some related Maratus species is among the richest in spiders. The dancing routine and leg coloration is just opposite in Euophrys.

Description. The color pattern and the shape of the body is well illustrated on Figs 3-5, the diagnostic dance gestures and rich color pattern are best shown on videos available in the Internet at http://www.dailymotion.com/video/x7qmpz and, especially, at https://www.youtube.com/watch?v=35U2esy9pml. Comparison of dance of Saitis barbipes with Maratus could be watched at https://www.youtube.com/user/Peacockspiderman. Interesting case of analogous setae structure in unrelated jumping spider Jotus remus Otto & Hill, 2016 is shown at https://www.youtube.com/watch?v=35U2esy9pml. The coloration of these spiders is so rich that over 80 species can be identified at a glance. However, classification these species into genera remains uncertain because of insufficient precision of palp and epigyne documentation, with diversity of spermathecae and ducts almost unknown.

The above description of SAITEAE should be complemented by precise documentation of their internal structures of epigyne and palps.

Distribution. The subgroup has disjunct range in Mediterranean (three species) and Australia (over 80 species, discovered recently, with new species being discovered almost daily). Otto & Hill hypothesize that the disjunction can originated recently by colonization of Mediterranean from Australia within 200 years, last years, that thesis could be tested by finding congeneric species of Saitis in Australia. The diversity of Saitis in the Mediterranean is too broad, however, to develop within 200 years, also supposed congeneric status of Australian Saitis is not yet proven, and seems to be questionable. The other possible explanation is that Mediterranean Saitis species are Gondwanian relicts of the SAITIEAE, proliferating recently in Australia. The confirmation of the relict character would be broad gaps in morphology of internal structures of epigyne, and in palps in Mediterranean species, as well as misjudgment of placement of Australian Saitis). Checking of either alternative require study of precise structure of spermathecae and ducts, as well as palps in species in both parts of the disjunct range of SAITEAE.


Gen. Saitis Simon, 1876

Figures 3, 4

Remarks. Since Drobroruka (2004: 39) placed Euophrys imitatus (Simon, 1868) in Mediterranean genus Saitis, popularly known by one of its species - S. barbipes, that genus requires some attention. There are three other nominal species of Saitis in Mediterranean and two species in Australia. The mutual behavioral features of Saitis - its peculiar courtship dance with lifted III pair of legs, strikingly colored for semaphore signaling, with "bottle-brush" like dense fur of black setae on metatarsus III, contrasting with strikingly white tarsus III, that behavior being enriched by lifting strikingly colorful abdomen in a number of Australian Maratus species, and some other genera (see video at http://www.dailymotion.com/video/x7qmpz comparing S. barbipes dance with that of Australian Maratus). There are suggestions that Saitis in Europe

3 Otto & Hill (2017) - discoverers of the proliferation of the genus Maratus, divided that enormous genus into 15 provisional groups of species: anomalus (p. 1 in Otto & Hill (2017), calcitrans (p: 4), chrysomelas (p: 6), fimbriatus (p: 7), harrisii (p: 8), linnaei (p: 9), mungaich (p: 9), pavonis (p: 12), spicatus (p: 14), tasmanicus (p: 15), velutinus (p: 6), vespa (p: 17), vespertilio (p: 18), volans (p: 19), not assigned yet to any group (p: 19) some of which apparently deserving elevation to new genera status, shown in their catalog, each species illustrated by color photographs of a male, figures in brackets refer to pages in their paper. Grouping by external appearance, the division has provisional character, the authors stress that research are in the development stage and further discoveries of species and genera are expected. The group deserves taxonomic revision, with state of art analysis of internal structures of epigyne and palps.
may be immigrant from Australia (Hill (2009)). However, diversity in internals structure of epigyne of *Saitis* requires revision.

**Type species.** *Attus barbipes* Simon, 1868 = *Sanities barbipes* (Simon, 1868)


**Diagnosis.** In males characterizing behavior of nuptial dance, adaptations of leg III to semaphore signaling, while legs I are devoid of semaphore adaptations. Palps confronting to the general type of EUOPHRYNES, but with various differences, not yet summarized as indicating genus. Epigyne and its internal structures represent various types, not yet summarized as indicating genus.

**Description.** See diversity of males and females (Figs 3, 4A-I, L-N, Q-S)) and especially documentation of dance gestures by Aart Noordam (Figs 3M-M9). Palps and epigyne structures are shown on Figs 4A-I and 5D-G, comparison of legs III on Figs 4Q-S.

**Distribution.** Mediterranean and Australia[?].

**Composition. Mediterranean species:** *Saitis barbipes* (Simon, 1868) (type species) (Figs 3A-F, 4A-D, G, L, Q), *Saitis tauricus* (Figs 3G-L, 4E-F1, H, M, R), *Saitis graecus* (Figs 3M-M9, 4I, N, S). Epigyne and its internal structures of *S. tauricus* and *S. graecus* stand out and matching of their epigyne with general appearances of respective females should be verified.

**MISPLACED Mediterranean species:** "*Saitis* ariadneae" (Figs 4K, P, U), "*Saitis* imitata" (Figs 2A-N), "*Saitis* sengleti" (Figs 4J, O, T) (see below).

**Australian species:** "*Saitis* mutans" (Figs 5B, D-E), "S." "virgatus" (Figs 5C, F-G).

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*["Saitis" imitatus (Simon, 1868)](Figure 2)*

**Saitis imitatus** (Simon, 1868)

*Attus imitatus* Simon, 1868: 62 (Df).

*Attus imitatus* Simon, 1871: 197 (Dm).

*Hasarius imitatus* Simon, 1876: 90.

*Euophrys imitata* Chyzer & Kuleczynski, 1891: 43, pl. 2, f. 1 (f Opisthosoma).

*Euophrys imitatus* Prószyński, 1984a: 41 (m).

*Saitis imitata* Dobrońka, 2004a: 39. f. 1-7 (Tmf from *Euophrys*).


[Synonyms listed after Word Spider Catalog].

**Type species.** *Attus imitatus* Simon, 1868 = "*Saitis" imitatus* (Simon, 1868).

**Material and documentation studied.** Literature documentation and color macrophotographs provided by M. Schäfer.

**Remarks.** Lack of typical diagnostic characters of *Saitis* (especially lack of semaphore-like adaptation of leg III) excludes possibility of placement in that genus, none the less the genus name "*Saitis*" is temporarily retained, pending decision of appropriate solution. Structure of spermatheca of this species is exceptionally rare in EUOPHRYINES, consist of three discrete chambers (Figs 2C-D, N), interconnected by narrow, duct-like constrictions, resembles newly delimited genus *Iberattus* gen. n. (see above) but existing drawings and photos are not precise enough. Pending reclassification.

**Diagnosis.** Palp of EUOPHRYINES type, somewhat resembling *Pseudeuophrys erratica* (Walckenaer,
1826), internal structure of epigyne resembling *Iberattus semiglabrata*, but with distinct differences. Differs from type species of *Saitis* - *S. barbipes* by absence of semaphore-like modification of leg III, some proportions of palp (especially diameter and development of embolar coil) and three-chambered spermatheca.  

**Description.** General appearance of both sexes is shown on Figs 2E-J, palps on Figs 2A and K, internal structure of epigyne Figs 2C-D and N, epigyne itself on Figs 2B and M. For comparison with *Saitis* see Figs 3 and 4, that comparison presents some difficulties because relevant drawings of the three species of *Saitis* differ between themselves so much that their matching with specimens requires verification. (see also below).  

**Distribution.** Reported from Croatia and Montenegro.
**DELIMITATION OF MEDITERRANEAN GENUS IBERATTUS GEN. N.**

**Relevant genera**

![Euophrys frontalis](image1)

![Talavera aequipes](image2)

![Pseudoeuophrys erratica](image3)

![Habrocestum pullatum](image4)

**Figure 2.** Diagnostic characters of "Saitis" imitatus, documented by color photographs (A-J) and diagnostic drawings (K-N), the latter compared also with spermathecae and ducts in relevant genera (O-R). A - palp, B-D - epigyne seen on surface of abdomen and in cleared preparation, in ventral and dorsal views, E-G - color pattern in live male, H-J - color pattern in live female. Diagnostic drawings: K - palp and tibial apophysis, L - changed dorsal pattern in preserved male and female, M-N - epigyne and cleared spermathecae. Cleared epigyne in relevant genera: O - *Euophrys frontalis*, P - *Talavera aequipes*, Q - *Pseudoeuophrys erratica*, R - comparison of multi-chamber spermatheca in *Habrocestum pullatum*.


**Diversity in Saitis**

Character of species diversity varies in different genera (presumably due to degree of advancement of evolution of a genus): in *Euophrys* majority of 55 recognizable (?) species are very similar, morphological gaps between them seem to be small and separation of some species seems to be uncertain (Prószyński, Lissner & Schäfer M., (2018), see also [http://www.peckhamia.com/salticidae/q10-Euoph.html](http://www.peckhamia.com/salticidae/q10-Euoph.html)). Opposite situation occurs in Mediterranean species of *Saitis*, in which morphological gaps between species are so big that there are doubts whether these species are really congeneric (Figs 3G-I, see also [http://www.peckhamia.com/salticidae/q10-Sait.html](http://www.peckhamia.com/salticidae/q10-Sait.html)).

**Accepting type species of the genus - Saitis barbipes** as the model of the genus, we can assume that its main generic characters of male *Saitis* are:

1) - striking difference in appearance and functions of legs III and I: the metatarsus III is covered by dense fur of longer black setae ("bottle-brush") contrasting with intensively white tarsus, which is entirely different from slender and light legs I, having 5 thin, dark, transverse short lines (Figs 3A-C),

2) - coil of embolus is wide, located antero-prolaterally to tegulum, the space inside coil is broad (Fig. 4G),

3) - spermatheca is oval, located posteriorly, extends anteriorly by broad ducts(?) and after making prominent transverse loop, changes direction by 180 degrees and runs in posterior direction towards rim of white "window" (Figs 4B-D, G).

*Saitis tauricus* has similar characteristic difference between leg III and I, except that legs I are dark, palps differ by small diameter of embolar coil located apically and in mid-line of tegulum (Fig. 4M); the spermatheca and duct are, however, entirely different, rather comparable with some *Pseudoeuophrys*, and there are doubts whether drawing of spermathecae (Fig.4H) was not mixed up with some other spider.

*Saitis graecus* – third legs dance gestures shown on Figs 3M-M9 are unmistakably comparable with *S. barbipes*, so placement of this species leaves no doubts, of the other hand are sufficiently different to confirm its separate species status. The problem of placement is created by the internal structure of epigyne (Fig. 4I), which is incompatible with *S. barbipes* and resembles rather *Euophrys* and *Pseudoeuophrys* (compare documentation of the latter in Prószyński, Lissner & Schäfer M., (2018)- which causes doubts whether that preparation was not mixed up with some other spider).
"Saitis" ariadneae (Figs 4K, P, U) and "S." sengleti (Figs 4J, O, T) do not share generic key characters with S. barbipes - have no modification of legs III for semaphore signaling, have different coil of embolus, internal structures of epigyne are entirely different, also sketches of their abdominal pattern are different. In my opinion both species should be transferred back to the genus Pseudeuophrys, in which they were placed by Metzner (1999:55) and Dobroruka (2003: 118) respectively, or to the new genus of their own. Therefore: "Saitis" ariadneae Logunov, 2001 = Pseudeuophrys ariadneae (Logunov, 2001). "Saitis" sengleti (Metzner, 1999) = Pseudeuophrys sengleti Metzner, 1999.
Figure 3. Diversity of color pattern, behavior and sexual dimorphism in the genus Saitis. A-F - *S. barbipes*, G-L - *S. tauricus*, M-M9 - *S. graecus* male, female as well as courtship dance routine, gestures and mating (M, M6-M8 - male, M9 - female, M1-M3, M6 - dance gestures, note unusual separate horizontal lifting of left and right leg III, M4-M5-phases of copulation).

SOURCES: A-L - ©Photos by M. Schäfer, M-M9 - ©Photos by Aart Noordam. All ©copyrights are retained by the original authors and copyright holders, used by their courtesy.


Position of Australian *Saitis* species
Tempting hypothesis on congeneric status of Australian and Mediterranean species of *Saitis* is supported by behavior of lifting their third legs for semaphore signaling during nuptial and recognition dances. In Mediterranean signaling with horizontal and vertical lifting of third legs, and their special, striking coloration seems to be exceptional and unique to *Saitis barbipes* (and two really congeneric species), but in Australia it is a typical feature of 83 species of *Maratus* Karsch, 1878, 9 species of *Jotus* L. Koch, 1881, and probably other species as well. However, these hypotheses should be confirmed by studies on other characters of these genera, especially palps and epigyne (the photographs shown on Figs 4E, G are insufficient and should be complemented by more sophisticated research). If some of these species are really congeneric, then collateral hypothesis of immigrant character of occurrence of *Saitis* in Mediterranean become also plausible.
Figure 5. General appearance and genital characters of Australian “Saitis” mutans (Figs 4B, D-E) and “S”. virgatus (Figs 4C, F-G) (note “bottle-brush” like leg III). A - map of distribution of 3 Mediterranean “Saitis” and two "Saitis" species.

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Appendix 1

facsimiles of original descriptions

Figure 6. Facsimile of description of Euophrys semiglabrata by Hęciak & Prószyński (1984).

Figure 7. Diagnostic drawings of Euophrys semiglabrata misidentified as "Euophrys difficilis" (its conditional replacement name E. lundbladii never become valid).

SOURCES: E. Schenkel (1938) Arkiv för Zoologi 30(A24): 15, f. 6. All ©copyrights are retained by the original authors and copyright holders, used by their courtesy.

Figure 8. Facsimile of description of Attus imitatus Simon (1868 &1871).

SOURCES: Annales de la Société Entomologique de France (4) 8: 62; (5) 1: 197.
DELIMITATION OF MEDITERRANEAN GENUS IBERATTUS GEN. N.

Appendix 2

Overdue nomenclatorical correction

"Chalcoscirtus" diminutus Edwards, 2003a: 71 = “Euophrys” diminuta (Banks, 1896)


I do not think „diminuta” could be placed in any of them. Possibly it can be described as a new genus - but of which relationship? I am unable to propose final placement of the species and during 28 years nobody proposed any better solution. Therefore I propose to return to the last documented, although provisional generic placement, in order to call attention of arachnologists.

References

ATTENTION: only selected references are listed here, other references can be found in the Internet "Monograph of Salticidae (Araneae) of the World 1995-2016" Prószyński (2016 a, b) at http://www.peckhamia.com/salticidae/, or in the WSC at http://www.wsc.nmbe.ch/.

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