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A Review of the Holarctic Ground Spider Genus *Parasyrisca* (Araneae, Gnaphosidae)

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ABSTRACT

The 44 species of the Holarctic ground spider genus *Parasyrisca* known from the United States, Canada, Europe, Turkey, Russia, Kazakhstan, Kirgizstan, Tadjikistan, Mongolia, and China are reviewed. *Drassodes breviceps* Kroneberg, *D. sollers* Simon, and *D. vinosus* Simon are transferred to *Parasyrisca*. Two specific names are newly synonymized: *P. minor* (Schenkel) and *P. lugubris* (Schenkel), both with *P. potanini* Schenkel. Thirty-eight new species are described: *altaica* (Kazakhstan), *alai*, *koksu*, *kurgan*, *kyzylart*, *otmek*, *susamyr*, and *terskei* (Kirgizstan), *narynica* (Kir-

gizstan and Tadjikistan), *heimeri* and *khubsugul* (Mongolia), *asiatica* and *ulykpani* (Mongolia and Russia), *alexeevi*, *balcarica*, *belengish*, *belukha*, *birikchul*, *caucasica*, *guzeripli*, *hippai*, *holmi*, *logunovi*, *mikhailovi*, and *tyshchenkoi* (Russia), *andarbag*, *andreevae*, *anzobica*, *chikatunovi*, *gissarika*, *iskander*, *paironica*, *pamirica*, *pshartica*, *shakhristanica*, *vakhanski*, and *vorobica* (Tadjikistan), and *turkenica* (Turkey). The male of *P. schenkeli* Ovtsharenko and Marusik is described for the first time.

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INTRODUCTION

The spider genus *Parasyrisca* was established by Schenkel (1963) for one male of the type species, *P. potanini* Schenkel, then known only from Qinghai, China. Schenkel placed the genus in the family Clubionidae, as a close relative of *Syrisca* Simon (currently placed in the Miturgidae). In the same paper, Schenkel also described three new species that he placed in *Syrisca*: *S. potanini*, *S. minor*, and *S. lugubris*, each known only from females. Schenkel indicated that the male of *P. potanini* differs from the females of these three species mostly in the structure of the chelicerae. Ovtsharenko and Marusik (1988) showed that the male and females described by Schenkel in *Parasyrisca* and *Syrisca* belong to a single genus showing some sexual dimorphism; the male chelicerae of some species of *Parasyrisca* are elongated, relative to those of the female.

Lehtinen (1967) transferred *Parasyrisca* to the family Miturgidae. However, representatives of that family have a long second segment on the posterior lateral spinnerets, thus resembling agelenid spiders but having only two tarsal claws (Platnick and Shadab, 1989). Members of *Parasyrisca* share the distinctive features of gnaphosids, including long, cylindrical anterior spinnerets and short posterior lateral spinnerets lacking the long second segment. Ovtsharenko and Marusik (1988), in reviewing the gnaphosid fauna of the Magadan area of Russia, therefore transferred *Parasyrisca* to the Gnaphosidae. They also transferred the three species of *Syrisca* described by Schenkel (1963) to *Parasyrisca*.

Simon (1893) divided the genus *Drassodes* into seven groups of species. He included in Group B (the *hispanus* group) the species *D. vinosus* Simon from France. Recent authors, including Grimm (1985) and Heimer and Nentwig (1991), have accepted the inclusion of *D. vinosus* in the *hispanus* group of *Drassodes*. However, *D. vinosus* has a leg spination pattern and genitalic organs quite unlike those of true *Drassodes* (see Simon, 1914: 130) and we transfer the species to *Parasyrisca* below.

Representatives of *Parasyrisca* occur in mountain systems across the Palearctic: the Pyrenees, Alps, Caucasus, Pamir, Tian Shan, Altai, Tuva, northern China, Mongolia, and

the Chita, Khabarovsk, and Magadan regions, and also in southern British Columbia in Canada and western Washington in the United States. These spiders seem to prefer high elevations, mostly alpine zones or montane tundras. Thus, *P. vinosus* occurs only in the alpine zone of the western Alps and Pyrenees (Grimm, 1985), and a second representative of this species group, *P. ulykpani*, new species, occurs in montane moss-shrub tundra in Tuva, Russia and Mongolia. The new western Caucasian species *P. caucasica* and *P. guseripli* occur in the alpine and subnival zones between elevations of 1900 and 3000 m. These two species are found primarily under rocks on mountain slopes. The new central Caucasian species *P. balkarica* occurs mostly at high subnival elevations, and we collected this species near the snow line on Mt. Elbrus, at elevations of 3100–3500 m. The species from northern Osetiya, the new central Caucasus *P. alexeevi* and *P. mikhailovi*, also occur in the alpine zone, with the first one occupying elevations of between 1000 and 1200 m and the second one occurring between 1700 and 3000 m. In the Pamir and Tian Shan mountain systems, *Parasyrisca* occurs between elevations of 2000 and 4500 m. In the mountain systems of the eastern Palearctic, species of *Parasyrisca* occur at varied elevations, most between 600 and 2200 m. In western Washington, the only known New World species, *P. orites* (Chamberlin and Gertsch), occurs from subalpine to low alpine sites, in the range of 1650–2100 m (Crawford and Edwards, 1989).

The format of the descriptions and standard abbreviations of morphological terms follow those of Platnick and Shadab (1975a, 1975b), Platnick (1990), and Sierwald (1989); the posterior epigynal ridge is abbreviated as PRE. All measurements are in millimeters. Where sufficient material has been available, we present scanning electron micrographs, as well as drawings, of the male palpal bulb and female epigynum.

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COLLECTIONS EXAMINED

AMNH	American Museum of Natural History, New York
BINO	Zoological Museum of Biological Institute, Novosibirsk, Russia, D. V. Logunov
UWA	Thomas Burke Memorial Washington State Museum, University of Washington, Seattle, R. Crawford
CAS	California Academy of Sciences, San Francisco, C. E. Griswold
CNC	Canadian National Collection, C. D. Dondale and J. H. Redner
DMG	Museum Tierkund, Dresden, Germany, S. Heimer
HDO	Hope Entomological Collections, Oxford University, I. Lansbury
IZB	Institute of Zoology, Academia Sinica, Beijing, D. X. Song
MNHN	Muséum National d'Histoire Naturelle, Paris, J. Heurtault, C. Rollard
PAN	Institute of Zoology, Polska Akademia Nauk, Warsaw, W. Jedryczkowski, J. Prószynski
TUZM	Museum of Zoology, Turku University, Finland, S. Koponen, P. Lehtinen
USNM	National Museum of Natural History, Smithsonian Institution, Washington, J. Coddington, S. Larcher
ZISP	Zoological Institute, Russian Academy of Sciences, St. Petersburg, Russia
ZMUM	Zoological Museum, Moscow University, Moscow, Russia, K. G. Mikhailov

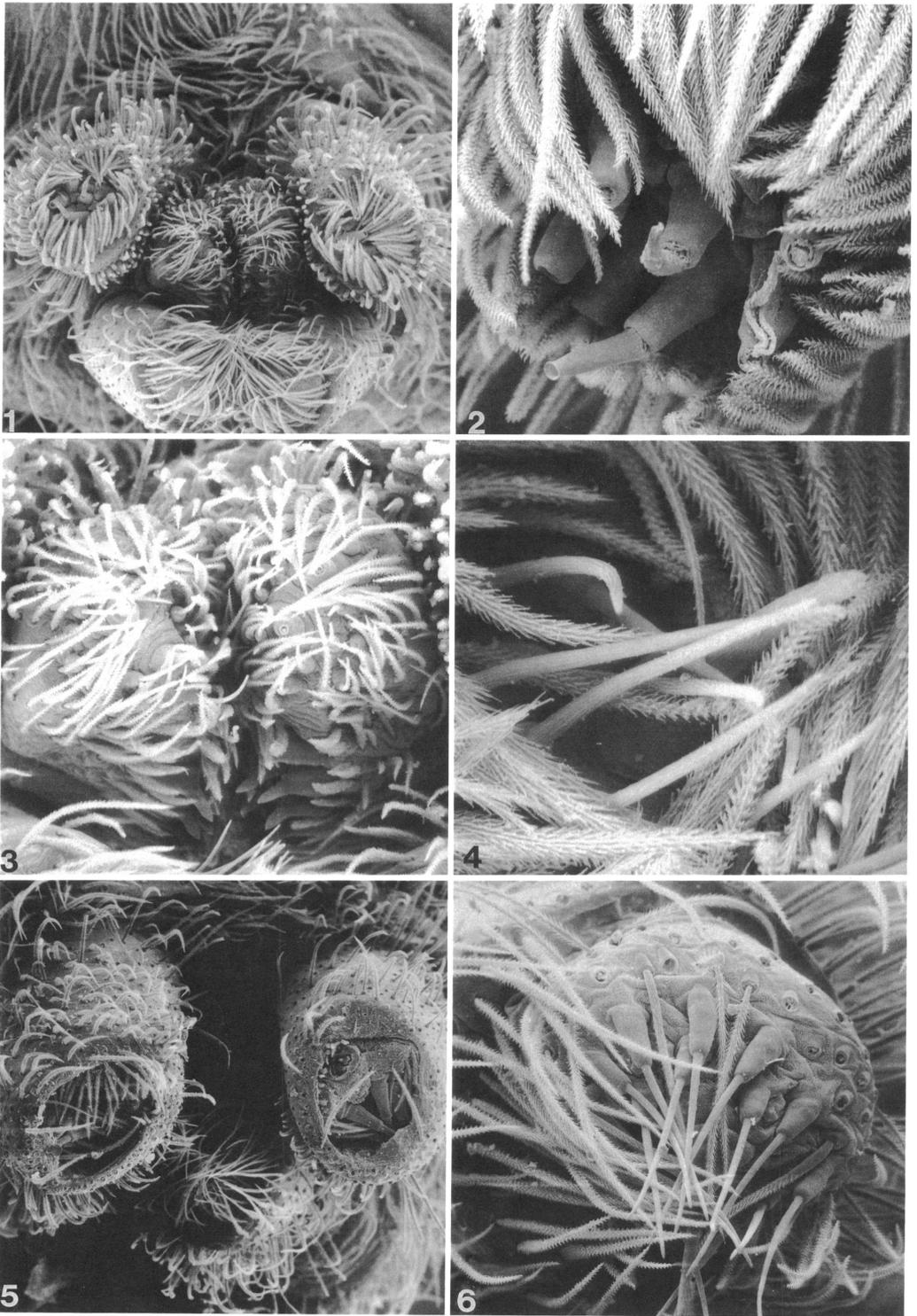
PARASYRISCA SCHENKEL

Parasyrisca Schenkel, 1963: 261 (type species by original designation *Parasyrisca potanini* Schenkel).

DIAGNOSIS: Specimens of *Parasyrisca* can be separated from other gnaphosids by the

combined presence of the following characters: relatively closely spaced anterior lateral spinnerets (figs. 1, 5), 1–3 pairs of ventral spines on tibiae I and II (figs. 45, 112), a short embolus supported by a variously shaped conductor (figs. 7, 12, 52, 88, 139, 153, 174); a flat or conical retrolateral tibial apophysis (figs. 9, 14, 55, 146, 155, 173) and a flat retrodorsal apophysis (*breviceps* group only, figs. 173, 176, 181), a single, wide anterior atrial hood and elevated posterior ridge (figs. 10, 50, 123) or raised median septum (figs. 158, 160, 167) on the epigynum; elongated, curved spermathecal ducts with anteriorly situated heads (figs. 11, 16, 96, 143, 183).

DESCRIPTION: Total length 4.65–12.00. Carapace oval in dorsal view, widest between coxae II and III, smoothly narrowed opposite palpi, light to dark brown, without darkened lateral margins; cephalic area slightly elevated; thoracic groove long, well developed, longitudinal. From above, anterior eye row procurved, posterior row slightly recurved; from front, both rows slightly procurved. AME circular, dark; PME irregularly rectangular, light; other eyes oval, light; PLE smallest, others subequal; AME separated by slightly less than their diameter, by slightly less than their radius from ALE; PME usually separated by slightly less than their diameter, by their diameter from PLE; lateral eyes of each side separated by their diameter; MOQ longer than wide. Clypeal height equal to or slightly greater than AME diameter. Chelicerae usually with two, three, or four promarginal teeth and two large retromarginal denticles; males of some species with elongated paturon and fang. Mouthparts and sternum dirty yellow to light brown; endites short, 1.5 times longer than width, slightly convergent, with weak distal scopula; labium widely rounded distally, length and width almost equal; sternum broad anteriorly, with long setae at margins, short dark setae covering entire sternum, rebordered, with short extensions to and between coxae. Leg formula 4123. Typical leg spination pattern (only surfaces bearing spines listed): femora: I d1-1-0, p0-0-1; II d1-1-0, p0-1-1; III d1-1-0, p0-1-1, r0-0-1; IV d1-1-0, r0-0-1; tibiae: I v2-2-2; II v1r-1r-0; III p2-1-0, v1-1-2, r1-0-1; IV p2-0-1, v1-2-2, r1-0-1; metatarsi: I, II v2-0-0; III p2-0-2, v2-0-2, r1-0-2; IV p2-0-2, v2-0-2, r2-0-2. Legs yellow-brown or light brown, metatarsi and tarsi



Figs. 1–6. Spinnerets of *Parasyrisca*. 1–4. *P. asiatica*, new species. 5. *P. caucasica*, new species. 6. *P. guzeripli*, new species. 1. Spinnerets, apical view. 2, 5. Anterior lateral spinneret, apical view. 3, 4. Posterior median spinneret, apical view. 6. Posterior lateral spinneret, apical view.

darkest; tarsi lightly scopulate, with two dentate claws and claw tufts; trochanters at most only shallowly notched; metatarsal preening comb lacking; tibiae I, II with 1–3 pairs of spines ventrally (figs. 45, 112, 147, 162); tarsi with two rows, metatarsi with single row of trichobothria; trichobothrial bases bearing 4–8 high, narrow ridges (figs. 47, 48, 116, 117, 165), tarsal organ elevated, circular, or slightly elongated, with oval median or distal opening (figs. 49, 115, 166). Abdomen usually dirty yellow to dark brown with conspicuous anterior tuft of hairs, dorsum of some species with chevron pattern anteriorly; venter same color or paler with two closely spaced longitudinal rows of dark spots; males lacking anterior scutum. Carapace, abdomen, and legs covered by distally squamose, plumose setae bearing proximally 5–8 pairs of appendages originating from lateral surface of setae (figs. 46, 113, 114, 163, 164). Six spinnerets, anterior laterals large, cylindrical, separated by almost their diameter, with two major ampullate gland spigots (fig. 5) and seven piriform gland spigots (figs. 1, 2), posterior median spinnerets smallest, apically with minor ampullate and aciniform gland spigots, females with two posterior rows of cylindrical gland spigots (figs. 1, 3, 4); posterior lateral spinnerets apically with aciniform and (in females) cylindrical gland spigots (figs. 1, 6). Palp with narrow retrolaterally or medially situated embolus directed prolaterally (*potanini* and *breviceps* groups, figs. 22, 58, 89, 108, 134, 168, 180), apically (*guzeripli* group, figs. 148, 154), or retrolaterally (*vinosus* group, figs. 140, 145), different forms of transparent or membranous conductor situated prolaterally (figs. 12, 21, 97, 107, 139, 174; embolus merged with conductor in *P. potanini* only, figs. 7, 8), medially or retrolaterally situated terminal apophysis (figs. 52, 63, 140, 174, 175), and usually with spikelike median apophysis situated dorsally and directed prolaterally (figs. 22, 53); male palpal tibia with one or two apophyses, retrolateral apophysis flat, usually jagged dorsally (*potanini* and *vinosus* groups, figs. 14, 55, 122, 141), sometimes conical, slightly bifurcated at tip (*guzeripli* group, figs. 151, 154) or slightly curved at tip (*breviceps* group, figs. 173, 175); retrodorsal apophysis (in *breviceps* group only) large, flat (figs. 173, 176, 181). Epigynum with deep, round atrium bearing wide anterior

hood, long, distinct “horseshoe” posterior ridge (PRE) (*potanini* and *vinosus* groups, figs. 10, 50, 123, 142), or without distinct PRE (*guzeripli* group, figs. 152, 156), or with wide, raised median septum dividing atrium into two parts (*breviceps* group, figs. 158, 167, 182); copulatory openings situated anteriorly (figs. 10, 50, 70, 142); spermathecal ducts longitudinal, curved, widened medially or anteriorly (figs. 16, 25, 96, 157, 194).

RELATIONSHIPS: *Parasyrisca* shares with *Orodassus* Chamberlin a number of features, including the eye position and cheliceral armature. Examination of the leg spination and genitalia of *Orodassus* indicates that the two genera are distinct, however. Both sexes of *Orodassus* lack the 1–3 pairs of ventral spines on tibiae I and II that are characteristic of *Parasyrisca*. Males of *Orodassus* lack the transparent conductor and flat or conical retrolateral tibial apophysis on the male palp, and females lack the wide anterior hood and long “horseshoe” posterior epigynal ridge that are found in *Parasyrisca*. *Orodassus* is exclusively North American in distribution (Platnick and Shadab, 1975b); the report on the distribution of *Orodassus* in Asia (Platnick and Dondale, 1992) refers to members of *Parasyrisca*.

SPECIES GROUPS: Four species groups, the *potanini*, *vinosus*, *guzeripli*, and *breviceps* groups, are recognized below.

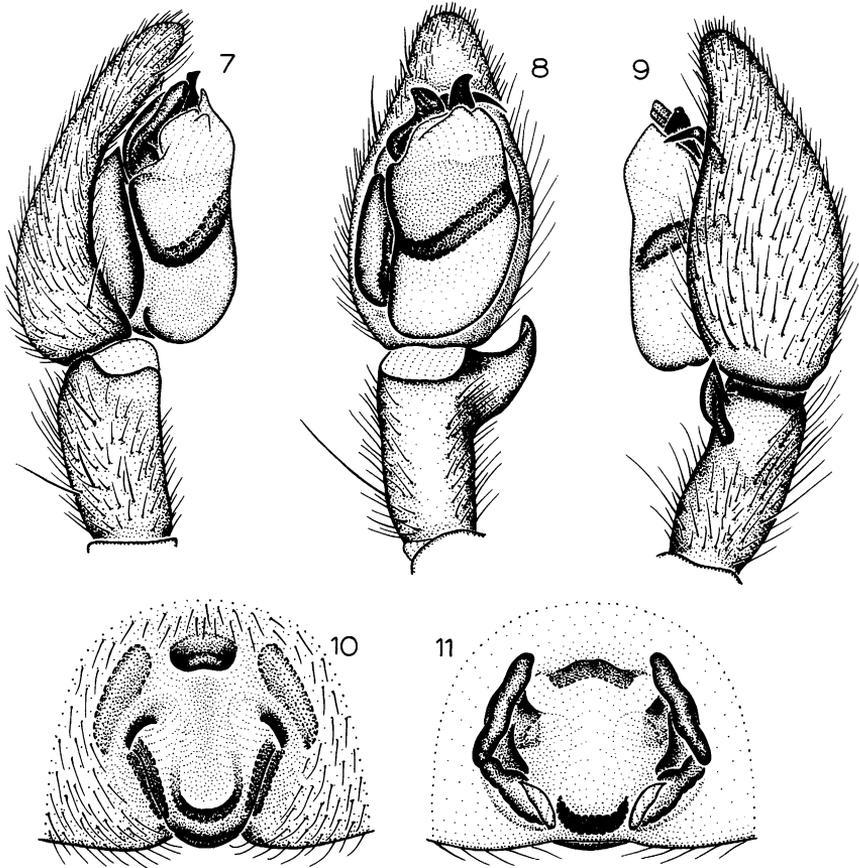
THE *POTANINI* GROUP

Members of this species group can easily be recognized by the presence of a short, narrow medially or retrolaterally situated embolus directed prolaterally and closely spaced with an elongate, transparent conductor (conductor sometimes absent), a flat, quadrangular retrolateral tibial apophysis (usually jagged dorsally, as in figs. 9, 14, 55, 56, 122), a deep epigynal atrium with a long PRE (figs. 10, 24, 50, 123, 138), and elongate, curved spermathecal ducts that are widened medially or anteriorly (figs. 11, 16, 61, 83, 96).

Parasyrisca potanini Schenkel

Figures 7–11; Map 1

Parasyrisca potanini Schenkel, 1963: 262, figs. 148a–e (male holotype from “Flüsschen Ulan



Figs. 7–11. *Parasyrisca potanini* (Schenkel). 7. Left male palp, prolateral view. 8. Same, ventral view. 9. Same, retrolateral view. 10. Epigynum, ventral view. 11. Same, dorsal view.

ussu östlich vom Kuku nor," Qinghai, China, in MNHN, examined).

Syrisca minor Schenkel, 1963: 266, fig. 150 (female holotype from "Stadt Donkyr im Amdo," Qinghai, China, in MNHN, examined). NEW SYNONYMY.

Syrisca lugubris Schenkel, 1963: 267, fig. 151 (female holotype from "Fluss Bardun zwischen Solomo und Rdoskui," Qinghai, China, in MNHN, examined). NEW SYNONYMY.

Parasyrisca minor: Ovtsharenko and Marusik, 1988: 214.

DIAGNOSIS: Males can easily be recognized by the short, wide embolus that is merged with the conductor (free conductor lacking) and strongly curved ventrally (figs. 7–9); females resemble those of *P. alexeevi* but can

be distinguished by the narrow epigynal hood, elongate epigynal atrium, and short copulatory openings (fig. 10), as well as the anteriorly situated copulatory ducts and the narrow, anteriorly approximate, posteriorly folded spermathecal ducts (fig. 11).

MALE: Described by Schenkel (1963).

FEMALE: Described by Schenkel (1963).

MATERIAL EXAMINED: **China:** *Qinghai:* "Fluss Bardun zwischen Solomo und Rdoskui," May 19, 1886 (G. N. Potanin, MNHN), 1♀ (holotype); "Flüsschen Ulan ussu östlich vom Kuku nor," Apr. 20, 1886 (G. N. Potanin, MNHN), 1♂ (holotype); "Stadt Donkyr im Amdo," Apr. 14–15, 1885 (G. N. Potanin, MNHN), 1♀ (holotype). **Russia:** *Tuva:* Erzint Dist.: Dus-Khol Lake, 20 km NW Erzint, May 31, 1989, elev. 800 m, under rocks (D. V.

Logunov, ZISP), 1♀; 5–7 km SW Erzin, Tes-Khem River valley, May 24, 1990, elev. 1000–1100 m (D. V. Logunov, O. V. Lyakhov, ZISP), 1♂. Kyzyl Dist.: 5–7 km W Kyzyl, Yenisei River valley, *Lasiagrostis splendens* steppe, May 13–25, 1989–1990, elev. 700–800 m (D. V. Logunov, ZISP, BINO), 10♀. Pii-Khemsk Dist.: 10 km SE Seserlig, May 2, 1990, elev. 1100–1200 m, *Stipa-Artemisia* dry steppe (D. V. Logunov, ZISP), 1♀.

DISTRIBUTION: Tuva in Russia, and northern China (map 1).

SYNONYMY: No genitalic differences were detected between the two female holotypes, and they appear to represent the females of *P. potanini*.

Parasyrisca schenkeli
Ovtsharenko and Marusik
Figures 12–16; Map 1

Syrisca potanini Schenkel, 1963: 264, fig. 149 (female syntype from “Kloster Marsan im Tal des Sining ho,” Gansu, China, in MNHN, examined); preoccupied in *Parasyrisca* by *P. potanini* Schenkel.

Parasyrisca schenkeli Ovtsharenko and Marusik, 1988: 214 (replacement name).

DIAGNOSIS: This species seems closest to *P. potanini*, *P. sollers*, and *P. altaica* but can be separated in males by the long, narrow conductor being strongly curved retrolaterally, the wide embolus being sharply pointed at its tip and slightly curved apically, and the strongly jagged dorsobasal margin of the retrolateral tibial apophysis (figs. 12–14) and in females by the deep epigynal atrium, widely spaced lateral atrial tubercles, semicircular copulatory openings directed posteriorly (fig. 15), elongated copulatory ducts, widely spaced heads of the spermathecal ducts, and narrow, posteriorly folded spermathecal ducts (fig. 16).

MALE: Total length 8.70. Carapace 4.20 long, 3.15 wide. Femur II 3.15 long. Eye sizes and interdistances: AME 0.23, ALE 0.19, PME 0.21, PLE 0.16; AME-AME 0.17, AME-ALE 0.02, PME-PME 0.17, PME-PLE 0.23, ALE-PLE 0.21; MOQ length 0.69, front width 0.68, back width 0.59. Leg spination: tibiae: I v2-2-0; IV p1-0-1; metatarsi: III r2-0-2.



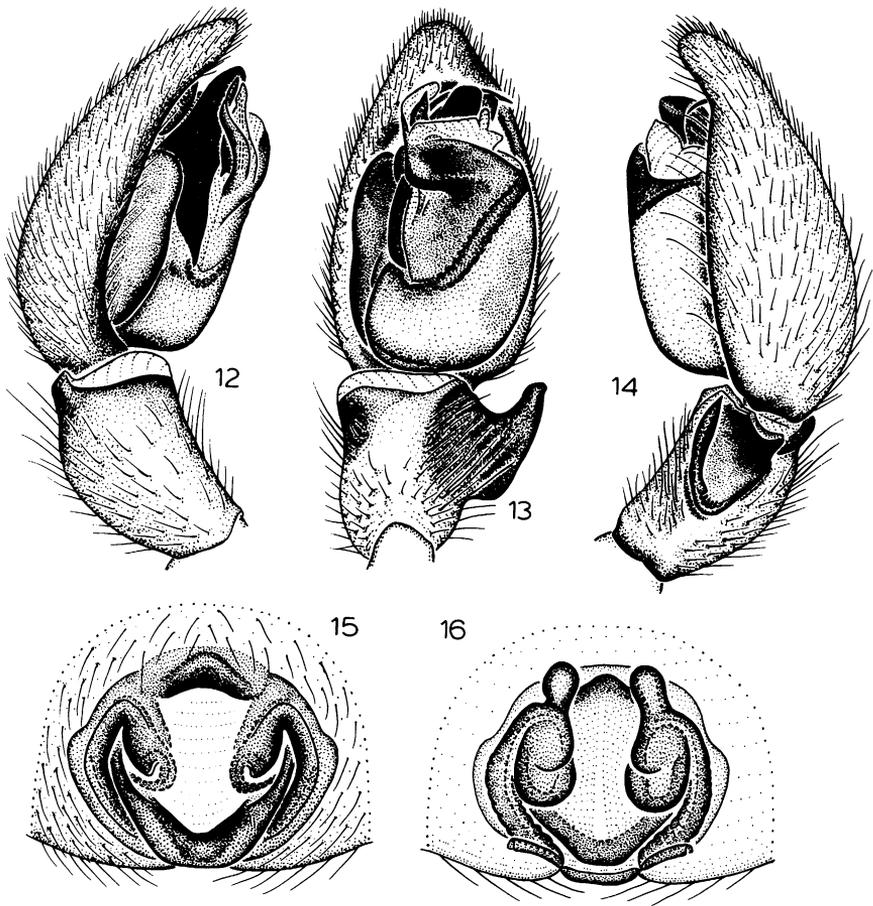
Map 1. Distribution of *Parasyrisca potanini* (squares), *P. schenkeli* (circles), *P. sollers* (triangles), *P. heimeri* (inverted triangle), and *P. altaica* (diamond).

Palp with narrow conductor, strongly curved retrolaterally; embolus basally widened, sharply pointed at tip; retrolateral tibial apophysis flat, slightly elongated, curved apically, jagged dorsobasally (figs. 12–14).

FEMALE: Described by Schenkel (1963).

MATERIAL EXAMINED: **China:** Gansu: “Kloster Marsan im Tal des Sining ho,” Apr. 23, 1885 (G. N. Potanin, MNHN), 1♀ (syntype); no detailed locality (G. N. Potanin, MNHN), 1♀. **Kazakhstan:** *Vostochno-Kazakhstanskaya:* Kuludzhunski Reservation, Samarskoe Dist., Sept. 14–15, 1990, fixed sands (V. K. Zinchenko, BINO), 1♂. **Mongolia:** *East Gobi:* Choir, June 3, 1962 (R. Bielawski, B. Pisarski, PAN), 1♀. *South Gobi:* Gobi Altai Mt., May 28, 1983 (K. Arnold, DMG), 1♀, Gobi, 25 km NNW Bajan-Ondor, June, 1988, desert with few stones (S. Heimer, DMG), 1♀. *South Khangai:* Chushut, Sept. 17, 1971 (B. Pisarski, PAN), 1♂. *Sukh-Bator:* Ganga Lake, Dariganga, July 20, 1985, under rocks (V. I. Ovtsharenko, ZISP), 1♂, 1♀. *Ulan-Bator:* nr. Ulan-Bator, Sept. 16, 1982 (A. P. Rasnitsyn, ZMUM), 1♂, 1♀.

DISTRIBUTION: Eastern Kazakhstan, northern China, and Mongolia (map 1).



Figs. 12–16. *Parasyrisca schenkeli* Ovtsharenko and Marusik. 12. Left male palp, prolateral view. 13. Same, ventral view. 14. Same, retrolateral view. 15. Epigynum, ventral view. 16. Same, dorsal view.

Parasyrisca sollers (Simon),
new combination
Figures 17, 18; Map 1

Drassodes sollers Simon, 1895: 333 (female holotype from “Vallée de Dserge et rive mérid. du lac Chara-Ussu,” Kobdo, Mongolia, in MNHN, examined).

DIAGNOSIS: Females resemble those of *P. schenkeli* but can be recognized by the approximate lateral atrial tubercles of the epigynum and short copulatory openings directed posteromedially (fig. 17), and by the circular copulatory ducts, closely spaced heads of the spermathecal ducts, and the wide spermathecal ducts (fig. 18).

MALE: Unknown.

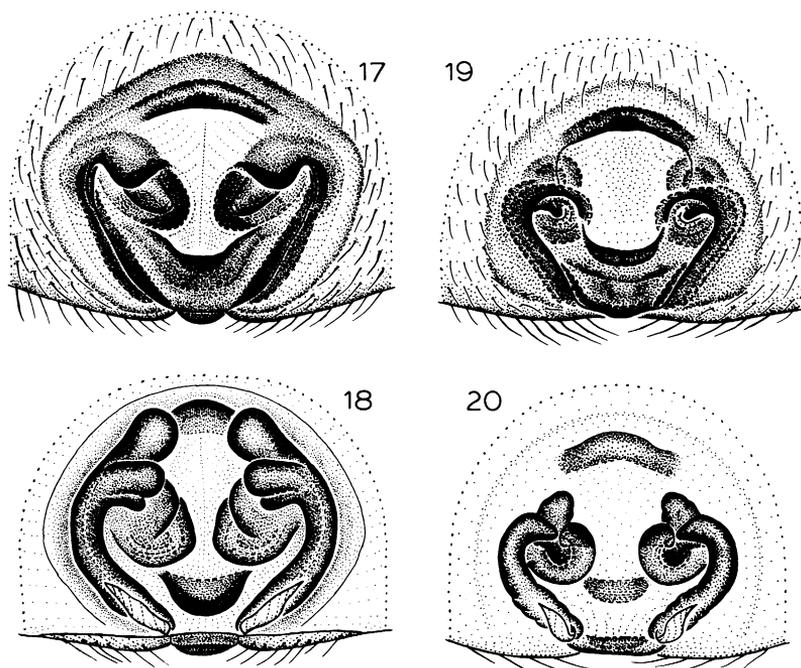
FEMALE: Described by Simon (1895).

MATERIAL EXAMINED: **China:** *Xinjiang:* Barkol, May 6, 1982, elev. 2065 m (Y. L. Chen, IZB), 1♀. **Mongolia:** *Kobdo:* “Vallée de Dserge et rive mérid. du lac Chara-Ussu,” Apr. 7–12, 1877 (G. N. Potanin, MNHN), 1♀ (holotype).

DISTRIBUTION: Known only from the Mongolian Altai and northeastern Xinjiang, China (map 1).

Parasyrisca heimeri,
new species
Figures 19, 20; Map 1

TYPE: Female holotype from Gurwan Saikhan Mt. range, Gobi Altai, South Gobi, Mon-



Figs. 17–20. 17, 18. *Parasyrisca sollers* (Simon). 19, 20. *P. heimeri*, new species. 17, 19. Epigynum, ventral view. 18, 20. Same, dorsal view.

golia (June 1988; S. Heimer), deposited in DMG.

ETYMOLOGY: The specific name is a patronym in honor of the collector of the holotype.

DIAGNOSIS: Females resemble those of *P. schenkeli* and *P. sollers* but can be recognized by the shallow epigynal atrium without lateral tubercles, the short, horizontally oriented copulatory openings directed posteromedially (fig. 19), the widely spaced, circular copulatory ducts and heads of spermathecal ducts, and the narrow, strongly curved spermathecal ducts (fig. 20).

MALE: Unknown.

FEMALE: Total length 6.90. Carapace 3.60 long, 2.70 wide. Femur II 2.70 long. Eye sizes and interdistances: AME 0.21, ALE 0.17, PME 0.17, PLE 0.15; AME-AME 0.13, AME-ALE 0.04, PME-PME 0.13, PME-PL 0.23, ALE-PL 0.17; MOQ length 0.59, front width 0.53, back width 0.49. Leg spination: femora: II p0-0-1; III r0-0-1; tibiae I v2-2-0. Epigynal atrium shallow, wide, without lateral tubercles; short copulatory openings directed pos-

teromedially, short PRE (fig. 19); copulatory ducts widely spaced, circular, heads of spermathecal ducts small, widely spaced; spermathecal ducts narrow, slightly folded posteriorly, strongly curved, situated laterally (fig. 20).

OTHER MATERIAL EXAMINED: None.

DISTRIBUTION: Known only from southern Mongolia (map 1).

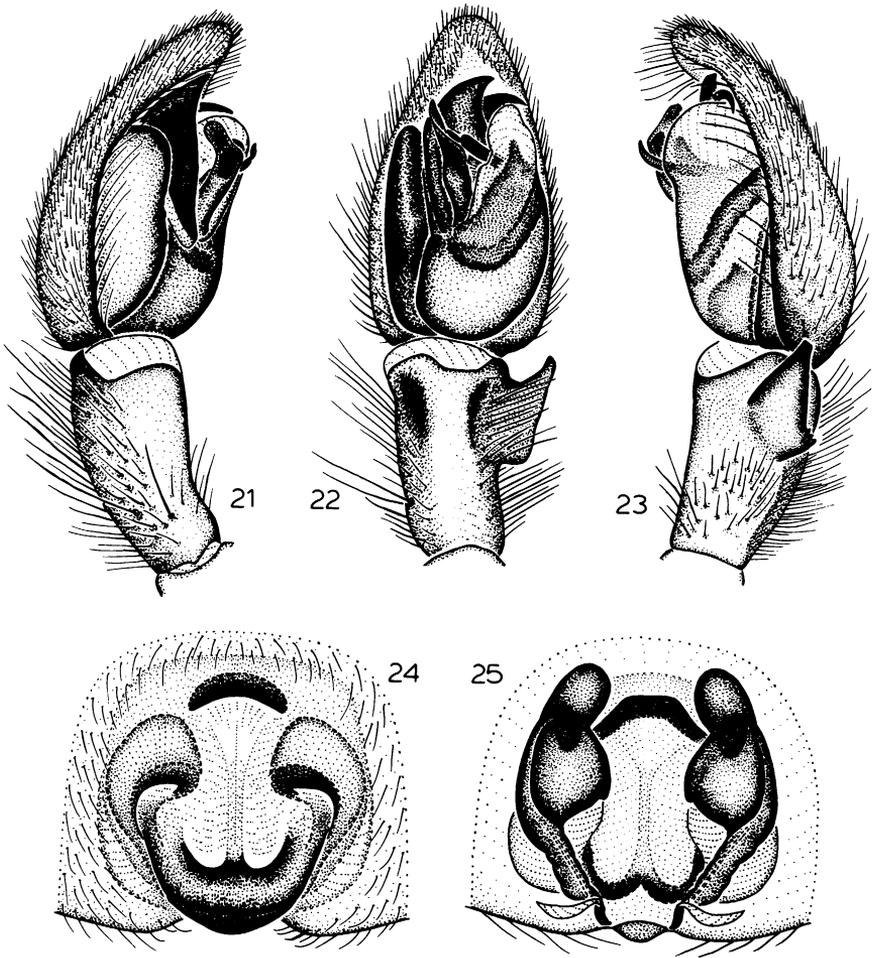
***Parasyrisca altaica*,
new species**

Figures 21–25; Map 1

TYPES: Male holotype and female allotype taken near Rakhmanovskie Klyuchi, S spurs of Katun Mt. range, Altai, Vostochno-Kazakhstanskaya, Kazakhstan (summer 1986; I. Kabak), deposited in ZISP.

ETYMOLOGY: The specific name is an arbitrary combination of letters.

DIAGNOSIS: This species seems closest to *P. schenkeli* and *P. tyshchenkoi* but can be separated in males by the dorsally slightly curved conductor and short embolus bearing



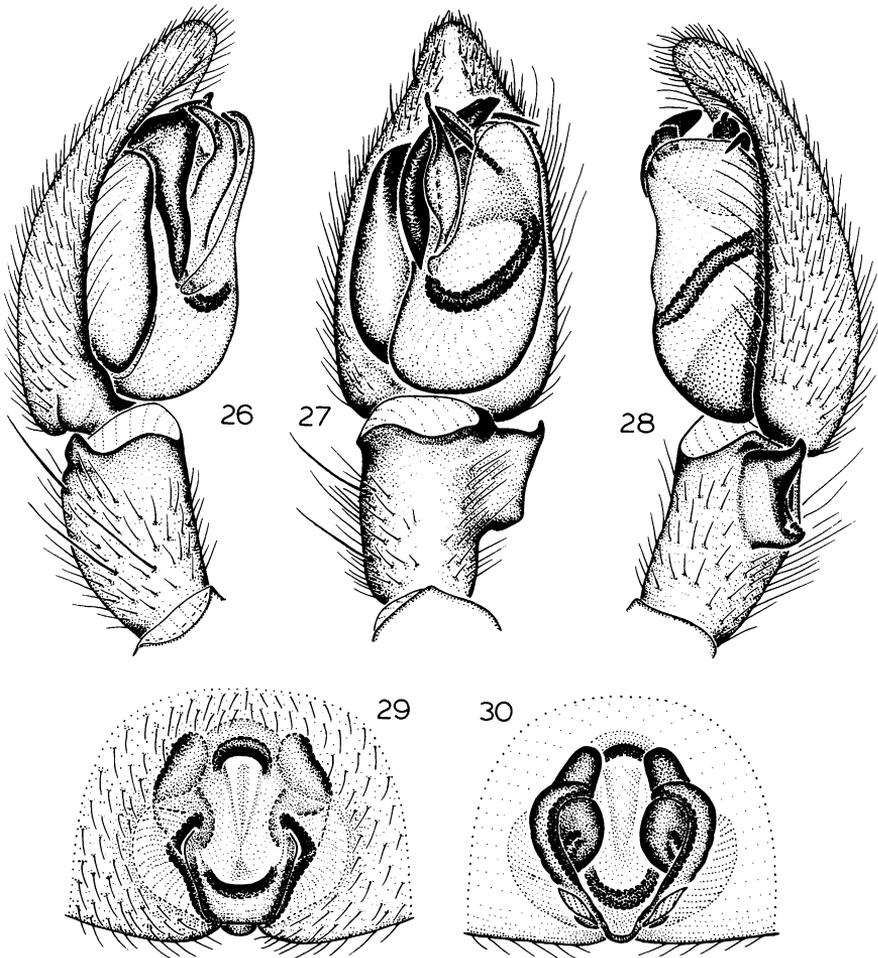
Figs. 21–25. *Parasyrisca altaica*, new species. 21. Left male palp, prolateral view. 22. Same, ventral view. 23. Same, retrolateral view. 24. Epigynum, ventral view. 25. Same, dorsal view.

a small process at its base (figs. 21–23) and in females by the wide epigynal hood and wide PRE (figs. 24, 25).

MALE: Total length 10.20. Carapace 4.80 long, 3.75 wide. Femur II 4.05 long. Eye sizes and interdistances: AME 0.17, ALE 0.19, PME 0.17, PLE 0.17; AME-AME 0.21, AME-ALE 0.08, PME-PME 0.21, PME-PLE 0.36, ALE-PLE 0.29; MOQ length 0.65, front width 0.55, back width 0.57. Leg spination: femora IV p0-0-1; tibiae: I, II v2-2-0; III p1-1-1; IV v2-2-2, r1-1-1. Palp with conductor dorsally slightly curved, wide, oval at tip; embolus short, wide, bearing elongate process at base;

retrolateral tibial apophysis flat, slightly bifurcate at tip, jagged on basal part (figs. 21–23).

FEMALE: Total length 12.00. Carapace 4.50 long, 3.60 wide. Femur II 3.60 long. Eye sizes and interdistances: AME 0.17, ALE 0.21, PME 0.17, PLE 0.17; AME-AME 0.19, AME-ALE 0.12, PME-PME 0.23, PME-PLE 0.31, ALE-PLE 0.23; MOQ length 0.57, front width 0.51, back width 0.57. Leg spination: femora III r0-1-1; tibiae: I, II v2-2-0; III v2-2-2; IV v2-2-2, r2-1-1; metatarsi III r2-0-2. Epigynal atrium with wide hood, wide PRE; copulatory opening situated, directed anteriorly;



Figs. 26–30. *Parasyrisca tyshchenkoi*, new species. 26. Left male palp, prolateral view. 27. Same, ventral view. 28. Same, retrolateral view. 29. Epigynum, ventral view. 30. Same, dorsal view.

copulatory ducts directed anteriorly (fig. 24); copulatory ducts widened anteriorly, spermathecal ducts curved (fig. 25).

OTHER MATERIAL EXAMINED: Three females taken with the types (ZISP).

DISTRIBUTION: Known only from Kazakhstan's Altai (map 1).

Parasyrisca tyshchenkoi,
new species

Figures 26–30; Map 2

Parasyrisca lugubris: Ovtsharenko and Marusik, 1988: 214, figs. 38, 42, 43, 49 (misidentification).

TYPES: Male holotype and female allotype from Bolshoi Annachag Mt. range, Vlasnyi Mt. peak, Aborigen research station, Sibit-Tyellakh River basin, Tenkinski Dist., Magadan, Russia (summer 1984, 1985; I. B. Grishkan, Y. M. Marusik), deposited in ZISP.

ETYMOLOGY: The specific name is a patronym in honor of Prof. V. P. Tyshchenko, student of the spider fauna of the former USSR.

DIAGNOSIS: This species seems closest to *P. altaica* but can be separated in males by the dorsally strongly curved conductor and narrow embolus without a process at its base



Map 2. Distribution of *Parasyrisca tyshchenkoi* (squares), *P. birikhchul* (circles), *P. andreevae* (triangle), *P. belukha* (inverted triangle), and *P. asiatica* (diamonds).

(figs. 26–28), and in females by the narrow epigynal hood and PRE of the epigynal atrium (figs. 29, 30).

MALE: Total length 6.80. Carapace 3.00 long, 2.25 wide. Femur II 2.85 long. Eye sizes and interdistances: AME 0.13, ALE 0.15, PME 0.13, PLE 0.13; AME-AME 0.15, AME-ALE 0.04, PME-PME 0.17, PME-PLE 0.17, ALE-PLE 0.15; MOQ length 0.46, front width 0.42, back width 0.40. Leg spination: femora II p0-0-1; tibiae: I, II v2-2-0; IV p1-0-1. Palp with conductor dorsally strongly curved, narrowed at tip; embolus narrow, lacking process at base; retrolateral tibial apophysis flat, hooked at tip, jagged on basal edge (figs. 26–28).

FEMALE: Total length 8.70. Carapace 3.30 long, 2.70 wide. Femur II 2.70 long. Eye sizes and interdistances: AME 0.15, ALE 0.17, PME 0.15, PLE 0.13; AME-AME 0.15, AME-ALE 0.06, PME-PME 0.13, PME-PLE 0.19, ALE-PLE 0.15; MOQ length 0.48, front width 0.44, back width 0.42. Leg spination: femora: II p0-0-1; III r0-1-1; tibiae I, II v2-2-0. Epigynal atrium with narrow hood, PRE, copulatory openings situated laterally, copulatory ducts directed laterally (fig. 29); copulatory ducts widened medially, spermathecal

ducts situated dorsally, strongly curved (fig. 30).

OTHER MATERIAL EXAMINED: **Russia:** *Chita:* Lukovoye, Sokhondinski Reserve, 60 km SW Kyra, Kyra Dist., June 11, 1991, elev. 1700–1800 m, moss-shrub mountain tundra (D. V. Logunov, BINO), 2♀. *Magadan:* Bolshoi Annachag Mt. range, Vlasnyi Mt. peak, Aborigin research station, Sibit-Tyellakh River basin, Tenkinski Dist., July 20–Sept. 4, 1979 (S. P. Bukhkalov, ZISP), 1♂, 1♀, May 31–Aug. 9, 1983–1986, pitfall traps (Y. M. Marusik, AMNH, ZISP), 5♂, 3♀; Jack London Lake, Upper Kolyma River, July 10–20, 1983 (Y. M. Marusik, ZISP), 1♀; Kontakt Station, 147°30'E, 62°40'N, Kontaktovyi creek basin, Upper Kolyma River, Tenkinski Dist., summer 1987 (S. P. Bukhkalov, ZISP), 1♀. *Tuva:* Torgalyk, July 15–19, 1985 (N. A. Formozov, ZMUM), 1♂.

NATURAL HISTORY: This species has been found under the bark of *Larix cajanderi* and *Betula lanata* on exposed slopes at elevations of 550–700 m.

DISTRIBUTION: Tuva and eastern Siberia (map 2).

Parasyrisca birikhchul,
new species

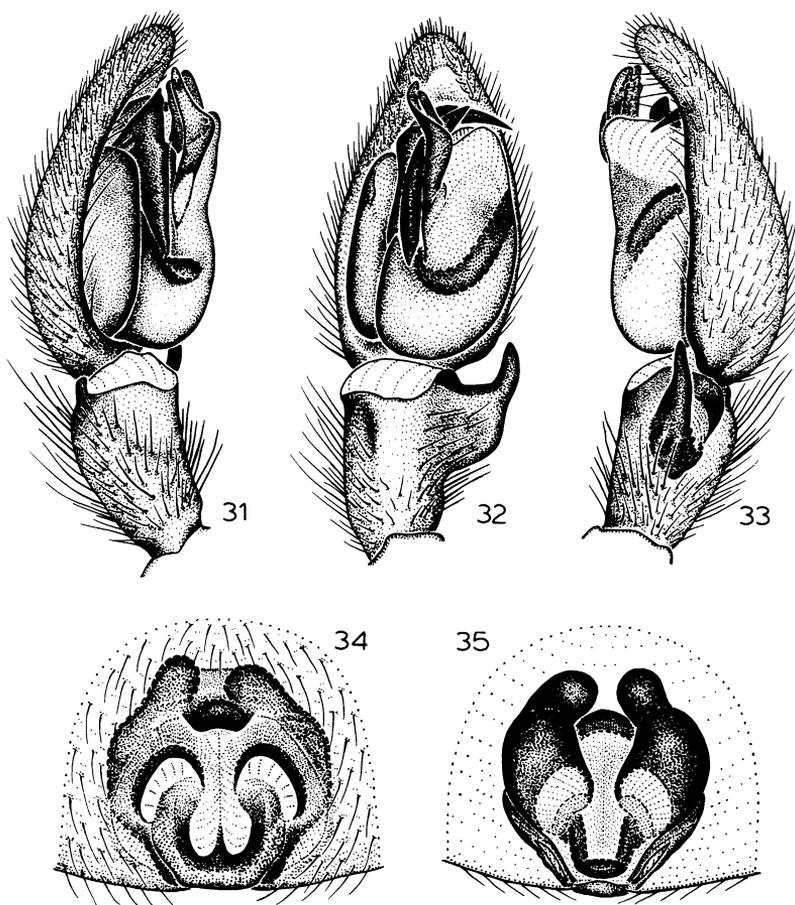
Figures 31–35; Map 2

TYPES: Male holotype and female allotype from 8 km E Birikhchul or 40–45 km W Askiz, Askiz Dist., Khakassiya, Krasnoyarsk, Russia (July 18, 1990; D. V. Logunov), deposited in BINO.

ETYMOLOGY: The specific name is a noun in apposition taken from the type locality.

DIAGNOSIS: This species seems closest to *P. tyshchenkoi* but can be separated in males by the apically strongly narrowed conductor, the long, wide, apically oval embolus (figs. 31–33) and in females by the wide epigynal atrium, small PRE, and long lateral pockets of the copulatory openings (figs. 34, 35).

MALE: Total length 8.55. Carapace 3.30 long, 2.70 wide. Femur II 2.85 long. Eye sizes and interdistances: AME 0.17, ALE 0.19, PME 0.15, PLE 0.15; AME-AME 0.15, AME-ALE 0.06, PME-PME 0.15, PME-PLE 0.21, ALE-PLE 0.15; MOQ length 0.53, front width 0.46, back width 0.46. Leg spination: femora II p0-0-1; tibiae: I v2-2-0; II v1-2-0; meta-



Figs. 31–35. *Parasyrisca birikchul*, new species. 31. Left male palp, prolateral view. 32. Same, ventral view. 33. Same, retrolateral view. 34. Epigynum, ventral view. 35. Same, dorsal view.

tarsi III r2-0-2. Palp with slightly curved, apically narrowed conductor; embolus long, wide, oval apically; retrolateral tibial apophysis very flat with elongated apical part, slightly jagged on basal part (figs. 31–33).

FEMALE: Total length 7.50. Carapace 3.45 long, 2.70 wide. Femur II 2.85 long. Eye sizes and interdistances: AME 0.17, ALE 0.17, PME 0.13, PLE 0.10; AME-AME 0.11, AME-ALE 0.02, PME-PME 0.15, PME-PLE 0.22, ALE-PLE 0.17; MOQ length 0.48, front width 0.46, back width 0.44. Leg spination: tibiae: I v2-2-0; II v1-2-0; III r2-0-2. Epigynal atrium wide, with small, narrow PRE and long lateral pockets of copulatory openings directed laterally (fig. 34); copulatory ducts widened posteriorly, spermathecal ducts sit-

uated ventrally, heads of spermathecae closely spaced (fig. 35).

OTHER MATERIAL EXAMINED: **Russia:** *Krasnoyarsk:* 3–5 km W Birikchul, Khakassiya, Askiz Dist., July 18, 1990 (D. V. Logunov, ZISP), 1♀.

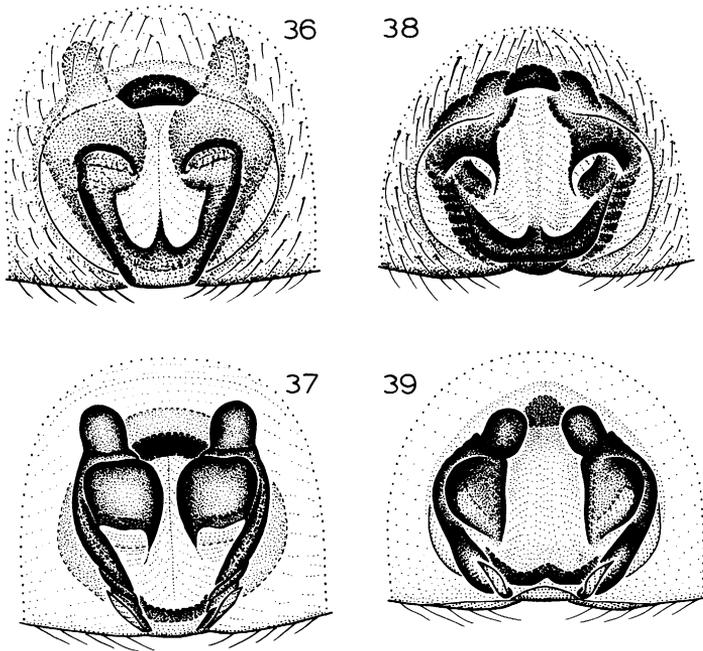
NATURAL HISTORY: Specimens have been collected under rocks on sloping mountain steppes.

DISTRIBUTION: Known only from Khakassiya in Russia (map 2).

***Parasyrisca hippai*, new species**

Figures 36, 37; Map 9

TYPE: Female holotype from tundra 10 km SE Katanda, SW Altai, Russia (July 10–14, 1983; H. Hippa), deposited in TUZM.



Figs. 36–39. 36, 37. *Parasyrisca hippai*, new species. 38, 39. *P. belukha*, new species. 36, 38. Epigynum, ventral view. 37, 39. Same, dorsal view.

ETYMOLOGY: The specific name is a patronym in honor of the collector of the holotype.

DIAGNOSIS: Females of this species seem closest to *P. birikchul* but can be separated by the short, closely spaced, horizontal atrial epigynal pockets with the copulatory openings directed anteriorly (figs. 36, 37).

MALE: Unknown.

FEMALE: Total length 7.20. Carapace 3.00 long, 2.40 wide. Femur II 2.40 long. Eye sizes and interdistances: AME 0.15, ALE 0.17, PME 0.13, PLE 0.18; AME-AME 0.13, AME-ALE 0.06, PME-PME 0.13, PME-PLE 0.21, ALE-PLE 0.13; MOQ length 0.46, front width 0.40, back width 0.42. Leg spination: femora: I v2-2-0; II v1-2-0; metatarsi III r2-0-2. Epigynal atrium with long PRE, short, closely spaced horizontal atrial pockets with copulatory openings directed anteriorly (fig. 36); copulatory ducts circular, closely spaced, spermathecal ducts situated laterally (fig. 37).

OTHER MATERIAL EXAMINED: **Russia:** *Altai:* Bertkem, SW Altai, July 12–13, 1983, elev. 2000 m, tundra (H. Hippa, TZM), 2♀; 10 km SE Katanda, SW Altai, July 10–14,

1983, tundra (H. Hippa, ZISP), 2♀. *Tuva:* Barlyk River, Mungun-Taiginskii Dist., June 6–13, 1990, elev. 1800 m, under rocks (O. V. Lyakhov, ZISP), 3♀; Ust-Uyuk, Uyukskii Mt. range, Pii-Khemski Dist., May 21, 1989, elev. 800–900 m (D. V. Logunov, BINO), 1♀.

DISTRIBUTION: Known only from Altai and Tuva in Russia (map 9).

***Parasyrisca belukha*, new species**

Figures 38, 39; Map 2

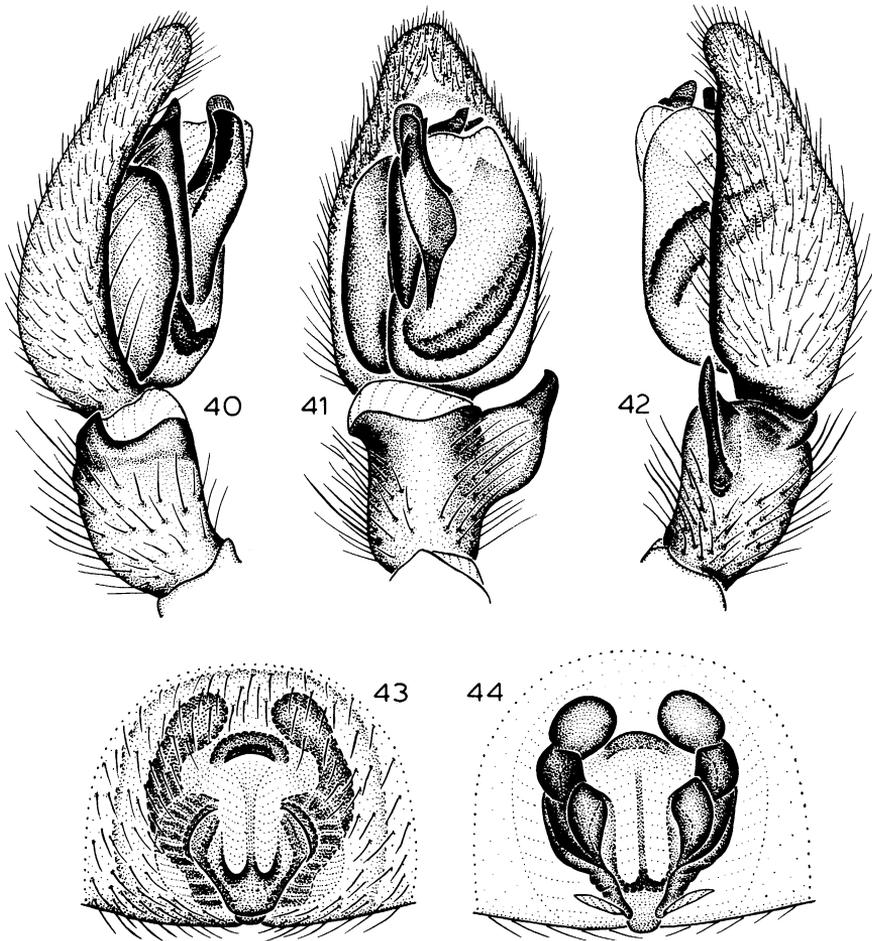
TYPE: Female holotype taken 3–4 km from Mt. Belukha, Gorno-Altai Area, Altai, Russia (July 12–20, 1977; S. S. Reshetnikov), deposited in ZISP.

ETYMOLOGY: The specific name is a noun in apposition taken from the type locality.

DIAGNOSIS: Females of this species seem closest to *P. birikchul* and *P. hippai* but can be separated by the widely spaced atrial epigynal pockets with the copulatory openings directed anteromedially (figs. 38, 39).

MALE: Unknown.

FEMALE: Total length 12.00. Carapace 4.95 long, 3.90 wide. Femur II 3.90 long. Eye sizes



Figs. 40–44. *Parasyrisca orites* (Chamberlin and Gertsch). 40. Left male palp, prolateral view. 41. Same, ventral view. 42. Same, retrolateral view. 43. Epigynum, ventral view. 44. Same, dorsal view.

and interdistances: AME 0.17, ALE 0.20, PME 0.13, PLE 0.16; AME-AME 0.17, AME-ALE 0.11, PME-PME 0.23, PME-PLE 0.34, ALE-PLE 0.29; MOQ length 0.63, front width 0.48, back width 0.53. Leg spination: femora: III r0-1-1; IV p0-0-1; tibiae: I v2-2-0; II v1-2-0; III v1-2-2; IV r1-1-1; metatarsi III r2-0-2. Epigynal atrium wide, with broadly spaced pockets, copulatory openings directed anteromedially (fig. 38); copulatory ducts elongated, closely spaced, spermathecal ducts strongly curved, situated laterally (fig. 39).

OTHER MATERIAL EXAMINED: Three females taken with the holotype (ZISP, BINO).

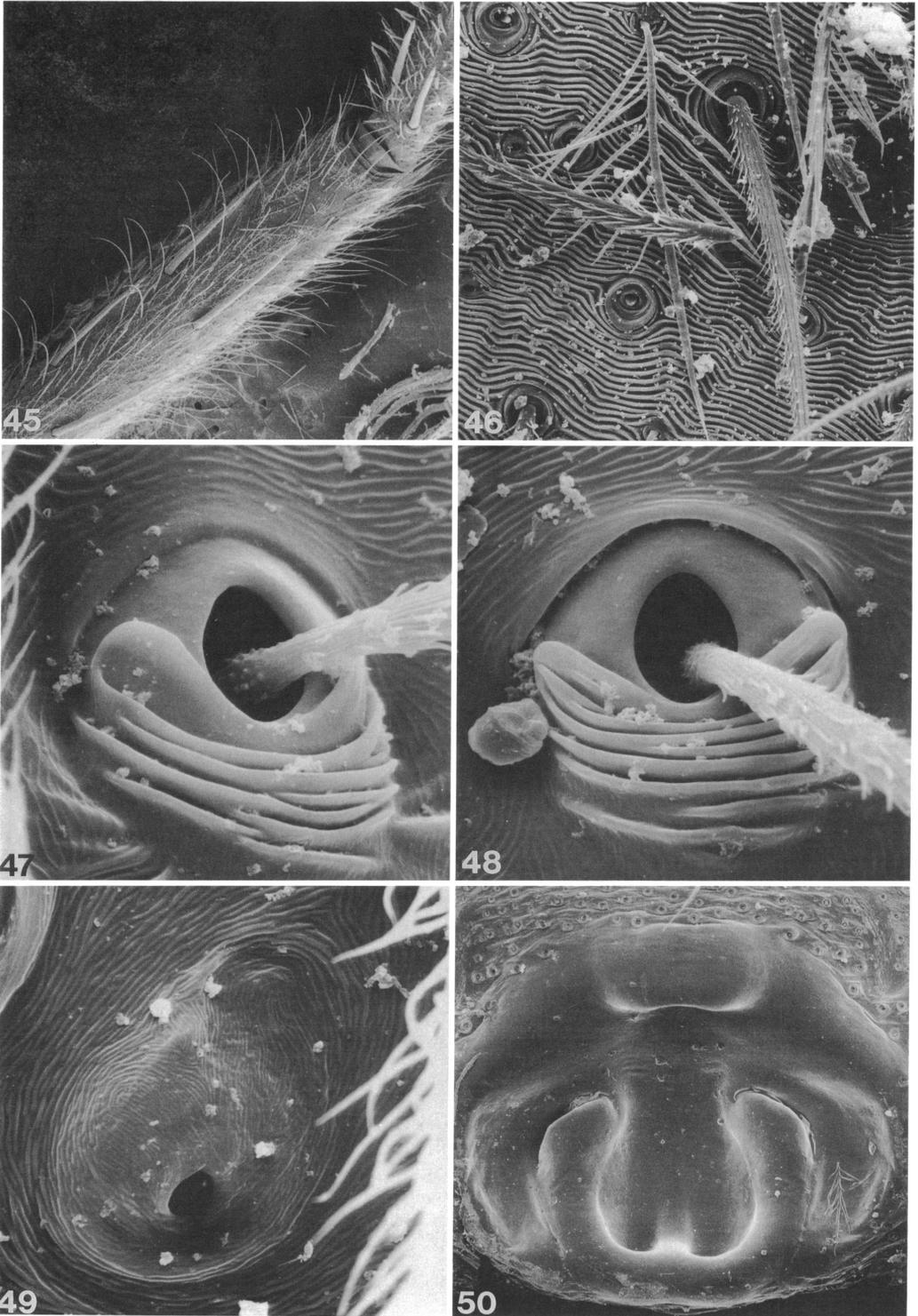
DISTRIBUTION: Known only from Altai in Russia (map 2).

Parasyrisca orites
(Chamberlin and Gertsch)
Figures 40–44

Orodassus orites Chamberlin and Gertsch, 1940: 10, fig. 7 (female holotype from Mt. Rainier, Pierce County, Washington, in AMNH, examined). — Platnick and Shadab, 1975b: 38, figs. 85, 86, 103–106. — Platnick and Dondale, 1992: 205, figs. 305–308.

Parasyrisca orites: Ovtsharenko and Marusik, 1988: 214 (misidentification, see *P. holmi* below).

DIAGNOSIS: This species seems closest to *P. asiatica* but can be separated in males by the conductor, which narrows to the top and



Figs. 45–50. *Parasyrisca asiatica*, new species. 45. Tibia of leg I, ventral view. 46. Abdominal setae, dorsal view. 47, 48. Trichobothrial base, dorsal view. 49. Tarsal organ, dorsal view. 50. Epigynum, ventral view.

is slightly curved dorsally, the embolus, which is wider than the conductor and curved dorsally with a flat, rounded apex (figs. 40–42) and in females by the wide epigynal hood with two short, narrow atrial pockets with the copulatory openings directed medially or posteromedially, the narrow, longitudinal keel of the epigynal atrium, and the straight spermathecal ducts with closely spaced spermathecal heads that are smaller in diameter than the ducts (figs. 43, 44).

MALE: Described by Platnick and Shadab (1975b).

FEMALE: Described by Platnick and Shadab (1975b).

MATERIAL EXAMINED: **United States:** *Washington:* Pierce Co.: Bearhead Mt. summit, Aug. 15, 1982, elev. 6000–6089 ft (R. Crawford, UWA), 2♂, 3♀; Panorama Point, June 27–Aug. 5, 1976, elev. 6880 ft, pitfall (D. H. Mann, UWA), 2♂; Paradise Park, Mt. Rainier, July 18, 1937 (Hatch, CAS), 1♀; Wonderland Trail, July 27, 1976, elev. 5400 ft (D. H. Mann, UWA), 1♀. *Snohomish Co.:* Miner's Ridge Lookout, Glacier Peak, July–Aug. 1935 (A. Holland, CAS), 1♀. **Canada:** *British Columbia:* Blackwall Peak, Manning Prov. Park, July 4, 1979, elev. 6500 ft, under stones (C. D., B. J., L. E. Dondale, CNC), 8♀.

DISTRIBUTION: Southern British Columbia and western Washington.

Parasyrisca asiatica,
new species

Figures 45–61; Map 2

TYPES: Male holotype and female allotype taken in a stony mountain steppe at an elevation of 1850–2000 m in the Kargy River valley, 3 km SE Mugur-Aksy, Mungun-Taiginskii Dist., Tuva, Russia (July 22, 1993; D. V. Logunov), deposited in BINO.

ETYMOLOGY: The specific name is an arbitrary combination of letters.

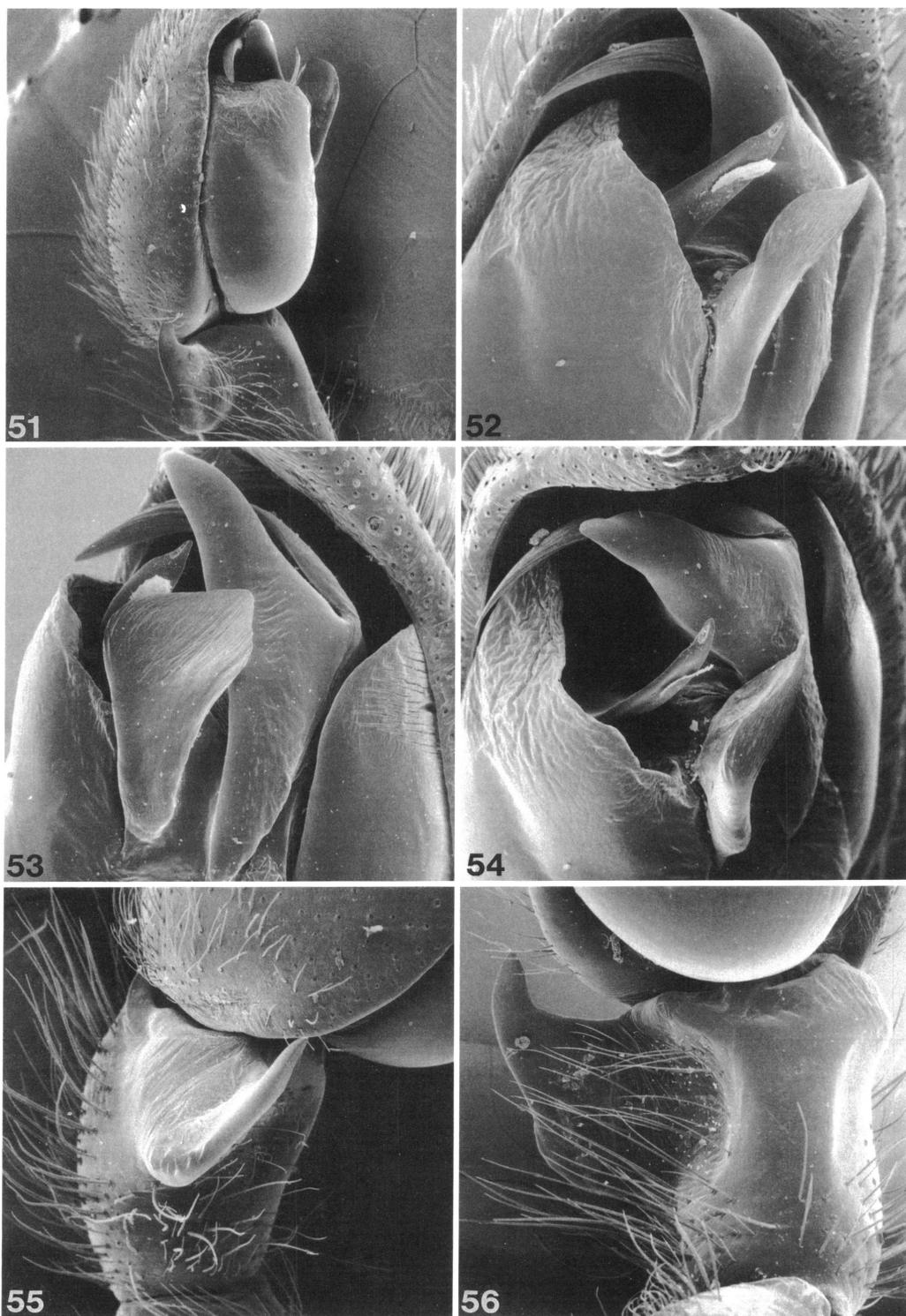
DIAGNOSIS: This species seems closest to *P. orites* and *P. tyshchenkoi* but can be separated in males by the straight, wide, apically oval conductor and narrow, sharply pointed embolus (figs. 51–54, 57–59) and in females by the narrow PRE, wide epigynal atrium, and narrow atrial pockets with the copulatory openings directed posteromedially (figs. 50, 60, 61).

MALE: Total length 6.75. Carapace 3.00

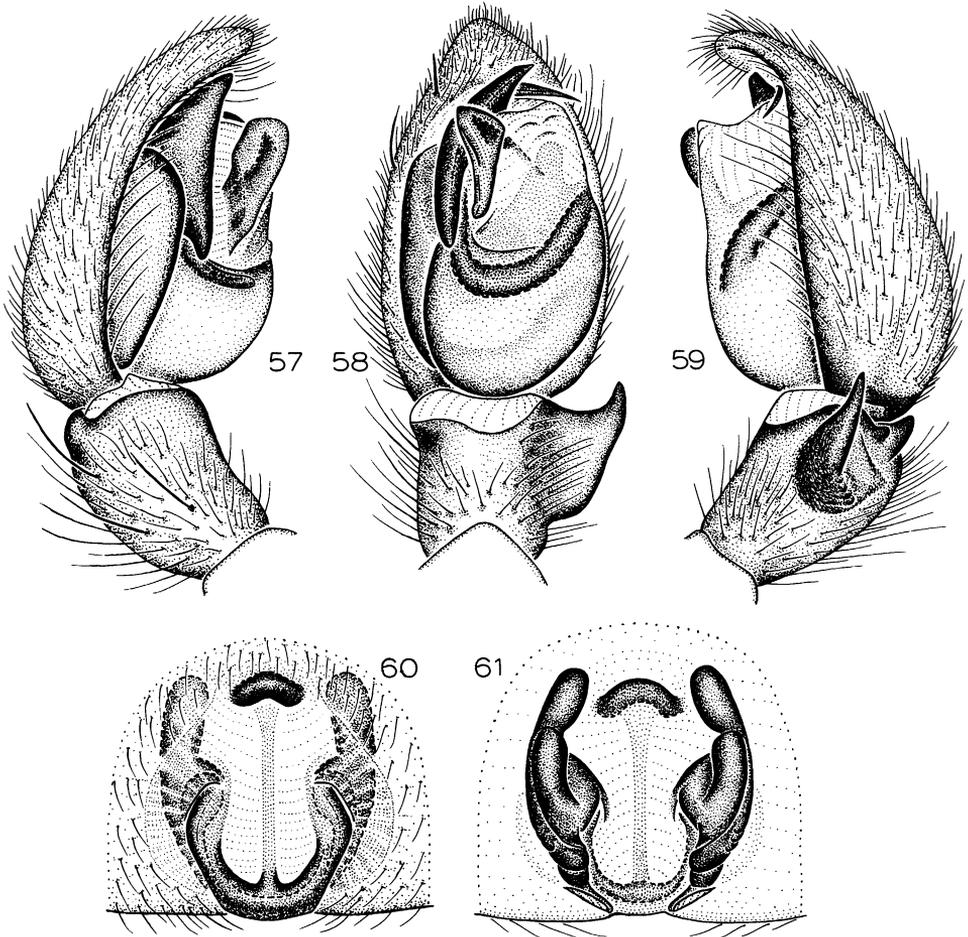
long, 2.48 wide. Femur II 2.40 long. Eye sizes and interdistances: AME 0.19, ALE 0.15, PME 0.13, PLE 0.13; AME-AME 0.10, AME-ALE 0.02, PME-PME 0.17, PME-PLE 0.21, ALE-PLE 0.17; MOQ length 0.51, front width 0.46, back width 0.42. Leg spination: femora II p0-0-1; metatarsi III r2-0-2. Palp with straight conductor, widened at tip, oval apically; embolus small, narrow, sharply pointed; retrolateral tibial apophysis flat, with elongated apical part, slightly jagged on basal part (figs. 51–59).

FEMALE: Total length 8.25. Carapace 3.45 long, 3.00 wide. Femur II 0.58 long. Eye sizes and interdistances: AME 0.21, ALE 0.17, PME 0.13, PLE 0.13; AME-AME 0.13, AME-ALE 0.04, PME-PME 0.19, PME-PLE 0.23, ALE-PLE 0.19; MOQ length 0.15, front width 0.51, back width 0.57. Leg spination: femora: II p0-0-1; III p0-0-1; tibiae: I v2-2-0; II v1-2-0; III v1-2-2. Epigynal atrium wide with narrow PRE, atrial pockets narrow, with copulatory openings directed posteromedially (fig. 60); copulatory ducts widened medially, broadly spaced, spermathecal ducts slightly curved, situated laterally (fig. 61).

OTHER MATERIAL EXAMINED: **Mongolia:** *Bayan Ulegei:* Bayannur, Tsagarav, July 1982 (K. Ulykpan, ZISP), 4♂, 7♀. **Russia:** *Altai:* Kosh-Agach, July 15, 1972 (A. P. Kononenko, ZISP), 1♂; upper part of Chup River, Chuya River valley, Gorno-Altai Area, June 14, 1879 (G. N. Potanin, ZISP), 1♀. *Tuva:* Mungun-Taiginskii Dist.: Barlyk River, 15–20 km NE Mugur-Aksy, June 8, 1990, elev. 1800 m, scree, under rocks (O. V. Lyakhov, ZISP), 1♀; Eski-Tolaity Lake, 50–55 km SW Mugur-Aksy, May 16, 1989, elev. 2100–2200 m (D. V. Logunov, ZISP), 4♀; Mugur-Aksy, Aug. 11, 1978 (A. Voitsyk, ZISP), 1♀; 50–55 km W Mugur-Aksy, June 14–15, 1990, elev. 2100–2200 m, under rocks (D. V. Logunov, O. V. Lyakhov, BINO), 10♀; Kargy River, 3 km SE Mugur-Aksy, May 16, 1990, elev. 1800 m (D. V. Logunov, BINO), 4♀; 3 km ESE Mugur-Aksy, May 14–16, 1990, elev. 1800–1850 m (D. V. Logunov, ZISP), 4♀; 30–35 km SE Mugur-Aksy, Mungun-Taiga Mt., July 27, 1993, elev. 3100–3300 m, mountain tundra and mountain screes (D. V. Logunov, ZISP), 1♂, 5♀; Kargy River, upper flow, 45–50 km W Mugur-Aksy, May 17–18, 1990, elev. 2200–2360 m, mountain steppe (D. V. Logunov, ZISP, BINO), 16♀; Kargy River



Figs. 51–56. *Parasyrisca asiatica*, new species. 51. Right male palp, retrolateral view. 52. Apical portion of male palp, ventral view. 53. Same, prolateral view. 54. Same, apical view. 55. Retrolateral tibial apophysis, retrolateral view. 56. Same, ventral view.



Figs. 57–61. *Parasyrisca asiatica*, new species. 57. Left male palp, prolateral view. 58. Same, ventral view. 59. Same, retrolateral view. 60. Epigynum, ventral view. 61. Same, dorsal view.

valley, 3 km SE Mugur-Aksy, July 22, 1993, elev. 1850–2000 m, stony mountain steppe (D. V. Logunov, ZISP, AMNH), 4♂, 1♀; 3–5 km N Kyzyl-Khaya, Mogen-Buren River, June 15, 1989, elev. 2000–2100 m (D. V. Logunov, ZISP), 2♀; Upper Kuge-Davaa spring, 3–9 km NE Mugur-Aksy, May 16–19, 1990, elev. 1800–2700 m (D. V. Logunov, ZISP), 13♀. Ovyurskii Dist.: Mt. pass between Sagly River and Onachy, 30 km W Sagly, June 13, 1989, elev. 2300 m, under rocks (D. V. Logunov, ZISP), 2♀.

DISTRIBUTION: Altai and southwestern Tuva in Russia and northwestern Mongolia (map 2).

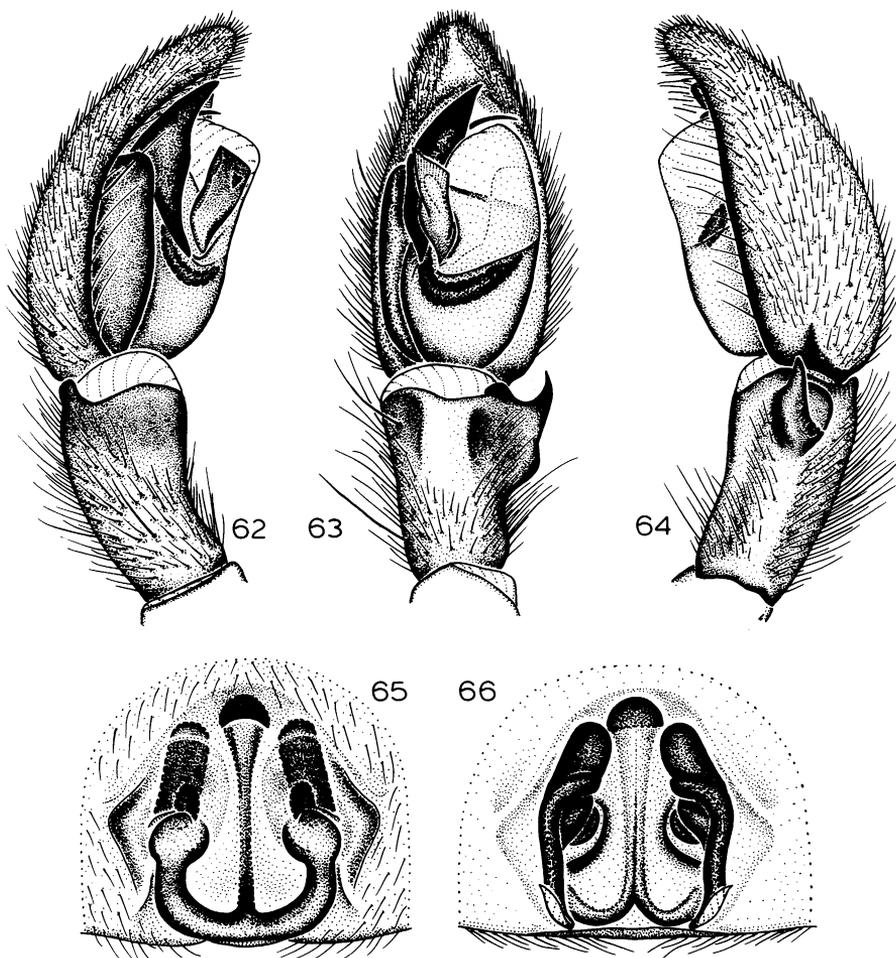
Parasyrisca logunovi,
new species

Figures 62–66; Map 3

TYPES: Male holotype and female allotype taken in mountain tundra and scree at an elevation of 3100–3300 m on Mungun Taiga Mt., 30–35 km SE Mugur-Aksy, Mungun-Taiginskii Dist., Tuva, Russia (July 23, 1993; D. V. Logunov), deposited in BINO.

ETYMOLOGY: The specific name is a patronym in honor of the collector of the holotype and curator of the BINO, who provided many specimens for this study.

DIAGNOSIS: This species seems closest to



Figs. 62-66. *Parasyrisca logunovi*, new species. 62. Left male palp, prolateral view. 63. Same, ventral view. 64. Same, retrolateral view. 65. Epigynum, ventral view. 66. Same, dorsal view.

P. asiatica but can be separated in males by the conductor with parallel lateral borders and the apically flat, very short, sharply pointed embolus (figs. 62-64) and in females by the anteriorly strongly reinforced PRE, the lateral corners of the epigynal atrium, and the anteriorly directed narrow atrial pockets (figs. 65, 66).

MALE: Total length 11.00. Carapace 4.50 long, 3.90 wide. Femur II 4.35 long. Eye sizes and interdistances: AME 0.16, ALE 0.18, PME 0.17, PLE 0.15; AME-AME 0.23, AME-ALE 0.13, PME-PME 0.21, PME-PLE 0.36, ALE-PLE 0.27; MOQ length 0.61, front width 0.51, back width 0.57. Leg spination: femora

IV p0-0-1; tibiae: I v2-2-0; II v1-2-0; III p1-1-1, v2-2-2; IV v2-2-2, r2-1-1; metatarsi III v2-1-2, r2-0-2. Palp with conductor straight, with parallel lateral borders, pointed dorsally, flat apically; embolus very short, narrow, sharply pointed; retrolateral tibial apophysis flat, becoming thicker basally, with elongated apical and basal parts, jagged on basal part (figs. 62-64).

FEMALE: Total length 12.00. Carapace 4.80 long, 3.60 wide. Femur II 3.75 long. Eye sizes and interdistances: AME 0.17, ALE 0.21, PME 0.15, PLE 0.17; AME-AME 0.20, AME-ALE 0.10, PME-PME 0.25, PME-PLE 0.38, ALE-PLE 0.30; MOQ length 0.61, front width

0.51, back width 0.57. Leg spination: femora IV p0-0-1; tibiae: I v2-2-0; II v1-2-0; III p1-1-1, v2-2-2; IV p1-1-1, v2-2-2, r2-1-1; metatarsi III r2-0-2. Epigynal atrium with lateral corners, PRE wide, narrow, strongly reinforced anteriorly, atrial pockets extremely narrow, with copulatory openings directed anteriorly (fig. 65); copulatory ducts narrow, heads of spermathecae wide, approximate, spermathecal ducts straight, situated laterally (fig. 66).

OTHER MATERIAL EXAMINED: Two males and seven females taken with the types (ZISP, AMNH, BINO).

DISTRIBUTION: Southwestern Tuva in Russia (map 3).

***Parasyrisca holmi*, new species**

Figures 67–71; Map 3

Parasyrisca orites: Ovtsharenko and Marusik, 1988: 214, figs. 39–41, 44, 46 (misidentification).

TYPES: Male holotype and female allotype from Kontakt Station, 147°30'E, 62°40'N, Kontaktovyi creek basin, Magadan, Russia (summer 1988; S. P. Bukhhalo), deposited in ZISP.

ETYMOLOGY: The specific name is a patronym in honor of the late Prof. Å. Holm, who studied the spider fauna of Siberia.

DIAGNOSIS: This species seems closest to *P. birikhchul* but can be separated in males by the straight, apically widened conductor and the wide, medially curved embolus (figs. 67–69) and in females by the elongated epigynal atrium, narrow PRE, and long, narrow lateral atrial pockets (figs. 70, 71).

MALE: Total length 9.15. Carapace 2.85 long, 2.25 wide. Femur II 2.10 long. Eye sizes and interdistances: AME 0.15, ALE 0.17, PME 0.13, PLE 0.13; AME-AME 0.10, AME-ALE 0.02, PME-PME 0.11, PME-PLE 0.16, ALE-PLE 0.11; MOQ length 0.42, front width 0.38, back width 0.42. Leg spination: femora II p0-0-1; tibiae I, II v2-2-0. Palp with straight, apically widened conductor; embolus wide, curved medially; retrolateral tibial apophysis flat, with slightly elongated apical part and 3–4 small teeth on basal part (figs. 67–69).

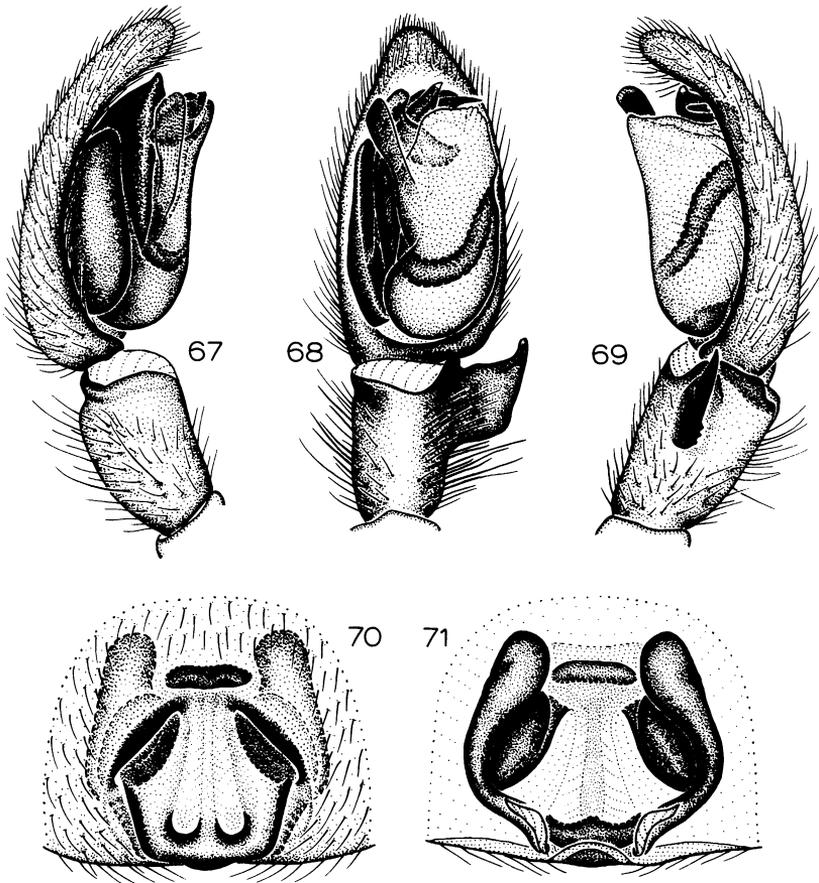
FEMALE: Total length 7.20. Carapace 2.85 long, 2.25 wide. Femur II 2.10 long. Eye sizes and interdistances: AME 0.15, ALE 0.15,



Map 3. Distribution of *Parasyrisca logunovi* (square), *P. holmi* (circles), *P. khubsugul* (triangle), *P. susamyr* (inverted triangles), and *P. narynica* (diamonds).

PME 0.13, PLE 0.13; AME-AME 0.10, AME-ALE 0.02, PME-PME 0.11, PME-PLE 0.15, ALE-PLE 0.12; MOQ length 0.42, front width 0.38, back width 0.40. Leg spination: femora II p0-0-1; tibiae: I, II v2-2-0; III v2-2-2. Epigynal atrium elongated, with narrow PRE, long, narrow lateral pockets with copulatory openings (fig. 70); copulatory ducts widened anteriorly, spermathecal ducts situated laterally, heads of spermathecae widely spaced (fig. 71).

OTHER MATERIAL EXAMINED: **Russia:** *Khabarovsk:* Badzhalski Mt. range, Verkhne-Burianski Dist., July 18, 1988, elev. 1700 m, under rocks (D. Kurenshchikov, ZISP), 1♀. *Magadan:* Bolshoi Annachag Mt. range, Vlasnyi Mt. peak, Aborigin research station, Sibit-Tyellakh River basin, Tenkinski Dist., June 26–Aug. 20, 1983–1986, elev. 600–1300 m, mountain tundra (Y. M. Marusik, ZISP, BINO), 3♂, 6♀; Bulum Spring, Ola River upper flow, Ola Plateau, Magadan Dist., June 15–July 17, 1992, elev. 1000–1100 m, mountain tundra, under rocks (Y. M. Marusik, ZISP), 4♀; Kontakt Station, 147°30'E, 62°40'N, Kontaktovyi creek basin, Tenkinski Dist., Aug. 11, 1986 (Y. M. Marusik, ZISP), 1♀, summer 1987–1988 (S. P. Bukhhalo, ZISP),



Figs. 67-71. *Parasyrisca holmi*, new species. 67. Left male palp, prolateral view. 68. Same, ventral view. 69. Same, retrolateral view. 70. Epigynum, ventral view. 71. Same, dorsal view.

AMNH), 6♂, 2♀; Nagayevskaya Bay, Magadan, July 28, 1991, under rocks (Y. M. Marusik, ZISP), 1♀.

DISTRIBUTION: Khabarovsk and Magadan regions in Russia (map 3).

Parasyrisca khubsugul,
new species

Figures 72-74; Map 3

TYPE: Male holotype from an alpine meadow at Zhargalant, Tarbagatai Mt. range, Khubsugul, Mongolia (July 13, 1985; B. Shekhtel), deposited in ZISP.

ETYMOLOGY: The specific name is a noun in apposition taken from the type locality.

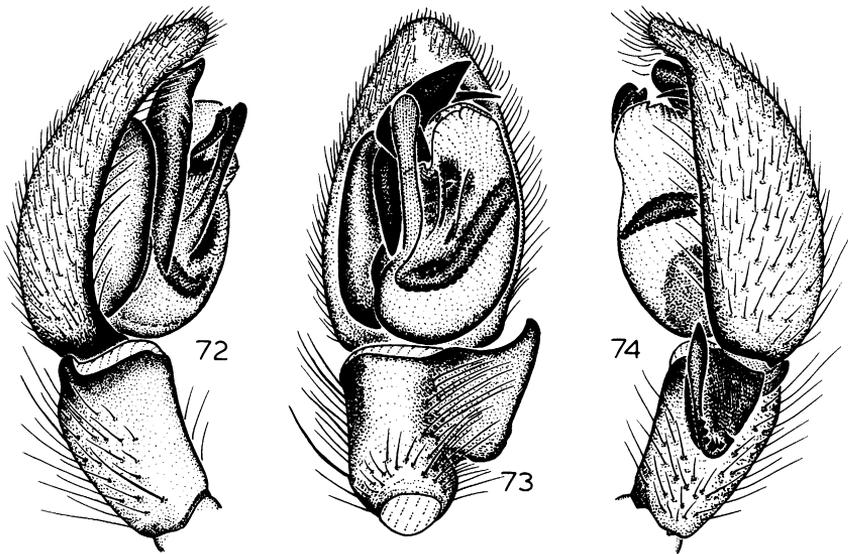
DIAGNOSIS: Males seem closest to those of *P. holmi* but can be separated by the straight conductor and the wide, rolled-up embolus embracing the conductor (figs. 72-74).

MALE: Total length 7.80. Carapace 3.15 long, 2.40 wide. Femur II 2.55 long. Eye sizes and interdistances: AME 0.19, ALE 0.15, PME 0.13, PLE 0.13; AME-AME 0.10, AME-ALE 0.06, PME-PME 0.11, PME-PLE 0.23, ALE-PLE 0.19; MOQ length 0.49, front width 0.42, back width 0.40. Leg spination: tibiae: I v2-2-0; II v1-2-0; metatarsi III r2-0-2. Palp with straight conductor with parallel margins; embolus wide, rolled-up, embracing conductor dorsally; retrolateral tibial apophysis flat, thickened, jagged on basal part (figs. 72-74).

FEMALE: Unknown.

OTHER MATERIAL EXAMINED: Mongolia: *Khubsugul*: Zhargalant, Tarbagatai Mt. range, Aug. 13, 1985, alpine meadow (B. Shekhtel, ZISP), 1♂.

DISTRIBUTION: Known only from Khubsugul in Mongolia (map 3).



Figs. 72–74. *Parasyrisca khubsugul*, new species. 72. Left male palp, prolateral view. 73. Same, ventral view. 74. Same, retrolateral view.

***Parasyrisca belengish*,**
new species

Figures 75, 76; Map 4

TYPE: Female holotype from Belengish, 10–12 km NW Khol-Oozhu, Tes-Khemskii Dist., Tuva, Russia (July 9–11, 1989; D. V. Logunov), deposited in BINO.

ETYMOLOGY: The specific name is a noun in apposition taken from the type locality.

DIAGNOSIS: Females of this species seem closest to *P. belukha* and *P. hippai* but can be separated by having the atrial epigynal pockets separated by 1.5 times the width of the epigynal hood, the short epigynal pockets with the copulatory openings directed anteromedially, and the closely spaced copulatory ducts and spermathecal heads (figs. 75, 76).

MALE: Unknown.

FEMALE: Total length 7.50. Carapace 3.30 long, 2.55 wide. Femur II 2.70 long. Eye sizes and interdistances: AME 0.19, ALE 0.17, PME 0.13, PLE 0.15; AME-AME 0.11, AME-ALE 0.04, PME-PME 0.15, PME-PLE 0.22, ALE-PLE 0.17; MOQ length 0.49, front width 0.44, back width 0.46. Leg spination: femora IV p0-0-1; tibiae: I v2-2-0; II v1-2-0; metatarsi III r2-0-2. Epigynal atrium with short pockets separated by 1.5 times width of epigynal hood, copulatory openings directed anteromedially (fig. 75); copulatory ducts wid-

ened medially, spermathecal ducts situated laterally, copulatory ducts and heads of spermathecae separated by almost diameter of spermathecal head (fig. 76).

OTHER MATERIAL EXAMINED: **Russia:** *Tuva:* Tes-Khemskii Dist.: Belengish natural boundary, 10–12 km NW Khol-Oozhu, July 9–11, 1989, elev. 1700–1800 m, stony sloping steppe, under rocks (D. V. Logunov, ZISP, BINO), 6♀; 15 km NW Khol-Oozhu, July 16, 1993, elev. 1800–1900 m (D. V. Logunov, ZISP, AMNH), 7♀. *Erzin Dist.:* Ular River, 35 km NE Erzin, June 11, 1989, elev. 1500 m (D. V. Logunov, ZISP), 1♀.

DISTRIBUTION: Known only from southern Tuva, Russia (map 4).

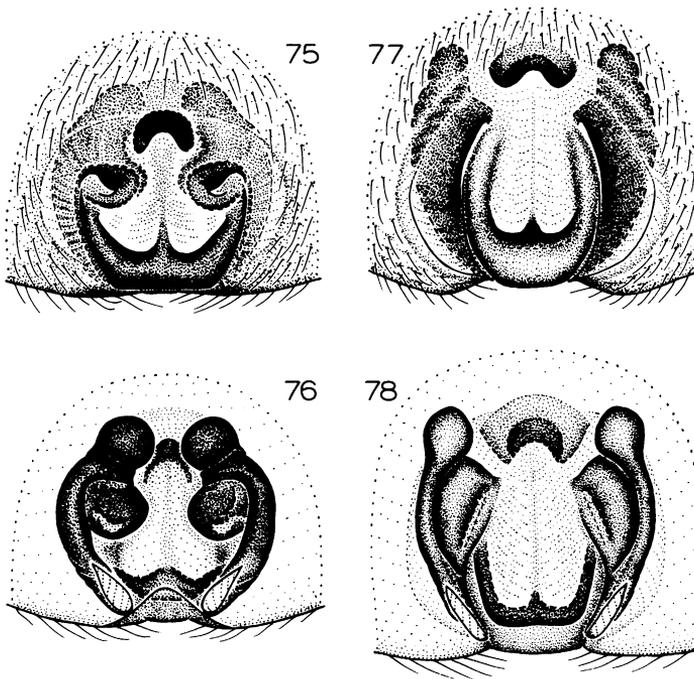
***Parasyrisca susamyr*,**
new species

Figures 79–83; Map 3

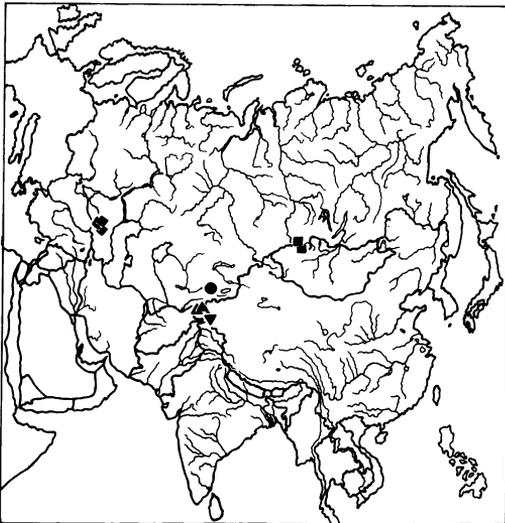
TYPE: Male holotype and female allotype taken in an alpine meadow at an elevation of 3000 m in the Kara-Balty River gorge, near Tyuz-Ashuu Mt. pass, N slope Kirgiz Mt. range, Bishkek, Kirgizstan (July 12, 1983; S. V. Ovchinnikov, S. L. Zonstein), deposited in ZISP.

ETYMOLOGY: The specific name is an arbitrary combination of letters.

DIAGNOSIS: Males of this species can easily



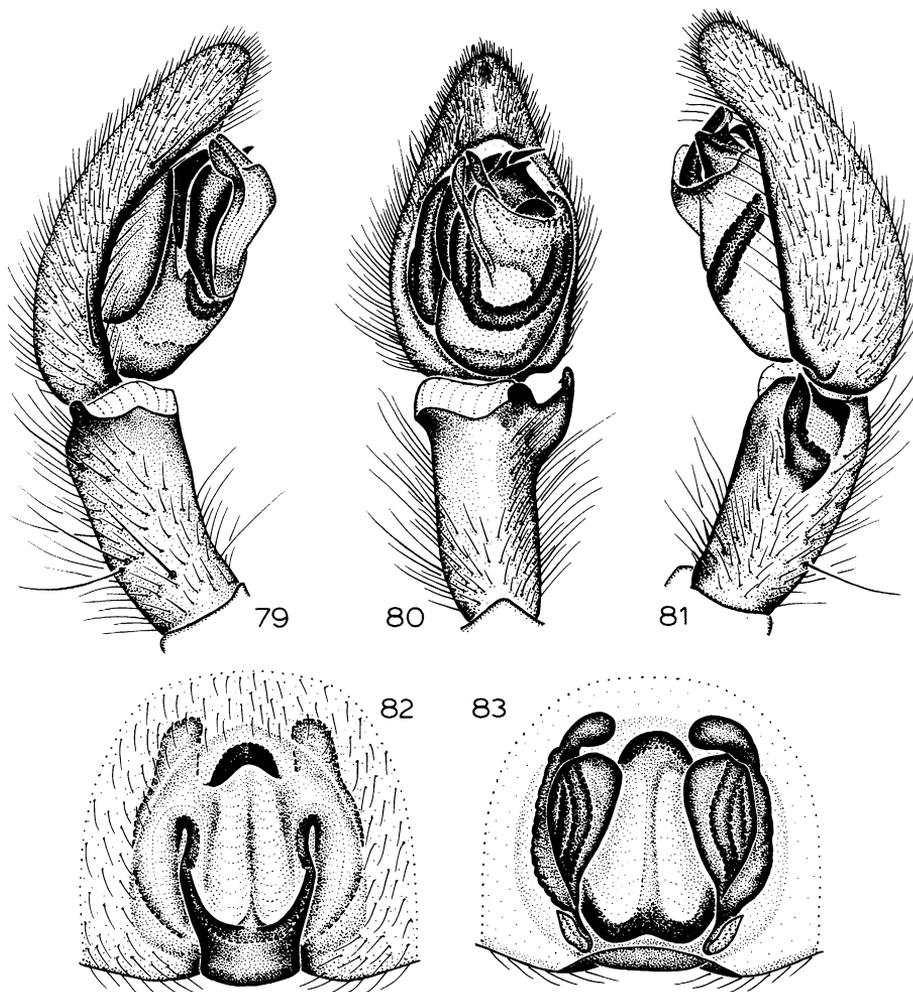
Figs. 75–78. 75, 76. *Parasyrisca belengish*, new species. 77, 78. *P. otmek*, new species. 75, 77. Epigynum, ventral view. 76, 78. Same, dorsal view.



Map 4. Distribution of *Parasyrisca belengish* (squares), *P. otmek* (circle), *P. pshartica* (triangles), *P. vakhanski* (inverted triangle), and *P. balcarica* (diamonds).

be recognized by the elongated, flat, strongly curved, anteriorly directed embolus and the membranous conductor widely separated from the embolus, and the slightly curved apical part of the retrolateral tibial apophysis (figs. 79–81); females resemble those of *P. otmek* but can be separated by the two longitudinal, lateral atrial tubercles, the narrow, short atrial pockets, and the anteriorly directed copulatory openings (fig. 82), as well as the narrow, medially strongly curved spermathecal heads (fig. 83).

MALE: Total length 9.00. Carapace 4.20 long, 3.45 wide. Femur II 4.05 long. Eye sizes and interdistances: AME 0.21, ALE 0.21, PME 0.17, PLE 0.17; AME-AME 0.17, AME-ALE 0.09, PME-PME 0.21, PME-PLE 0.34, ALE-PLE 0.26; MOQ length 0.59, front width 0.55, back width 0.57. Leg spination: femora: III r0-0-1; IV p0-0-1; tibiae: I v2-2-0; II v1-2-0; III p1-1-0; IV p1-0-1, r1-1-1; metatarsi III v2-1-2, r2-0-2. Palp with long, flat, basally strongly curved embolus directed anteriorly and short, membranous, medially widened



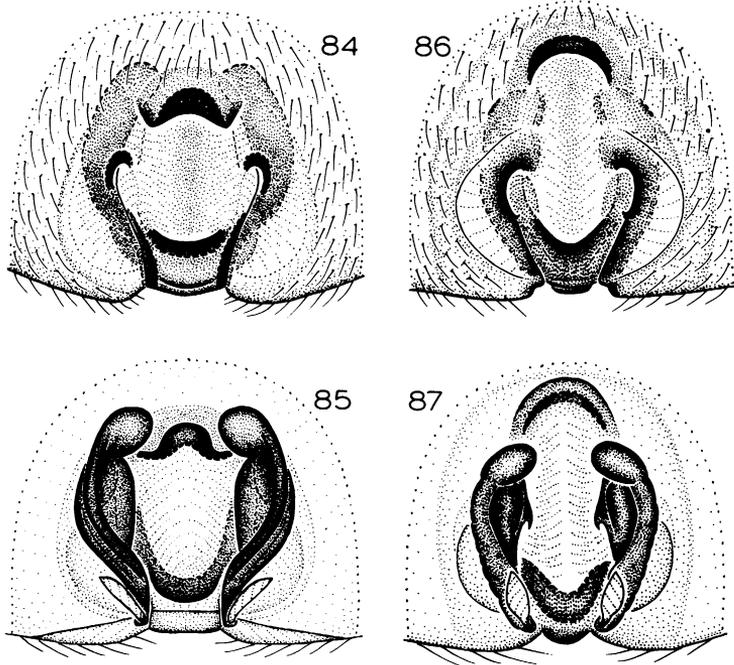
Figs. 79–83. *Parasyrisca susamyr*, new species. 79. Left male palp, prolateral view. 80. Same, ventral view. 81. Same, retrolateral view. 82. Epigynum, ventral view. 83. Same, dorsal view.

conductor; embolus and conductor separated; retrolateral tibial apophysis flat with slightly curved apical part, jagged on basal part (figs. 79–81).

FEMALE: Total length 9.75. Carapace 4.65 long, 3.45 wide. Femur II 3.53 long. Eye sizes and interdistances: AME 0.19, ALE 0.20, PME 0.17, PLE 0.18; AME-AME 0.19, AME-ALE 0.08, PME-PME 0.21, PME-PLE 0.19, ALE-PLE 0.31; MOQ length 0.57, front width 0.53, back width 0.55. Leg spination: femora: III r0-0-1; IV p0-0-1; tibiae: I, II v2-2-0; III p1-1-0, v1-2-2; IV p1-0-1; metatarsi III r2-1-2. Epigynal atrium with two longitudinal,

lateral tubercles, short, narrow atrial pockets situated laterally from tubercles, copulatory openings directed anteriorly (fig. 82); copulatory ducts widened anteriorly, spermathecal ducts situated dorsolaterally, heads of spermathecae narrow, elongated, strongly curved medially (fig. 83).

OTHER MATERIAL EXAMINED: **Kirgizstan:** Besh-Tash Mt. pass, Talasskii Alatau, Aug. 16, 1986 (S. V. Ovchinnikov, ZISP), 2♀; Karabalty River gorge, nr. Tyuz-Ashuu Mt. Pass, N slope Kirgiz Mt. range, Bishkek, July 12, 1983, elev. 3000 m, alpine meadow (S. V. Ovchinnikov, S. L. Zonstein, ZISP), 1♀; Ko-



Figs. 84–87. 84, 85. *Parasyrisca terskei*, new species. 86, 87. *P. kurgan*, new species. 84, 86. Epigynum, ventral view. 85, 87. Same, dorsal view.

komenen River, Susamyrtau Mt. range, Aug. 22, 1986 (S. V. Ovchinnikov, ZISP), 2♀; Sharkritma, Susamyrtau Mt. range, Aug. 10, 1986 (S. V. Ovchinnikov, ZISP, AMNH), 6♀.

DISTRIBUTION: Known only from Kirgizstan (map 3).

***Parasyrisca otmek*, new species**

Figures 77, 78; Map 4

TYPE: Female holotype from Otmek Mt. pass, Talasskii Alatau, Kirgizstan (Aug. 21, 1986; S. L. Zonstein), deposited in ZISP.

ETYMOLOGY: The specific name is a noun in apposition taken from the type locality.

DIAGNOSIS: Females of this species seem closest to those of *P. susamyr* but can be separated by the absence of atrial epigynal tubercles and by the presence of long, straight atrial pockets, laterally directed copulatory openings (fig. 77), and globular, widely spaced spermathecal heads (fig. 78).

MALE: Unknown.

FEMALE: Total length 8.25. Carapace 3.75 long, 2.85 wide. Femur II 2.70 long. Eye sizes and interdistances: AME 0.18, ALE 0.18,

PME 0.15, PLE 0.16; AME-AME 0.14, AME-ALE 0.04, PME-PME 0.16, PME-PLE 0.19, ALE-PLE 0.15; MOQ length 0.51, front width 0.46, back width 0.48. Leg spination: femora: II p0-0-1; IV p0-0-1; tibiae: I v2-2-0; II v1-2-0; III p1-1-0, v2-2-2; IV p1-0-1, v2-2-2, r1-1-1; metatarsi III r2-0-2. Epigynal atrium with long, straight atrial pockets, copulatory openings directed laterally or anterolaterally (fig. 77); copulatory ducts narrow, widened anteriorly, spermathecal ducts situated laterally, spermathecal heads globular, widely spaced (fig. 78).

OTHER MATERIAL EXAMINED: One female taken with the holotype (ZISP).

DISTRIBUTION: Known only from Kirgizstan (map 4).

***Parasyrisca terskei*,
new species**

Figures 84, 85; Map 5

TYPE: Female holotype from Barskaun gorge, Terskei Ala-Too Mt. range, Kirgizstan (July 8, 1988; S. V. Ovchinnikov), deposited in ZISP.

ETYMOLOGY: The specific name is a noun in apposition taken from the type locality.

DIAGNOSIS: Females of this species seem closest to *P. otmek* but can be separated by the short, narrow PRE of the epigynum, the oval atrial pockets situated anterolaterally from the PRE, the anteriorly directed copulatory openings (fig. 84), and the strongly curved spermathecal ducts and approximate spermathecal heads (fig. 85).

MALE: Unknown.

FEMALE: Total length 7.35. Carapace 3.75 long, 3.00 wide. Femur II 2.70 long. Eye sizes and interdistances: AME 0.19, ALE 0.19, PME 0.15, PLE 0.15; AME-AME 0.14, AME-ALE 0.06, PME-PME 0.19, PME-PLE 0.27, ALE-PLE 0.21; MOQ length 0.57, front width 0.51, back width 0.53. Leg spination: femora: II p0-0-1; IV p0-0-1; tibiae: I v2-2-0; II v1-2-0; III p1-0-1; IV p1-0-1, v2-2-2; metatarsi III r2-0-2. Epigynal atrium wide, with short, narrow PRE, short, oval atrial pockets situated anterolaterally from PRE, copulatory openings directed anteriorly (fig. 84); copulatory ducts slightly widened medially, spermathecal ducts strongly curved, situated dorsolaterally, spermathecal heads approximate (fig. 85).

OTHER MATERIAL EXAMINED: **Kirgizstan:** Barskaun gorge, Terskei Ala-Too Mt. range, Aug. 13, 1988, elev. 2500 m (S. V. Ovchinnikov, ZISP), 2♀.

DISTRIBUTION: Known only from Kirgizstan (map 5).

***Parasyrisca kurgan*, new species**

Figures 86, 87; Map 6

TYPE: Female holotype from Kurgan-Dzhar, Ferganskii Mt. range, Kirgizstan (June 1, 1978; S. L. Zonstein), deposited in ZISP.

ETYMOLOGY: The specific name is a noun in apposition taken from the type locality.

DIAGNOSIS: Females of this species seem closest to *P. terskei* but can be separated by the elongated and shallow epigynal atrium with a large hood (fig. 86), the slightly curved spermathecal ducts, and the anteriorly widened copulatory ducts (fig. 87).

MALE: Unknown.

FEMALE: Total length 8.10. Carapace 3.00 long, 2.10 wide. Femur II 2.40 long. Eye sizes and interdistances: AME 0.17, ALE 0.17,



Map 5. Distribution of *Parasyrisca terskei* (square), *P. andarbag* (circle), *P. pamirica* (triangle), *P. caucasica* (inverted triangles), and *P. alexeevi* (diamond).

PME 0.13, PLE 0.13; AME-AME 0.11, AME-ALE 0.03, PME-PME 0.15, PME-PLE 0.21, ALE-PLE 0.15; MOQ length 0.43, front width 0.42, back width 0.42. Leg spination: femora: II p0-0-1; IV p0-0-1; tibiae: I v2-2-0; II v1-2-0; III p1-0-1, v1-2-2. Epigynal atrium elongated, shallow, with large hood, PRE low anteriorly, oval atrial pockets situated anteriorly from PRE, copulatory openings anteriorly directed (fig. 86); copulatory ducts widened anteriorly, spermathecal ducts slightly curved, situated laterally, spermathecal heads widely spaced (fig. 87).

OTHER MATERIAL EXAMINED: **Kirgizstan:** Osh: nr. Karagoi, Aug. 21-24, 1987 (A. A. Zyuzin, ZISP), 1♀.

DISTRIBUTION: Kirgizstan (map 6).

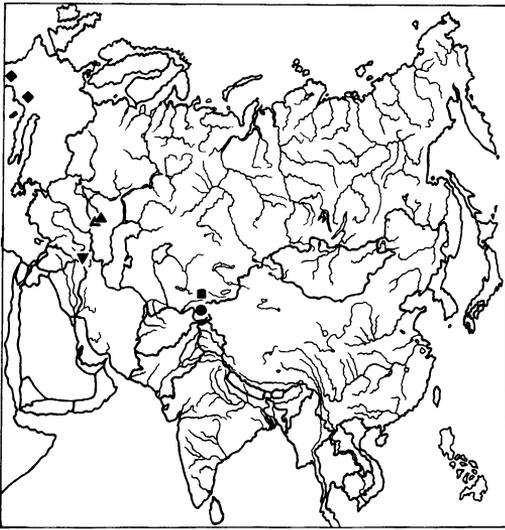
***Parasyrisca narynica*, new species**

Figures 88-92; Map 3

TYPES: Male holotype and female allotype from Irisu River, Narynskii Mt. range, Kirgizstan (July 18, 1987; S. V. Ovchinnikov), deposited in ZISP.

ETYMOLOGY: The specific name is an arbitrary combination of letters.

DIAGNOSIS: Males of this species can easily be recognized by the widely spaced embolus



Map 6. Distribution of *Parasyrisca kurgan* (square), *P. kyzylart* (circle), *P. mikhailovi* (triangle), *P. turkenica* (inverted triangle), and *P. vinosus* (diamonds).

and conductor, the strongly dorsally curved tip of the conductor, the prolaterally curved embolus, and the narrow dorsal keel on the retrolateral tibial apophysis (figs. 88–90); females resemble those of *P. anderbag* and *P. pshartica* but can be separated by the long PRE occupying more than half the width of the epigynal atrium, the strong lateral corners of the atrium, the anteriorly directed atrial pockets (fig. 91), and the slightly curved, widely spaced anterior parts of the spermathecae (fig. 92).

MALE: Total length 10.50. Carapace 4.35 long, 3.45 wide. Femur II 3.75 long. Eye sizes and interdistances: AME 0.21, ALE 0.21, PME 0.17, PLE 0.21; AME-AME 0.22, AME-ALE 0.06, PME-PME 0.19, PME-PLE 0.29, ALE-PLE 0.25; MOQ length 0.63, front width 0.53, back width 0.49. Leg spination: femora IV p0-0-1; tibiae: I v2-2-0; II v0-2-0; III p1-1-0, v1-2-2; IV p1-0-1, v2-2-2. Palp with widely spaced embolus and conductor, embolus narrow, pointed, prolaterally strongly curved, conductor tip strongly curved dorsally; retrolateral tibial apophysis flat, with narrow keel on dorsal surface (figs. 88–90).

FEMALE: Total length 10.50. Carapace 4.50 long, 3.50 wide. Femur II 3.50 long. Eye sizes and interdistances: AME 0.21, ALE 0.19,

PME 0.15, PLE 0.21; AME-AME 0.17, AME-ALE 0.10, PME-PME 0.15, PME-PLE 0.34, ALE-PLE 0.19; MOQ length 0.63, front width 0.55, back width 0.49. Leg spination: femora: III r0-1-1; IV p0-0-1; tibiae: I v2-2-0; II v0-2-0; III p1-1-0. Epigynal atrium with short, slightly procurved hood, long PRE occupying more than half of atrial width, strong lateral corners of atrium (frequently broken), anteriorly directed atrial pockets (fig. 91); anterior parts of spermathecae slightly curved, narrow, widely spaced (fig. 92).

OTHER MATERIAL EXAMINED: **Kirgizstan:** Barskaun gorge, Terskei Ala-Too Mt. range, July 8, 1988 (S. V. Ovchinnikov, ZISP), 2♂; Bosogo, At-Bashi Mt. range, July 22, 1987 (S. V. Ovchinnikov, ZISP), 1♀. **Tadjikistan:** Naizatash Mt. pass, between North and South Allichur Mt. range, July 24, 1988 (S. V. Ovchinnikov, ZISP), 2♀.

DISTRIBUTION: Kirgizstan and Tadjikistan (map 3).

Parasyrisca pshartica,
new species

Figures 93, 94; Map 4

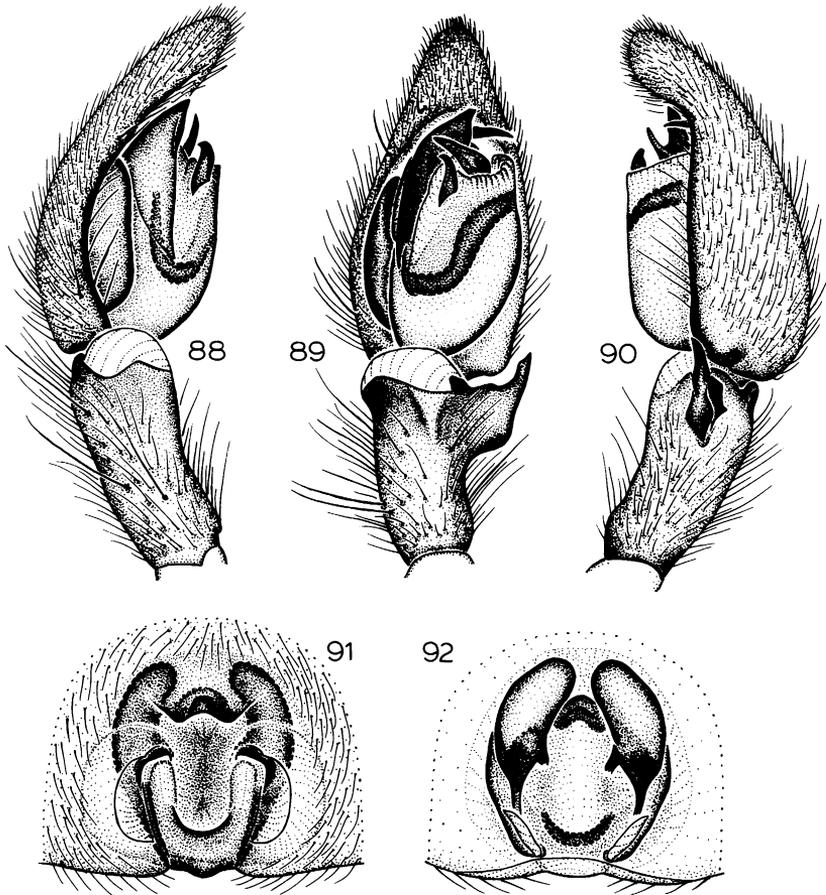
TYPE: Female holotype taken at an elevation of 4900 m in the Pshart Mt. range, Gorno-Badakhshan area, Tadjikistan (June 15, 1971; L. Zharkova), deposited in ZISP.

ETYMOLOGY: The specific name is an arbitrary combination of letters.

DIAGNOSIS: This species seems closest to *P. narynica* but can be separated by the short PRE occupying half the width of the epigynal atrium, the medially approximate lateral atrial corners (fig. 93), and the straight, wide anterior portion of the spermathecae (fig. 94).

MALE: Unknown.

FEMALE: Total length 13.20. Carapace 5.70 long, 4.35 wide. Femur II 4.50 long. Eye sizes and interdistances: AME 0.21, ALE 0.26, PME 0.17, PLE 0.21; AME-AME 0.21, AME-ALE 0.11, PME-PME 0.19, PME-PLE 0.40, ALE-PLE 0.29; MOQ length 0.61, front width 0.57, back width 0.57. Leg spination: femora: III r0-1-1; IV p0-0-1; tibiae: I, II v2-2-0; III p1-1-0, v2-2-2; IV p1-1-0, v2-2-2, r1-0-1. Epigynal atrium with short, wide hood, PRE occupying half of atrial width, lateral atrial corners approximate, atrial pockets directed anterolaterally (fig. 93); anterior portions of



Figs. 88–92. *Parasyrisca narynica*, new species. 88. Left male palp, prolateral view. 89. Same, ventral view. 90. Same, retrolateral view. 91. Epigynum, ventral view. 92. Same, dorsal view.

spermathecae wide, separated by more than their diameter (fig. 94).

OTHER MATERIAL EXAMINED: **Tadjikistan:** *Gorno-Badakhshan:* Kara-Dzhilga River valley, E Pshart Mt., Muzkol Mt. range, June 15–July 2, 1971, elev. 4600–4900 m (L. Zharkova, ZISP), 4♀; E Pshart River valley, Pshart Mt. range, July 20, 1971, elev. 4500 m (L. Zharkova, ZISP), 1♀.

DISTRIBUTION: Eastern Tadjikistan (map 4).

***Parasyrisca vakhanski*,**
new species

Figures 97–99; Map 4

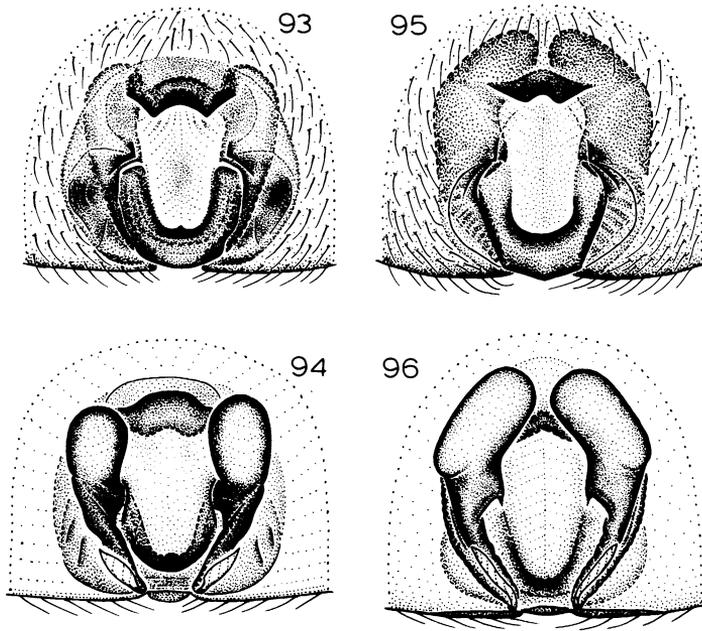
TYPE: Male holotype taken in a snow field at an elevation of 4400 m in the Vakhanski

Mt. range, Tadjikistan (June 27, 1974; V. Turkov), deposited in ZISP.

ETYMOLOGY: The specific name is a noun in apposition taken from the type locality.

DIAGNOSIS: Males of this species seem closest to those of *P. narynica* but can be separated by the straight, apically widened conductor and the large dorsal lamina on the retrolateral tibial apophysis (figs. 97–99).

MALE: Total length 9.00. Carapace 3.75 long, 3.15 wide. Femur II 3.90 long. Eye sizes and interdistances: AME 0.15, ALE 0.17, PME 0.15, PLE 0.15; AME-AME 0.15, AME-ALE 0.10, PME-PME 0.15, PME-PLP 0.29, ALE-PLP 0.19; MOQ length 0.49, front width 0.40, back width 0.46. Leg spination (III leg missing): femora IV r0-0-1; tibiae: I v2-2-0; II v1-2-0; IV p1-1-1, v2-2-2, r1-1-1. Palp



Figs. 93–96. 93, 94. *Parasyrisca pshartica*, new species. 95, 96. *P. andarbag*, new species. 93, 95. Epigynum, ventral view. 94, 96. Same, dorsal view.

with widely spaced embolus and conductor, conductor straight, widened apically; retrolateral tibial apophysis flat, with large lamina on dorsal surface, tiny keel on apical part (figs. 97–99).

FEMALE: Unknown.

OTHER MATERIAL EXAMINED: None.

DISTRIBUTION: Known only from Tadzhikistan (map 4).

Parasyrisca alai, new species

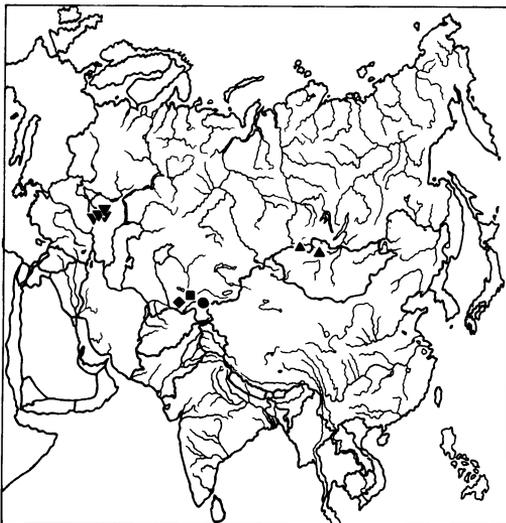
Figures 100–102; Map 7

TYPE: Male holotype taken at an elevation of 3615 m in the Taldyk Mt. pass, Alai Mt. range, Osh, Kirgizstan (Aug. 26, 1988; S. V. Ovchinnikov), deposited in ZISP.

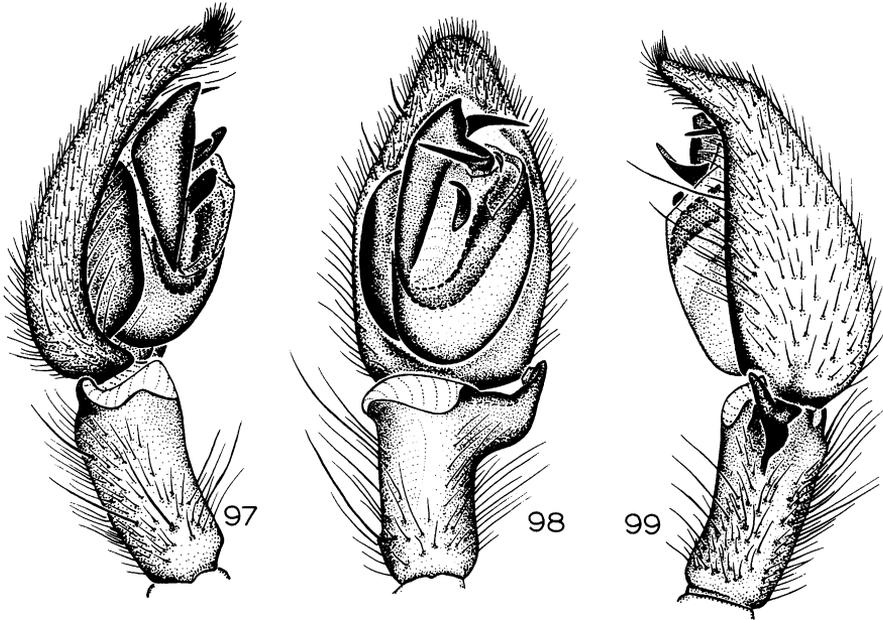
ETYMOLOGY: The specific name is a noun in apposition taken from the type locality.

DIAGNOSIS: Males of this species seem closest to those of *P. narynica* and *P. vakhanski* but can be separated by the narrow, slightly dorsally curved tip of the conductor and the low dorsal lamina on the retrolateral tibial apophysis (figs. 100–102).

MALE: Total length 7.65. Carapace 3.00 long, 2.40 wide. Femur II 2.55 long. Eye sizes and interdistances: AME 0.15, ALE 0.11, PME 0.11, PLE 0.11; AME-AME 0.13, AME-ALE 0.04, PME-PME 0.11, PME-PLE 0.22, ALE-PLE 0.15; MOQ length 0.43, front width 0.41, back width 0.38. Leg spination: femora: III r0-0-1; IV p0-0-1; tibiae: I v2-2-0; II v0-2-0; III p1-1-0; IV p1-1-0, r1-1-1. Palp with



Map 7. Distribution of *Parasyrisca vorobica* (square), *P. alai* (circle), *P. ulykpani* (triangles), *P. guzeripli* (inverted triangles), and *P. breviceps* (diamond).



Figs. 97–99. *Parasyrisca vakhanski*, new species. 97. Left male palp, prolateral view. 98. Same, ventral view. 99. Same, retrolateral view.

deeply situated embolus; conductor narrow, slightly curved dorsally at tip; retrolateral tibial apophysis flat, with low lamina on dorsal surface, without keel on apical part but apically slightly bifurcate (figs. 100–102).

FEMALE: Unknown.

OTHER MATERIAL EXAMINED: None.

DISTRIBUTION: Known only from Kirgizstan (map 7).

***Parasyrisca andarbag*,**
new species

Figures 95, 96; Map 5

TYPE: Female holotype taken at an elevation of 2000 m near Andarbag, Yazgulem Mt. range, W Pamir, Tadjikistan (Apr. 18, 1990; S. L. Zonstein), deposited in ZISP.

ETYMOLOGY: The specific name is a noun in apposition taken from the type locality.

DIAGNOSIS: Females of this species seem closest to those of *P. narynica* but can be separated by the short PRE, the short lateral atrial corners, the anterolaterally directed atrial pockets (fig. 95), and the strongly curved, wide, closely spaced anterior parts of the spermathecae (fig. 96).

MALE: Unknown.

FEMALE: Total length 8.40. Carapace 3.90 long, 3.15 wide. Femur II 3.45 long. Eye sizes and interdistances: AME 0.17, ALE 0.15, PME 0.15, PLE 0.15; AME-AME 0.15, AME-ALE 0.08, PME-PME 0.19, PME-PLE 0.34, ALE-PLE 0.25; MOQ length 0.49, front width 0.48, back width 0.49. Leg spination: femora: III r0-2-2; IV p0-0-1; tibiae: I v1-2-0; II v1-2-0; III v2-2-2; IV v2-2-2, r1-1-1. Epigynal atrium with short, tiny, procurved hood, short PRE occupying half of atrial width, short lateral atrial corners, anterolaterally directed atrial pockets (fig. 95); anterior parts of spermathecae wide, strongly curved, approximate (fig. 96).

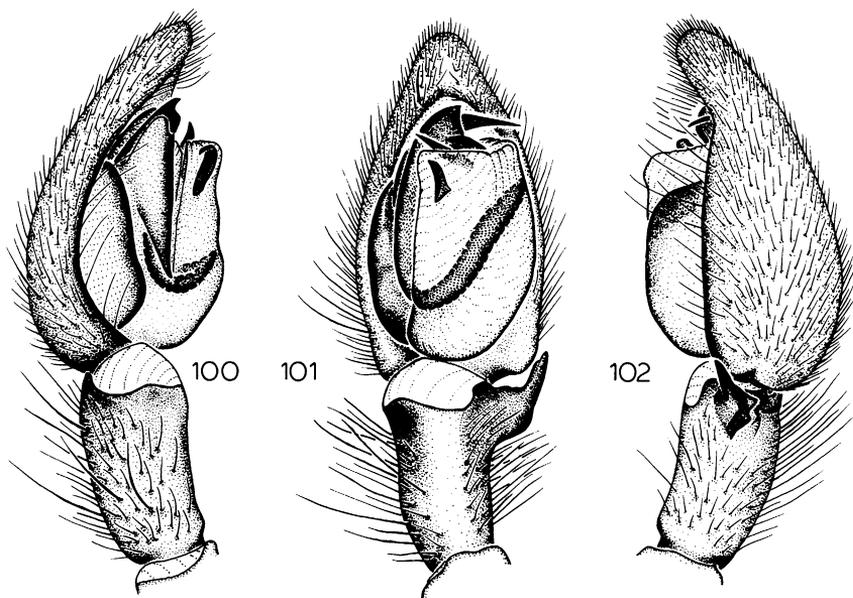
OTHER MATERIAL EXAMINED: None.

DISTRIBUTION: Known only from Tadjikistan (map 5).

***Parasyrisca kyzylart*,**
new species

Figures 103, 104; Map 6

TYPE: Female holotype taken at an elevation of 4280 m in the Kyzyl-Art Mt. pass, Zaalaiskii Mt. range, Osh, Kirgizstan (July 25, 1988; S. L. Zonstein), deposited in ZISP.



Figs. 100–102. *Parasyrisca alai*, new species. **100.** Left male palp, prolateral view. **101.** Same, ventral view. **102.** Same, retrolateral view.

ETYMOLOGY: The specific name is a noun in apposition taken from the type locality.

DIAGNOSIS: Females of this species seem closest to those of *P. andarbag* but can be separated by the narrow, procurved epigynal hood, the wide PRE, the widely spaced lateral atrial corners, the anteriorly directed atrial pockets (fig. 103), and the short, wide anterior parts of the spermathecae (fig. 104).

MALE: Unknown.

FEMALE: Total length 10.50. Carapace 4.80 long, 3.60 wide. Femur II 3.90 long. Eye sizes and interdistances: AME 0.21, ALE 0.20, PME 0.15, PLE 0.19; AME-AME 0.19, AME-ALE 0.11, PME-PME 0.17, PME-PLE 0.34, ALE-PLE 0.25; MOQ length 0.59, front width 0.53, back width 0.51. Leg spination: femora: III r0-1-1; IV p0-0-1; tibiae: I v1-2-0; II v0-2-0; III p1-1-0, v1-2-2; IV p1-1-0, v2-2-2, r1-1-1. Epigynal atrium with narrow, procurved hood, PRE short, wide, atrial pockets directed anteriorly, widely spaced lateral atrial corners situated laterally from copulatory openings (figs. 103); anterior parts of spermathecae short, wide, slightly curved, separated by almost their radius (fig. 104).

OTHER MATERIAL EXAMINED: None.

DISTRIBUTION: Known only from Kirgizstan (map 6).

Parasyrisca pamirica,
new species

Figures 105, 106; Map 5

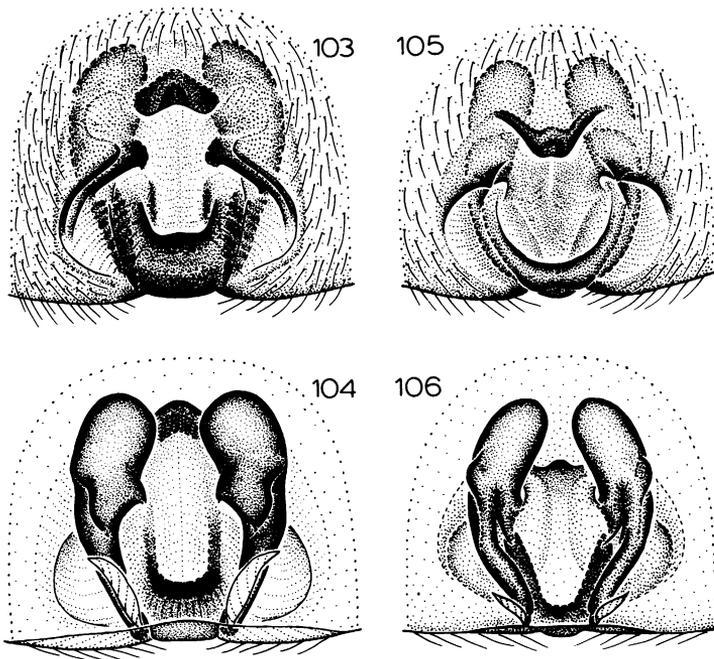
TYPE: Female holotype taken at an elevation of 4200 m on the Tanymas Glacier (NE branch of Fedchenko Glacier), Tadjikistan (Aug. 20, 1928; E. F. Rozmirovich), deposited in ZISP.

ETYMOLOGY: The specific name is an arbitrary combination of letters.

DIAGNOSIS: Females of this species seem closest to those of *P. narynica* but can be separated by the long, trapeziform epigynal hood, the extensive lateral atrial corners, the anteromedially directed copulatory openings (fig. 105), and the elongate, straight, apically widened, closely spaced anterior parts of the spermathecae (fig. 106).

MALE: Unknown.

FEMALE: Total length 13.00. Carapace 5.55 long, 4.35 wide. Femur II 4.80 long. Eye sizes and interdistances: AME 0.21, ALE 0.21, PME 0.17, PLE 0.21; AME-AME 0.19, AME-ALE 0.10, PME-PME 0.23, PME-PLE 0.48, ALE-PLE 0.36; MOQ length 0.67, front width 0.59, back width 0.57. Leg spination: femora: III r0-1-1; IV p0-0-1; tibiae: I, II v2-2-0; III p1-1-0, v2-2-2; IV p1-0-1; metatarsi IV v2-



Figs. 103–106. 103, 104. *Parasyrisca kyzylart*, new species. 105, 106. *P. pamirica*, new species. 103, 105. Epigynum, ventral view. 104, 106. Same, dorsal view.

1-2. Epigynal atrium with long, trapeziform hood, extensive lateral corners, copulatory openings directed anteromedially (fig. 105); spermathecal ducts slightly curved, situated laterally, anterior parts of spermathecae elongate, straight, apically widened, closely spaced, separated by less than their radius (fig. 106).

OTHER MATERIAL EXAMINED: None.

DISTRIBUTION: Known only from Tadjikistan (map 5).

***Parasyrisca balcarica*,**
new species

Figures 107–111; Map 4

TYPES: Male holotype and female allotype taken at an elevation of 3000 m on Mt. Cheget, Kabardino-Balkar, Russia (July 1, 1976; V. I. Ovtsharenko), deposited in ZISP.

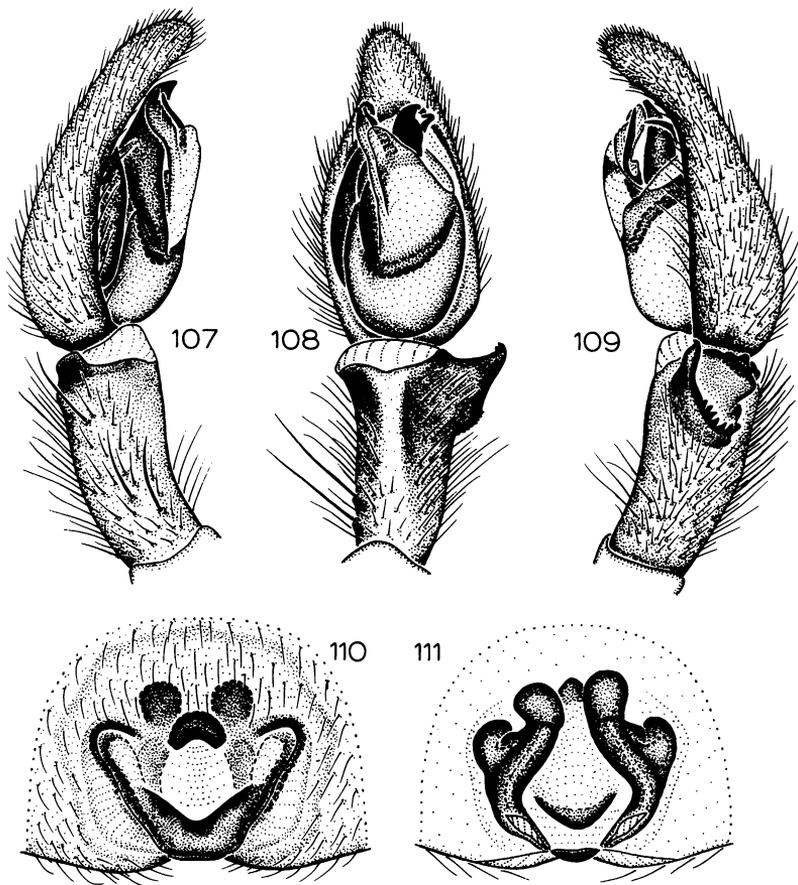
ETYMOLOGY: The specific name is an arbitrary combination of letters.

DIAGNOSIS: This species seems closest to *P. caucasica* but can be separated in males

by the elongated conductor and wide embolar base (figs. 107–109) and in females by the short PRE in the posterior part of the atrium (fig. 110) and the strongly curved, closely spaced spermathecal ducts (fig. 111).

MALE: Total length 9.90. Carapace 5.10 long, 3.90 wide. Femur II 4.50 long. Eye sizes and interdistances: AME 0.21, ALE 0.21, PME 0.17, PLE 0.19; AME-AME 0.15, AME-ALE 0.10, PME-PME 0.17, PME-PLE 0.36, ALE-PLE 0.25; MOQ length 0.67, front width 0.51, back width 0.51. Leg spination: femora: III r0-1-1; IV p0-0-1; tibiae: III p2-1-1, v2-2-2, r1-1-1; IV p1-1-1, v2-2-2, r1-1-1; metatarsi: I, II v2-2-0; III v2-1-2, r1-2-2; IV v2-2-2. Palp with long, narrow conductor expanded anteriorly, wide embolar base with narrow apical part; retrolateral tibial apophysis flat, bifurcate in apical part, jagged on basal part (figs. 107–109).

FEMALE: Total length 12.75. Carapace 4.65 long, 3.90 wide. Femur II 4.05 long. Eye sizes and interdistances: AME 0.19, ALE 0.21, PME 0.17, PLE 0.21; AME-AME 0.15, AME-ALE 0.06, PME-PME 0.17, PME-PLE 0.36,



Figs. 107–111. *Parasyrisca balcarica*, new species. 107. Left male palp, prolateral view. 108. Same, ventral view. 109. Same, retrolateral view. 110. Epigynum, ventral view. 111. Same, dorsal view.

ALE-PLE 0.25; MOQ length 0.57, front width 0.53, back width 0.52. Leg spination: femora: III r0-0-1; IV p0-0-1; tibiae: I v2-4-2; II v2-2-2; III p1-0-1, v2-2-2; IV p1-0-1, v2-2-2, r1-1-1; metatarsi: I, II v2-2-0; III v2-2-2, r2-1-2; IV v2-2-2. Epigynal atrium wide with short PRE anteriorly reaching medial part of atrium (fig. 110); spermathecal ducts strongly curved, closely spaced (fig. 111).

OTHER MATERIAL EXAMINED: **Russia:** *Kabardino-Balkar:* Adylsu gorge, Mt. Shkhelda, Aug. 5, 1972 (A. A. Zyuzin, ZISP), 1♂; Mt. Elbrus, July, 1976, elev. 3100–3500 m, alpine zone (V. I. Ovtsharenko, ZISP, AMNH), 3♂, 1♀. *Stavropol:* Tylych-Khan River, Karachaevo-Cherkesk area, July 30, 1981, elev. 2500 m, alpine zone (S. Udalov, ZISP), 1♀.

DISTRIBUTION: Known only from the central Caucasus, Russia (map 4).

Parasyrisca caucasica,
new species

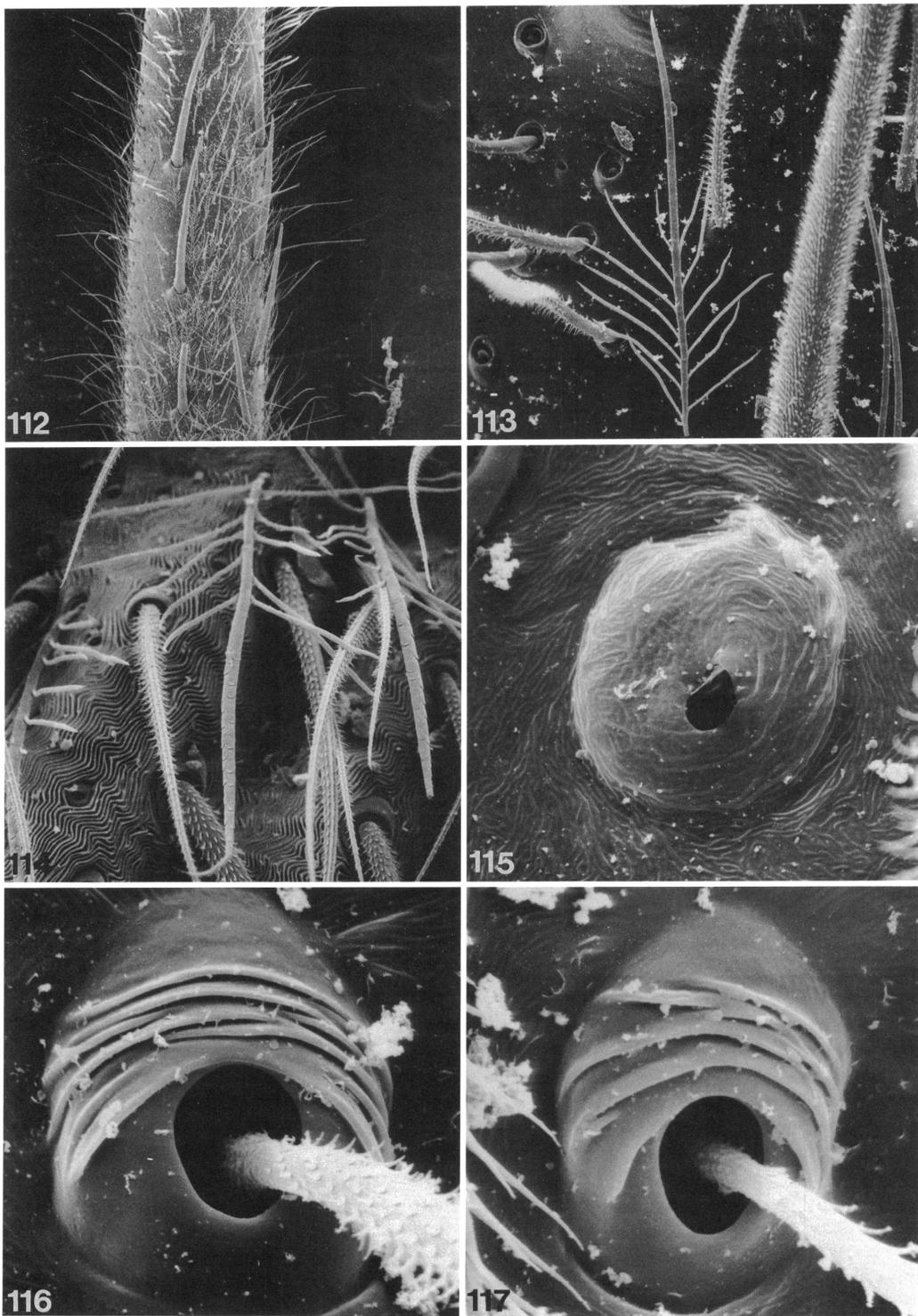
Figures 112–128; Map 5

TYPES: Male holotype and female allotype taken at an elevation of 2600 m in the alpine zone of Mt. Abago, Caucasian reserve, Krasnodar, Russia (Aug. 13, 1974; V. I. Ovtsharenko), deposited in ZISP.

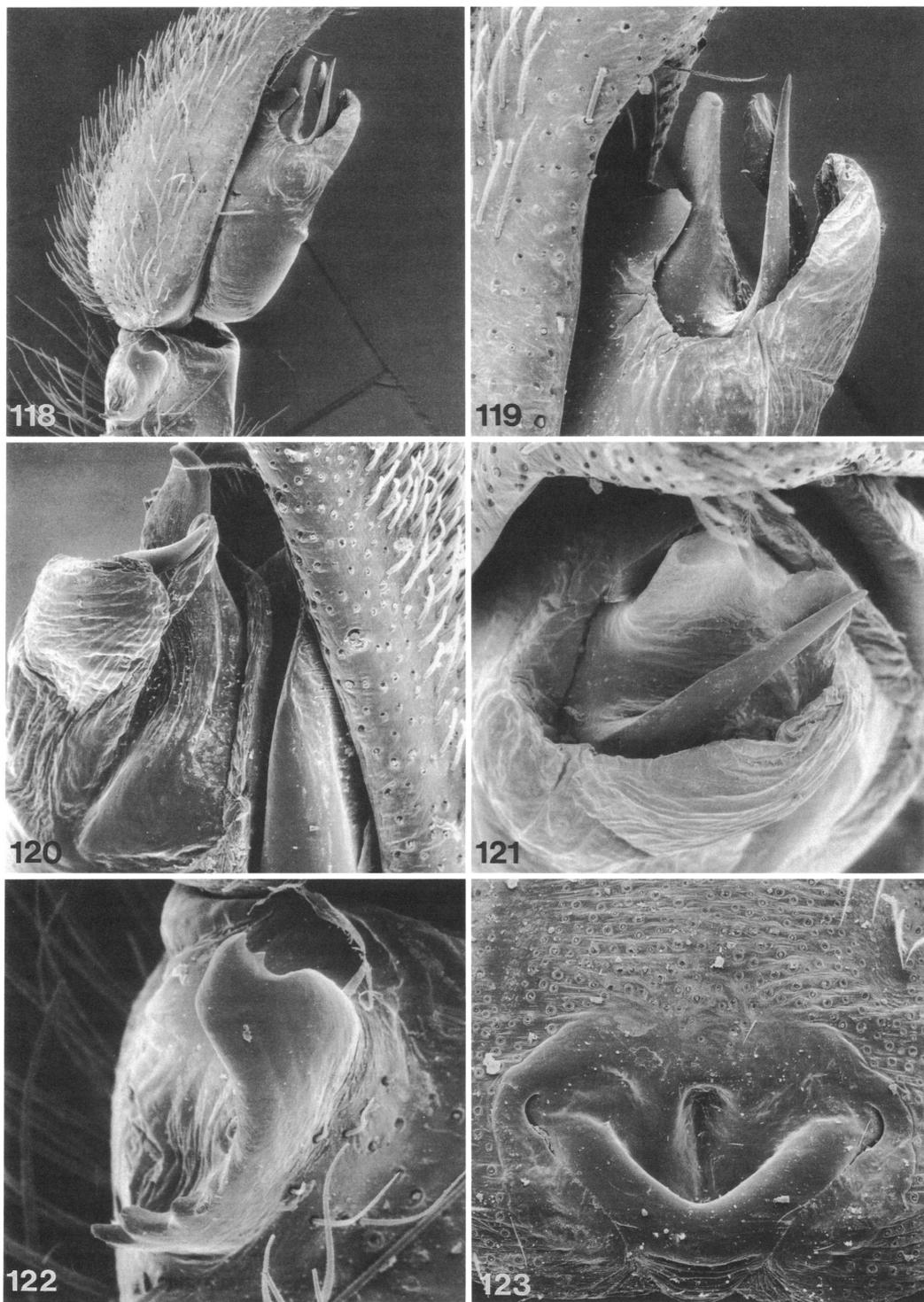
ETYMOLOGY: The specific name is an arbitrary combination of letters.

DIAGNOSIS: This species seems closest to *P. balcarica* but can be separated in males by the short conductor and narrow embolar base (figs. 118–121, 124–126) and in females by the long PRE and the slightly curved, widely spaced spermathecal ducts (figs. 123, 127, 128).

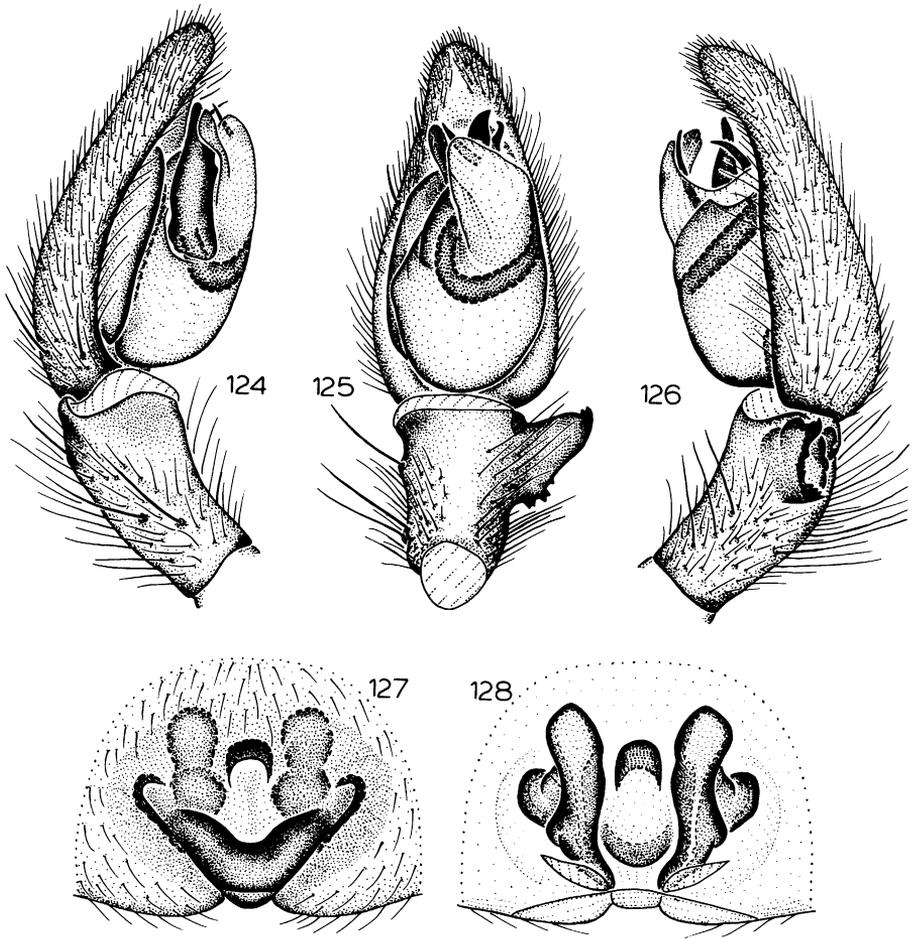
MALE: Total length 8.25. Carapace 3.45



Figs. 112–117. *Parasyrisca caucasica*, new species. 112. Tibia of leg I, ventral view. 113. Tibial setae, ventral view. 114. Abdominal setae, dorsal view. 115. Tarsal organ, dorsal view. 116, 117. Trichobothrial base, dorsal view.



Figs. 118–123. *Parasyriska caucasica*, new species. 118. Right male palp, retrolateral view. 119. Apical portion of male palp, retrolateral view. 120. Same, prolateral view. 121. Same, apical view. 122. Retrolateral tibial apophysis, retrolateral view. 123. Epigynum, ventral view.



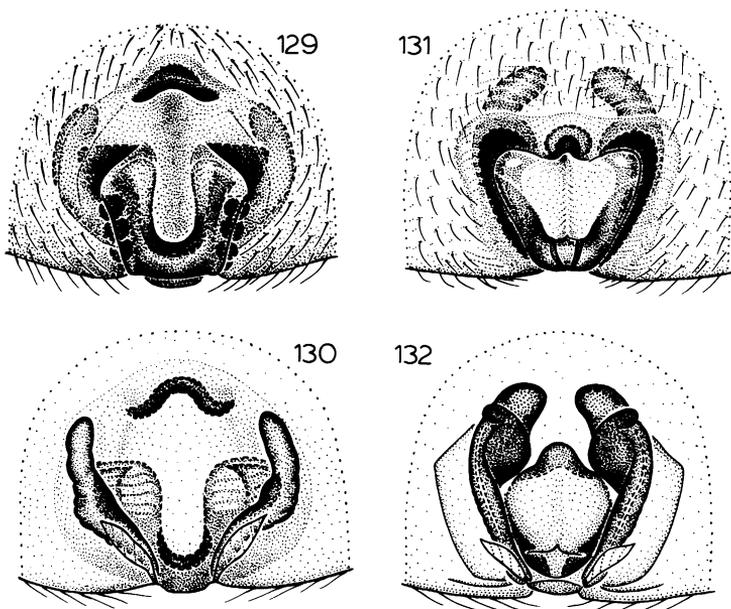
Figs. 124–128. *Parasyrisca caucasica*, new species. 124. Left male palp, prolateral view. 125. Same, ventral view. 126. Same, retrolateral view. 127. Epigynum, ventral view. 128. Same, dorsal view.

long, 2.55 wide. Femur II 2.70 long. Eye sizes and interdistances: AME 0.19, ALE 0.21, PME 0.14, PLE 0.15; AME-AME 0.10, AME-ALE 0.06, PME-PME 0.13, PME-PLE 0.23, ALE-PLE 0.14; MOQ length 0.48, front width 0.42, back width 0.44. Leg spination: femora: III r0-1-1; IV r0-0-1; tibiae: III p1-0-1, v2-2-2; IV p1-0-1, v2-2-2, r1-1-1; metatarsi: I, II v2-2-0; III r2-0-2. Palp with short, anteriorly slightly expanded conductor, narrow embolar base with narrow apical part; retrolateral tibial apophysis flat, curved, bifurcate in apical part, strongly jagged on dorsal margin (figs. 118–122, 124–126).

FEMALE: Total length 9.00. Carapace 3.60

long, 2.85 wide. Femur II 2.55 long. Eye sizes and interdistances: AME 0.17, ALE 0.21, PME 0.16, PLE 0.17; AME-AME 0.12, AME-ALE 0.05, PME-PME 0.15, PME-PLE 0.23, ALE-PLE 0.15; MOQ length 0.49, front width 0.46, back width 0.48. Leg spination: femora: III r0-1-1; IV p0-0-1; tibiae: III p1-0-1, v1-2-2; IV p1-0-1, r1-1-1; metatarsi: I, II v2-2-0; III r2-0-2. Epigynal atrium narrow, with long PRE reaching anterior pockets (figs. 123, 127); spermathecal ducts slightly curved, widely spaced (fig. 128).

OTHER MATERIAL EXAMINED: **Russia:** *Krasnodar:* Abago Mt., Chugush Mt., Mramornaya Mt, Pseashkho Mt., Caucasian re-



Figs. 129–132. 129, 130. *Parasyrisca alexeevi*, new species. 131, 132. *P. mikhailovi*, new species. 129, 131. Epigynum, ventral view. 130, 132. Same, dorsal view.

serve, elev. 2300–3000 m, alpine zone (July 3–Aug. 13, 1974–1976; V. I. Ovtsharenko, ZISP, AMNH, ZMUM), 7♂, 141♀.

DISTRIBUTION: Known only from the western Caucasus in Russia (map 5).

Parasyrisca alexeevi,
new species

Figures 129, 130; Map 5

TYPES: Female holotype from pitfall trap in Ardon River Valley, opposite Unal and Zintsar, Alagir Gorge, North Osetiya, Russia (Apr. 5–15, 1985; S. K. Alexeev), deposited in ZMUM.

ETYMOLOGY: The specific name is a patronym in honor of the collector of the holotype.

DIAGNOSIS: Females of this species resemble those of *P. potanini* as well as those of *P. balcarica* and *P. caucasica*, but can be distinguished by the wide epigynal hood, the rounded epigynal atrium with long copulatory openings and a strongly curved PRE (fig. 129), as well as the posteriorly situated copulatory ducts and anteriorly widely spaced spermathecal ducts (fig. 130).

MALE: Unknown.

FEMALE: Total length 6.00. Carapace 2.40 long, 1.95 wide. Femur II 1.80 long. Eye sizes and interdistances: AME 0.19, ALE 0.17, PME 0.15, PLE 0.14; AME-AME 0.08, AME-ALE 0.03, PME-PME 0.11, PME-PLE 0.15, ALE-PLE 0.10; MOQ length 0.46, front width 0.42, back width 0.42. Leg spination: femora II p0-0-1; tibiae: I v2-2-0; III p1-1-0; IV p1-1-0. Epigynal atrium rounded, with wide hood, short, strongly curved PRE, long copulatory openings, long lateral pockets (fig. 129); copulatory ducts situated posteriorly, spermathecal ducts narrow, widely spaced anteriorly, slightly folded posteriorly (fig. 130).

OTHER MATERIAL EXAMINED: Two females taken with the holotype (ZISP, ZMUM).

DISTRIBUTION: Known only from the central Caucasus, Russia (map 5).

Parasyrisca mikhailovi,
new species

Figures 131, 132; Map 6

TYPE: Female holotype from near Tsei, S slope Tsei Mt. range, North Osetiya, Russia (June 25, 1981; S. K. Alexeev), deposited in ZMUM.

ETYMOLOGY: The specific name is a patronym in honor of Dr. K. G. Mikhailov, who helped obtain *Parasyrisca* material from the Caucasus.

DIAGNOSIS: This species seems closest to *P. balcarica* but can be separated in females by the shorter PRE with a deep, medial groove, the anteriorly situated and directed atrial pockets (fig. 131), and the slightly curved, widely spaced spermathecal ducts (fig. 132).

MALE: Unknown.

FEMALE: Total length 15.00. Carapace 5.25 long, 3.90 wide. Femur II 4.80 long. Eye sizes and interdistances: AME 0.22, ALE 0.22, PME 0.17, PLE 0.17; AME-AME 0.17, AME-ALE 0.08, PME-PME 0.23, PME-PLE 0.38, ALE-PLE 0.30; MOQ length 0.68, front width 0.57, back width 0.59. Leg spination: femora: III r0-1-1; IV p0-0-1; tibiae: I v1-4-2; III p1-1-0, v2-2-2; IV p1-0-1, v2-2-2, r2-1-1; metatarsi III r2-0-2. Epigynal atrium elongate, PRE short, with deep, medial groove, atrial pockets situated, directed anteriorly (fig. 131); spermathecal ducts slightly curved, widely spaced, widened anteriorly (fig. 132).

OTHER MATERIAL EXAMINED: Russia: *North Osetiya*: nr. Tsei, S slope Tsei Mt. range, July 7–20, 1981, elev. 1700–3000 m (S. K. Alxeev, ZISP, ZMUM), 1♀.

DISTRIBUTION: Known only from the central Caucasus, Russia (map 6).

Parasyrisca turkenica,
new species

Figures 133–138; Map 6

TYPES: Male holotype and female allotype taken under stones on a bare hillside at an elevation of 9,800 ft on the N side of Halanduran Dag Mt., near Baskale, S Van Lake, Turkey (Aug. 31, 1956; J. A. L. Cooke, G. P. Lampel), deposited in HDO.

ETYMOLOGY: The specific name is an arbitrary combination of letters.

DIAGNOSIS: Males resemble those of *P. balcarica* but can be easily recognized by the extremely elongated retrolateral tibial apophysis (figs. 133–135); females have an elongated atrium and an elevated medial septum with the PRE on the posterior side of the epigynal plate (figs. 136–138).

MALE: Total length 8.25. Carapace 3.30

long, 2.55 wide. Femur II 2.55 long. Eye sizes and interdistances: AME 0.21, ALE 0.17, PME 0.17, PLE 0.17; AME-AME 0.17, AME-ALE 0.06, PME-PME 0.15, PME-PLE 0.21, ALE-PLE 0.17; MOQ length 0.67, front width 0.55, back width 0.51. Leg spination: femora II p0-0-1; tibiae: I v2-2-0; III p1-1-0; IV p1-0-1. Palp with wide conductor narrowing anteriorly, wide embolar base curved anteriorly; retrolateral tibial apophysis long, reaching more than half of cymbial length (figs. 133–135).

FEMALE: Total length 8.40. Carapace 3.30 long, 2.55 wide. Femur II 2.40 long. Eye sizes and interdistances: AME 0.19, ALE 0.17, PME 0.17, PLE 0.17; AME-AME 0.11, AME-ALE 0.03, PME-PME 0.13, PME-PLE 0.23, ALE-PLE 0.17; MOQ length 0.67, front width 0.53, back width 0.48. Leg spination: femora II p0-0-1; tibiae: I v2-2-0; III p1-1-0; IV p1-0-1. Epigynal atrium elongate, with narrow anterior hood situated far from elevated medial septum, septum reinforced laterally, PRE situated on posterior side of epigynal plate (figs. 136, 138); spermathecal ducts short, narrow, curved medially (fig. 137).

OTHER MATERIAL EXAMINED: Six males and four females taken with the types (HDO).

DISTRIBUTION: Southeastern Turkey (map 6).

THE *VINOSUS* GROUP

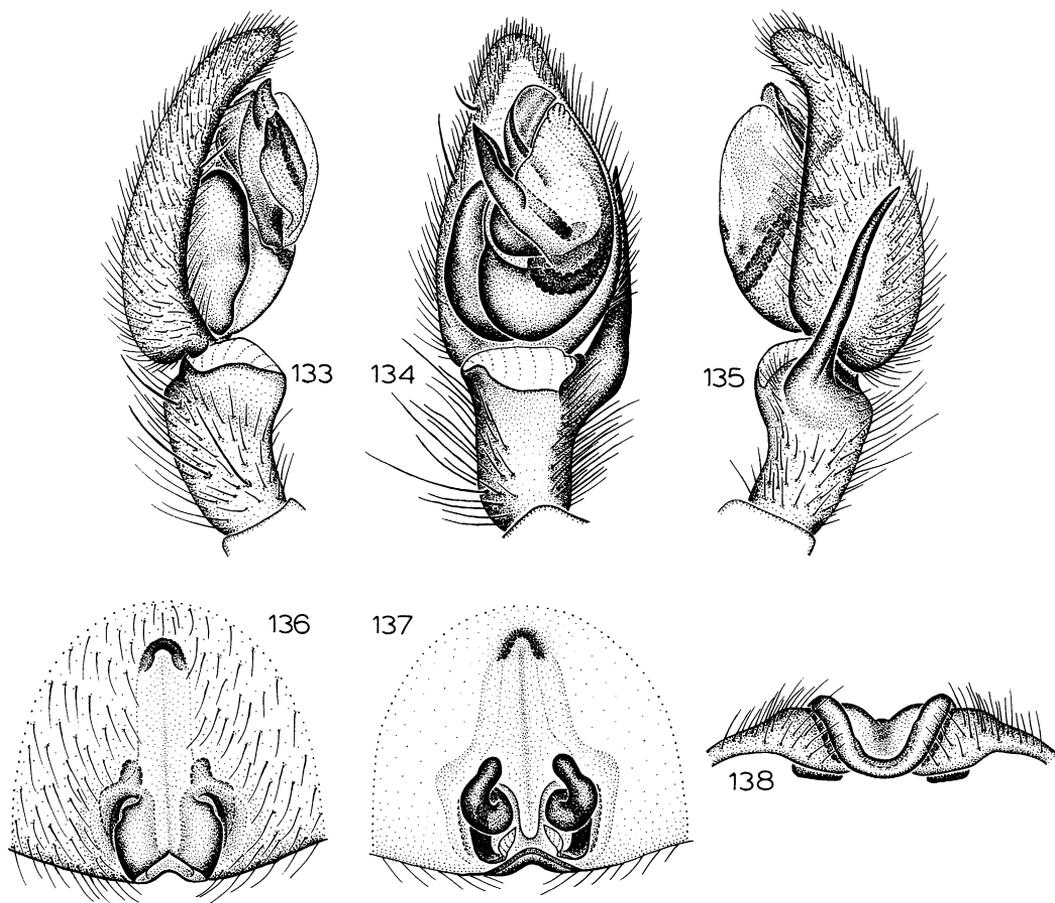
Members of this species group are easily recognized by the long, wide, slightly curved embolus, the small, narrow, membranous conductor, and the triangular retrolateral tibial apophysis with a dorsal projection (as in figs. 139–141, 144–146), and by the elongated epigynal atrium, two anterior atrial hoods, short PRE, deep, posterolaterally directed atrial pockets (fig. 142), and strongly y-shaped spermathecal ducts (fig. 143).

Parasyrisca vinosus (Simon),
new combination

Figures 139–143; Map 6

Drassus vinosus Simon, 1878: 123 (female syntype from Briançon, Hautes Alps, France, should be in MNHN, not examined).

Drassodes vinosus: Simon, 1893: 360. — Lessert, 1910: 52, fig. 44. — Simon, 1914: 130, 207, figs.



Figs. 133–138. *Parasyrisca turkenica*, new species. 133. Left male palp, prolateral view. 134. Same, ventral view. 135. Same, retrolateral view. 136. Epigynum, ventral view. 137. Same, dorsal view. 138. Same, posterior view.

212–214. — Grimm, 1985: 126, figs. 123–125.
— Heimer and Nentwig, 1991: 418, fig. 1102.

DIAGNOSIS: Males resemble those of *P. ulykpani* but can be recognized by the smaller dorsal projection on the retrolateral tibial apophysis and different shape of conductor (figs. 139–141); females have two closely spaced, shallow anterior atrial hoods, an elongated epigynal atrium with long lateral folds, and y-shaped spermathecal ducts (figs. 142, 143).

MALE: Described by Simon (1914).

FEMALE: Described by Simon (1878).

MATERIAL EXAMINED: No locality data, Simon collection #2057 (MNHN), 1♂, 5♀.

DISTRIBUTION: The Pyrenees and western Alps (map 6).

Parasyrisca ulykpani,
new species

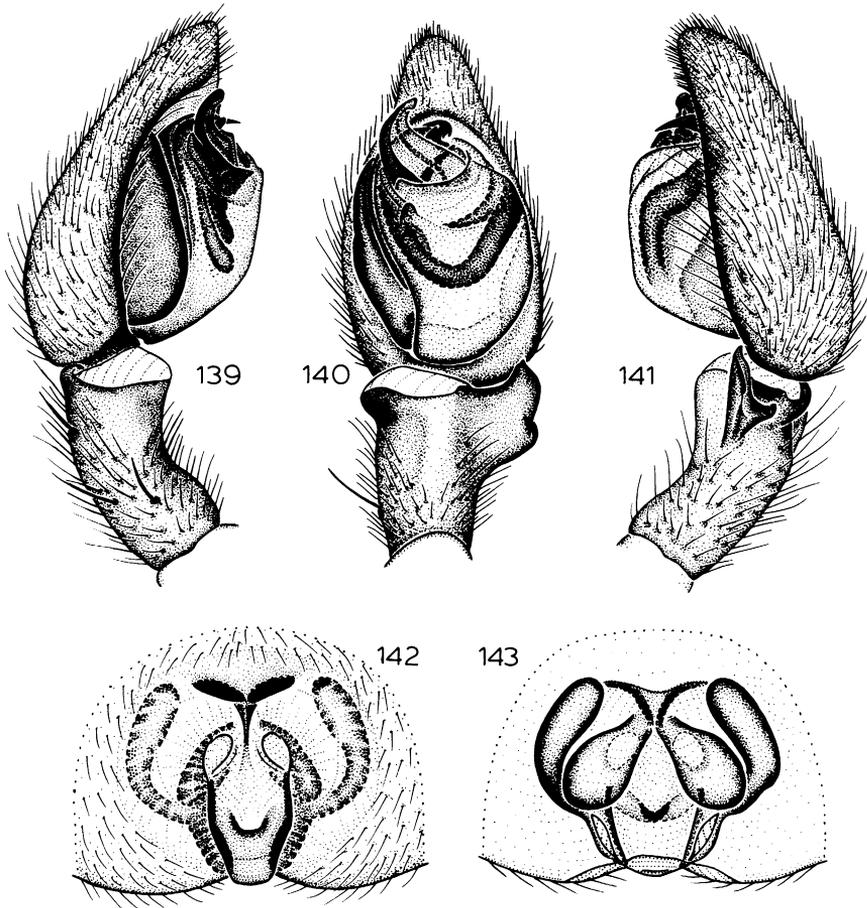
Figures 144–146; Map 7

TYPE: Male holotype taken at an elevation of 2100–2173 m in moss-shrub tundra on Kangai-Kyry Mt., 20 km NW Khol-Oozhu, Tes-Khemsii Dist., Tuva, Russia (July 8–9, 1989; D. V. Logunov), deposited in BINO.

ETYMOLOGY: The specific name is a patronym in honor of one of the collectors of the species.

DIAGNOSIS: This species seems closest to *P. vinosus* but can be separated by the larger dorsal projection of the retrolateral tibial apophysis and the differently shaped conductor (figs. 144–146).

MALE: Total length 5.55. Carapace 2.70



Figs. 139–143. *Parasyrisca vinosus* (Simon). 139. Left male palp, prolateral view. 140. Same, ventral view. 141. Same, retrolateral view. 142. Epigynum, ventral view. 143. Same, dorsal view.

long, 2.10 wide. Femur II 2.25 long. Eye sizes and interdistances: AME 0.17, ALE 0.15, PME 0.13, PLE 0.13; AME-AME 0.10, AME-ALE 0.04, PME-PME 0.11, PME-PLE 0.19, ALE-PLE 0.15; MOQ length 0.44, front width 0.38, back width 0.40. Leg spination: femora II p0-0-1; tibiae: I v2-2-0; II v1-2-0; III p1-1-0; IV p1-0-1. Palp with long, wide, curved embolus, short, narrow, membranous conductor; triangular retrolateral tibial apophysis with dorsal projection shifted anteriorly (figs. 144–146).

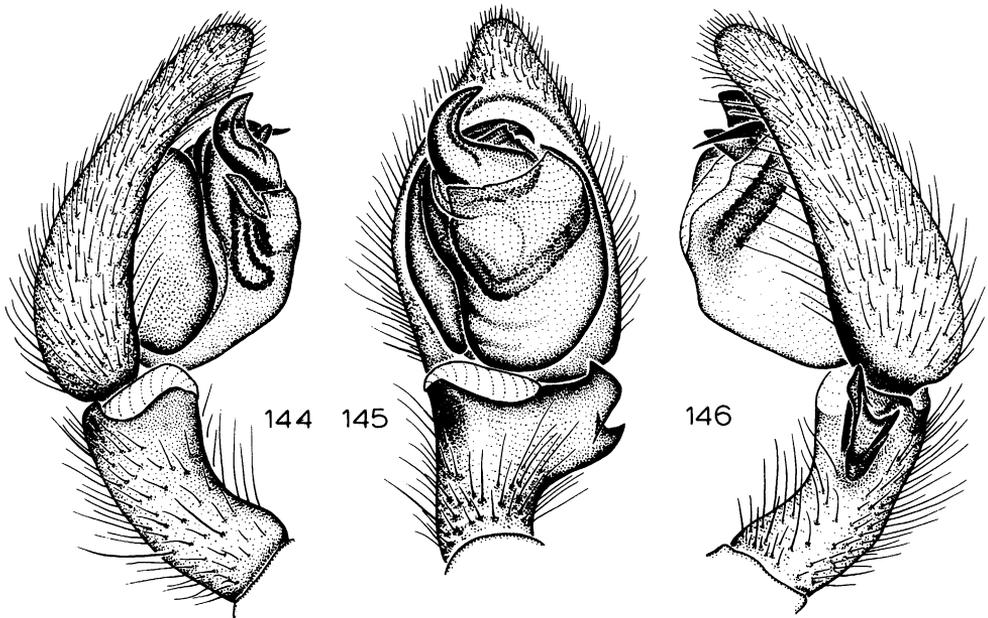
FEMALE: Unknown.

OTHER MATERIAL EXAMINED: **Mongolia:** *Khubsugul*: Bayangol, 70 km from S apex of Khubsugul Lake, July 4–16, 1986, mountain tundra (K. Ulykpan, ZISP), 2♂.

DISTRIBUTION: Known only from Tuva in Russia and northern Mongolia (map 7).

THE *GUZERIPLI* GROUP

Members of this species group are easily recognized by the presence in males of a long and narrow embolus situated retrolaterally on the palpal bulb, a narrow, prolateral, membranous conductor, a conical retrolateral tibial apophysis (as in figs. 148–151, 153–155) and in females of an elongated epigynal atrium, a narrow median septum, parallel epigynal folds, and the absence of an elevated PRE (figs. 152, 156) as well as narrow and closely spaced longitudinal spermathecal ducts (fig. 157).



Figs. 144–146. *Parasyriscus ulykpani*, new species. 144. Left male palp, prolateral view. 145. Same, ventral view. 146. Same, retrolateral view.

Parasyriscus guzeripli,
new species

Figures 147–157; Map 7

TYPES: Male holotype and female allotype taken at an elevation of 2300 m in the alpine zone of Pseashkho Mt., The Caucasian Reserve, Krasnaya Polyana, Krasnodar, Russia (July 17, 1976; V. I. Ovtsharenko), deposited in ZISP.

ETYMOLOGY: The specific name is an arbitrary combination of letters.

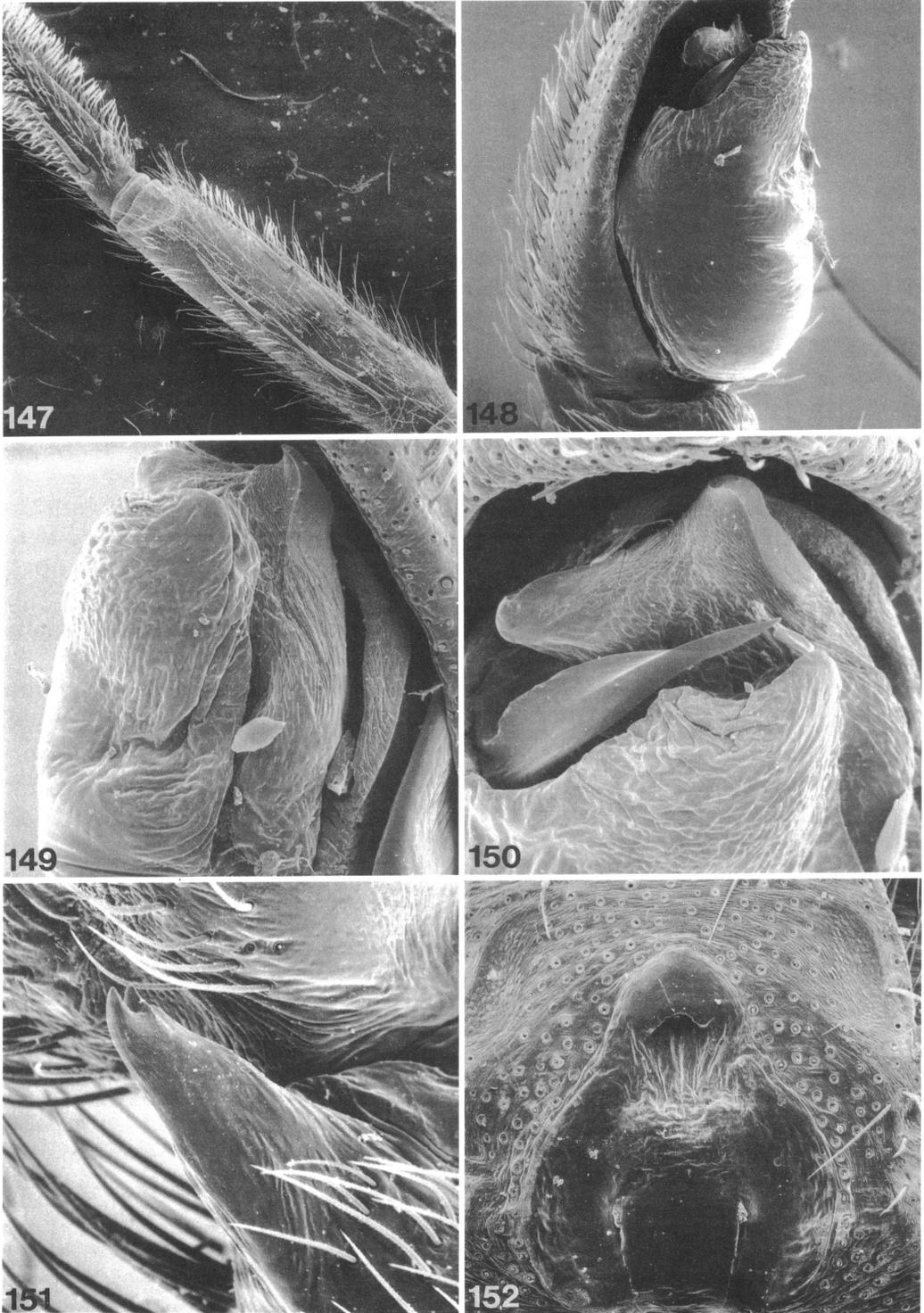
DIAGNOSIS: This species has a long, narrow embolus situated retrolaterally on the palpal bulb, a narrow, prolateral, membranous conductor, and a short retrolateral tibial apophysis (figs. 148–151, 153–155) in males, and an elongated epigynal atrium, a narrow median septum, parallel epigynal folds (figs. 152, 156), and closely spaced, longitudinal spermathecal ducts (fig. 157) in females.

MALE: Total length 4.95. Carapace 2.40 long, 1.88 wide. Femur II 1.80 long. Eye sizes and interdistances: AME 0.11, ALE 0.12, PME 0.11, PLE 0.11; AME-AME 0.08, AME-ALE 0.02, PME-PME 0.08, PME-PLE 0.15, ALE-PLE 0.09; MOQ length 0.34, front width

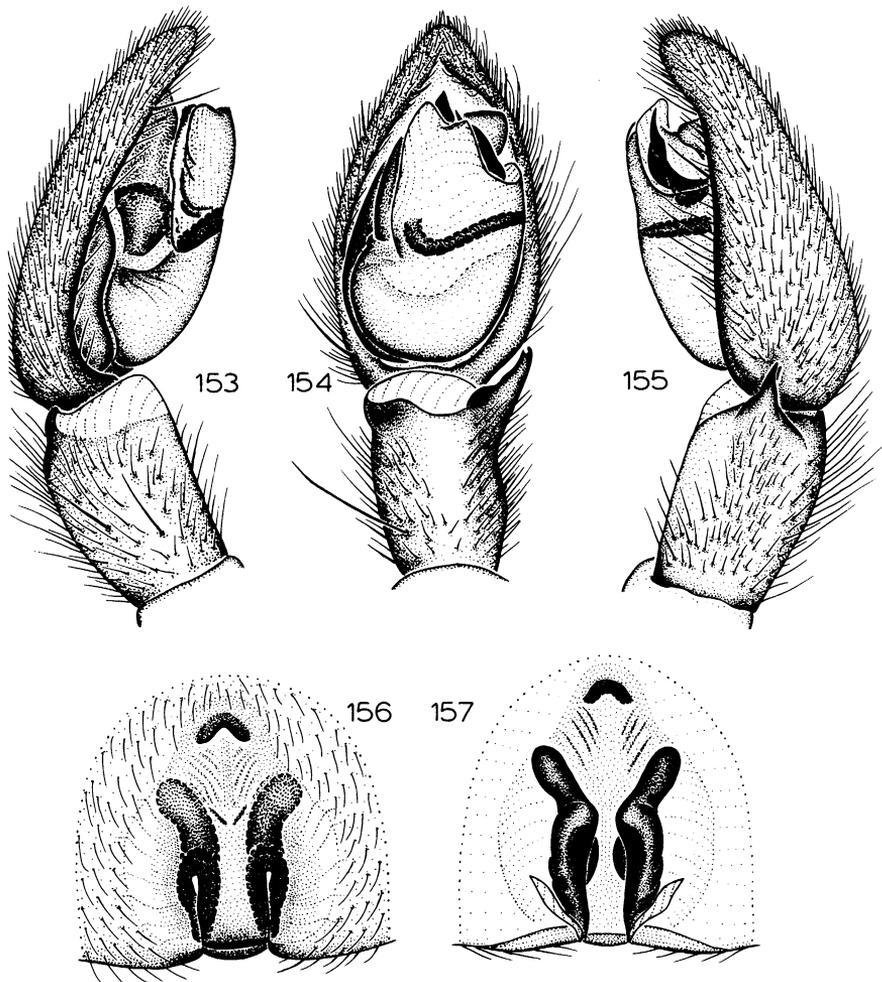
0.30, back width 0.29. Leg spination: femora: II p1-1-0; III r0-0-1; tibiae: II v1-1-2; III p1-1-0; IV p0-1-1; metatarsi III r2-0-2. Palp with long embolus narrowed, sharpened at tip, prolateral membranous conductor; short conical retrolateral tibial apophysis, slightly bifurcated at tip (figs. 148–151, 153–155).

FEMALE: Total length 9.00. Carapace 3.00 long, 2.40 wide. Femur II 1.95 long. Eye sizes and interdistances: AME 0.15, ALE 0.17, PME 0.13, PLE 0.15; AME-AME 0.11, AME-ALE 0.03, PME-PME 0.11, PME-PLE 0.17, ALE-PLE 0.10; MOQ length 0.43, front width 0.38, back width 0.38. Leg spination: femora IV p0-2-2; tibiae: II v2-2-0; III p1-1-0; IV p1-0-1; metatarsi III r2-0-2. Epigynal atrium elongate, with one anterior hood situated far from atrium, narrow median septum, parallel epigynal folds (figs. 152, 156); spermathecal ducts closely spaced, slightly curved longitudinally (fig. 157).

OTHER MATERIAL EXAMINED: **Russia:** *Krasnodar:* Abago Mt., Guzeripl, Chugush Mt., Mramornaya Mt., Pseashkho Mt., The Caucasian reserve, June 20–July 28, 1974–1976, elev. 1900–3000 m, alpine zone, pitfall traps and under rocks (V. I. Ovtsharenko,



Figs. 147–152. *Parasyrisca guzeripli*, new species. 147. Tibia of leg I, ventral view. 148. Right male palp, retrolateral view. 149. Apical portion of male palp, prolateral view. 150. Same, apical view. 151. Retrolateral tibial apophysis, retrolateral view. 152. Epigynum, ventral view.



Figs. 153–157. *Parasyrisca guzeripli*, new species. 153. Left male palp, prolateral view. 154. Same, ventral view. 155. Same, retrolateral view. 156. Epigynum, ventral view. 157. Same, dorsal view.

ZISP, AMNH, USNM), 7♂, 172♀; Achishkho Mt., July 10, 1938, elev. 2000 m, alpine zone, under rocks (I. T. Palyanichka, ZISP), 2♀.

DISTRIBUTION: Known only from the western Caucasus in Russia (map 7).

THE *BREVICEPS* GROUP

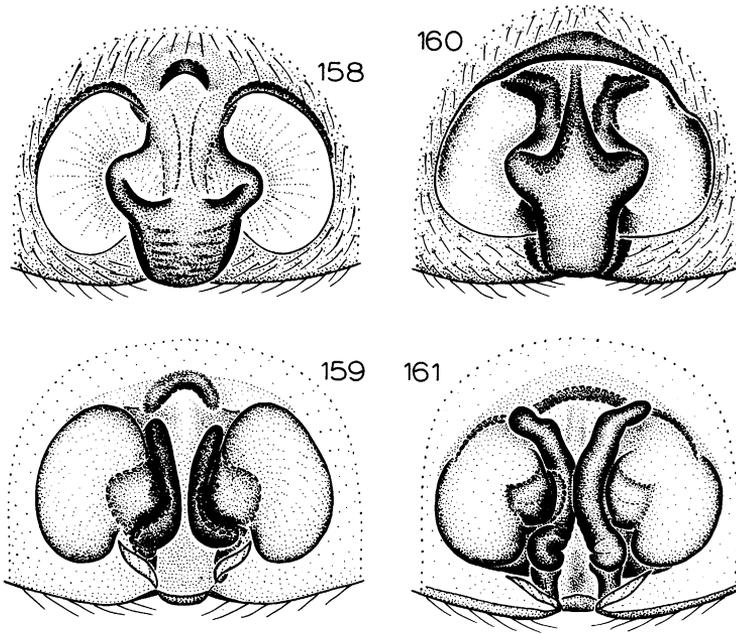
Members of this species group are easily recognized in males by the presence of a flat, long and strongly curved embolus, situated apically on the palpal bulb, a small and narrow membranous conductor, two tibial apophyses (a conical retrolateral apophysis and a flat, bifid retrodorsal apophysis, as in figs. 168–176, 179–181) and in females by

the wide anterior atrial hood, wide and raised median septum dividing the epigynal atrium into two parts (as in figs. 158, 167), and the long, narrow, anteriorly widened, strongly curved, closely spaced spermathecal ducts (figs. 159, 192).

Parasyrisca breviceps (Kroneberg), new combination

Figures 158, 159; Map 7

Drassus breviceps Kroneberg, 1875: 21, fig. 43 (three female syntypes from Auchidagana Mt. pass, between Auchi and Oburdon, Turkestan Mt. ridge, Tadjikistan, in ZMUM, examined).
Drassodes breviceps: Reimoser, 1919: 198.



Figs. 158–161. 158, 159. *Parasyrisca breviceps* (Kroneberg). 160, 161. *P. gissarika*, new species. 158, 160. Epigynum, ventral view. 159, 161. Same, dorsal view.

DIAGNOSIS: Females resemble those of *P. anzobica*, but can be recognized by the narrow epigynal hood situated near the epigynal atrium, the elongated and narrow median septum dividing the epigynal atrium (fig. 158), and the long, tiny spermathecal ducts (fig. 159).

MALE: Unknown.

FEMALE: Described by Kroneberg (1875).

MATERIAL EXAMINED: **Tadjikistan:** Auchidagana Mt. pass (= "Auchi Pass"), between Auchi (= Avchi) and Oburdon area, Turkestan Mt. ridge, June 2, 1870 (A. P. Fedtchenko, ZMUM), 3♀ (syntypes).

DISTRIBUTION: Western Tadjikistan (map 7).

***Parasyrisca anzobica*,**
new species

Figures 162–178; Map 8

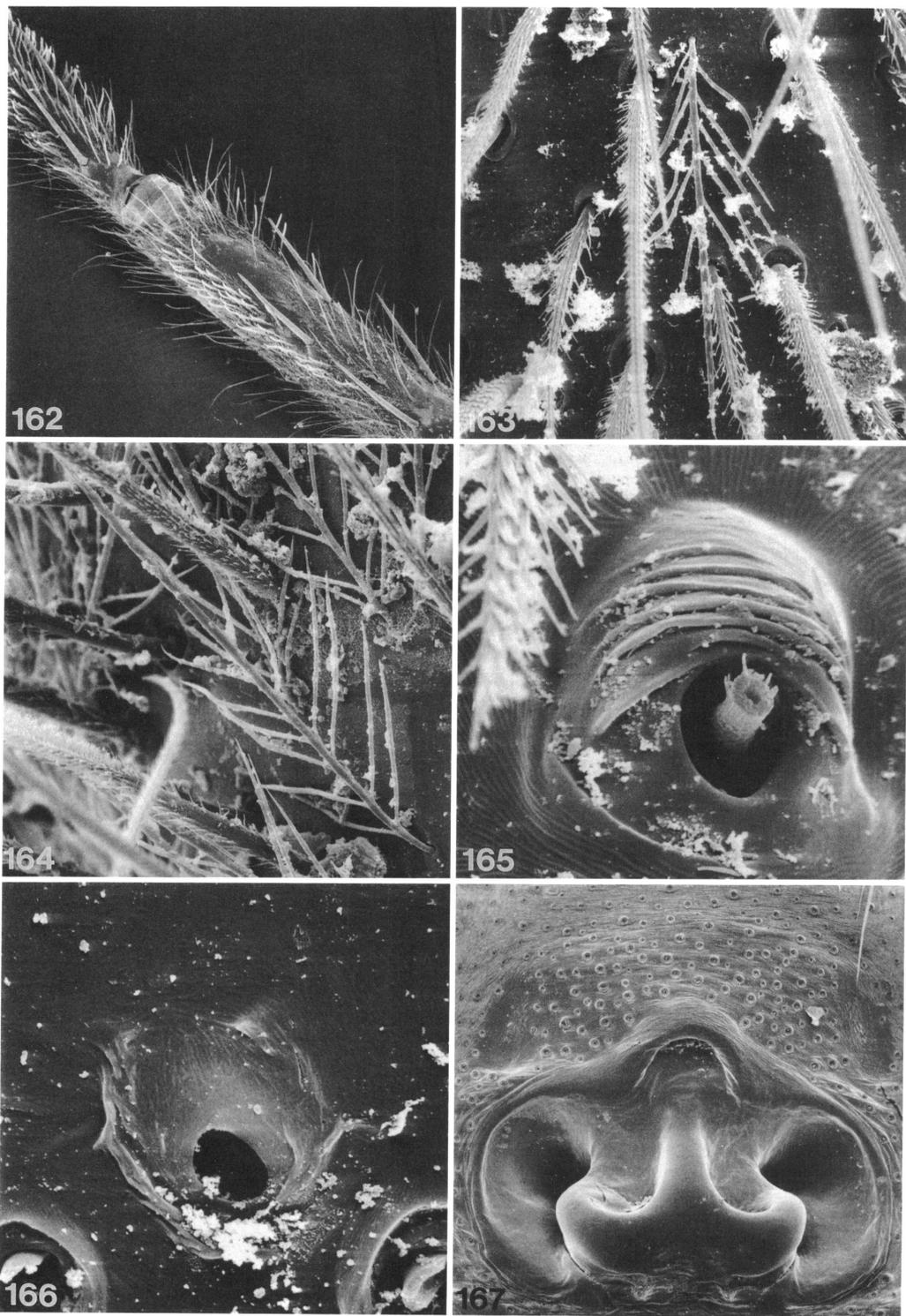
TYPES: Male holotype and female allotype from Anzob Mt. pass, Gissar Mt. range, Tadjikistan (July 9, 1988; S. V. Ovchinnikov), deposited in ZISP.

ETYMOLOGY: The specific name is an arbitrary combination of letters.

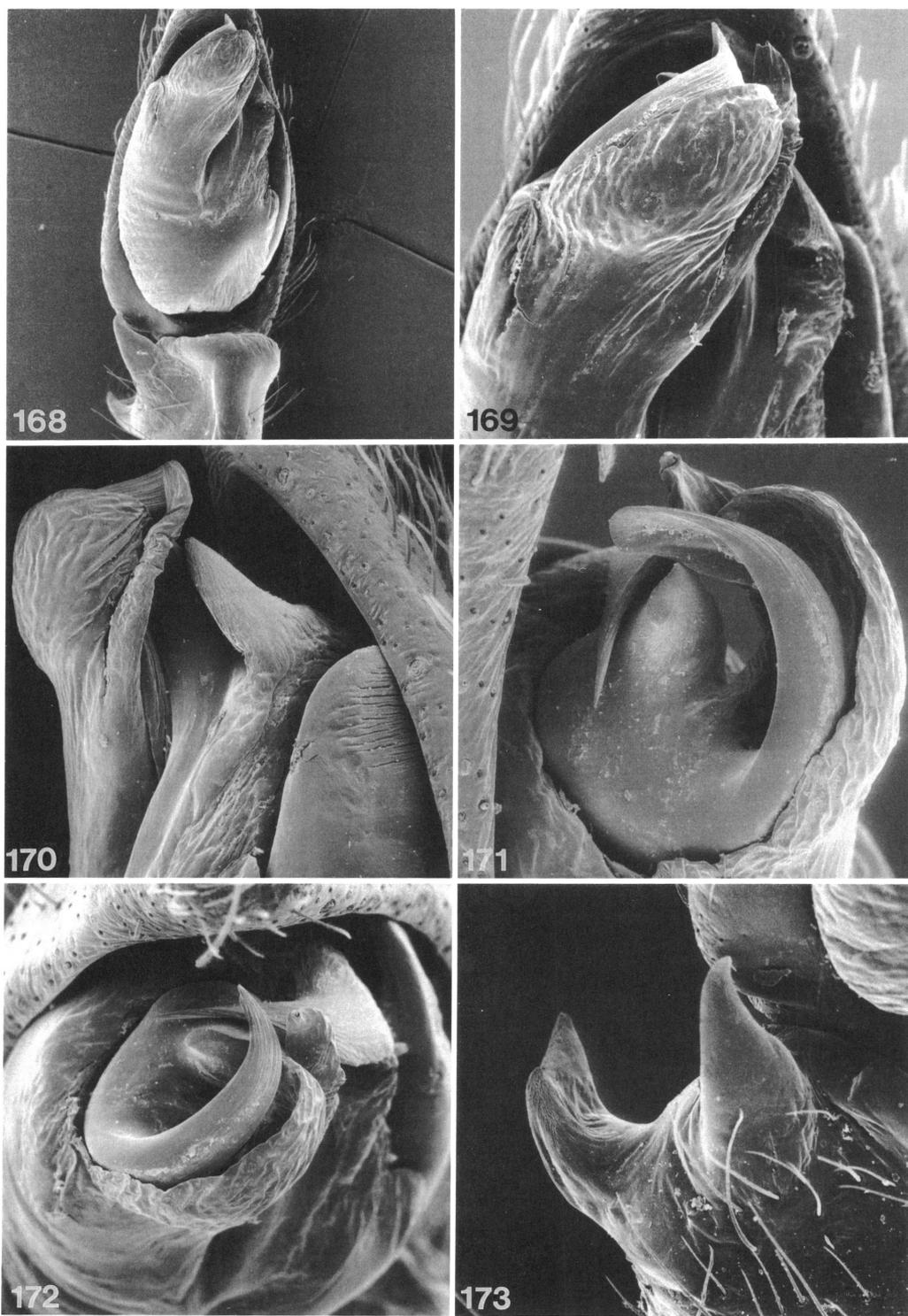
DIAGNOSIS: Females resemble those of *P. breviceps* but can be distinguished by the more anteriorly spaced atrial epigynal hood, the wide median epigynal septum (figs. 167, 177), and the short, wide spermathecal ducts (figs. 178); males have a long, strongly curved embolus, situated apically on the palpal bulb, a long, membranous conductor, a conical retrolateral tibial apophysis and a flat, bifid retrodorsal tibial apophysis (figs. 168–176).

MALE: Total length 7.05. Carapace 3.08 long, 2.40 wide. Femur II 2.40 long. Eye sizes and interdistances: AME 0.11, ALE 0.14, PME 0.13, PLE 0.15; AME-AME 0.13, AME-ALE 0.06, PME-PME 0.15, PME-PLE 0.19, ALE-PLE 0.13; MOQ length 0.44, front width 0.40, back width 0.42. Leg spination: femora IV p0-0-1; tibiae: I v2-2-0; II v1-2-0; III p1-1-0; IV p1-0-1, v2-2-2, r1-1-1; metatarsi III r2-2-2. Palp with elongate, flat, strongly curved embolus, situated and directed apically; conductor long, membranous; conical retrolateral tibial apophysis slightly curved at tip, retrodorsal apophysis wide, flat, strongly bifurcated (figs. 168–176).

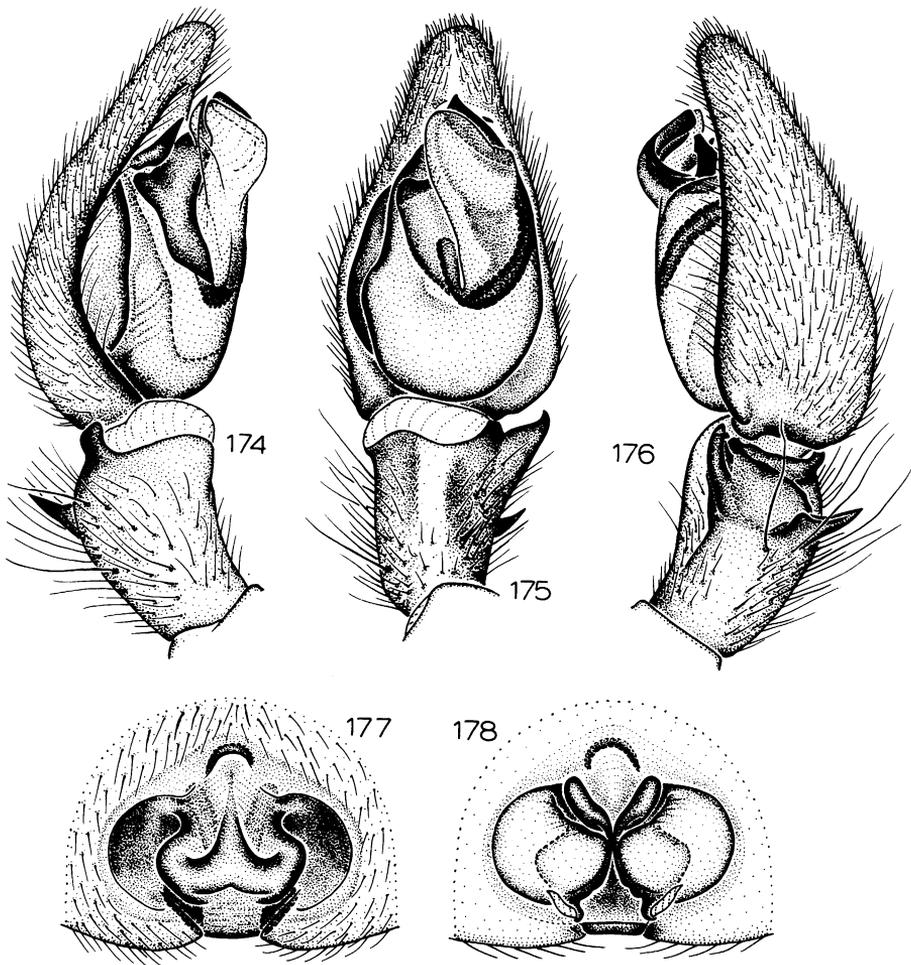
FEMALE: Total length 8.00. Carapace 2.85 long, 2.25 wide. Femur II 2.25 long. Eye sizes



Figs. 162–167. *Parasyrisca anzobica*, new species. 162. Tibia of leg I, ventral view. 163, 164. Tibial setae, ventral view. 165. Trichobothrial base, dorsal view. 166. Tarsal organ, dorsal view. 167. Epigynum, ventral view.



Figs. 168–173. *Parasyrisca anzobica*, new species. 168. Right male palp, ventral view. 169. Apical portion of male palp, ventral view. 170. Same, prolateral view. 171. Same, retrolateral view. 172. Same, apical view. 173. Retrolateral and retrodorsal tibial apophyses, retrolateral view.



Figs. 174–178. *Parasyrisca anzobica*, new species. 174. Left male palp, prolateral view. 175. Same, ventral view. 176. Same, retrolateral view. 177. Epigynum, ventral view. 178. Same, dorsal view.

and interdistances: AME 0.11, ALE 0.14, PME 0.13, PLE 0.15; AME-AME 0.11, AME-ALE 0.06, PME-PME 0.13, PME-PLE 0.19, ALE-PLE 0.15; MOQ length 0.42, front width 0.29, back width 0.40. Leg spination: femora IV p0-0-1; tibiae: I v2-2-0; II v1-2-0; III p1-1-0; IV p1-1-0; metatarsi III r2-2-2. Epigynal atrium deep, with short, anteriorly spaced atrial hood, median septum wide (figs. 167, 177); spermathecal ducts short, wide, curved, closely spaced (fig. 178).

OTHER MATERIAL EXAMINED: **Tadjikistan:** Anzob canyon, Gissar Mt. range, July 8, 1988 (S. L. Zonstein, ZISP), 1♂, 1♀; Anzob Mt. pass, Gissar Mt. range, June 22–Aug., 1965–1967, elev. 3450 m (E. M. Andreeva, Chikatunov,

Seleznev, Seredina, ZISP, AMNH, PAN), 8♂, 35♀.

DISTRIBUTION: Tadjikistan (map 8).

***Parasyrisca shakhristanica*,**
new species

Figures 179–183; Map 8

TYPES: Male holotype and female allotype taken at an elevation of 2600–2800 m at Kusavli-sai, Shakhristan, Turkestan Mt. ridge, Tadjikistan (June 28–29, 1970; L. A. Zhylytsova), deposited in ZISP.

ETYMOLOGY: The specific name is an arbitrary combination of letters.

DIAGNOSIS: This species seems closest to

P. breviceps and *P. anzobica* but can be separated in males by the short, narrow membranous conductor, the narrow retrolateral tibial apophysis, and the flat, retrodorsal tibial apophysis with an elongate dorsal projection (figs. 179–181) and in females by the wide atrial hood, narrow median epigynal septum (fig. 182), and wide, long, posteriorly strongly curved spermathecal ducts (fig. 183).

MALE: Total length 12.90. Carapace 4.65 long, 3.90 wide. Femur II 4.50 long. Eye sizes and interdistances: AME 0.19, ALE 0.21, PME 0.15, PLE 0.17; AME-AME 0.17, AME-ALE 0.08, PME-PME 0.21, PME-PLE 0.34, ALE-PLE 0.25; MOQ length 0.55, front width 0.53, back width 0.53. Leg spination: femora: III r0-1-1; IV p0-0-1; tibiae: I v2-2-0; II v2-2-0; III p1-1-0, v1-2-2; IV d1-1-0, p1-1-1, v2-2-2, r2-2-1; metatarsi: III r2-1-2; IV r2-1-2. Palp with flat, strongly curved embolus, directed anteriorly, conductor short, narrow, slightly curved, membranous; palpal tibia with narrow retrolateral apophysis, flat, bifurcated retrodorsal apophysis bearing elongate dorsal projection, length of palpal tibia and cymbium almost equal (figs. 179–181).

FEMALE: Total length 12.00. Carapace 3.30 long, 2.70 wide. Femur II 2.40 long. Eye sizes and interdistances: AME 0.15, ALE 0.17, PME 0.11, PLE 0.15; AME-AME 0.13, AME-ALE 0.04, PME-PME 0.15, PME-PLE 0.23, ALE-PLE 0.19; MOQ length 0.44, front width 0.40, back width 0.44. Leg spination: femora: III r0-1-1; IV p0-0-1; tibiae: I v2-2-0; II v1-2-0; III v1-2-2, r2-1-0; IV d1-1-1, r2-1-1. Epigynal atrium deep, trapeziform, with slightly curved, broad anterior atrial hood, median septum narrow (fig. 182); spermathecal ducts wide, long, approximate, strongly curved posteriorly (fig. 183).

OTHER MATERIAL EXAMINED: **Tadjikistan:** Kusavli-sai, Shakhristan, Turkestan Mt. ridge, June 28–Sept. 29, 1970–1972, elev. 2600–3200 m (E. M. Andreeva, A. Statsenko, L. Zharkova, ZISP, AMNH), 10♀.

DISTRIBUTION: Tadjikistan (map 8).

***Parasyrisca chikatunovi*,**
new species

Figures 184–188; Map 9

TYPES: Male holotype and female allotype from Anzob Mt. pass., Gissar Mt. range, Tad-



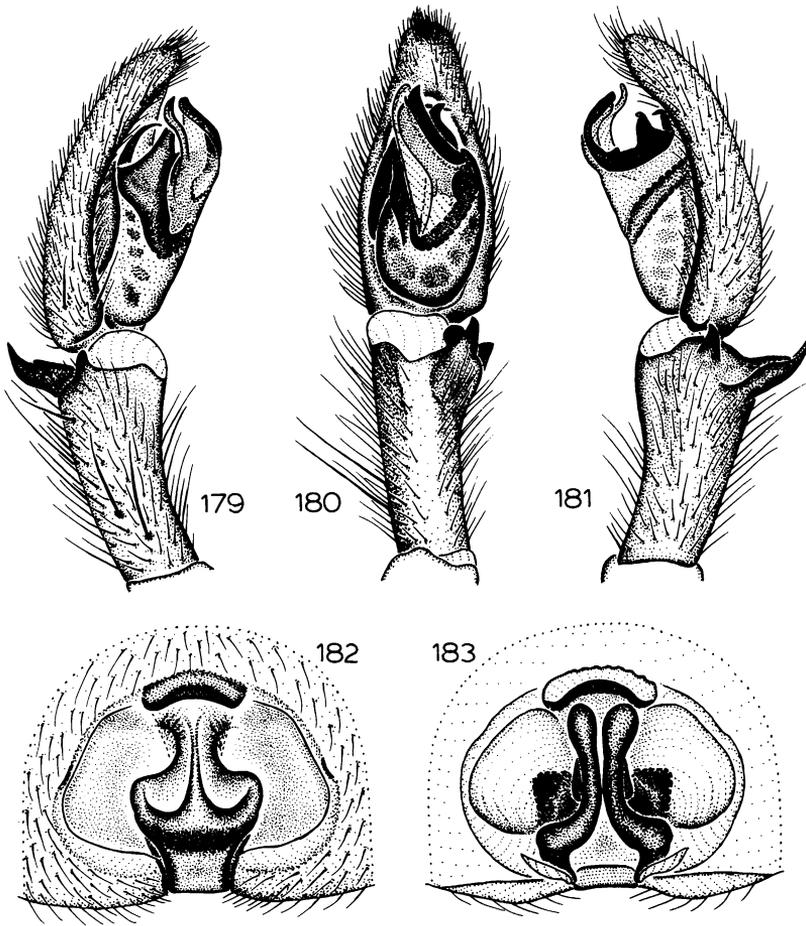
Map 8. Distribution of *Parasyrisca anzobica* (square), *P. koksu* (circle), *P. iskander* (triangle), and *P. shakhristanica* (inverted triangle).

jikistan (♂: July 25, 1966, Chikatunov; ♀: July 16, 1967, Seleznev), deposited in ZISP.

ETYMOLOGY: The specific name is a patronym in honor of one of the collectors of the species.

DIAGNOSIS: This species seems closest to *P. shakhristanica* but can be separated in males by the short embolus, very short and strongly curved membranous conductor, and the shape of the flat retrodorsal tibial apophysis (figs. 184–186) and in females by the oval atrium with a wide hood (fig. 187) and the straight, parallel spermathecal ducts (fig. 188).

MALE: Total length 8.70. Carapace 4.05 long, 3.00 wide. Femur II 3.45 long. Eye sizes and interdistances: AME 0.19, ALE 0.21, PME 0.13, PLE 0.19; AME-AME 0.17, AME-ALE 0.08, PME-PME 0.17, PME-PLE 0.32, ALE-PLE 0.12; MOQ length 0.51, front width 0.49, back width 0.49. Leg spination: femora: III p0-1-1; IV p0-0-1; tibiae: I, II v2-2-0; III p1-1-1, v2-2-2, r2-0-1; IV d1-1-0, p2-1-1, v2-2-2, r2-1-1; metatarsi IV r1-0-2. Palp with short embolus, narrow, short, strongly curved, membranous conductor; narrow retrolateral tibial apophysis slightly curved at tip, flat, bifurcate retrodorsal apophysis with equally sized dorsal, lateral projections, cymbium almost twice length of palpal tibia (figs. 184–186).



Figs. 179–183. *Parasyrisca shakhristanica*, new species. 179. Left male palp, prolateral view. 180. Same, ventral view. 181. Same, retrolateral view. 182. Epigynum, ventral view. 183. Same, dorsal view.

FEMALE: Total length 12.00. Carapace 4.05 long, 3.38 wide. Femur II 3.45 long. Eye sizes and interdistances: AME 0.19, ALE 0.21, PME 0.17, PLE 0.18; AME-AME 0.14, AME-ALE 0.06, PME-PME 0.21, PME-PLE 0.30, ALE-PLE 0.23; MOQ length 0.56, front width 0.48, back width 0.51. Leg spination: femora: I p0-1-1; III r0-1-1; IV p0-0-1; tibiae: I, II v2-2-0; III d1-1-0, v2-2-2; IV d1-1-0, p2-1-1, v2-2-2, r2-1-1; metatarsi: I r2-0-2; IV v2-1-2. Epigynal atrium oval, with wide hood forming anterior border (fig. 187), spermathecal ducts straight, parallel, widely spaced (fig. 188).

OTHER MATERIAL EXAMINED: **Tadjikistan:** Anzob Mt. pass, Gissar Mt. range, July 17–22, 1967, elev. 3450 m, alpine zone (E. M. Andreeva, Seredina, ZISP, AMNH, PAN),

8♀; July 9, 1988 (S. V. Ovchinnikov, ZISP), 1♀.

DISTRIBUTION: Tadjikistan (map 9).

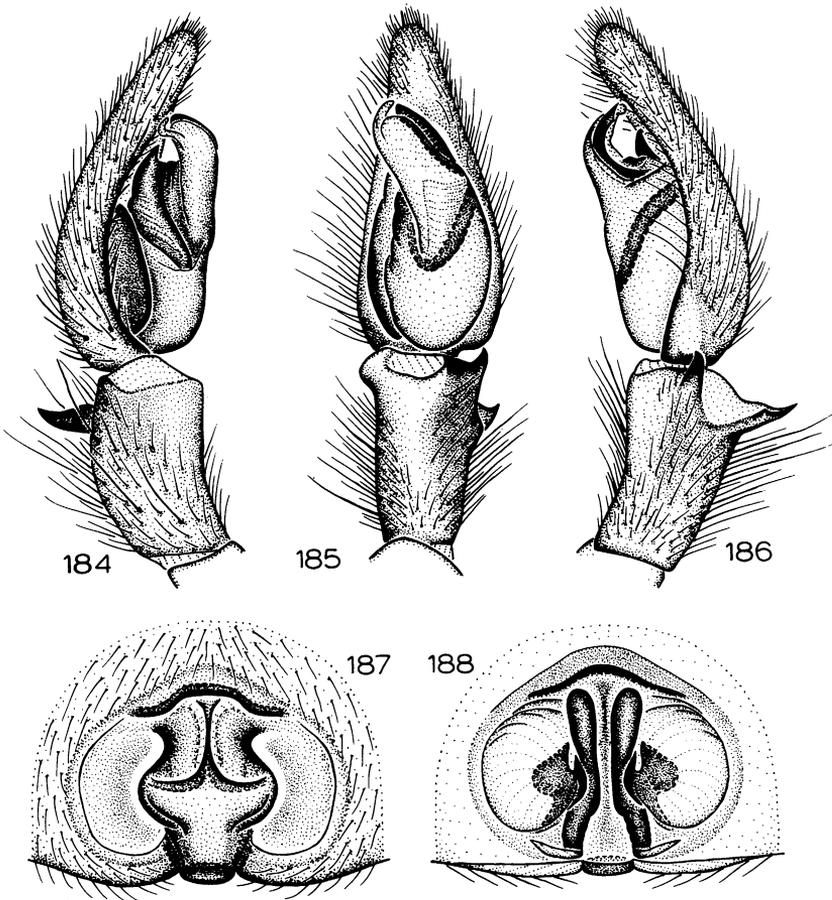
Parasyrisca gissarika,
new species

Figures 160, 161; Map 9

TYPE: Female holotype from Maikhura River, spurs of Gissar Mt. range, Tadjikistan (Aug. 20, 1978; N. Y. Polchaninova), deposited in ZISP.

ETYMOLOGY: The specific name is an arbitrary combination of letters.

DIAGNOSIS: This species seems closest to *P. chikatunovi* but can be separated by the broad anterior epigynal hood, the elongated median epigynal septum (fig. 160), and the



Figs. 184–188. *Parasyrisca chikatanovi*, new species. 184. Left male palp, prolateral view. 185. Same, ventral view. 186. Same, retrolateral view. 187. Epigynum, ventral view. 188. Same, dorsal view.

x-shaped, large, anteriorly narrowed spermathecal ducts (fig. 161).

MALE: Unknown.

FEMALE: Total length 9.00. Carapace 3.60 long, 2.85 wide. Femur II 3.15 long. Eye sizes and interdistances: AME 0.18, ALE 0.17, PME 0.17, PLE 0.17; AME-AME 0.15, AME-ALE 0.06, PME-PME 0.13, PME-PLE 0.19, ALE-PLE 0.15; MOQ length 0.51, front width 0.46, back width 0.46. Leg spination: femora IV p0-0-1; tibiae: I, II v2-2-0; III d1-0-0, v2-2-2; IV d1-0-0, v2-2-2, r2-1-1; metatarsi III r2-1-2. Epigynal atrium deep, with broad anterior hood, median septum elongate (fig. 160); spermathecal ducts large, narrowed anteriorly, curved laterally, overlapping medially (fig. 161).

OTHER MATERIAL EXAMINED: None.

DISTRIBUTION: Western Tadjikistan (map 9).

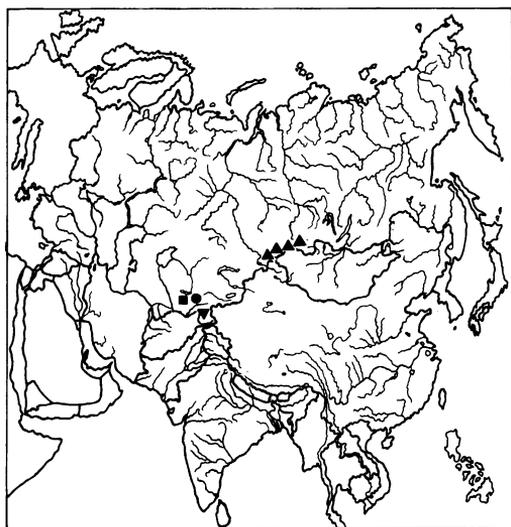
***Parasyrisca koku*, new species**

Figures 189–190; Map 8

TYPE: Female holotype taken at an elevation of 2500–2900 m at Koxu River, Alaiskii Mt. range, Osh, Kirgizstan (Aug. 17, 1985; S. L. Zonstein), deposited in ZISP.

ETYMOLOGY: The specific name is a noun in apposition taken from the type locality.

DIAGNOSIS: This species seems closest to *P. gissarika* but can be separated by the narrow anterior atrial hood, the widened median epigynal septum (fig. 189), and the x-shaped, anteriorly widened spermathecal ducts (fig. 190).



Map 9. Distribution of *Parasyrisca chikatunovi* (square), *P. gissarika* (circle), *P. hippai* (triangles), and *P. paironica* (inverted triangle).

MALE: Unknown.

FEMALE: Total length 9.00. Carapace 4.05 long, 3.15 wide. Femur II 3.15 long. Eye sizes and interdistances: AME 0.19, ALE 0.17,

PME 0.13, PLE 0.17; AME-AME 0.18, AME-ALE 0.07, PME-PME 0.15, PME-PLE 0.25, ALE-PLE 0.21; MOQ length 0.51, front width 0.48, back width 0.49. Leg spination: femora: II p0-0-1; IV p0-0-1; tibiae: I, II v2-2-0; III v2-2-2; IV d1-0-0, v2-2-2; metatarsi III r2-0-2. Epigynal atrium deep, with narrow anterior hood, wide median septum (fig. 189); spermathecal ducts large, widened anteriorly, curved, slightly overlapped medially (fig. 190).

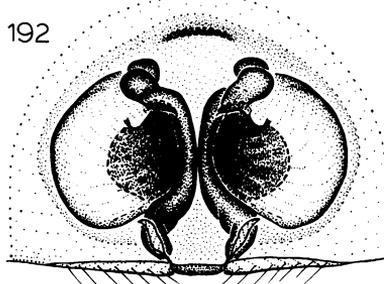
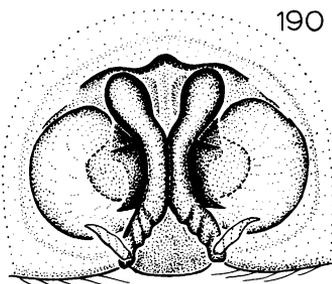
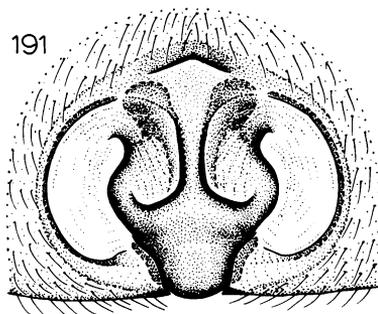
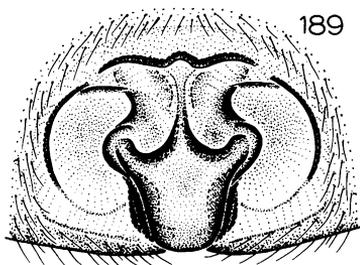
OTHER MATERIAL EXAMINED: Kirgizstan: Kyzyl-Talaa, N slope Alaiskii Mt. range, Osh, June 22, 1970, elev. 3200–3500 m (M. Zapryagaev, ZISP), 1♀; Mazar-sai, nr. Kyzyl-Talaa, N slope Alaiskii Mt. range, Osh, June 21, 1970, elev. 3500–4000 m (M. Zapryagaev, ZISP), 1♀.

DISTRIBUTION: Kirgizstan (map 8).

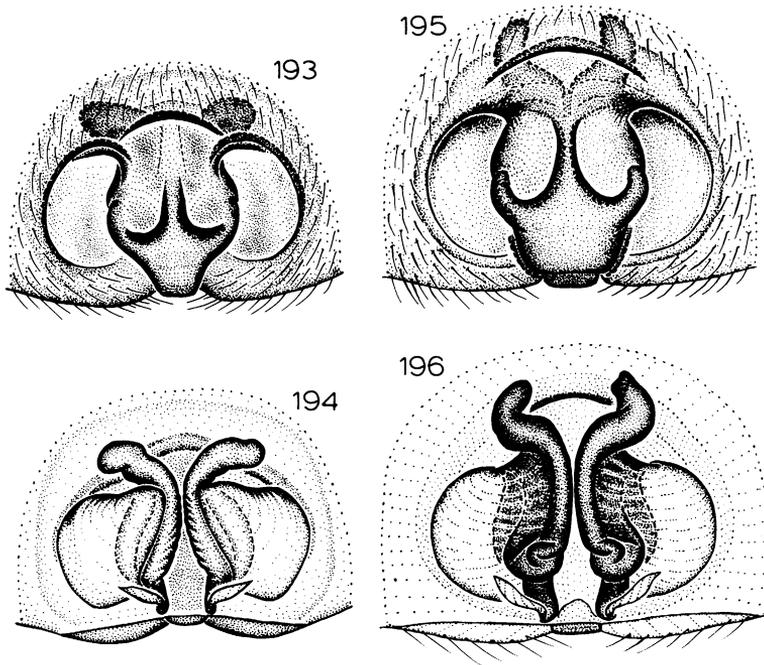
Parasyrisca andreevae,
new species

Figures 191, 192; Map 2

TYPE: Female holotype taken at an elevation of 2900 m on the N slope of Gissar Mt. range, Tadjikistan (Aug. 20, 1968; E. M. Andreeva), deposited in ZISP.



Figs. 189–192. 189, 190. *Parasyrisca koksui*, new species. 191, 192. *P. andreevae*, new species. 189, 191. Epigynum, ventral view. 190, 192. Same, dorsal view.



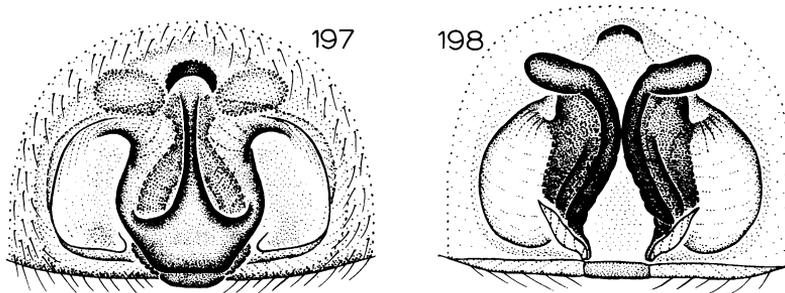
Figs. 193–196. 193, 194. *Parasyrisca iskander*, new species. 195, 196. *P. paironica*, new species. 193, 195. Epigynum, ventral view. 194, 196. Same, dorsal view.

ETYMOLOGY: The specific name is a patronym in honor of the collector of the species, who provided numerous specimens for this study.

DIAGNOSIS: This species seems closest to *P. iskander* but can be separated by the narrow anterior atrial hood, the elongated median epigynal septum (fig. 191), and the strongly curved ventrally, anteriorly narrowed spermathecal ducts (fig. 192).

MALE: Unknown.

FEMALE: Total length 7.65. Carapace 3.00 long, 2.40 wide. Femur II 2.10 long. Eye sizes and interdistances: AME 0.14, ALE 0.15, PME 0.11, PLE 0.15; AME-AME 0.10, AME-ALE 0.04, PME-PME 0.13, PME-PLP 0.19, ALE-PLP 0.15; MOQ length 0.44, front width 0.38, back width 0.40. Leg spination: femora IV p0-0-1; tibiae: I v2-2-0; II v1-2-0; III p1-0-1; IV p1-0-1; metatarsi III r2-1-2. Epigynal



Figs. 197–198. *Parasyrisca vorobica*, new species. 197. Epigynum, ventral view. 198. Same, dorsal view.

atrium deep, with narrow anterior hood, median septum elongate (fig. 191); spermathecal ducts closely spaced, slightly narrowed anteriorly, strongly curved ventrally (fig. 192).

OTHER MATERIAL EXAMINED: **Tadjikistan:** N slope, Gissar Mt. range, Aug. 20, 1968, elev. 2900 m (E. M. Andreeva, ZISP), 2♀, Aug. 19, 1969, elev. 3400 m (E. M. Andreeva, ZISP, AMNH), 2♀.

DISTRIBUTION: Tadjikistan (map 2).

Parasyrisca iskander,
new species

Figures 193, 194; Map 8

TYPE: Female holotype taken at an elevation of 2450 m in the environs of Iskander-Kul Lake, N to Kara-Kul Lake, Gorno-Badakhshan area, Tadjikistan (July 21, 1976; V. Turkov), deposited in ZISP.

ETYMOLOGY: The specific name is a noun in apposition taken from the type locality.

DIAGNOSIS: This species seems closest to *P. andreevae* but can be separated by the broad atrial hood and rounded median epigynal septum (fig. 193) and the strongly curved laterally, anteriorly widened, elongate spermathecal ducts (fig. 194).

MALE: Unknown.

FEMALE: Total length 6.90. Carapace 3.20 long, 2.48 wide. Femur II 2.25 long. Eye sizes and interdistances: AME 0.15, ALE 0.15, PME 0.13, PLE 0.15; AME-AME 0.13, AME-ALE 0.04, PME-PME 0.13, PME-PLE 0.19, ALE-PLE 0.15; MOQ length 0.48, front width 0.39, back width 0.42. Leg spination: femora IV p0-0-1; tibiae: I v2-2-0; II v1-2-0; III p1-1-0; IV p1-1-0; metatarsi III r1-0-2. Epigynal atrium deep, with broad hood, median septum widened posteriorly, rounded (fig. 193); spermathecal ducts elongate, strongly curved laterally, widened anteriorly (fig. 194).

OTHER MATERIAL EXAMINED: Three females taken with the holotype (ZISP, AMNH).

DISTRIBUTION: Tadjikistan (map 8).

Parasyrisca paironica,
new species

Figures 195, 196; Map 9

TYPE: Female holotype from Pairon-Karatag, Tadjikistan (Aug. 4-5, 1971; E. M. Andreeva), deposited in ZISP.

ETYMOLOGY: The specific name is an arbitrary combination of letters.

DIAGNOSIS: This species seems closest to *P. iskander* but can be separated by the broad anterior atrial hood, the wide median epigynal septum (fig. 195), and the anteriorly strongly curved apical portions of the spermathecal ducts (fig. 196).

MALE: Unknown.

FEMALE: Total length 8.70. Carapace 2.85 long, 2.25 wide. Femur II 2.25 long. Eye sizes and interdistances: AME 0.13, ALE 0.18, PME 0.14, PLE 0.15; AME-AME 0.13, AME-ALE 0.06, PME-PME 0.13, PME-PLE 0.20, ALE-PLE 0.13; MOQ length 0.44, front width 0.38, back width 0.42. Leg spination: femora IV p0-0-1; tibiae: I v2-2-0; II v1-2-0; III p1-0-1; IV p1-0-1; metatarsi III r2-0-2. Epigynal atrium deep, with broad hood far anterior of atrium, median septum wide (fig. 195); spermathecal ducts large, with slightly thickened, strongly curved anterior portions (fig. 196).

OTHER MATERIAL EXAMINED: None.

DISTRIBUTION: Tadjikistan (map 9).

Parasyrisca vorobica,
new species

Figures 197, 198; Map 7

TYPE: Female holotype taken at an elevation of 3000 m in the Vorobinyi Mt. pass., Gissar Mt. range, Tadjikistan (July 11-12, 1975; Blagoveshchenskaya), deposited in ZISP.

ETYMOLOGY: The specific name is an arbitrary combination of letters.

DIAGNOSIS: This species seems closest to *P. paironica* but can be separated by the very narrow anterior atrial hood, the posteriorly widened median epigynal septum (fig. 197), and the large, anteriorly widened, laterally curved spermathecal ducts (fig. 198).

MALE: Unknown.

FEMALE: Total length 9.00. Carapace 2.85 long, 2.40 wide. Femur II 2.10 long. Eye sizes and interdistances: AME 0.15, ALE 0.15, PME 0.13, PLE 0.13; AME-AME 0.15, AME-ALE 0.04, PME-PME 0.13, PME-PLE 0.19, ALE-PLE 0.15; MOQ length 0.42, front width 0.42, back width 0.40. Leg spination: femora IV p0-0-1; tibiae: I v2-2-0; II v1-2-0; III p1-0-1; IV p1-0-1; metatarsi III r2-0-2. Epigynal atrium deep, with narrow anterior hood, me-

dian septum widened posteriorly (fig. 197); spermathecal ducts large, narrow, anterior portions wide, strongly curved laterally (fig. 198).

OTHER MATERIAL EXAMINED: Five females taken with the holotype (ZISP, AMNH).

DISTRIBUTION: Tadzhikistan (map 7).

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