

Two New Species of Spiders of the Family Gnaphosidae (Aranei) from the Crimea¹

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Abstract—Illustrated descriptions of *Berlandina shumskyi* sp. n. and *Parasyrisca marusiki* sp. n. are given. *Berlandina shumskyi* sp. n. differs from the close species *B. cinerea* (Menge 1868) in the shape of the bulbus apophyses and tibial apophyses of the male palp. *Parasyrisca marusiki* sp. n. differs from the close species *P. vinosus* (Simon 1878) in the bifurcated retrolateral tibial apophysis of the male palp and reservoirs of receptacula seminis in the female that are half as long. The genera *Berlandina* Dalmás 1922 and *Parasyrisca* Schenkel 1963 are reported for the first time for the Crimean fauna.

New species have been found during the faunistic and ecological study of soil and litter-dwelling spiders in the Crimea

The material was collected by the author and deposited at the Zoological Museum of Moscow State University (ZMMU) and at the Zoology Department, Vernadsky Taurida National University, Simferopol (TNU).

The leg chaetotaxy is designated as follows: d, dorsal; pl, prolateral; rl, retrolateral; v, ventral; a, apical spines.

The length of the legs is described by the formula: femur + genu + tibia + pretarsus + tarsus = total length (min–max). All measurements are given in mm.

Berlandina shumskyi Kovblyuk sp. n. (Fig. 1)

Material. Holotype ♂ (ZMMU), Ukraine, the Crimea, Simferopol District, Lozovoe, very dry steppe (*Festuca rupicola*, *Stipa capillata*, *Artemisia austriaca*, *Amygdalus nana*) on porphyrite diabase outcrops, Barber traps, April 4–18, 2000. Paratypes: 12 ♂♂ (ZMMU), April 4–18, 2000; 40 ♂♂, 3 ♀♀ (TNU), April 18–May 1, 2000; 38 ♂♂ (TNU), May 1–14, 2000; 16 ♂♂, 2 ♀♀ (TNU), May 14–26, 2000; 2 ♂♂, 2 ♀♀ (TNU), May 26–June 6, 2000; 1 ♀ (TNU), June 6–23, 2000; 1 ♀ (ZMMU), June 23–July 16, 2000; 1 ♀ (ZMMU), July 26–August 8, 2000; 1 ♀ (TNU), August 26–October 8, 2000; same locality.

Description. Male. Measurements ($n = 5$). Total body length 4.9–5.6. Cephalothorax: length 2.2–2.6, width 1.7–2.0. Leg length: I, $(1.5–1.9) + (0.6–1.0) + (1.0–1.3) + (0.8–1.1) + (0.8–1.0) = 4.8–6.4$; II, $(1.4–1.7) + (0.8–1.2) + (1.0–1.2) + (0.9–1.1) + (0.8–1.0) = 4.9–6.0$; III, $(1.4–1.7) + (0.7–0.9) + (0.8–1.0) + (1.2–$

$1.5) + (0.9–1.0) = 4.7–6.0$; IV, $(2.0–2.2) + (0.9–1.1) + (1.5–1.7) + (1.8–2.5) + (0.5–1.3) = 6.7–8.7$. Leg chaetotaxy: I, femur d 1–1, pl 1; tibia v 1 or 2a; pretarsus v 2–2–2a or 2–1–2a. II, femur d 1–1 or 1–1–1, pl 1; tibia v 1–1–2a, pl 1; pretarsus v 2–2–2a or 2–1–2a or 2–2a. III, femur d 1–1–1 or 1–1, pl 1–1–1 or 1–1, rl 1–1 or 1; genu pl 1–2–2 or 2–2–1 or 1–2–1–1–1, rl 1; tibia d 2–1 or 1–1, v 2–2–2a or 1–2–2a, pl 2–1–2 or 1–1–2, rl 1–1; pretarsus d 1–1–1a or 2–2–2a, v 2–2–1–2a or 2–1–2–2a or 2–2–2a, pl 2–2–1a or 1–1–1–1a, rl 1–1–1a. IV, femur d 1–1–1, pl 1, rl 1; genu pl 1–1, rl 1; tibia d 1–1, v 2–2–2a, rl 2–1–1 or 1–1–1, pl 2–1–2; pretarsus d 2–2–2 or 1–2–2 or 1–2, v 2–2–2–1–2a or 2–1–2–1–2a or 2–1–2–2a, pl 1–1–1–1–1a or 1–1–1–1, rl 1–1–1a or 1–1.

Coloration greenish brown. Abdomen darker than cephalothorax and legs. Legs, coxae, palps, chelicerae, and sternum uniformly colored, without stripes or spots. Dorsal pattern of cephalothorax and abdomen typical of the genus *Berlandina* Dalmás 1922 (Heimer and Nentwig, 1991: fig. 1067; Levy, 1995: 938).

Palp morphology as shown in Fig. 1, 1–5, 9, 11.

Female. Measurements ($n = 5$). Total body length 6.3–8.5. Cephalothorax: length 2.4–3.4, width 1.8–2.5. Leg length: I, $(1.8–2.2) + (1.0–1.25) + (1.3–1.5) + (1.1–1.4) + (0.9–1.1) = 5.9–7.2$; II, $(1.6–2.0) + (0.9–1.2) + (1.1–1.4) + (1.0–1.2) + (0.9–1.0) = 5.5–6.8$; III, $(1.5–2.0) + (0.8–1.1) + (0.9–1.1) + (1.2–1.6) + (0.9–1.2) = 5.3–7.0$; IV, $(2.0–2.6) + (1.0–1.4) + (1.5–1.8) + (1.9–2.6) + (1.0–1.4) = 7.8–9.9$. Leg chaetotaxy: I, femur d 1–1 or 1, pl 1; tibia v 2–2–1a or 1a; pretarsus v 2–2a or 2–1–1a or 2–1–2a or 2. II, femur d 1–1, pl 1–1 or 1; tibia v 1–1–2a or 1–2–1a, pl 1a or 0; pretarsus v 2–2–2a or 2–1–2a or 2. III, femur d 1–1–1 or 1–1, pl 1–1–1 or 1–1, rl 1–1; genu d 1–1 or 0, pl 1–2–1, rl 1; tibia d 2–1 or 1–1 or 1, v 2–2–2a, pl 3–2–2 or 2–1–2 or 1–1–2 or 1–1–1, rl 1–1; pretarsus d 2–2–2 or 1–2–2 or 1–1–2, v 2–1–2–2 or 2–2–2, pl 1–2–2–2 or 1–1–1–1 or 1–1–1

¹ This article was submitted by the author in English.

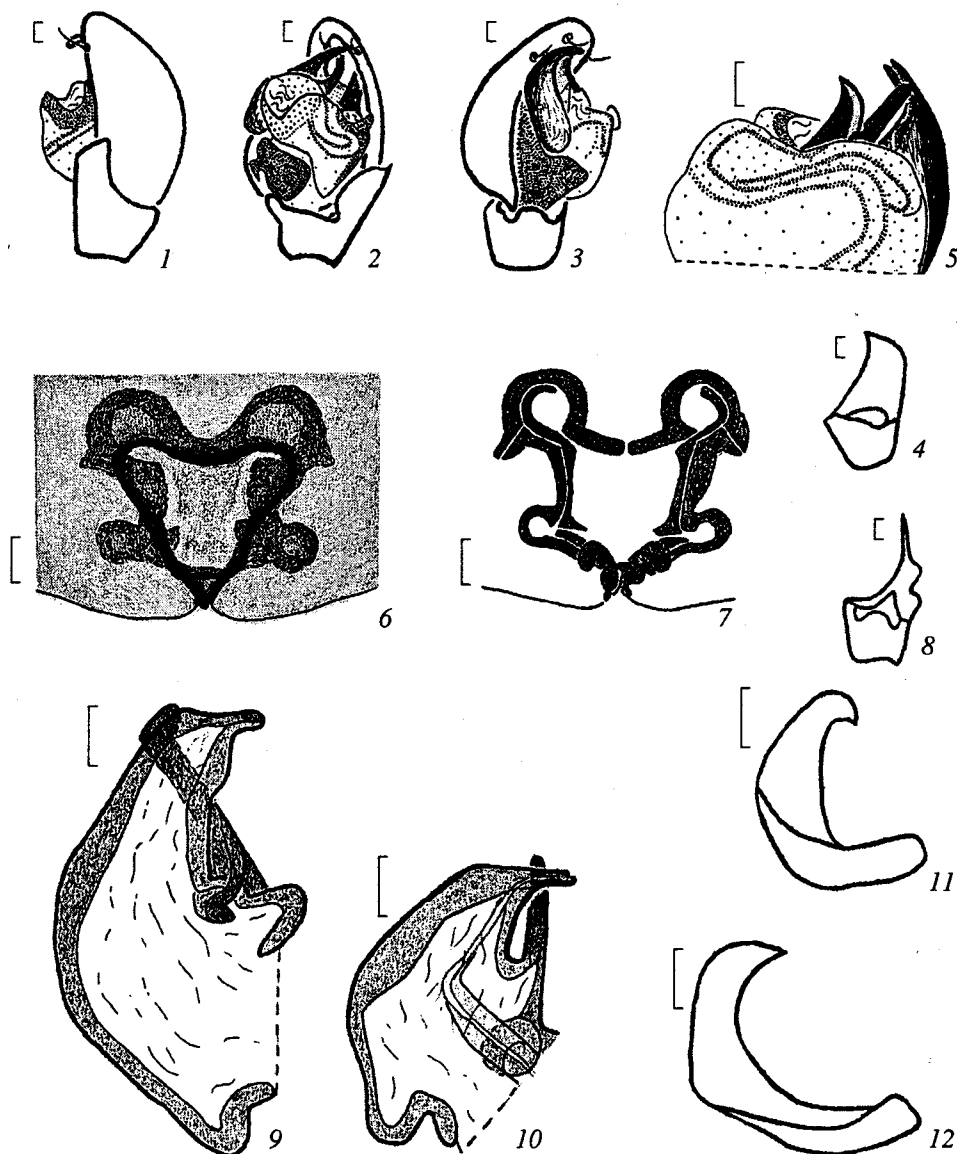


Fig. 1. Details of copulatory organs of *Berlandina shumskyi* sp. n. (1-7, 10, 11) and *B. cinerea* (Menge 1868) (8, 9, 12): male palp in retrolateral (1), ventral (2), and prolateral (3) views; tibia of male palp in prolateral view (4, 8); upper portion of bulbus in dorsal view with cymbium removed (5); epigyne in ventral (6) and dorsal (7) views; embolus and median apophysis of bulbus in ventral view (9, 10); tegular apophysis of bulbus in prolateral view (11, 12). Scale bar, 0.1 mm.

or 1-1, rl 1-1-1 or 1-1. IV, femur d 1-1-1 or 1-1, pl 1 or 0, rl 1; genu pl 1-2-1 or 2-2 or 1-1 or 0, rl 1 or 0; tibia d 1-1 or 0, v 2-2-2a or 2-2-1a, pl 2-1-2 or 1-1, rl 2-1-1-1 or 1-1-1; pretarsus d 2-2-2 or 1-2-2 or 2-2, v 2-1-2-1-2a or 2-2-2, pl 1-1-1-1a or 1-1-1 or 1-1, rl 1-1-1a or 1-1.

Coloration the same as in male.

Epigyne morphology as shown in Fig. 1, 6, 7.

Differential diagnosis. The new species is close to *B. cinerea* (Menge 1868) but differs markedly in the shape of the tibial apophyses of the male palp (Fig. 1, 4, 8) and the shape of the bulbus apophyses (Fig. 1, 2,

5, 9-12). No differences have been observed in the morphology of the epigyne and spermatheca.

The new species resembles *B. caspica* Ponomarev 1979 (Ponomarev, 1979: fig. 1) in the shape of the tibial apophyses of the male palp. However, *B. caspica* strongly differs from *B. shumskyi* sp. n. in the shape of the bulbus apophyses and the epigynal fovea (Ponomarev, 1979: figs. 2, 3).

Biology. The new species was found only in a single, very small area of steppe that strongly differed from the surrounding territory by extreme arid conditions and noncalcareous natural rock (porphyrite diabase). Males can be observed from April till June, and females from

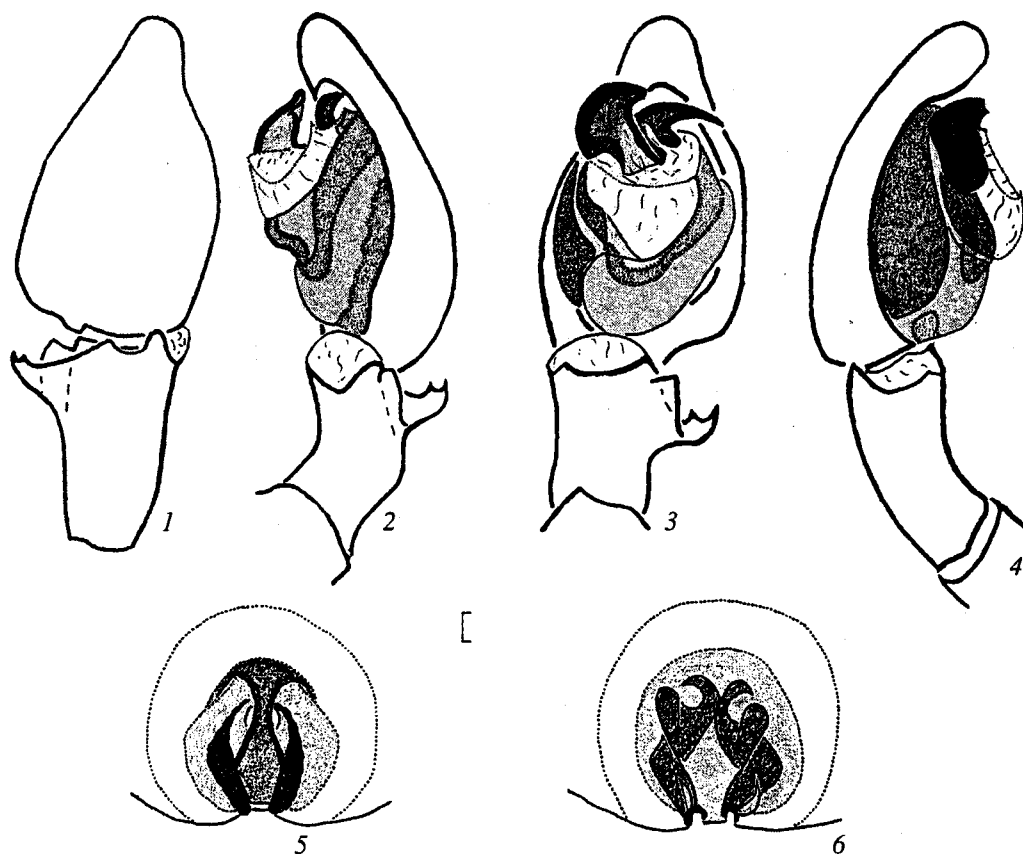


Fig. 2. Details of copulatory organs of *Parasyrisca marusiki* sp. n.: male palp in dorsal (1), retrolateral (2), neutral (3), and prolateral (4) views; epigyne in neutral (5) and dorsal (6) views. Scale bar, 0.1 mm.

April till October. The peak of abundance and activity of mature individuals occurs in late April.

Note. The genus *Berlandina* Dalmas 1922 is new to the Crimean fauna. The close species *B. cinerea* (Menge 1868) is distributed from Europe to Central Asia but has not been found in the Crimea (*B. cinerea* specimens used for comparison had been collected in Donetsk oblast, Ukraine).

Etymology. The species is named after Andrei Vladimirovich Shumsky (Simferopol), an amateur botanist who had accompanied me for many years in my trips near Simferopol and who was the first to notice the peculiar characteristics of the biotope where the new species was collected.

Parasyrisca marusiki Kovblyuk sp. n. (Fig. 2)

Material. Holotype ♂ (ZMMU), Ukraine, the Crimea, Crimean State Nature Reserve (CSNR), Nikitskaya yaila [plateau], over 1000 m above sea level, steppe (*Festuca* sp., *Rosa* sp.), Barber traps, April 22–May 4, 2001. Paratypes: 1 ♀ (ZMMU), same locality, June 2–12, 2001; 1 ♀ (ZMMU), Ukraine, the Crimea, CSNR, Gurzufskaya yaila, near Besedka Vetrov, over 1000 m above sea level, June 13, 2000.

Description. Male (holotype). Measurements. Total body length 8.7. Cephalothorax: length 4, width 3. Leg length: I, $3.6 + 1.9 + 3.5 + 2.8 + 2.2 = 14.0$; II, $3.5 + 1.8 + 2.9 + 2.4 + 2.0 = 12.6$; III, $3.0 + 1.4 + 2.4 + 2.1 + 1.8 = 10.8$; IV, $4.0 + 1.8 + 3.6 + 3.2 + 2.2 = 14.8$. Leg chaetotaxy: I, femur d 1–1, pl 1; tibia v 2–2–0; pretarsus v 2–0–0. II, femur d 1–1, pl 1; tibia v 1–2–0; pretarsus v 2–0–0. III, femur d 2–0–2, pl 0–1–1, rl 0–1–1; tibia v 1–1–2a, pl 1–1, rl 1–1; pretarsus d 2–2, v 2–2a, pl 0–1, rl 1–1. IV, femur d 1–1, pl 1, rl 1–1; tibia d 2–2, v 1–2–2; pretarsus d 2–2, v 1–2–2a, rl 1–1, pl 1–1. Posterior margin of groove of chelicera with two identical teeth.

Coloration. All leg segments uniform yellow brown. Abdomen, sternum, labium, maxillae, chelicerae, and cymbium brown. Carapax darker than legs but paler than abdomen. Head darkened. Two brown stripes run anterolaterad from anterior end of median stripe, forming together a Y-pattern.

Palp morphology as shown in Fig. 2, 1–4.

Female (paratype). Measurements. Total body length 7.5. Cephalothorax: length 3.8, width 3. Leg length: I, $3.2 + 1.7 + 2.5 + 1.8 + 1.8 = 11.0$; II, $3.0 + 1.6 + 2.4 + 1.8 + 1.7 = 10.4$; III, $1.6 + 1.5 + 2.0 + 1.8 + 1.6 = 8.4$; IV, $3.6 + 1.6 + 3.1 + 2.6 + 2.0 = 12.5$. Leg chaetotaxy: I and II, same as in male. III, femur d 1–1,

pl 1-1, rl 1; tibia v 1-2-2, pl 1-1, rl 1-1; pretarsus d 1-2, v 2-2, pl 1-1, rl 1-1. IV, femur d 1-1, pl 1, rl 1; tibia d 2-2, v 1-2-2a; pretarsus d 2-2, v 1-1-2, pl 1-1, rl 1-1. Palps also with spines. Posterior margin of groove of chelicera with two identical teeth; anterior margin with three teeth, the middle one larger than the others.

Coloration. Legs, carapax, and maxillae uniform yellow. Sternum yellow with broad brown margin. Chelicerae and labium brown. Eye field darkened. Unlike in male, carapax without spots or stripes. Median groove distinct.

Epigyne morphology as shown in Fig. 2, 5, 6.

Differential diagnosis. According to the classification proposed by V.I. Ovtsharenko and coauthors (1995), *P. marusiki* sp. n. belongs to the "vinosus" species group, which also includes *P. vinosus* (Simon 1878) and *P. ulykpani* Ovtsharenko *et al.*, 1995. The new species differs markedly from the above species in the bifurcated retrolateral tibial apophysis of male palp (Fig. 2, 1-3). Reservoirs of receptacula seminis in the female of the new species are about half as long as in *P. vinosus* (the female of *P. ulykpani* is unknown) and separated from the septum stalk by a distance equal to their width (Fig. 2, 5, 6), whereas the same distance in *P. vinosus* is twice the reservoirs' width (Ovtsharenko *et al.*, 1995: 41, figs. 142, 143).

Biology. The new species was found at 1000-1200 m above sea level in the Nikitskaya and Gurzufskaya plateaus, in the rocky mountain steppe. The male was found in late April, and the females in June. The species appears to be very rare and scarce.

Note. The genus *Parasyrisca* Schenkel 1963 is new to the Crimean fauna. The reported findings represent the westernmost known Eurasian locality for this genus.

Etymology. The species is named after Yuri Mikhailovich Marusik (Magadan), an eminent arachnologist who has made a grand contribution to the study of the genus *Parasyrisca*.

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