

ARTÍCULO:

New records of *Olios sericeus* (Kroneberg 1875) with notes on its taxonomy and biogeography (Araneae: Sparassidae: Sparassinae)

Peter Jäger

Research Institute Senckenberg,
Senckenberganlage 25,
D-60325 Frankfurt am Main,
Germany.
Peter.Jaeger@Senckenberg.de

Stefan Otto

Seção de Animais Peçonhentos,
Gutsmuthsstr. 42,
04177 Leipzig, Germany,
s.otto_bio@gmx.net

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(SEA)

Avda. Radio Juventud, 37

50012 Zaragoza (ESPAÑA)

Tef. 976 324415

Fax. 976 535697

C-elect.: amelic@telefonica.net

Director: Carles Ribera

C-elect.: cribera@ub.edu

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New records of *Olios sericeus* (Kroneberg 1875) with notes on its taxonomy and biogeography (Araneae: Sparassidae: Sparassinae)

Peter Jäger & Stefan Otto

Abstract:

New records of *Olios sericeus* are presented, increasing the distribution range of the species from Central Asia to the Caucasus, where it is recorded for the first time from Georgia. Diagnostic characters are listed and illustrated. Systematic relationships are discussed.

Key words: Biogeography, distribution range, Central Asia, Caucasus, relationships, species group

Nuevas citas de *Olios sericeus* (Kroneberg 1875) con notas sobre su taxonomía y biogeografía (Araneae: Sparassidae: Sparassinae)

Resumen:

Se presentan nuevos registros de *Olios sericeus*, expandiendo el rango de distribución de la especie desde Asia Central hasta el Cáucaso, donde es citada por primera vez en Georgia. Se listan e ilustran los caracteres diagnósticos de la especie, y se discuten sus parentescos.

Palabras clave: Biogeografía, rango de distribución, Asia Central, Cáucaso, parentescos, grupo de especies

Introduction

The genus *Olios* Walckenaer 1837 is by far the largest genus of the spider family Sparassidae and consists of more than 260 nominal species (Platnick 2006). Most of them are cited only once—in their original description—or a second time, when transferred from another genus into *Olios*. Thus, the genus is far from being revised and its intrageneric relationships are not understood. Only few species are better investigated, e.g., the southwest-palaearctic *Olios argelasius* (Walckenaer 1805), the type species, or larger, apparently abundant spiders from the tropics, such as *O. lamarcki* (Latreille 1806). So much the more important appear the present new records of *O. sericeus* (Kroneberg 1875) together with illustrations of the variability of its copulatory organs.

Besides the two historical collections of *O. sericeus* during the 19th-century expeditions of A. Fedtschenko (1868–71) and G. Radde (1886–87) (cf. Kroneberg 1875; Simon 1889) there have been only few additional records of this species – all from locations between the Kopetdagh (Turkmenistan) and Gulcha (Kyrgyzstan) in the Western Tianshan (Ovtsharenko & Fet 1980; Fet 1983; Mikhailov & Fet 1986).

Newly obtained material from the Lesser Caucasus in Georgia (Stefan Otto leg.) and Almaty in Kazakhstan (Coll. A. Gromov) significantly increased the range of this species. It seems therefore reasonable to outline the known distribution of *O. sericeus* and to provide diagnostic drawings and taxonomic information to facilitate further studies on this species.

Material and methods

Spiders were examined in 70% ethanol with a Leica MZ16 stereomicroscope. Internal duct system of females were treated with 96% lactic acid. Illustrations were made using a camera lucida-attachment. Material is deposited in the following museums: Museum national d'histoire naturelle Paris, France (MNHN), Research Institute and Natural History Museum Senckenberg Frankfurt, Germany (SMF), Zoological Institute, Russian Academy of Sciences, St. Petersburg, Russia (ZIN), Zoological Museum of the University Moscow, Russia (ZMUM).

Abbreviations: PJ – subsequent number of Sparassidae examined by Peter Jäger, RTA – retrolateral tibial apophysis. In the schematic course of the female internal duct system (Fig. 9) a circle represents the copulatory opening, a 'T' a glandular structure and an arrow the fertilisation duct in direction of the uterus externus.

Results

Olios sericeus (Kroneberg 1875)

Figs 1–16

Sparassus sericeus Kroneberg 1875: 28, pl. 3, fig. 19 (description of male and female)
Olios sericeus– Simon, 1880a: 298 (transfer to *Olios*)

SYNTYPES. 1 male (PJ 1392), 1 female (PJ 1393), 1 subadult male (PJ 1394), 1 subadult female (PJ 1395), 1 juvenile (PJ 1396), Tashkent, February–March (ZMUM Ta-1363) [Uzbekistan, Fig. 1: 2]; 1 male (PJ 1397), 1 female (PJ 1398), Turkestan Province; 1 male (PJ 1399), 1 female (PJ 1400), 1 juvenile female (PJ 1401), Samarkand (ZMUM Ta-1359) [Uzbekistan, Fig. 1: 3].

Notes: All syntypes collected on the Turkestan scientific expedition by A.P. Fedtschenko, probably leg. 1871 (Warncke 1989). In the original description specimens from the localities Osh and Gulcha (Kirgisistan, Fig. 1: 4–5) are listed. Most likely these belong to the syntype series, but could not be examined.

ADDITIONAL MATERIAL EXAMINED. 1 male (PJ 2479), Kazakhstan, Almaty, Institute of Zoology, building, A.T. Mamataeva leg., A. Gromov ded., 11.X.2005 (SMF 56202); 1 female (PJ 1427), Kazakhstan, Almaty Town, Akademgorodok, 26.VI.1997, A. Gromov leg. (Fig. 1: 1) (Coll. Gromov)

4 males (PJ 770–773), 1 female (PJ 774), 'Asia ant.' [exact location not available, not figured] (MNHN 1657-5888) Note: These specimens are probably identical to those published by Simon (1889) from Gustav Radde's Turkmenistan-Expedition 1886–87 from Ashgabad [=Ashgabad] [Turkmenistan; Fig. 1: 8]

1 female (PJ 2153), Georgia, Lesser Caucasus, Region Javakheti, Eastern shore of Lake Paravani (village Rodionovka, =P'aravani, Geological station, Fig. 1: 9), 2400m a.s.l., 1. VIII.2004, S. Otto leg. (SMF 56201)

FURTHER MATERIAL CONSIDERED. Several specimens,

Turkmenistan, Repetek, Kushka (Badkhyz), and Ashgabad [Fig. 1: 6–8], V. Fet leg. 1976–1985, (Ovtsharenko & Fet 1980; Fet 1983; Mikhailov & Fet 1986). (ZMUM, ZIN) (not examined)

EXTENDED DIAGNOSIS. Medium sized spiders (9.6–10.7 body length; Fig. 15). Males (Figs 2–5): small, narrowly bent embolus in distal half of bulbus with serrated ridge; tegulum with massive apophysis, extending prolaterally beyond cymbium, prolateral and ventral margin of apophysis serrated; single RTA broad, bent dorsad. Females (Figs 6–14, 16): epigynum with median slit, the latter diverging regularly posterior, but abruptly anterior, forming wide pit; internal duct system with glandular structure close to the copulatory openings, otherwise with simple course, only with a small loop close to fertilisation ducts.

VARIATION. Median margins of lateral lobes with or without humps in anterior half. Surface of internal duct system more or less furrowed.

RELATIONSHIPS. *Olios sericeus* belongs to a species group within the genus, which is characterised by the following characters of copulatory organs: the embolus is small and exhibits a narrow bent in the distal half of the bulbus; the tegular apophysis is more or less prolaterally extending; epigyna are simple, with or without median slit; internal duct system simple, without complex windings or loops. Within this species-group two sub-groups can be distinguished by means of male copulatory organs: group A with a simple RTA (5 species from Cameroon, Sudan, Ethiopia, Yemen, Egypt, Israel, and 3 species from Philippines, Japan, Vietnam), group B with a double RTA, i.e. an additional retrolateral apophysis in the basal half of the tibia (11 species from Mozambique, Marokko, Senegal, Sudan, India, Nepal, Myanmar, China, Vietnam). *O. sericeus* belongs clearly to group A, but shows no affinities within this group to any other species due to its unique and dominant tegular apophysis.

DISTRIBUTION. The range of *Olios sericeus* covers roughly 3000 kilometers from the Lesser Caucasus across the Kopetdagh and the Karakorum Desert to Almaty in the Western Tianshan-Mountains (Fig. 1). Its distribution-type is therefore Central Asian-Caucasian. There are no records so far from the Elburz-Mountains at the southern shores of the Caspian Sea but its occurrence there is to be expected. The Caucasian specimen is the westernmost record of this species and the first record of this species for the Caucasus and Georgia, from where only two Sparassidae were known so far: *Micrommata virescens* (Clerck 1757) and *Micrommata ligurina* (C. L. Koch 1845) (Koch 1878; Dunin 1984; Mikhailov 1997, 1998; Mkhaidze 1997; Marusik et al. 2004; for record-lists see Otto & Dietzold 2006). Furthermore, the Caucasian specimen is the northernmost record of this species group (see "Relationships").

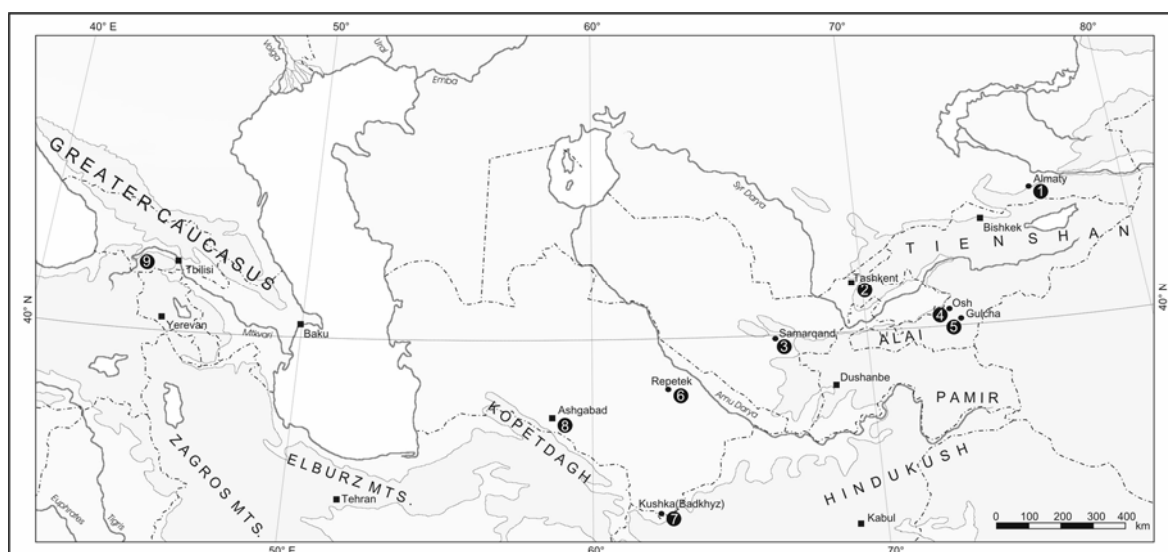
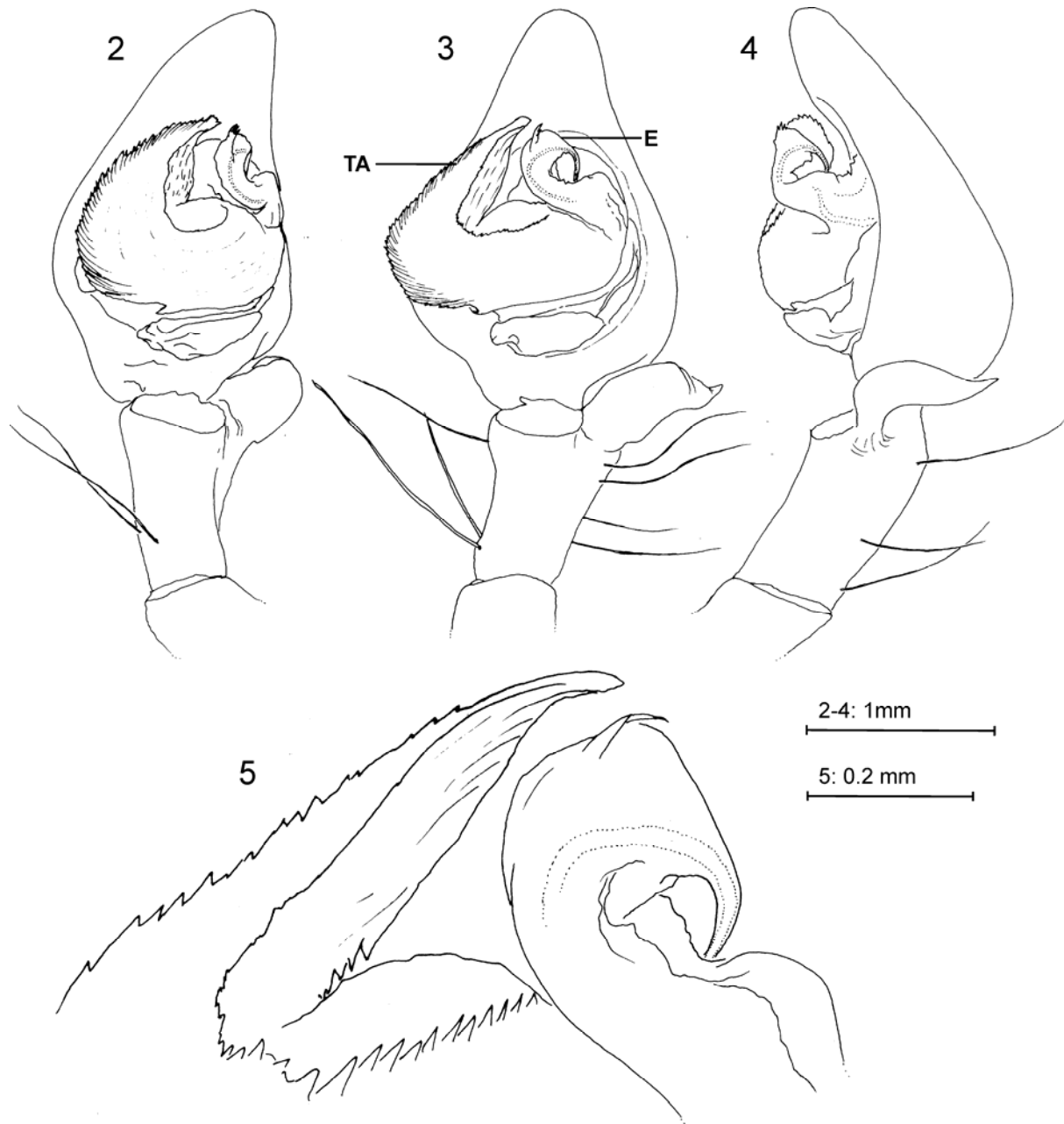


Fig 1. Records of *Olios sericeus* in Central Asia and the Caucasus.

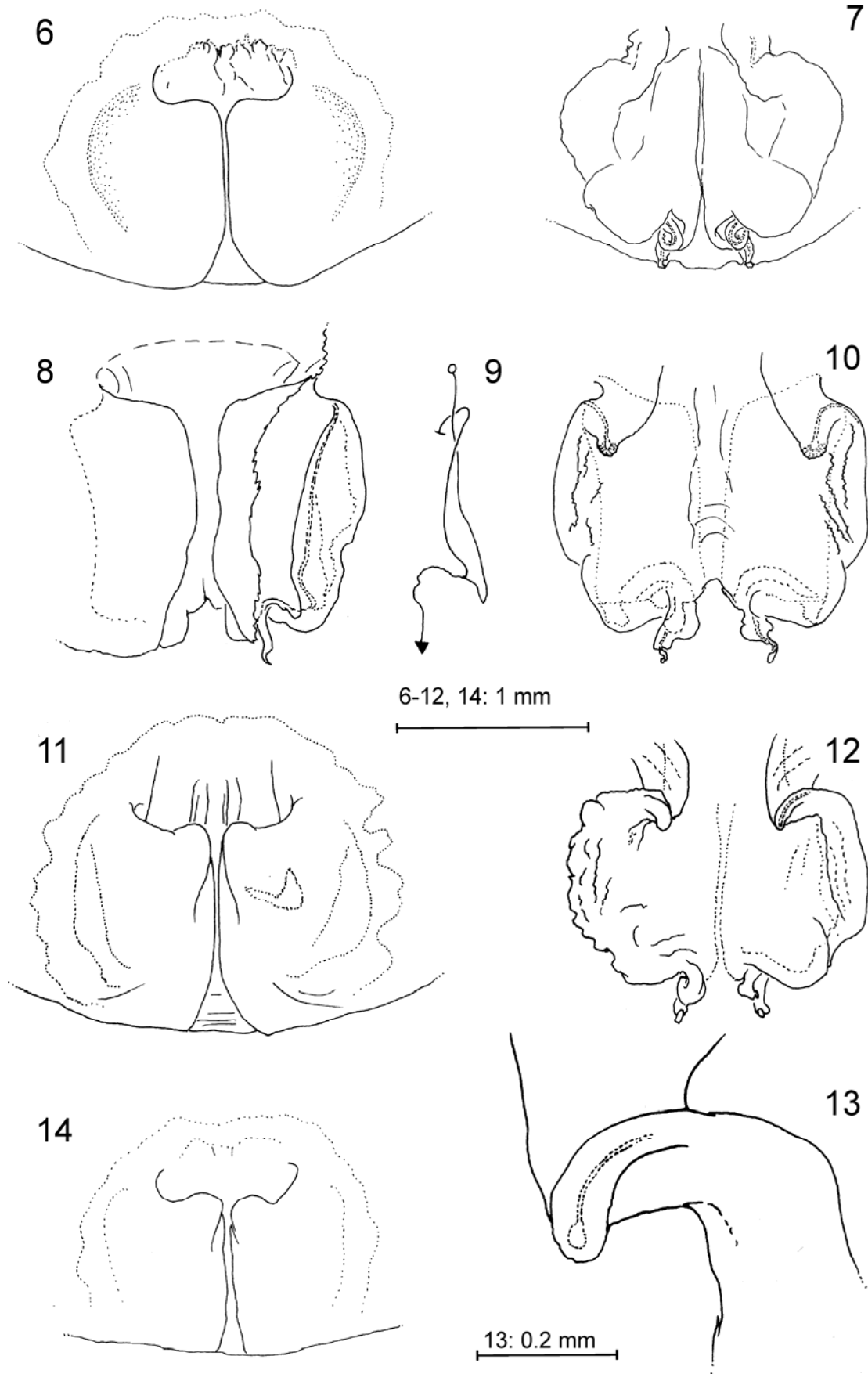
BIOLOGY. Information on the biology of this species is almost nonexistent but it seems to prefer mountainous habitats (locations are between 200 and 2200 m a.s.l.). Fet (pers. comm.) found *O. sericeus* in the Kopetdagh Mountains at 1000 m a.s.l. It is a synanthropic species “making its tubes along the ceilings in houses in Turkmenistan [...] along with *Eusparassus oculatus*” (Fet, pers. comm.) The Caucasian specimen (adult female) was collected within the limits of a small village on grazed alpine mats at the beginning of August.

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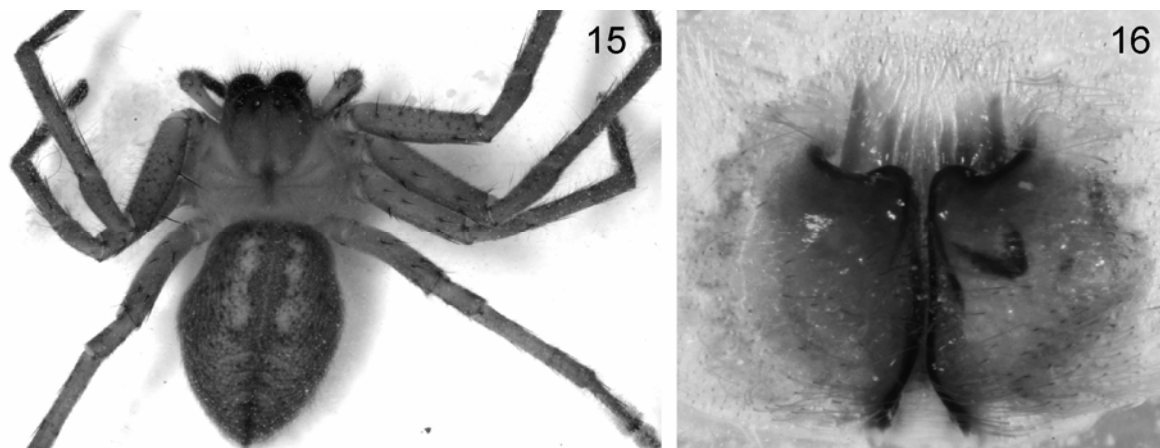
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Figs. 2–5. *Olios sericeus*, male copulatory organs of syntype males (2–4 PJ 1392, 5 PJ 1397). 2–4 Left pedipalpus (2 prolateral, 3 ventral, 4 retrolateral view); 5 Tip of embolus and tegular apophysis, ventral view.



Figs. 6–14. *Olios sericeus*, females, copulatory organs (6–7 syntype from Tashkent: PJ 1393, 8–10 Almaty: PJ 1427, 11–13 Caucasus: PJ 2153, 14 syntype from Samarkand: PJ 1400). 6, 8, 11, 14 Epigyna, ventral view (8 with cuticle removed in left half); 7, 10, 12 Vulvae, dorsal view; 9 schematic course of internal duct system, ventral view; 13 anterior part of internal duct system, showing the glandular structure.



Figs. 15–16. *Olios sericeus*, female from Caucasus (PJ 2153) in ethanol. **15** Habitus, dorsal view; **16** Epigynum, ventral view.

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