

**Redescription of *Aelurillus subaffinis* Caporiacco, 1947
(Araneae: Salticidae)**

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Abstract – The jumping spider species *Aelurillus subaffinis* CAPORIAMCO, 1947 is redescribed and illustrated, its lectotype and a paralectotype are designated. Comparison and notes on the closely related species *A. aeruginosus* (SIMON, 1871) and *A. faragallai* PRÓSZYNSKI, 1993 are given. With 10 figures.

Key words – Taxonomy, *Aelurillus subaffinis*, Salticidae, Afrotropical region.

INTRODUCTION

KÁLMÁN KITTENBERGER, the famous Hungarian hunter collected for the Hungarian Natural History Museum several times in Africa in the first decade of the 20th century. Although he focused mainly on mammals, the number of spiders he collected seems to be relevant as well (about 200 specimens only from the spider family Salticidae). A part of his collection was lent for study as unidentified around 1940 to LUDOVICO DI CAPORIAMCO, but it was not returned until 1999, except the specimens studied by WANLESS, i. e. the holotypes of *Pseudomarengo inermis* CAPORIAMCO, 1947 and *P. rufescens* CAPORIAMCO, 1947 (WANLESS 1981) which were sent back earlier.

Presumably this is the reason why the material still exists in a good condition, because in the Hungarian Natural History Museum there was a fire in 1956, and most of the collection was destroyed. On the other hand DI CAPORIAMCO had described 3 new salticid genera and 19 new species (CAPORIAMCO 1947) from that material, and the types were not accessible for scientific study, since nobody knew their whereabouts. Finally in 1999, with the kind assistance of Dr. JERZY PRÓ-

SZYNSKI the material was sent back from the Museum of Bergamo by PAOLO PANTINI to the Hungarian Natural History Museum.

Although the scientific methods used in the middle of the 20th century were precise enough to result significant studies (e.g. LESSERT 1936), CAPORACCO had not made detailed drawings of the copulatory organs and/or the internal structure of the female genitalia of each species he described. The maturity of a specimen was not even a requirement to become the type of a species. Therefore his species could not be recognised without doubt – not even his identification could be used as sure data. Therefore study and redescrptions of his species are badly needed, to avoid describing species more than once. Now our first result, the redescription of *Aelurillus subaffinis* is presented here. Fortunately we could also compare the species with two other, closely related species: *Aelurillus faragallai* PRÓSZYNSKI, 1993 and *Aelurillus aeruginosus* (SIMON, 1871).

MATERIALS AND METHODS

The examined specimens are kept in the following institutions:

A female specimens, which is a syntype of three taxa (*Attus mustellatus* SIMON, 1868, *Attus arenicolor* SIMON, 1868 and *Attus aeruginosus* SIMON, 1871), is in the Natural History Museum, Paris (curator: CHRISTINE ROLLARD). The specimen was originally described as the female of *Attus mustellatus* (SIMON 1868: 530), but the name proved to be a junior homonym of *Attus mustellatus* NICOLET, 1849. Having discovered his mistake, SIMON proposed in the *Errata* of the same paper (SIMON 1868: 723) a new name: *Attus arenicolor* SIMON, 1868, but it was a junior homonym of *Attus arenicolor* GRUBE, 1861, so the name was changed again (SIMON 1871: 154) to *Attus aeruginosus* SIMON, 1871, which was later transferred to the genus *Aelurillus* SIMON, 1884.

The paratype female of *Aelurillus faragallai* PRÓSZYNSKI, 1993 is kept in the Institute of Zoology of the Polish Academy of Sciences, Warsaw (curator: TOMASZ HUFLEJT), and two syntype females of *Aelurillus subaffinis* CAPORACCO, 1947 in the Hungarian Natural History Museum, Budapest (curator: SÁNDOR MAHUNKA).

For description of the leg spination the system used by ONO (1988) is adopted. Drawings were made by the second author using the grid method. Measurements are given in millimetres.

Abbreviations – AME = anterior median eye, ap = apical, d = dorsal, Fm = femur, HNHM = Hungarian Natural History Museum, IZPAS = Institute of Zoology of the Polish Academy of Sciences, Mt = metatarsus, NHMP = Natural History Museum, Paris, PLE = posterior lateral eye, Pt = patella, pr = prolateral, rt = retrolateral, Ta = tarsus, Tb = tibia, v = ventral.

RESULTS

Aelurillus subaffinis CAPORACCO, 1947, *Aelurillus aeruginosus* (SIMON, 1871) and *Aelurillus faragallai* PRÓSZYNSKI, 1993 are considered separate, but closely related species. The females can be distinguished with certainty by the study of in-

ternal structure of the genitalia only. Since there are little differences in the genitalic structure of females we intended to suggest to focus also on somatic characters. However, without fresh material no relevant diagnosis of the body colour could be given, because the types of *A. aeruginosus* and *A. subaffinis* are rather (about/more than 100 years) old. Therefore the following differences of the genitalic characters should be used to distinguish the species: position of the spermatheca pockets, shape of the epigynal pockets and epigynal flaps.

REDESCRIPTION OF AELURILLUS SUBAFFINIS (Figs 1–6)

Aelurillus subaffinis CAPORIACCO, 1947: 236. (Description of female.)

Aelurillus subaffinis: PRÓSZYNSKI 1990: 43.

Type material – Female lectotype (designated here) from Eritrea, Assab, VII 1907, K. Kittenberger (HNHM, Nr. 216); female paralectotype (designated here) from “Gibdó, Afr. Or. VII.04. 1903, K. Kittenberger” (most probably from Tanzania) (HNHM Nr. 214).

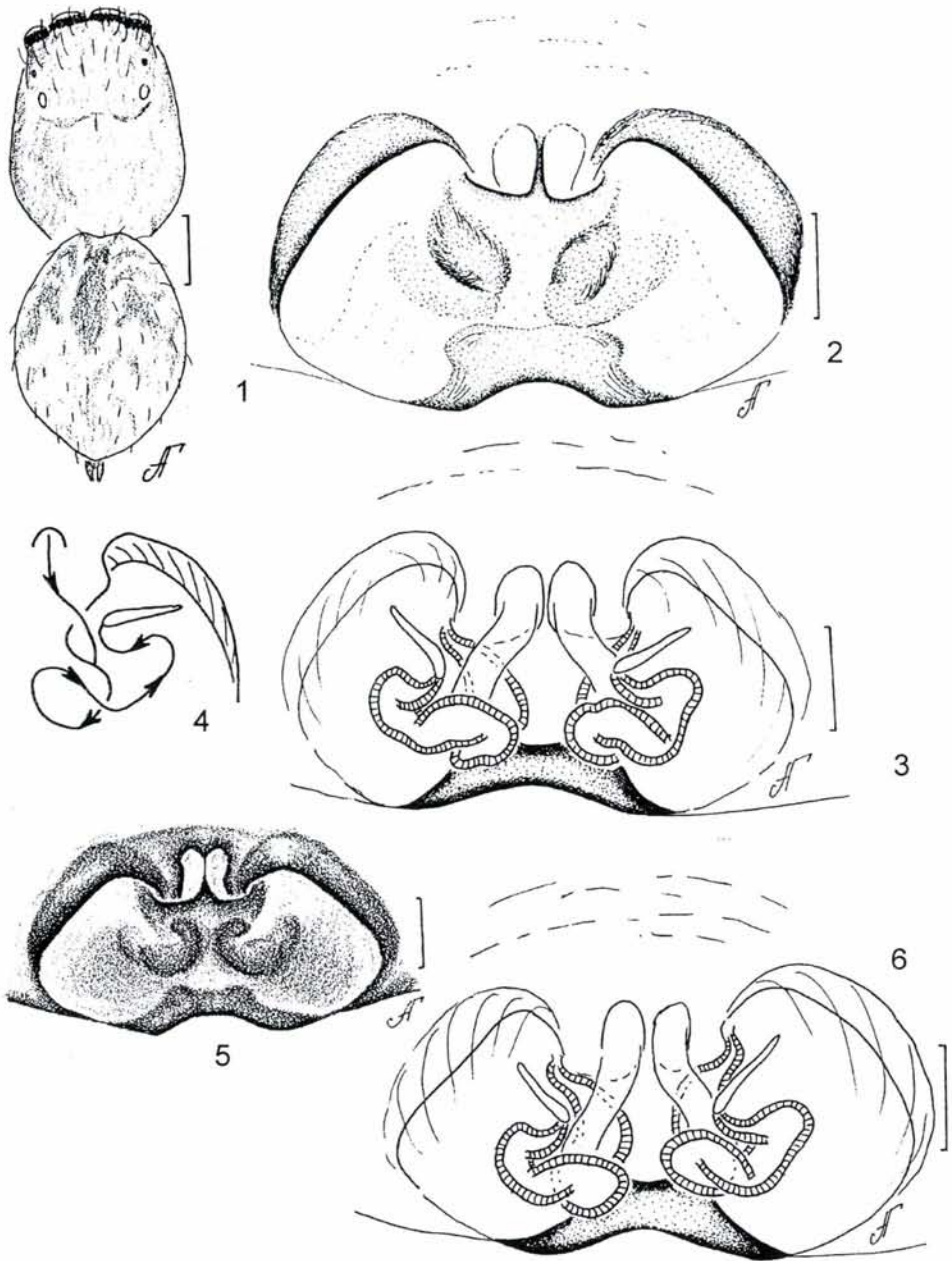
Comparative material – Female lectotype of *Attus aeruginosus* SIMON, 1871 (Figs 7–10) (NHMP Nr. 800), labelled as “3a Nevada 631”. Female paratype of *Aelurillus faragallai* PRÓSZYNSKI, 1993 (IZPAS) from Saudi Arabia: Hada Alshan, alfalfa fields, A. A. FARAGALLA.

Diagnosis – *Aelurillus subaffinis* (Fig. 1) seems to be more closely related to *A. aeruginosus* (Fig. 7) than *A. faragallai*. The females could be recognised by the shape of the epigynal pocket (Figs 3, 6, 9), which is low and the situation of the pockets of the spermathecae (Figs 2–5). The face is covered with whitish hairs on a brown tegument, see PRÓSZYNSKI’s (2001) Internet Catalogue for colour photographs of types.

Distribution – Known only from the type localities in East Africa. (Eritrea and a locality called “Gibdó” – probably in Tanzania, but cannot be located).

Description – Male unknown. Female lectotype: Measurements (measurements of paralectotype is given in brackets): Carapace 3.2 (3.1) long, 2.3 (2.25) wide, 1.6 (1.4) high at PLE. Ocular area 1.2 (1.2) long, 1.6 (1.5) wide anteriorly and 1.5 (1.4) wide posteriorly. Diameter of AME 0.45 (0.45). Abdomen 2.75 (3.8) long, 2.4 (2.9) wide. Cheliceral length 1.0 (1.1). Clypeal height 0.3 (0.3). Length of leg segments of paralectotype:

| | Fm | Pt | Tb | Mt | Ta |
|-----|------|------|------|------|------|
| I | 1.25 | 0.9 | 0.95 | 0.6 | 0.6 |
| II | 1.35 | 0.75 | 0.95 | 0.75 | 0.6 |
| III | 2.05 | 1.05 | 1.3 | 1.3 | 0.8 |
| IV | 2.0 | 0.95 | 1.35 | 1.65 | 0.75 |

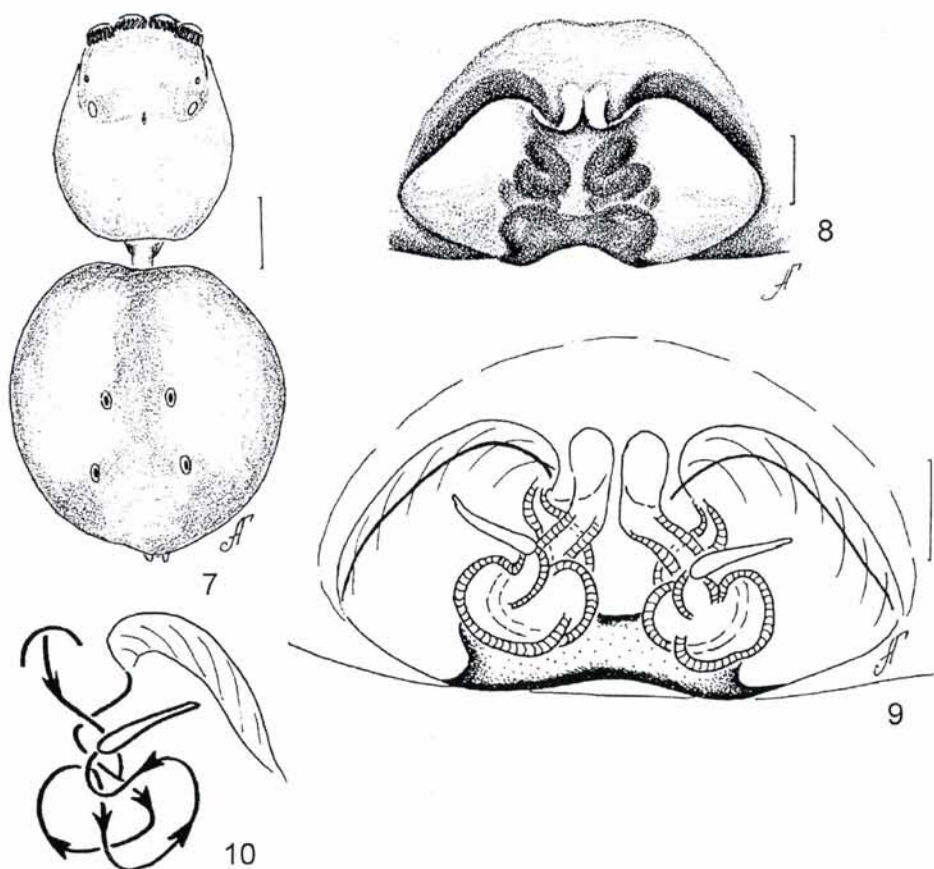


Figs 1–6. *Aelurillus subaffinis* CAPORIACCO, 1947: 1 = lectotype habitus, 2 = epigyne, ventral view, 3 = vulva, dorsal view, 4 = diagrammatic course of seminal duct, 5 = paralectotype, epigyne, ventral view, 6 = vulva, dorsal view. Scale = 1 mm for 1, 0.1 mm for 2–6

Leg spination:

| | Fm | Pt | Tb | Mt |
|-----|---------|------------|--------------------------------------|---|
| I | d 1-1-4 | 0 | pr 1-1, v 1-1-2 ap | v 2-2 ap |
| II | d 1-3-5 | 0 | pr 0-1, v 1-0-2 ap | v 2-2 ap |
| III | d 1-2-3 | pr 1, rt 1 | d 1-0-0, pr and rt 1-1-1, v 1-0-2 ap | d 1-1-0, pr and rt 1-0-2, v 1-1-2 ap |
| IV | d 1-1-1 | pr 1, rt 1 | d 1-0-0, pr and rt 1-1-1, v 1-0-2 ap | d 1-1-0, pr 1-1-2, rt 1-0-2, v 1-1-2 ap |

Colouration: Carapace brown with dark brown eye field, covered with dense adpressed white scales. Cheeks and clypeus brownish-yellow (lectotype) to yellowish-brown (paralectotype) with white hairs. Chelicerae brown. Hairs around AME and ALE white. Abdomen yellow, dorsum with indistinct pattern. Book lung covers and spinnerets greyish yellow. All legs yellow with greyish brown spots. Palps yellow, covered with white hairs. Abdomen of paralectotype in poor condition.



Figs 7–10. *Aelurillus aeruginosus* (SIMON, 1871): 7 = lectotype habitus, 8 = epigyne, ventral view, 9 = vulva, dorsal view, 10 = diagrammatic course of seminal duct. Scale = 1 mm for 7, 0.1 mm for 8–10

DISCUSSION

The generic relationships within the family Salticidae are far from understood. Only a few relationships are clear at generic level: Spartaeinae WANLESS, 1984 and perhaps Euphrydinae PRÓSZYNSKI, 1976, which comprise about 30 genera of 500 (PRÓSZYNSKI, pers. comm.). The aelurillid genera (*Aelurillus* SIMON, 1884, *Asianellus* LOGUNOV et HECIAK, 1996, *Phlegra* SIMON, 1876, *Langelurillus* PRÓCHNIEWICZ, 1994, *Langona* SIMON, 1901, *Microheros* WESOŁOWSKA, 1999, *Proszynskiana* LOGUNOV, 1996, *Rafalus* PRÓSZYNSKI, 1999, *Stenaelurillus* SIMON, 1885) form a natural group, accepted by most of the specialists, characterised by the cymbial pocket (LOGUNOV 1996) of the male palp with a hardened and opaque tegulum, forming shield covering entire bulbus ventrally, and special kind of tibial apophyses (PRÓSZYNSKI pers. comm.). The genus *Aelurillus* SIMON, 1884 seems to be well defined as well: body hairy, male palp with two tibial apophyses, separated by broad triangular space; female epigyne with sclerotized 'wing-shaped' epigynal flaps (PRÓSZYNSKI 2002). Although many reviews and notes on the genus are presented in the literature (e.g. HARM 1977, PRÓSZYNSKI 1978, PRÓCHNIEWICZ & HECIAK 1994), the revision of the whole genus is lacking, and the description of several species is unsatisfactory. Since there are several *Aelurillus* species closely related to *A. subaffinis*, *A. aeruginosus* and *A. faragallai*, e.g. *A. concolor* KULCZYNSKI, 1901, *A. conviniens* (O. P. CAMBRIDGE, 1872) etc. (see WESOŁOWSKA 1996), further taxonomic studies of all females are suggested, and an establishment of a separate species group for the valid species appears to merit further consideration.

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