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Cryptodrassus Miller, 1943 (Araneae: Gnaphosidae) – the first record for the fauna of the Caucasus

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Abstract. The female *Cryptodrassus helvolus* (O. Pickard-Cambridge, 1872) is first recorded in Azerbaijan (vicinity of Mingachevir). This is the first discovery of the species and the genus *Cryptodrassus* Miller, 1943 in the country and the Caucasus. A detailed description of the female is provided.

Key words: Araneae, *Cryptodrassus*, first record, Azerbaijan.

Cryptodrassus Miller, 1943 (Araneae: Gnaphosidae) – первое указание для фауны Кавказа

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Резюме. Самка *Cryptodrassus helvolus* (O. Pickard-Cambridge, 1872) впервые отмечена в Азербайджане (окрестности Мингачевира). Это первая находка вида и рода *Cryptodrassus* Miller, 1943 в стране и на Кавказе. Представлено подробное описание самки.

Ключевые слова: Araneae, *Cryptodrassus*, первое указание, Азербайджан.

Introduction

Gnaphosidae is one of the extensively researched spider families on a global scale. The family comprises 2453 species spanning 150 genera [World Spider Catalog, 2023].

This group is one of the largest and diverse in the fauna of the Caucasus in general and Azerbaijan in particular. The fauna of Gnaphosidae in the Caucasus contains 150 species from 28 genera, of them 85 species and 26 genera are known from Azerbaijan (summarized from the works of Mikhailov [2013], Nuruyeva and Huseynov [2016], Huseynov and Nuruyeva [2017], Otto [2022], Nuruyeva and Snegovaya [2023]).

After analysing the collected material from the vicinity of the Mingachevir reservoir, a female specimen belonging to the genus *Cryptodrassus* Miller, 1943 was identified. In total, this genus includes 10 species [World Spider Catalog, 2023]. Of these, four species have been described and recorded only from India [Sankaran et al., 2020]. One species, *Cryptodrassus beijing* Lin et Li, 2022, has been recorded in China [Lin et al., 2022], *C. helvoloides* (Levy, 1998) in Israel [Levy, 1998] and *C. iranicus* Zamani, Chatzaki, Esyunin et Marusik, 2021 in Iran [Zamani et al., 2021]. In contrast to the listed species, *C. criticus* Chatzaki, 2002, *C. hungaricus* (Balogh, 1935) and *C. helvolus* (O. Pickard-Cambridge, 1872) have a wider distribution. A brief description of the female *C. helvolus* was given by Levy [1998] under the name *Zelotes helvoloides*. This work provides more detailed redescription of the female of this species with illustrations.

Material and methods

The single female is preserved in a solution of 75% ethanol. This specimen was examined, extracted and measured using the NIKON SMZ 1270 stereomicroscope. The female's endogyna was purified using a solution of potassium hydroxide (KOH 20%) and later transferred to ethanol for extraction. The identification was based on the work of Chatzaki and Russel-Smith [2017]. Visual documentation was achieved through the use of a SONY DSC-P8 digital camera. The posterior median eyes were measured by length. Abbreviations: eyes: ALE – anterior lateral eye, AME – anterior median eye, PLE – posterior lateral eye, PME – posterior median eye; legs: d – dorsal, pd – prodorsal, rd – retrodorsal, pl – prolateral, rl – retrolateral, v – ventral, pv – proventral, rv – retroventral.

The specimen is deposited at the Institute of Zoology of the Ministry of Science and Education of the Republic of Azerbaijan (Baku, Azerbaijan).

Family Gnaphosidae Banks, 1892

Genus *Cryptodrassus* Miller, 1943

Cryptodrassus helvolus (O. Pickard-Cambridge, 1872)

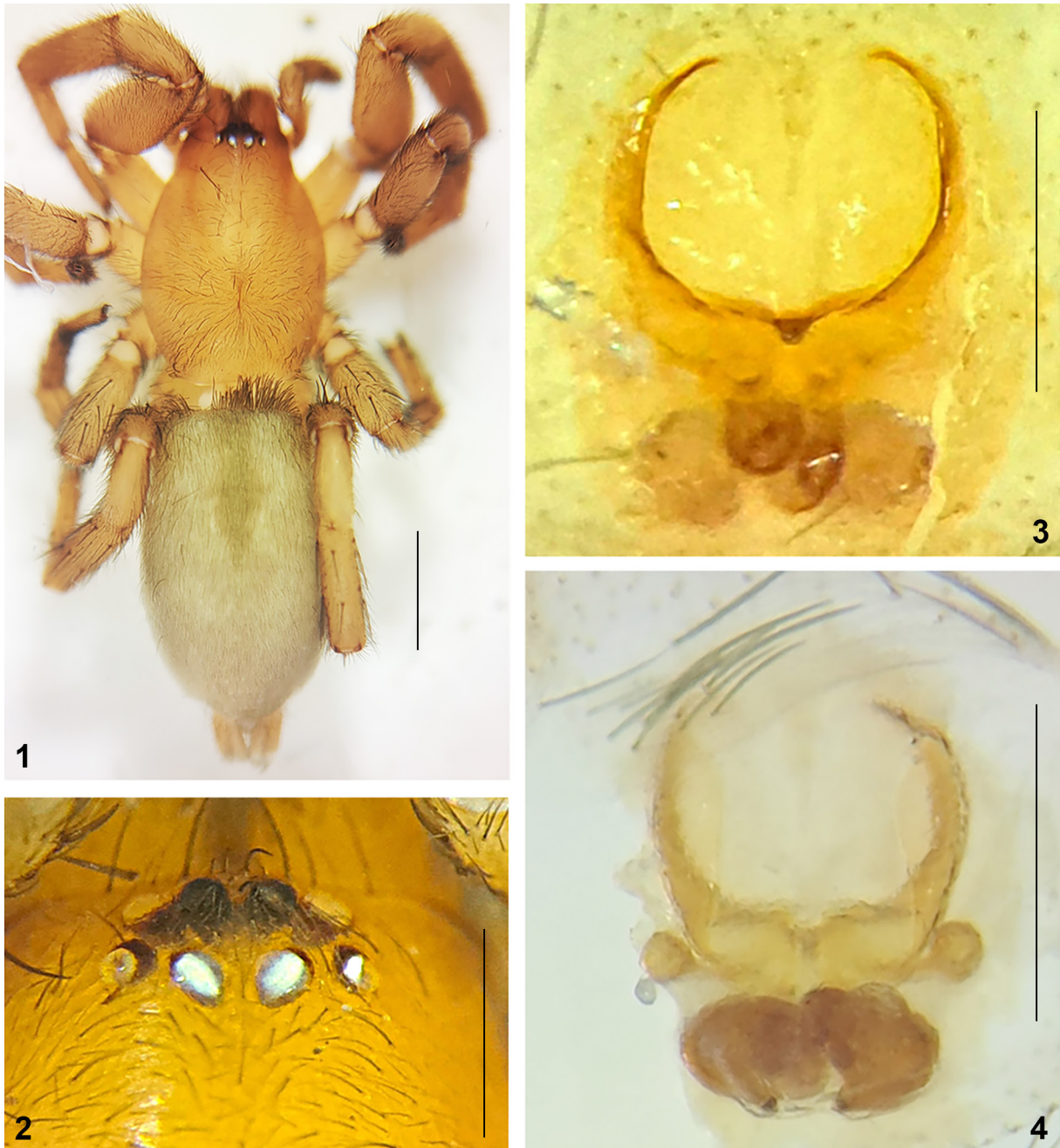
(Figs 1–4)

Zelotes helvoloides: Levy, 1998: 150, figs 126–127 (♀).

Cryptodrassus helvolus: Chatzaki, Russell-Smith, 2017: 238, figs 1–6 (♂♀); Ponomarev et al., 2018: 246, figs 3–4 (♀).

Material. 1♀, central Azerbaijan, Mingachevir Distr., 40.79651°N / 47.05372°E, 85 m a.s.l., under stone, 17–18.05.2023 (N.Yu. Snegovaya).

Redescription. Female. Total body length 4.9 mm. Carapace: 1.8 mm long, 1.1 mm wide, light-brown (Fig. 1). PME



Figs 1–4. *Cryptodrassus helvolus*, female, habitus and details of structure.

1 – habitus, dorsal view; 2 – eyes; 3 – epigyne, ventral view; 4 – epigyne after maceration, dorsal view. Scale bars: 1 – 1 mm; 2–5 – 0.2 mm.

Рис. 1–4. *Cryptodrassus helvolus*, самка, габитус и детали строения.

1 – общий вид, дорсально; 2 – глаза; 3 – эпигина, вентрально; 4 – эпигина после мацерации, дорсально. Масштабные линейки: 1 – 1 мм; 2–5 – 0.2 мм.

large oval, rest round. Anterior median eyes edged with black. Eyes size: AME 0.075, ALE 0.073, PME 0.092, PLE 0.053. AME almost touching ALE, AME–AME = 0.0375. PME–PME = 0.072, PME–PLE = 0.049 (Fig. 2). Sternum and labium light-brown. Chelicerae brown, with 3 promarginal and 2 retromarginal denticles. Opisthosoma light-grey, without pattern. Legs light-brown, segment lengths specified in Table 1.

Leg spination. Femur I: d 1, pd 1; II: d 1, pd 1; III: d 1–1–1, pd 1–1, rd 1–1; IV: d 1–1–1, pd 1–1, rd 1–1. Patella III: pd 1, rd 1. Tibia III: d 1, pd 1–1, rd 1–1, pl 1, rl 1, pv 1–1, rv 1–1; IV: d 1–1,

pd 1–1, rd 1–1, pl 1–1, v 1–1, pv 1–1, rv 1–1. Metatarsus III: d 1, pd 1–1, rd 1–1, rl 1, pv 1–1, rv 1–1; IV: pd 1–1–1, rd 1–1–1, pl 1–1, pv 1–1, rv 1–1.

Epigyne. Rounded light recess, surrounded by a brown bordure. Brown teardrop-shaped spermathecae (Figs 3, 4).

Notes. We redescribed the female *Cryptodrassus helvolus* in more detail, since Levy [1998] gave a brief description of this species, and our specimen is significantly larger than the female described by Levy.

Table 1. Leg segments length (mm) of the female *Cryptodrassus helvolus*.

Таблица 1. Длина сегментов ног (мм) самки *Cryptodrassus helvolus*.

| Legs Ноги | Femur Бедро | Patella Колено | Tibia Голень | Metatarsus Предлапка | Tarsus Лапка | Total length Общая длина |
|--------------|----------------|-------------------|-----------------|-------------------------|-----------------|-----------------------------|
| I | 1.25 | 0.85 | 1 | 0.8 | 0.6 | 4.5 |
| II | 1 | 0.6 | 0.85 | 0.7 | 0.5 | 3.65 |
| III | 0.95 | 0.65 | 0.75 | 0.9 | 0.55 | 3.75 |
| IV | 1.2 | 0.8 | 1.1 | 1.2 | 0.65 | 4.95 |

Bionomics. The female specimen found in central Azerbaijan was discovered beneath a rock close to the Mingachevir water reservoir, situated at the foot of clay hills (Fig. 5).

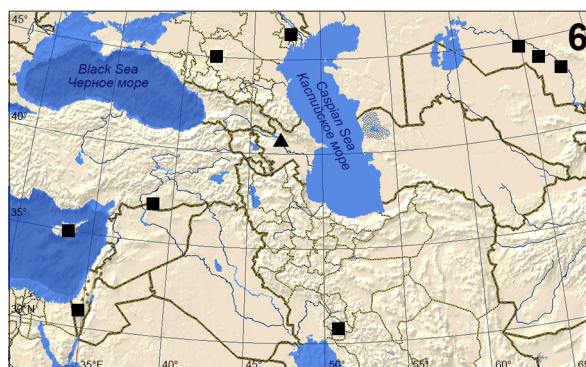
Distribution. The species is common in Russia (Stavropol and Astrakhan regions) [Ponomarev, 2022], Cyprus [Chatzaki, Russell-Smith, 2017], Turkey, Kazakhstan [Gromov, 2013], Israel [Pickard-Cambridge, 1872; Levy, 1998], Iran [Hosseinpour et al., 2019] (Fig. 6). Thus, the species is new for Azerbaijan, Transcaucasia and the entire Caucasus. Its presence in Azerbaijan is quite expected since the species was known in Iran and the Ciscaucasia (Stavropol Region in Russia).

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Figs 5–6. Localities of *Cryptodrassus helvolus*.

5 – habitat in Azerbaijan, clay hills near the Mingachevir water reservoir; 6 – distribution map (squares – literature records, triangle – new record).

Рис. 5–6. Местонахождения *Cryptodrassus helvolus*.

5 – местообитание в Азербайджане, глинистые холмы возле Мингачевирского водохранилища; 6 – карта распространения (квадраты – литературные данные, треугольник – новая находка).

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