

Salticidae of Middle Asia. 3. A new genus, *Proszynskiana* gen. n., in the subfamily Aelurillinae (Araneae, Salticidae)

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Summary

A new aelurilline genus *Proszynskiana* is proposed for four new Middle-Asian species: *P. deserticola* sp. n., *P. iranica* sp. n., *P. starobogatovi* sp. n. and *P. zonshteini* sp. n. All the species are described and figured, with a distributional map for all the species. A new morphological term, cymbial pocket, is proposed and discussed.

Introduction

Proszynskiana gen. n. is a small salticid genus comprising four new species and here included in the subfamily Aelurillinae, as it possesses a unique diagnostic character of the subfamily, i.e. a deep cymbial pocket.

The cymbial pocket (CP) is a hollow space (cavity) between the apical part of the tegulum and the cymbium, in which the embolus is usually hidden (Fig. 32). Two types of CP are recognised: open CP (Figs. 3,32), if the embolus is readily visible in ventral view (in *Proszynskiana*), and closed (Fig. 4), if the embolus is completely hidden in the pocket, except for its tip (in the other aelurilline genera, e.g. *Aelurillus* or *Phlegra*).

On the basis that the alveolus of the most primitive salticids, e.g. *Lyssomanes*, is situated sub-basally on the cymbium (see Galiano, 1980: figs. 41, 53, etc.), I assume that the cymbial pocket is derived from the distal part of the cymbium that has expanded to form a flat cover of the apical division. Thus, the typical aelurilline palp appears to form a chitinous “capsule”, consisting of dorsal (the cymbium) and ventral (the tegulum) halves (Figs. 3, 4), in which the apical division (the embolus), seminal ducts, the subtegulum and both haematodochae are hidden and protected.

The aims of the present paper are (1) to describe and diagnose a new genus, *Proszynskiana*, and (2) to describe

all its species. Four species are studied, all being new to science.

Material and methods

The work is based on newly collected material from Middle Asia. Specimens used for this study are distributed among two museums: ISE=Zoological Museum of the Institute for Systematics and Ecology of Animals, Novosibirsk, Russia; ZMMU=Zoological Museum of the Moscow State University, Moscow, Russia.

The sequence of leg segments in measurement data is as follows: femur+patella+tibia+metatarsus+tarsus. All measurements are in mm.

Most of the terms adopted for descriptions of genitalia were proposed by Comstock (1910), Davies & Žabka (1989), Sierwald (1990) and Coddington (1990), and most of them are shown in Figs. 1–4, 17–19, 30–37. A new term, “cymbial pocket”, is explained above.

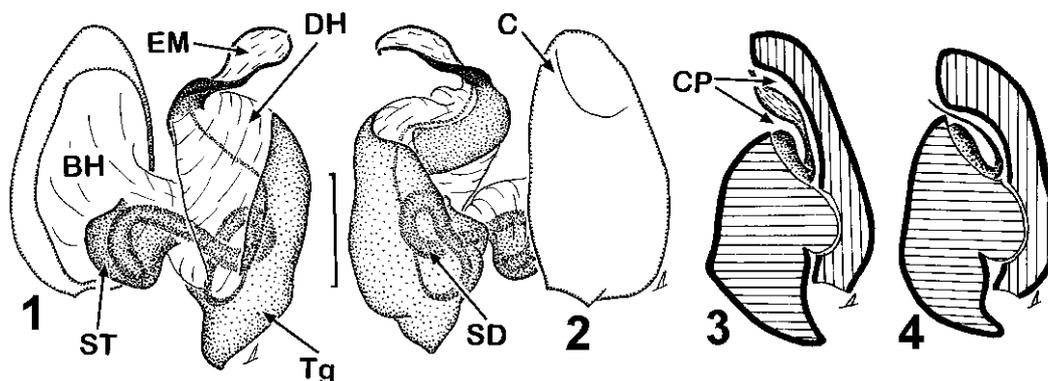
For leg spination the system adopted is that used by Ono (1988). Leg spination described for the genus reflects only the spine patterns which are present in all congeners of the genus. The AME/ALE ratio is the number of times AME-diameter exceeds ALE-diameter.

Abbreviations used in figures and text: C=cymbium, CP=cymbial pocket, BH=basal haematodocha, DH=distal haematodocha, EM=embolic membrane, EP=epigynal pocket, ID=insemination duct, LTA=lateral tibial apophysis, SD=seminal duct, ST=subtegulum, Tg=tegulum, Fd=fold, Fl=flaps, Fm=femur, Pt=patella, Tb=tibia, Mt=metatarsus.

Genus *Proszynskiana*, gen. n.

Type species: Proszynskiana starobogatovi, sp. n.

Definition: Medium size spiders ranging from about 4.0 to 5.2 mm in length. Sexes similar in general body form, but males with contrasting coloured (dark brown) tarsi, metatarsi I and sometimes with carapace darker than in females. Males also differ in having pro- and retrolateral spines (0–1–0) on patellae I, II and dorsal abdominal scutum. Colour markings on dorsum usually absent in both sexes, while faces usually species-specific (Figs. 5–12). Body of both sexes densely covered by flat adpressed scales (Fig. 14). Carapace: rather high; eye

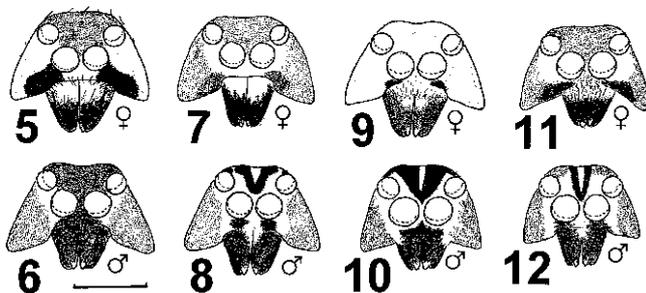


Figs. 1–4: 1 *Proszynskiana starobogatovi*, sp. n., expanded male palp, lateral view; 2 Ditto, median view; 3 Schematic longitudinal section of unexpanded male palp with open cymbial pocket; 4 Ditto with closed cymbial pocket. Scale line=0.25 mm.

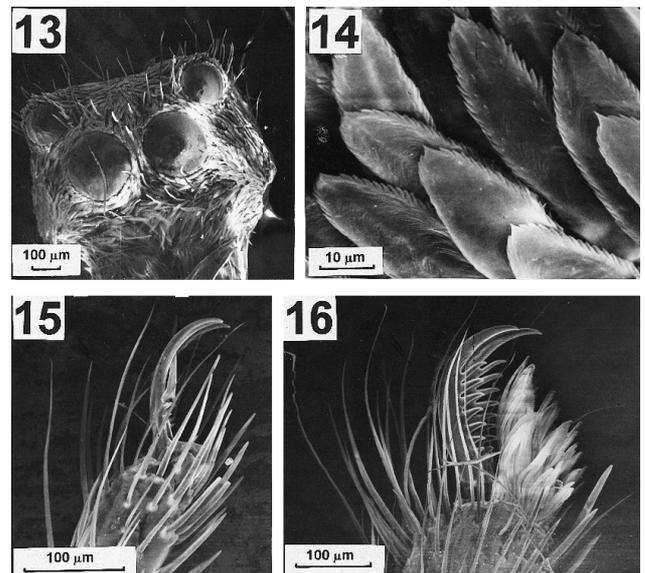
region slightly elevated (Fig. 27); fovea present. Eyes: in three rows; anterior row usually wider (seldom equal) than posterior one; middle row noticeably closer to PLE; AME/ALE ratio < 1.5 (about 1), i.e. ALE only slightly smaller than AME (Figs. 13, 28, 29); quadrangle length 44–51% of carapace length. Clypeus: low; about 36–55% of AME diameter; more or less backward sloping. Chelicerae: small; more or less subvertical; promargin with two small teeth and massive white protuberance protecting fang base (arrowed in Fig. 30); retromargin with small tooth. Maxillae: slightly convergent. Labium: subtriangular. Sternum: oval, elongate. Pedicel: short, not always visible in dorsal view. Abdomen: elongate; slightly tapered towards rear; usually densely covered with light scales; colour markings absent; spinnerets subequal in length and thickness. Legs: subequally developed; tarsi of all legs without pulvilla (claw tufts), only hard bristles present (Figs. 15, 22, 23); leg formula III, IV, II, I or IV, III, II, I. Leg spination: patellae III, IV pr., rt. 0–1–0 (in male patellae I, II with same pattern); tibiae of all legs v. 1–0–2ap.; additionally on tibiae III, IV d. 1–0, pr. and rt. 1–1–1; metatarsi I, II pr., rt. 1–1ap., v. 2–2ap.; metatarsi III, IV pr., v. 1–1–2ap., v. 2–1–2ap. Female palp: general form; without apical claws. Male palp: cymbial pocket open (Fig. 3); embolus hook-shaped and massive, with well-developed embolic membrane (Fig. 1); embolic tip pointed (Figs. 35, 43, etc.); lateral cymbial process absent. Female genitalia: epigyne usually with internal structure visible through integument; copulatory pores wide, usually hidden under flaps (Fig. 36); epigynal pocket present; insemination ducts evenly sclerotised; spermathecae funnel-shaped (Figs. 37, 45, etc.).

Diagnosis and affinities: *Proszynskiana* can be easily distinguished from other genera of the Aelurillinae by the larger ALE (AME/ALE ratio < 1.5, i.e. ALE size almost equal to that of AME, Figs. 13, 28); presence of the process on chelicerae (Figs. 30, 31); absence of claw tufts (Figs. 15, 22, 23 cf. Figs. 16, 24–26); presence of the open cymbial pocket (Figs. 3, 32); and the funnel-shaped spermathecae (Fig. 37).

Two of the above characters are apparently unique among the Salticidae: the presence of the cheliceral process (Fig. 30) and the absence of claw tufts (=foot pads or pulvilla) (Figs. 15, 22, 23). At present no salticid genus, except for *Proszynskiana*, is known to possess these characters.



Figs. 5–12: Face colour patterns of *Proszynskiana* species. 5, 6 *P. zonshteini*, sp. n.; 7, 8 *P. iranica*, sp. n.; 9, 10 *P. starobogatovi*, sp. n.; 11, 12 *P. deserticola*, sp. n. Scale line = 1 mm.



Figs. 13–16: Somatic characters of aelurilline species. 13 *Proszynskiana starobogatovi*, sp. n., male face; 14 Ditto, body scales; 15 *P. deserticola*, sp. n., praetarsus; 16 *Aelurillus variegatus* (Kroneberg), praetarsus.

The structure of the female genitalia and embolus indicate that this genus could lie near *Aelurillus*. Both genera share the following characters: the embolus with an embolic membrane (Fig. 1) and the copulatory pores hidden under the epigynal flaps/fold (Figs. 17, 19, 36). However, the above peculiarities of *Proszynskiana*, as well as the larger ALE, easily separate it from *Aelurillus*. Besides, *Aelurillus* has its own unique features, e.g. male femora I and palpi usually covered with long and very dense hairs, palpal femora in most cases with rounded distal-ventral convexity (bump-like) (Fig. 21), and spermathecae compact and strongly chitinised (Figs. 18, 20), all completely lacking in *Proszynskiana*. Thus, it is safe to consider these genera as being close, but clearly separated from each other and from other aelurilline genera, e.g. *Phlegra*.

Species included: Four species have so far been found in the genus: *P. deserticola* sp. n., *P. iranica* sp. n., *P. starobogatovi* sp. n., *P. zonshteini* sp. n.

Distribution: At present the genus is known only from Middle Asia (Fig. 39), but probably its distribution should also cover the Near East and North Africa.

Habitat: All known species have been collected from lower parts of chalk/clayey cliffs with a southern exposure, where they usually occur among stones and on cliff walls. It is likely that their light body coloration and dense cover of flat light scales (Fig. 14) are related to these unusual habitats.

Etymology: The new genus is named after Prof. Jerzy Prószyński (Poland), the prominent specialist on Salticidae. It is feminine in gender.

***Proszynskiana deserticola*, sp. n.** (Figs. 11–12, 15, 23, 27–39)

Material examined: Holotype ♂ from Kazakhstan (type locality), Mangistauzskaya Area, foot of Ustyurt Plateau, Karynzhyrk Depression, Ustyurtskij Reserve,

chalk hills 23 km W of Kendirli Cordon (42°55'N, 54°30'E), 22 May 1989 (A. A. Zyuzin, ISE, 1204). Paratypes: together with holotype, 2♂ (ISE, 1205); same area and reserve, Ustyurt Plateau, Kugusem well, 23–24 May 1989, 1♀ (A. A. Raikhanov & S. I. Ibraev, ISE, 1203), 1♂ 1♀ (A. A. Raikhanov & S. I. Ibraev, ZMMU, Ta-4757).

Etymology: The species name is a noun in apposition meaning “desert dweller”.

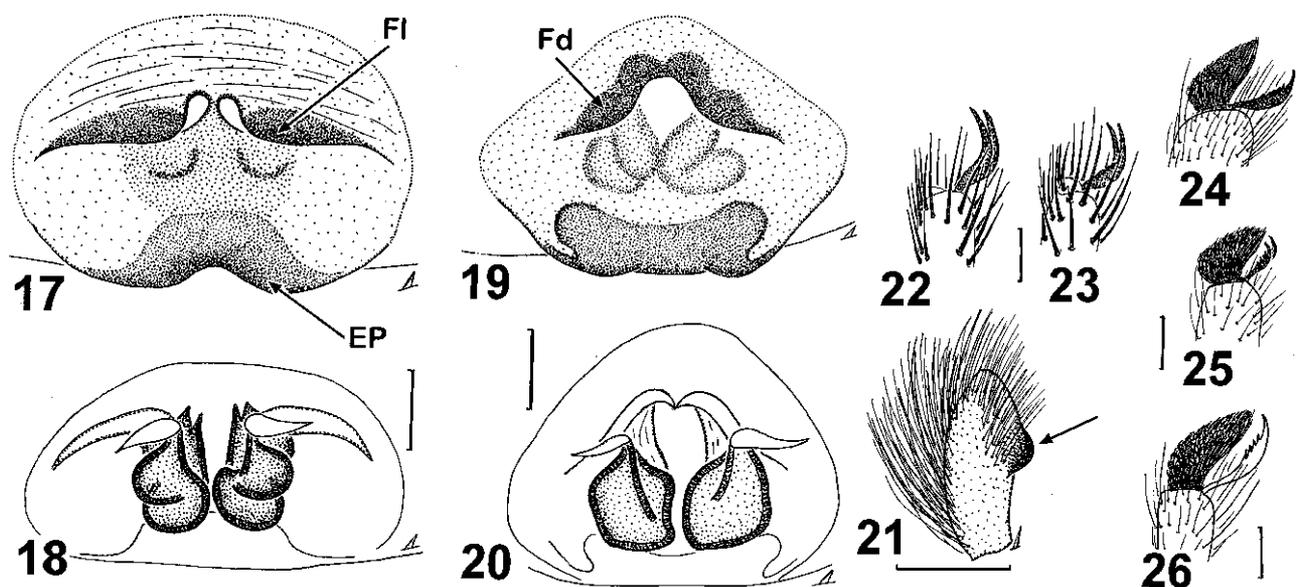
Diagnosis: This species is closely related to *P. starobogatovi*, but can be easily separated by the structure of the embolus and tibial apophysis (Figs. 32–35), the face coloration (Figs. 11–12), and the copulatory pores which touch in *P. deserticola* (Fig. 36) but are separated from each other in *P. starobogatovi* (Fig. 51). The new species also is very similar to *Aelurillus conveniens* (O.P.-Cambridge, 1872) (see Prószyński, 1976: fig. 311), known from a single female from Egypt, but distinct differences in the structure of the copulatory pores and the epigynal pocket can be found in comparison with Prószyński's drawings.

Distribution: Only the type locality (Fig. 39).

Description: *Male holotype*: Carapace 2.08 long, 1.50 wide, 1.00 high at PLE. Ocular area 1.05 long, 1.03 wide anteriorly and 0.93 wide posteriorly. Diameter AME 0.36. Abdomen 1.95 long, 1.50 wide. Cheliceral length 0.50. Clypeal height 0.13. Length of leg segments: I 1.05+0.58+0.73+0.55+0.40; II 1.03+0.60+0.65+0.53+0.45; III 1.43+0.75+0.80+1.00+0.58; IV 1.25+0.68+0.85+1.00+0.65. Leg spination: I: Fm d 0–1–1–2; Pt pr 0–1–0; Tb pr 1–1–2, rt 1–1, v 1–0–2ap; Mt pr and rt 1–1ap. II: Fm d 0–1–2–2; Pt pr and rt 0–1–0; Tb d 1–0, pr 1–1–1, rt 1–1, v 1–0–2ap; Mt pr and rt 1–1ap, v 2–2ap. III: Fm d 0–1–2–4; Pt pr and rt 0–1–0; Tb d 1–0, pr and rt 1–1–1, v 1–0–2ap; Mt pr 1–0–2ap, rt 2–1–2ap, v 1–0–2ap. IV: Fm d 0–1–1–3; Pt pr and rt 0–1–0; Tb d

1–0, pr and rt 1–1–1, v 1–0–2ap; Mt pr and v 1–1–2ap, rt 2–1–2ap. Carapace dark brown, densely covered with whitish-yellowish or reddish adpressed scales. Face surface and clypeus densely white-haired. Median line of white hairs between ALE, followed laterally by two lines of reddish hairs (Fig. 12). Sternum dark brown, covered with white hairs. Maxillae, labium and chelicerae yellowish-brown. Abdomen grey, without markings; densely covered with whitish and yellowish scales. Scutum dark brown, but not visible under scale cover. Book-lung covers yellowish. Spinnerets: anteriors brown, posteriors yellowish. Legs yellow to grey-yellow, but tibiae, metatarsi and tarsi I brownish. Palp: femur and patella yellow; tibia, cymbium and tegulum brown. Patella, tibia and cymbium of palp covered with long white hairs. Palpal structure as in Figs. 32–35.

Female: Carapace 2.43 long, 1.75 wide, 1.10 high at PLE. Ocular area 1.08 long, 1.15 wide anteriorly and 1.05 wide posteriorly. Diameter AME 0.35. Abdomen 2.50 long, 2.00 wide. Cheliceral length 0.68. Clypeal height 0.15. Length of leg segments: I 1.13+0.68+0.65+0.50+0.38; II 1.18+0.70+0.70+0.60+0.55; III 1.58+0.80+0.93+1.05+0.55; IV 1.50+0.80+1.00+1.15+0.63. Leg spination: I: Fm d 0–1–1–2; Tb pr 1–2, v 1–0–2ap; Mt pr 1–0, v 2–2ap. II: Fm d 0–1–1–2; Tb pr 1–1, rt 0–1, v 1–0–2ap; Mt pr 1–1ap, rt 1–0, v 2–2ap. III: Fm d 0–1–1–3; Pt pr and rt 0–1–0; Tb d 1–0, pr and rt 1–1–1, v 1–0–2ap; Mt pr 1–0–2ap, rt 2–1–2ap, v 1–1–2ap. IV: Fm d 0–1–1–1; Pt pr and rt 0–1–0; Tb d 1–0, pr and rt 1–1–1, v 1–0–2ap; Mt pr and v 1–1–2ap, rt 2–1–2ap. Coloration as in male, but body covered with more grey scales, especially on dorsum. Palp monochrome yellow. Legs yellowish with brownish patches. Distal segments of leg I yellow. Structure of epigyne and spermathecae as in Figs. 36–38.



Figs. 17–26: Genitalia and some somatic characters of Aelurillinae. **17** *Aelurillus m-nigrum* Kulcz., epigyne, ventral view; **18** Ditto, spermathecae, dorsal view; **19** *Aelurillus v-insignitus* (Clerck), epigyne, ventral view; **20** Ditto, spermathecae, dorsal view; **21** *Aelurillus ater* (Kroneberg), male palpal femur, lateral view (femoral tubercle arrowed); **22–26** Praetarsi: **22** *Proszynskiana starobogatovi*, sp. n.; **23** *P. deserticola*, sp. n.; **24** *Asianellus festivus* (C. L. Koch); **25** *Phlegra fasciata* (Hahn); **26** *Langona tartarica* (Charitonov). Scale lines=0.1 mm (17–20, 22–26), 0.5 mm (21).

Proszynskiana iranica, sp. n. (Figs. 7–8, 39–46)

Material examined: Holotype ♂ from Turkmenistan (type locality), 20–25 km SE of Polekhatum, south foothills of Gezgyadyk Mt. Range, 500 m elev., 15–16 April 1993 (D. V. Logunov, ISE, 1785). Paratypes: together with holotype, 4♂ 1♀ (ISE, 1786), 3♂ (ZMMU, Ta-4791).

Etymology: The new species was collected 5–6 km N of the Iranian border, and it is probably widely distributed at least in northern regions of Iran, as reflected in its name.

Diagnosis: This species is closely related to *P. starobogatovi* and *P. zonshtei*, but can be distinguished by the shape of the epigynal flaps (Fig. 44) in females and the structure of the embolus in males (Figs. 42, 43), as well as by the face coloration in both sexes (Figs. 7–8).

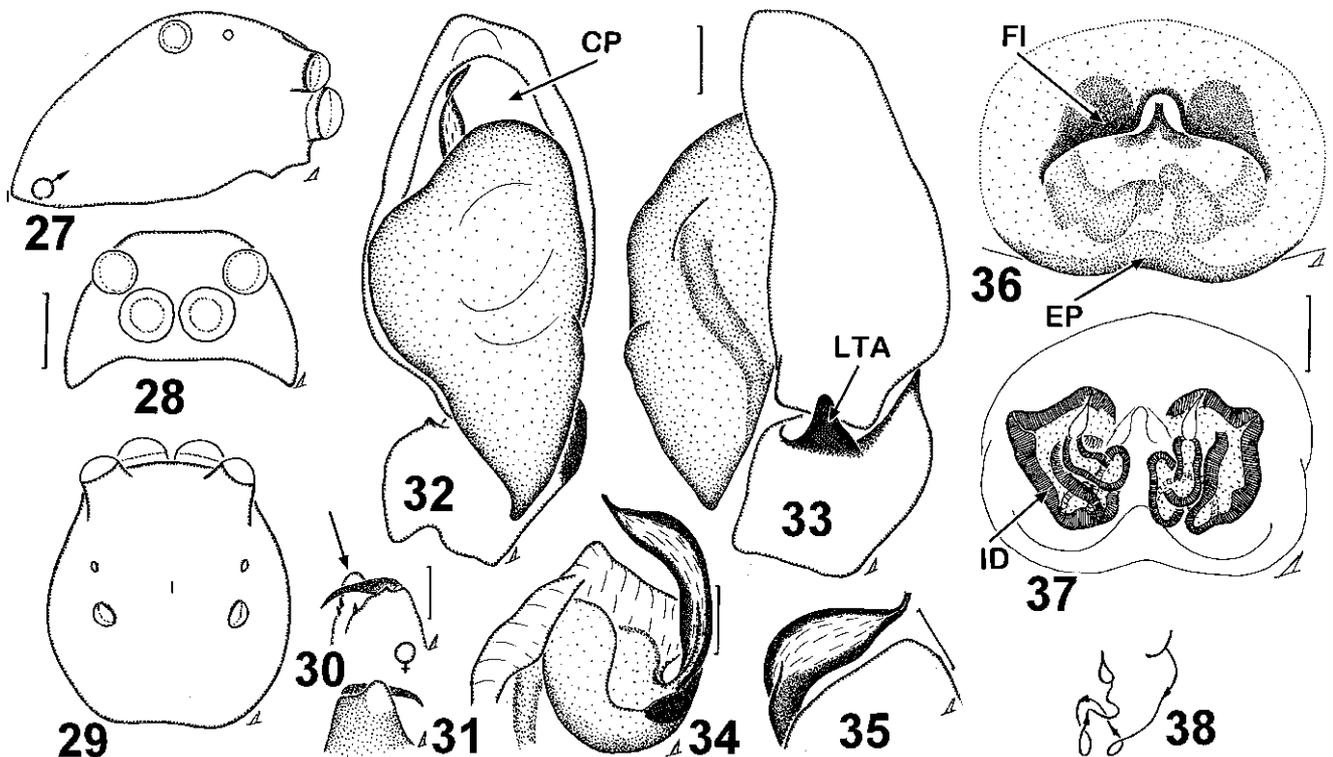
Distribution: Only the type locality (Fig. 39).

Habitat: The species was collected from lower parts of white clayey cliffs, among stones and on the cliff walls.

Description: Male holotype: Carapace 2.40 long, 2.48 wide, 1.28 high at PLE. Ocular area 1.13 long, 1.13 wide anteriorly and 1.05 wide posteriorly. Diameter AME 0.38. Abdomen 1.95 long, 1.45 wide. Cheliceral length 0.70. Clypeal height 0.13. Length of leg segments: I 1.20+0.70+0.78+0.65+0.53; II 1.18+0.68+0.75+0.60+0.53; III 1.55+0.83+0.95+0.88+0.75; IV 1.50+0.78+0.98+1.13+0.70. Leg spination: I: Fm d 0–1–1–3; Pt pr and rt 0–1–0; Tb pr 1–1–2, rt 1–1–1, v 1–0–2ap; Mt pr and rt 1–1ap, v 2–2ap. II: Fm d 0–1–1–4; Pt pr and rt 0–1–1; Tb d 1–0, pr and rt 1–1–1, v 1–0–2ap; Mt pr and

rt 1–1ap, v 2–2ap. III: Fm d 0–1–1–3; Pt pr and rt 0–1–0; Tb d 1–0, pr and rt 1–1–1, v 1–0–2ap; Mt pr and rt 2–1–2ap, v 2–0–2ap. IV: Fm d 0–1–1–3; Pt pr and rt 0–1–0; Tb d 1–0, pr and rt 1–1–1, v 1–0–2ap; Mt pr and v 1–1–2ap, rt 2–1–2ap. Carapace dark brown, with white line of scales on eye field between ALE (Fig. 8). Carapace densely covered with translucent scales. Face colour pattern as in Fig. 8. Sternum dark brown, covered with erect white hairs. Labium and maxillae brown with white tips. Chelicerae brown. Abdomen greyish-yellowish, but scutum dark brown. Dorsum with grey irregular markings. Book-lung covers yellowish-grey. Spinnerets: anteriors yellow, posteriors brown. Legs yellow, but metatarsi, tarsi I dark brown. Palpi yellow with brown cymbium and tegulum. Palpal structure as in Figs. 40–43.

Female: Carapace 2.48 long, 1.88 wide, 1.63 high at PLE. Ocular area 1.05 long, 1.13 wide anteriorly and 1.10 wide posteriorly. Diameter AME 0.38. Abdomen 2.70 long, 2.25 wide. Cheliceral length 0.63. Clypeal height 0.15. Length of leg segments: I 1.18+0.73+0.70+0.70+0.45; II 1.25+0.68+0.73+0.60+0.50; III 1.75+0.90+0.95+1.00+0.70; IV 1.70+0.80+1.08+1.20+0.70. Leg spination: I: Fm d 0–1–1–3; Tb pr 1–1–2, rt 1–1–1, v 1–0–2ap; Mt pr and rt 1–1ap, v 2–2ap. II: Fm d 0–1–1–2; Tb pr 1–1–1, v 1–0–2ap; Mt pr and rt 1–1ap, v 2–2ap. III: Fm d 0–1–1–2; Pt pr and rt 0–1–0; Tb pr and rt 1–1–1, v 1–0–2ap; Mt pr 1–0–2ap, rt 1–1–2ap, v 2–0–2ap. IV: Fm d 0–1–1–1; Pt pr and rt 0–1–0; Tb d 1–0, pr and rt 1–1–1, v 1–0–2ap; Mt pr 1–1–2ap, rt 2–1–2ap, v 1–2–2ap. Coloration as in male, but lighter;



Figs. 27–38: *Proszynskiana deserticola*, sp. n. 27 Male carapace, lateral view; 28 Ditto, anterior view; 29 Ditto, dorsal view; 30 Male chelicera, posterior view (cheliceral process arrowed); 31 Ditto, anterior view; 32 Male palp, ventral view; 33 Ditto, lateral view; 34 Embolus, dorsal view; 35 Ditto, ventral view; 36 Epigyne, ventral view; 37 Spermathecae, dorsal view; 38 Schematic course of insemination ducts. Scale lines=1 mm (27–29), 0.2 mm (30–37).

legs I have tarsi and metatarsi yellow, not dark brown. Epigyne and spermathecae as in Figs 44–46.

Proszynskiana starobogatovi, sp. n. (Figs. 1–2, 9–10, 13–14, 39, 47–53)

Material examined: Holotype ♂ from Tajikistan (type locality), Kurgan-Tyube Area, Ilyitchovskij Distr., Aruktau Mt. Range, Ganzhina, 21 September 1988 (S. L. Zonshtein, ZMMU, Ta-4755). Paratypes: together with holotype, 1♀ (ZMMU, Ta-4756), 2♂ 2♀ (ISE, 1202).

Etymology: The species is named after Dr Yaroslav I. Starobogatov, well-known Russian specialist in malacology and zoogeography.

Diagnosis: Differs from other species of *Proszynskiana* in the embolus possessing a dorsal concave bend (Fig. 50, arrow) and in the shape of the epigynal flaps (Fig. 51), as well as in the face colour pattern (Figs. 9, 10).

Distribution: Only the type locality (Fig. 39).

Description: *Male holotype:* Carapace 2.13 long, 1.40 wide, 1.05 high at PLE. Ocular area 1.00 long, 1.08 wide anteriorly and 0.94 wide posteriorly. Diameter AME 0.36. Abdomen 1.85 long, 1.38 wide. Cheliceral length 0.53. Clypeal height 0.13. Length of leg segments: I 1.03+0.63+0.63+0.48+0.43; II 1.03+0.63+0.60+0.55+0.45; III 1.35+0.73+0.75+0.93+0.55; IV 1.25+0.60+0.83+1.03+0.63. Leg spination: I: Fm d 0–1–1–2; Pt pr and rt 0–1–0; Tb pr 1–1–2, rt 1–1, v 1–0–2ap; Mt pr and rt 1–1ap, v 2–2ap. II: Fm d 0–1–1–4; Pt pr and rt 0–1–0; Tb pr and rt 1–1–1, v 1–0–2ap; Mt pr and rt 1–1ap, v 2–2ap. III: Fm d 0–1–1–4; Pt pr and rt 0–1–0; Tb d 1–0, pr and rt 1–1–1, v 1–0–2ap; Mt pr 1–0–2ap, rt 2–1–2ap, v 1–1–2ap. IV: Fm d 0–1–1–3; Pt pr and rt 0–1–0; Tb d 1–0, pr and rt 1–1–1, v 1–0–2ap; Mt pr and v 1–1–2ap, rt 2–1–2ap. Carapace dark brown, densely covered with reddish semi-transparent adpressed scales,

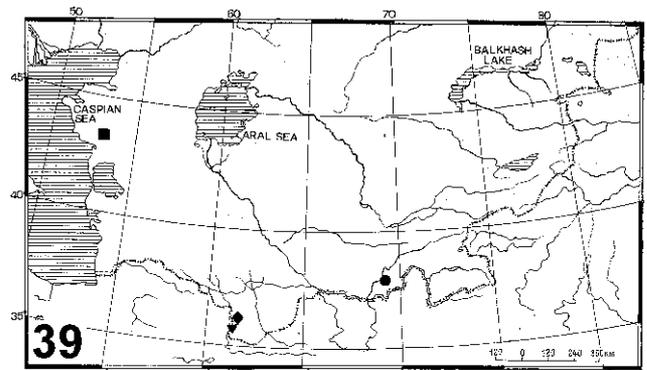
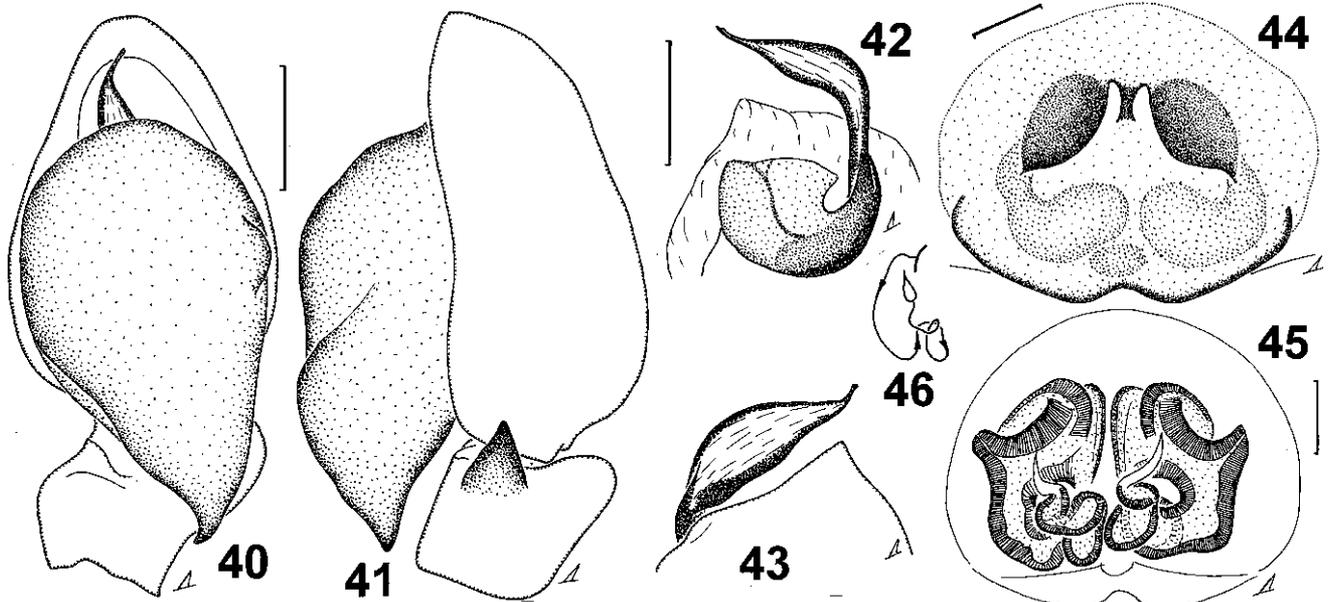


Fig. 39: Distribution of *Proszynskiana* species. *P. deserticola* (square), *P. iranica* (triangle), *P. zonshteini* (rhomb), *P. starobogatovi* (circle).

densely white-haired on clypeus and around eyes of first row. White line of hairs between ALE (Fig. 10). Sternum dark brown, covered with white hairs. Labium, chelicerae and maxillae brown. Abdomen yellowish-brown, densely covered with greyish-whitish scales, without markings. Scutum dark brown, usually not visible under scales. Book-lung covers yellowish-brown. Spinnerets: anteriors brown, posteriors yellowish. Legs yellow with brownish coxae, ventral sides of tibiae, metatarsi and tarsi I dark brown. Palp: femur, patella and tibia yellow; tegulum and cymbium brown. Patella, tibia and cymbium of palp covered dorsally with long white hairs. Palpal structure as in Figs. 47–50 (also Figs. 1, 2).

Female: Carapace 2.25 long, 1.63 wide, 1.15 high at PLE. Ocular area 1.15 long, 1.10 wide anteriorly and 1.00 wide posteriorly. Diameter AME 0.36. Abdomen 2.95 long, 2.25 wide. Cheliceral length 0.63. Clypeal height 0.20. Length of leg segments: I 1.08+0.65+0.65+0.48+0.40; II 1.13+0.70+0.68+0.53+0.45; III 1.53+0.80+0.88+0.88+0.70; IV 1.48+0.70+0.93+1.00+0.73.



Figs. 40–46: *Proszynskiana iranica*, sp. n. 40 Male palp, ventral view; 41 Ditto, lateral view; 42 Embolus, dorsal view; 43 Ditto, ventral view; 44 Epigyne, ventral view; 45 Spermathecae, dorsal view; 46 Schematic course of insemination ducts. Scale lines=0.2 mm (40–43), 0.1 mm (44, 45).

Leg spination: I: Fm d 0-1-1-2; Tb pr 1-2, v 1-0-2ap; Mt pr 1-0, v 2-2ap. II: Fm d 0-1-1-3; Tb pr 1-1-1, v 1-0-2ap; Mt pr and rt 1-1ap, v 2-2ap. III: Fm d 0-1-1-3; Pt pr and rt 0-1-0; Tb d 1-0, pr and rt 1-1-1, v 1-0-2ap; Mt pr 1-0-2ap, rt 2-1-2ap, v 1-1-2ap. IV: Fm d 0-1-1-1; Pt 0-1-0; Tb d 1-0, pr and rt 1-1-1, v 1-0-2ap; Mt pr and v 1-1-2ap, rt 2-1-2ap. Coloration as in male, except leg I completely yellow; palp yellow. Epigyne and spermathecae as in Figs. 51-53.

Proszynskiana zonshteini, sp. n. (Figs. 5-6, 39, 54-61)

Material examined: Holotype ♂ from Turkmenistan (type locality), Badkhyz Reserve, Kyzyl-Dzhar Canyon, 10-12 April 1993 (D. V. Logunov, ISE, 1787). Paratypes: together with holotype, 4♂ 3♀ (ISE, 1788), 4♂ 2♀ (ZMMU, Ta-4786).

Etymology: This species is named after my colleague and friend Dr Sergei L. Zonshtein, an arachnologist from Bishkek (Kyrgyzstan).

Diagnosis: Both the structure of the genitalia (Figs. 54-61) and the face coloration (Figs. 5, 6) are diagnostic for this species.

Distribution: Only the type locality (Fig. 39).

Habitat: Collected on the lower parts of clayey cliffs, among stones and on the cliff walls.

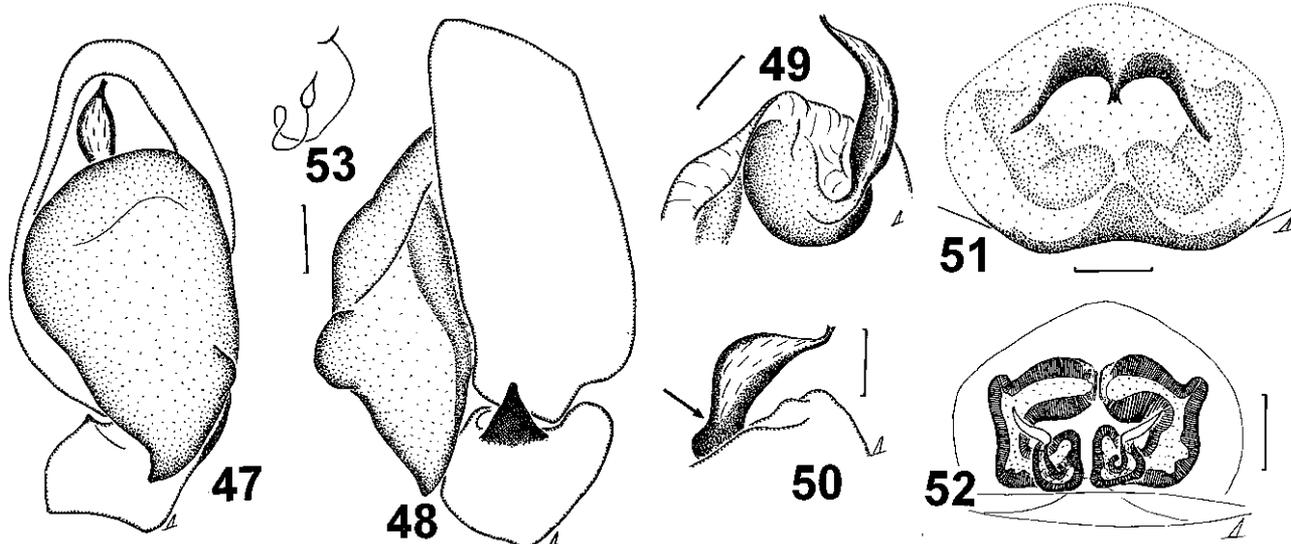
Description: *Male holotype*: Carapace 2.35 long, 1.60 wide, 1.15 high at PLE. Ocular area 1.10 long, 1.10 wide anteriorly and 0.85 wide posteriorly. Diameter AME 0.35. Abdomen 2.00 long, 1.50 wide. Cheliceral length 0.55. Clypeal height 0.13. Length of leg segments: I 1.13+0.70+0.70+0.55+0.45; II 1.13+0.68+0.65+0.53+0.50; III 1.58+0.83+0.90+1.05+0.65; IV 1.43+0.70+0.93+1.08+0.70. Leg spination: I: Fm d 0-1-1-3; Pt pr and rt 0-1-0; Tb d 1-0, pr 1-1-2, rt 1-1-1, v 1-0-2ap; Mt pr and rt 1-1ap, v 2-2ap. II: Fm d 0-1-1-5; Pt pr and rt 0-1-0; Tb d 1-0, pr and rt 1-1-1, v 1-2ap; Mt pr and rt 1-1ap, v 2-2ap. III: Fm d 0-1-3-5; Pt pr 0-1-0, rt 0-2-0; Tb pr 1-1-1, rt 2-1-1-1, v 2-0; Mt pr 1-0-2ap, rt 1-1-2ap, v 2-2ap. IV: Fm d 0-1-1-4; Pt pr 0-1-0, rt

0-2-0; Tb d 1-0, pr and rt 1-1-1, v 1-1-2ap or 1-0-2ap; Mt pr, rt and v 1-1-2ap. Carapace dark brown, densely covered with reddish (rust-fawn) scales. Face colour pattern as in Fig. 6; clypeus and anterior sides of chelicerae covered with reddish hairs. Sternum dark brown with numerous white erect hairs. Maxillae, labium and chelicerae yellowish-brown. Abdomen coloured as carapace, with dense cover of reddish (rust coloured) scales. Book-lung covers yellowish-brown. Spinnerets brown. All legs yellow-reddish, but tarsi and metatarsi I dark brown. Palpi yellow, but tegulum dark brown. Palpal structure as in Figs. 54-57.

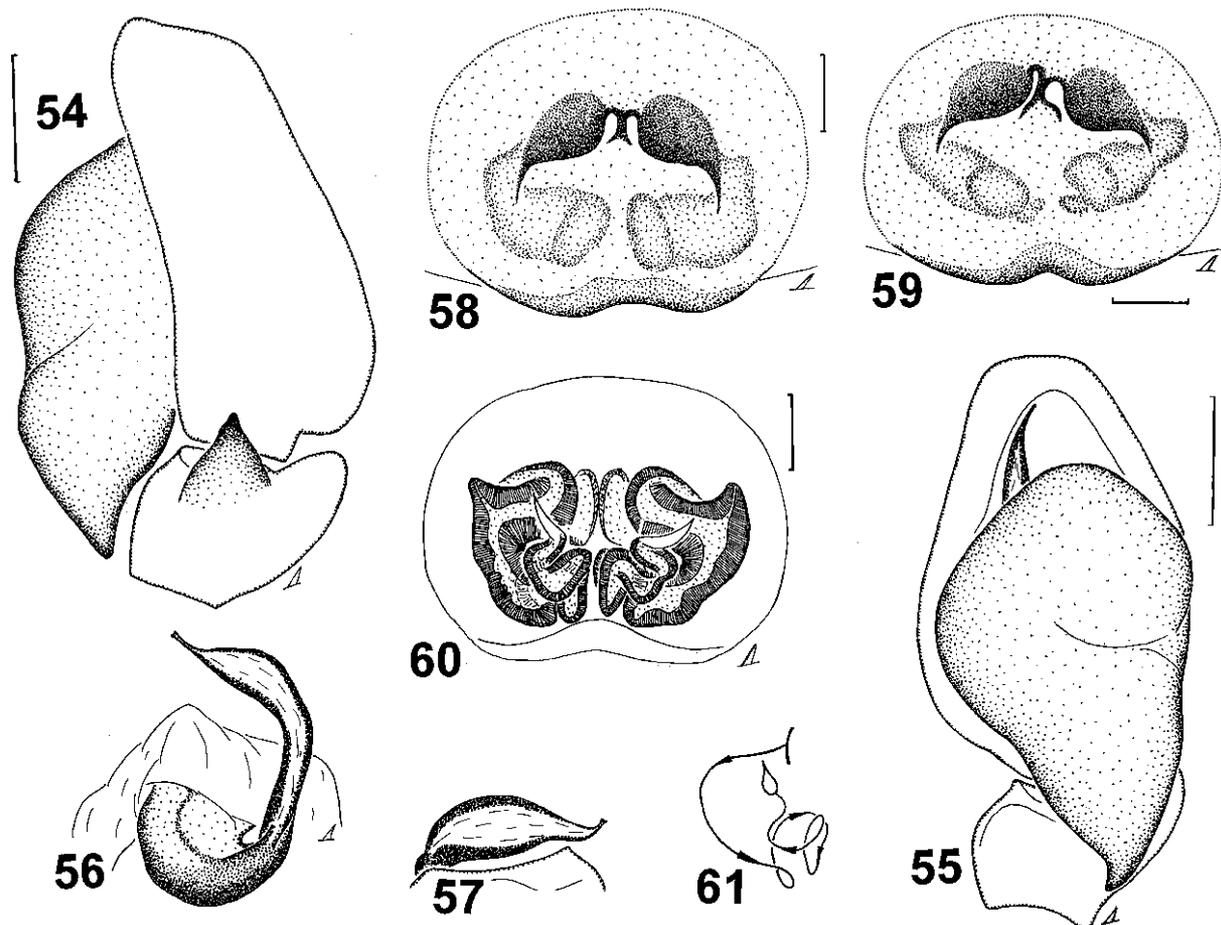
Female: Carapace 2.38 long, 1.80 wide, 1.35 high at PLE. Ocular area 1.08 long, 1.12 wide anteriorly and 1.01 wide posteriorly. Diameter AME 0.35. Abdomen 3.00 long, 2.35 wide. Cheliceral length 0.78. Clypeal height 0.15. Length of leg segments: I 1.13+0.78+0.70+0.53+0.40; II 1.23+0.75+0.75+0.58+0.50; III 1.70+0.88+0.96+0.95+0.80; IV 1.65+0.83+1.05+1.15+0.75. Leg spination: I: Fm d 0-1-1-2; Tb pr 1-2, v 1-0-2ap; Mt pr and rt 1-1ap, v 2-2ap. II: Fm d 0-1-1-2; Tb pr 1-1, v 1-0-2ap; Mt pr and rt 1-1ap, v 2-2ap. III: Fm d 0-1-1-3; Pt pr 0-1-0, rt 0-2-0; Tb d 1-0, pr and rt 1-1-1, v 1-0-2ap; Mt pr 1-0-2ap, rt and v 1-1-2ap. IV: Fm d 0-1-1-1; Pt pr 0-1-0, rt 0-2-0; Tb d 1-0, pr and rt 1-1-1, v 1-0-2ap; Mt pr 1-1-2ap, rt 2-1-2ap, v 1-0-2ap. Coloration as in male, but legs I fully reddish-yellow and face colour pattern different (Fig. 5). Epigyne and spermathecae as in Figs. 58-61.

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Figs. 47-53: *Proszynskiana starobogatovi*, sp. n. 47 Male palp, ventral view; 48 Ditto, lateral view; 49 Embolus, dorsal view; 50 Ditto, ventral view; 51 Epigyne, ventral view; 52 Spermathecae, dorsal view; 53 Schematic course of insemination ducts. Scale lines=0.1 mm.



Figs. 54–61: *Proszynskiana zonshteini*, sp. n. 54 Male palp, lateral view; 55 Ditto, ventral view; 56 Embolus, dorsal view; 57 Ditto, ventral view; 58, 59 Epigyne, ventral view; 60 Spermathecae, dorsal view; 61 Schematic course of insemination ducts. Scale lines=0.2 mm.

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