BEITR. ARANEOL., 4 (1994)

GNAPHOSID SPIDERS FROM TUVA AND ADJACENT TERRITORIES, RUSSIA

(Aranei: Gnaphosidae)

MARUSIK, Y. M., Institute for Biological Problems of the North, K.Marx pr.24, MAGADAN 685010, Russia &
LOGUNOV, D.V. Zoological Museum of Biological Institute, Frunze Str. 11, NOVOSIBIRSK 630091, Russia.

Abstract: The Gnaphosid spider fauna (Aranei: Gnaphosidae) from Tuva and adjacent territories (Russia) are studied and compared with the faunas of NE-Siberia, China and Mongolia. New described taxa are: Berlandina schenkeli, Berlandina ubsunurica, Drassodes longispinus, Echemus sibiricus, Gnaphosa tuvinica and Tuvadrassus. New synonyms and combinations: Drassodes tegulatus SCHENKEL, 1963 = Tuvadrassus tegulatus comb.n., Gnaphosa charitonovi SCHENKEL, 1963 & G. mandschurica SCHENKEL, 1963 = G. glandifera SCHENKEL, 1963 (both probably syn.n., Gnaphosa holmi SCHENKEL, 1963 = G. glandifera SCHENKEL, 1963, syn.n..

Gnaphosid faunas of Tuva and adjoining areas till last time were very poorly studied if comapared with those of NE Siberia, China, Mongolia. No species were recorded from Tuva. During two years of arachno-entomological expeditions undertaken by the Zoological Museum of Biological Institute, Novosibirsk, 46 species were found in Tuva and not less than 51 in the whole SW Siberia around Tuva. Five of them and one genus are new to science and 11 to fauna of Russia, and one genus (Echemus) is new to Siberia.
Numerous Micaria species were not included in the paper as whole material was sent for revision to Kirill G. MIKHAILOV (Moscow), and S.DANILOV (Ulan-Ude).

Abbreviations used in paper are: AME, ALE, PME, PLE refer respectively to anterior median, anterior lateral, posterior median, and posterior lateral eyes; MOQ - median ocular quadrangle; d, p, r, v refer respectively to dorsal, prolateral, retrolateral and ventral spines; ALT - Gorno Altai Region; Tuva: ER - Erzin Distr., KZ - Kyzyl Distr., MT - Mongun-Taiga Distr.,OV - Ovyurski Distr., PK - Piy-Khemski Distr., TA - Tandinski Distr., TD - Todzha Distr., TK - Tes-Khem Distr., UK - Ulug-Khem Distr; Khakassia: AS - Asskiz Distr., AT - Altay Distr., BG - Bograd Distr, SH - Shira Distr., UZ - Uzhur Distr; Krasnoyarsk Prov.: KYR - Yermakovskoye Distr.

All measurements are given in mm, scale = 0.1 mm, if not otherwise indicated.

All materials have been shared beetwing the collections of the Zoological Museum of the Biological Institute (BI), Novosibirsk, Institute for Biological Problems of the North (IBPN), Magadan, American Museum of Natural History (AMNH), New-York and private collection of JÖRG WUNDERLICH (JW), Straubenhardt.

Acknowledgements.

This study was partly supported by grants ISF NOGOOO, NOG3OO and INTAS 94-3708.
We are very grateful to all the colleagues whose collections we used for the present study: O.V.LYAKHOV (O.L.), Ye.I.KHLEBOSOLOV, V.K.ZINCHENKO (V.Z.), V.G.MORDKOVITCH (V.M.), S.CHERNYSHOV (S.C.), as well as to M.SAARISTO (Turku) and J.WUNDERLICH (Straubenhardt) who donated for us some comparative material. We are also indebted to K.Yu.ESKOV (MOSCOW) and N.N.VINOKUROV (Yakutsk), for having sent us spider collections from Saur Mt. Range and Yakutia respectively.

The following lists summarize new facts given in this paper.

New taxa described:

Berlandina schenkeli sp.n
Berlandina ubsunurica sp.n.
Drassodes longispinus sp.n
Echemus sibiricus sp.n.
Gnaphosa tuvinica sp.n.
Tuvadrassus gen.n.
Tuvadrassus tegulatus gen.n sp.n.

Unknown males described:
Gnaphosa gracilior KULCZYNSKI
Gnaphosa proxima KULCZYNSKI
Tuvadrassus tegulatus (SCHENKEL)

New synonyms and combinations:
Drassodes tegulatus SCHENKEL, 1963 = Tuvadrassus tegulatus comb.n.
Gnaphosa charitonovi SCHENKEL, 1963 & G. mandschurica SCHENKEL, 1963 = G. glandifera SCHENKEL, 1963, both probably syn.n.,
Gnaphosa holmi SCHENKEL, 1963 = G. glandifera SCHENKEL, 1963, syn.n.

Species new for the USSR:

Berlandina potanini SCHENKEL,
Drassodes lesserti SCHENKEL,
Drassodes kaszabi LOKSA,
Drassodes pseudolesserti LOKSA,
Drassodes serratidens SCHENKEL,
Gnaphosa denisi SCHENKEL,
Gnaphosa glanndifera SCHENKEL,
Gnaphosa gracilior KULCZYNSKI,
Tuvadrassus tegulatus (SCHENKEL),
Zelotes barkol PLATNICK et SONG,
Zelotes yutian PLATNICK et SONG.

TAXONOMIC SURVEY OF THE SPECIES

Berlandina potanini SCHENKEL, 1963 Figs. 1-3

Material examined: Tuva: KZ: 1♀, 5-7 km W of Kyzyl, Yenisei

River Valley, 700 m, 4-7.06.1989 (D.L.); 2♀, environs of Kyzyl, 700 m, 7.05.1990 (D.L.). OV: 1♀, north bank of Ubsu-Nur, 750 m, 12.06.1989 (D.L.).

Measurements. Total length: 6.5-7.5. Carapace: 2.5-2.9 long, 1.8-2.1 wide. Eye sizes and interdistances: AME 0.09, ALE 0.10, PME 0.11, PLE 0.08, all eyes closely separated, only PMA-PMA is about one diameter, MOQ 0.39-0.43 length, 0.43-0.49 front width, 0.51-0.56 back width.

Description. Carapace light yellow-greyish with grey stripes. Sternum, coxae and venter of abdomen yellow. All leg segments uniformly grey, exept for metatrsi which are redbrown-greyish. Legs spination: leg I: femur dl-1, p0-0-1, tibia vl-1-1ap., metatarsus v2-2-2ap., leg II: femur dl-1, p0-0-1, tibia p0-0-1-1, vl -1-2ap., metatarsus v2-1-2. Legs III and IV with numerous spines on tibia and metatarsus. Epigyne as in Figs. 1-3.
Male unknown.

Diagnosis and comments. B. potanini can be easily separated from all other representatives of the genus by the shape of epigynal fovea (Figs. 1-3). Female from Ovyur District was collected together with male, which is very small and has different leg spination (see description of B. ubsunurica sp.n.).

Distribution. South Siberian range, early was known from North China SCHENKEL 1(936 (as B. plumalis (O.P.-CAMBRIDGE); 1963), Mongolia (personal information). Tuva is the first record in the USSR and northwesternmost point of distribution.

Berlandina schenkeli sp.n. Figs. 4-7

Material examined: Tuva: ER: 1♀, environs of Erzin Vill., 1000 m, Tes-Khem River Valley, 24.05.1990 (D.L.). MT: 1♀, 5-8 km SE of Mugur-Aksy Vill., Kargy River Valley, 1700-1900 m, 18.05.1990 (D.L.); 8♂, same locality, 10-25.05.1989 (Ye.I.KHLEBOSOLOV). PK: 2♂, 3♀, 10 km SE of Seserlig Vill., 1100-1200 m, 2.05.1990 (D.L.).

Measurements (male/female). Total length: 4.9-6.3/7.0-8.0. Carapace 2.3-2.8/3.0-3.3 long, 1.7-2.0/2.3-2.4 wide. Eye sizes and interdistances: AME 0.07/0.09, ALE 0.10/0.12, PME 0.09/0.11, PLE 0.09/0.10, all eyes closely separated, MOQ 0.34-0.37/0.41-0.46 length, 0.37-0.41/0.46-0.47 front width, 0.44-0.51/0.53-0.60 back width.

Description. Male. Carapace yellow-brown with 2 longitudinal red-brown stripes. Sternum red-brownish. Coxae yellow. Abdomen dark-grey with 2 longitudinal red-brown stripes, ventrally yellow. Legs yellow-grey with yellow tarsi. Legs spination: leg I: femur dl-1-0, p0-0-1, tibia vl-1-2, metatarsus v2-2-2ap.; leg II: femur dl-1-0, p0-0-1, tibia vl-1-2ap., metatarsus v2-1-2ap. or 2-0-2ap.; legs III and IV with numerous spines on patellae, tibiae and metatarsi. Palp as in Figs. 4-5.

Female. Colouration same as in male. Legs spination: leg I; femur dl-1, p0-0-1, tibia vl-2-2ap., metatarsus vl-2-1-2-2ap.; leg II femur dl-1, p0-0-1, tibia p0-1, vl-1-2ap., metatarsus v2-2-1-2ap. or 2-2-2ap.; legs III and IV with numerous spines as in male. Epigyne as in Figs. 6-7.

Diagnosis. This new species can be easily distinguished from all other Berlandina species by the very long tibial and median apophyses, shape of embolic division and epigyne.

Distribution. Tuva only.

Berlandina ubsunurica sp. nov. Figs. 8-10

Material examined: Tuva: OV: holotype ♂, north bank of Ubsu-Nur, 750m, 12.06.1989 (D.L.).

Measurements. Total length: 4.3. Carapace: 1.85 long, 1.48 wide. Eye sizes and interdistances: AME 0.06, ALE 0.09, PME 0.07, PLE 0.10, all eyes closely separated, PME-PME is about one their diameter, all other interdistances less, MOQ 0.31 length, 0.34 front width, 0.36 back width.

Description. Carapace yellow-grey, with dark-grey stripes. Abdomen dark-grey dorsally. Coxae, sternum and venter of abdomen yellow. Leg uniform dark grey with yellow tarsi. Leg spination: leg I: femur dl-1, p0-0-1, tibia p0-0-1, v2-1-2ap., metatarsus v2-2ap.; leg II: femur dl-1, tibia p0-0-1, vl-1-2ap., metatarsus v2-0-2ap.; leg III: femur dl-1-2, tibia dl-0, p & r l-1, v2-2-2ap., metatarsus d2-3-2, v2-1-2ap.; leg IV: femur d0-1-2, tibia dl-1, p & r l-1-1, v2-2-2, metatarsus d2-2, p & r lap, v2-2-2. Palp as in Figs. 8-10.
Female unknown.

Diagnosis and comments. New species is related to B. charitonovi PONOMARJOV, 1979, from which it can be easily distinguished by the shape of embolus and tibial apophysis. A single male was taken from the same collecting sample as one female of B. potanini. As male is much smaller, has different colouration and spination we suppose that the two sexes belong to different species.

Distribution. Type locality only.

Callilepis nocturna (LINNAEUS, 1758)

Material examined: Khakassia: BG: 2♀, 5-6 km E of Bol'shaya Yerba Vill., 21.06.1990 (D.L.). SH: 1♀, 3-5km S of Shira Vill., Itkul' Lake, 22.07.1990 (D.L., S.C.); 18♀, 5 km SE of Shiira Vill., Shira Lake, 21.06.1990 (D.L., V.M.). Tuva: ER: 1♂, 2♀, 20-30 km W of Erzin Vill., Onchalaan Mt. Range, 1200-1400 m, 28.05.1990 (O.L.); 2♂, same locality, Yamaalyg Mt. Range, 1200 -1300 m, 9-10.06.1989

(D.L.); 5♂, 3♀, environs of Erzin Vill., 1000 m, Erzin River Valley, 23-26.05.1990 (D.L.); 1♂, Tere-Khol' Lake, Eder-Elezin Sands (Desert), 1150-1200 m, 26.05.1989 (D.L.); 1♀, 30-35 km NE of Erzin Vill., Upper flow of Ular-Khem River, 1300-1400 m, 11.06.1989 (D.L.); 2♂, 20 km NW of Erzin Vill., Tes-Khem River Valley, 800-900 m, 31.05.1989 (D.L.). KZ: 1♀, environs of Kyzyl, 700-900 m, 3.07.1989 (D.L.). MT: 1♂, 5-8 km SE of Mugur-Aksy Vill., Kargy River Valley, 1700-1900 m, 20.05.1990 (D.L.); 1♀, 30-35 km SW of Mugur-Aksy Vill, down flow of Kargy River, Semigorki, 1700 m, 15.06.1989 (D.L.); 1♀, 55 km SW of Mugur-Aksy, Eski-Tolayty Lake, 2100-2200 m, 14-15.06.1989 (D.L.). PK: 1♀, 5-7km NW of Seserlig Vill., 1000-1400 m, 24-25.07.1989 (D.L.); 1♂, 4-5 km NW of Cherbi Vill., 850-1000 m, 1.07.1990 (D.L.). TA: 1♂, 20♀, environs of Chagytay Lake, 1000-1200 m, 26.06.-2.07.1989 (D.L.). TK: 6♀, 10-12 km NW of Khol'-Oozhu Vill, Belengishch Natural Limit, 1700-1800 m, 9-11.07.1989 (D.L.); 3♀, 8 km NE of Khol'-Oozhu Vill., 1-2 km Aryskanny-Khem River, near Alak Mt., 1300-1800 m, 14.07.1989 (D.L.); 1♂, Upper flow of Nariyn-Gol River, 900 m, 10.06.1989 (D.L.); 1♂, environs of Khol'-Oozhu, 1200 m, 8.07.1989 (D.L.); 2♂, 50 km W of Erzin Vill., Shara-Nur Lake, 800-900 m, 3.06.1989 (V.Z.). KYR: 1♀, 14 km SW of Tanzybey Vill., Filin Spring, 400-500 m, 13.07.1990 (D.L.).

Distribution. Transpalearctic range, from West Europe to NE Siberia.

Drassodes lapidosus (WALCKENAER, 1802)

Material examined: Khakassia: SH: 2♀, 1 km of Kommunar Vill., 1300-1400 m, 23.07.1990 (D.L.). Tuva: MT: 1♂, 8-9 km NE of Mugur-Aksy, upper flow of Kuge-Dabaa, 2500-2700 m, 19.05.1990 (D.L.). PK: 4♂, 10♀, West Sayany, Kurtushinski Mt. Range, 10 km NW of Shivilig Vill., 1100-1200 m, 6-8.07.1990 (D.L.). TK: 1♂, 14♀, 15-20 km NW of Khol'-Oozhu Vill., Kangay-Kyry Mt., 2000-2100 m, 8-9.07.1989 (D.L.). KYR: 1♂, 32♀, West Sayany, Oiski Mt. Range, 8-10 km S of Oiskoye Lake, Oisky Pass, 1800 m, 27.06-10.07.1990 (D.L.); 2♀, 25-30 km N of Aradan Vill., 9.07.1990 (D.L.).

Distribution. Transpaleractic range (OVTSHARENKO, MARUSIK, 1988), from West Europe to NE Siberia.

Drassodes lesserti SCHENKEL, 1936 Figs. 13-18

Material examined: Tuva: ER: 4♂, 3-5 km E of Erzin Vill., 1000-1200 m, 23-25.05.1990 (D.L.); 1♂, 8♀, 20-30 km W of Erzin Vill., Yamaalyg and Onchalaan Mt. Ranges, 1200-1300 m, 9-12.06.1989 (D.L.); 3♂, Onchalaan Mt. Range, 1200-1300 m, 27.05-1.06.1990; 1♂, 3♀, 30-35 km NE of Erzin Vill., Upper flow of Ular-Khem River, 1300-1400 m, 11.06.1989 (D.L.); 1♀, 20 km NW of Erzin Vill., Tes-Khem River Valley, 800-900 m, 131.05.1989 (D.L.). KZ: 7♂, 16♀, environs of Kyzyl, 700-900 m, 20.05.-20.07.1989 (D.L.); 5♂,

2♀, same locality, 1.05-1.07.1990 (D.L.). MT: 3♂, 4♀, 5-8 km SE of Mugur-Aksy Vill., Kargy River Valley, 1700-1900 m, 16.05-5.06.1990 (D.L., O.L.). OV: 1♀, north bank of Ubsu-Nur, 750 m, 12.06.1989 (D.L.). PK: 2♂, 10 km SE of Seserlig Vill., 1100-1200m, 2.05.1990 (D.L.). TA: 21, environs of Chagytay Lake, 1000-1200m, 26.06.-2.07.1989 (D.L.); UK: 1♂, 5km E of Shagonar Town, Khayirkan Mt., 10.05.1990 (D.L.).

Comments. This species was described twice by SCHEKEL in 1936 (p.254-255, fig. 83) and in 1963 (p.31, fig.12) under same name. Both female holotypes belong to one species. Redescription of the female and description of the male was published by LOKSA (1965). According to our materials males described as D. lesserti by LOKSA belong to a different species (D.neglectus ?). Males find together with D. lesserti females in Tuva can be distinguished from sympatric species by the caracteristic shape of both embolus and tibial apophysis. Males of D.lesserti has palpal spines shorter than in D.longispinus sp.n. but longer than in D.serratidens. Females of this species can be easily separated from other Drassodes species by the shape of epigynal fovea and septum.

Distribution. North China (SCHENKEL, 1936, 1963), Mongolia (LOKSA, 1965) and Tuva (first record in the USSR).

Drassodes kaszabi LOKSA, 1965 Figs. 11-12

Material examined: Tuva: MT: 1♀, 45-50 km W of Mugur-Aksy Vill., upper flow of Kargy River, Kholchugdug Natural limit, 2200-2300 m, 20.05.1990 (O.L.).

Comments. Description of this species was based on a one female (LOKSA, 1965). A single female with the same epigyne was found in Tuva. Females of D. kaszabi can be easily distinguished from other Drassodes species by the great epigynal fovea and small septum. According to drawings of D. licenti SCHENKEL, 1953, described from East Mongolia this species is closely related to D. kaszabi or belongs to the same species. But as SCHEKEL's types described in 1953 were lost, we were unable to compare the two species.

Distribution. Earlier this species was known from Mongolia (LOKSA, 1965) only, Tuva is a first record in USSR.

Drassodes serratidens SCHENKEL, 1963 Figs. 19-25

Material examined: Tuva: ER: 1♂, 1♀, environs of Erzin Vill.,1000-1100 m, Tes-Khem River Valley, 24.05- 15.08.1989 (D.L.). PK: 2♂, 1♀, West Sayany, Kurtushinski Mt. Range, 10 km NW of Shivilig Vill., 1100-1200 m, 6-8.07.1990 (D.L.). TD: 1♂, 1♀, Azass Reserve, environs of Azass Lake, 19-23.06.1989 (D.L.); 3♂, same reserve, environs of Chagytay Lake, 1200 m, 28-29.06.1989 (D.L.).

Comments.Firstly we determined females of this species as D. ndamicus SCHENKEL, 1963. But after the males were recognized as D. serratidens we have found that the female of latter species described by SCHENKEL, belongs to a different species. Both males and females found in Tuva has very characteristic abdominal pattern (see fig. 14 in SCHENKEL, 1963) unusual for Drassodes. So D. ndamicus is a synonym of D. serratidens. As no holotype was selected by SCHENKEL for the latter species it would be possible to designate the female as lectotype. In this case names for both species will be valid. We leave this procedure for the first reviser of Asian Drassodes or SCHEKEL's materials. Males of D.pseudolesserti described by LOKSA (1965) from Ulan-Bator, Mongolia are similar to that of D. serratidens and may belong to the same species, while females are quite different. Males of D. serratidens are easily distinguishable by the shape of median and tibial apophyses, embolus and short tibial spines. Females can be easily separated from other species by the shape of epigynal fovea, margins of the fovea and septum.

Distribution. Early was known from China (SCHENKEL, 1963) only, first record in the USSR.

Drassodes neglectus (KEYSERLING, 1887)

Material examined: ALT: 1♀, environs of Kosh-Agach Vill., 13.06. 1972 (A.P.KONONENKO). Khakassia: AS: 4♀, 8 km E Birikchul' Vill., 16-18.07.1990 (D.L.); 5♀, 25-27 km NE of Askiz Vill., 19.07.1990 (D.L.). SH: 35♀, 3-5km S of Shira Vill., Itkul' Lake, 22.07.1990 (D.L.,S.C.); 5♂, 12♀, 5 km SE of Shiira Vill, Shira Lake, 21.06. 1990 (D.L., V.M.). Tuva: ER: 1♂, 3♀, 20 km NW of Erzin Vill., Tes-Khem River Valley, 800-900 m, 13-15.08.1989 (D.L.); 1♀, environs of Erzin Vill., 1000 m, Tes-Khem River Valley, 15.08.1989 (D.L.). KZ: 1♀, 25 km E of Kyzyl Town, Kaa-Khem River Valley, 700 m, 30.06.1990 (D.L.) MT: 2♀, 5-8 km SE of Mugur-Aksy Vill., Kargy River Valley, 1700-1900 m, 14-15.06.1989 (D.L.). PK: 1♂, 1♀, 5-7 km NW of Seserlig Vill., 1000-1400 m, 29.06.1990 (D.L.). TA: 1♂, 3♀, environs of Chagytay Lake, 1000-1200 m, 26.06.-2.07. 1989 (D.L.). TK: 1♂, 5♀, 10-12 kmNW of Khol'-Oozhu Vill., Belengishch Natural Limit, 1700-1800 m, 9-11.07.1989 (D.L.); 5♀, 8 km NE of Khol'-Oozhu Vill., 1-2 km Aryskanny-Khem River, near Alak Mt., 1300-1800 m, 14.07.1989 (D.L.).

Distribution. Siberian-American range (OVTSHARENKO, MARUSIK, 1988), Tuva is westernmost point of distribution.

Drassodes pseudolesserti LOKSA, 1965 ?

Material examined: Khakassia: BG: 2♀, 5-6 km E of Bol'shaya Yerba Vill., 21.06.1990 (D.L.). UZ: 5♀, 20 km N of Kopylovo Vill., Uchyum Lake, 24.07.1990 (D.L.). Tuva:UK: 1♂, 1♀, 8 km S of Torgalyg Vill., 1100-1250 m, 9.05.1990 (D.L.).

Distribution: Early this species was known from Ulan Bator, Mongolia, only (LOKSA, 1965). Tuva and Khakassia are northwesternmost points of its distribution.

Drassodes longispinus sp.n. Figs. 26-33

Material examined: Tuva: KZ: Holotype ♂, environs of Kyzyl, 700-900 m, 17.20.05.1990 (D.L.); paratypes: 6♂m, 15♀, environs of Kyzyl, 700-900 m, 20.05-3.07.1989 (D.L.); 1♀, same locality, 17.05-1.07.1990 (D.L.); 1♀, 65 km W of Kyzyl, Otuk-Dash Natural limit, 10.05.1990 (D.L.). PK: 1♀, 5-7 km NW of Seserlig Vill., 1000-1400 m, 24-25.07.1989 (D.L.). TD: 1♀, Azass Reserve, environs of Azass Lake, 21-22.06.1989 (D.L.). UK: 1♂, 1♀, 8 km S of Torgalyg Vill., 1100-1250 m, 9.05.1990 (D.L.); 1♂, 1♀, 5 km E of Shagonar Town, Khayirkan Mt., 10.05.1990 (D.L.).

Description: Total length 9.6-13.0/9.0-14.7. Carapace: 4.0-6.0/ 4.4-6.25 long, 2.9-4.2/2.85-4.4 wide. Colouration common for Drassodes. Abdomen with indistinct heart-line. Palp with relatively short embolus and long seminal duct (Figs. 26-30), epigyne with small fovea and short margins (Figs. 32-33). Male chelicera as in Fig. 31.

Diagnosis and comments. The new species has unique for Drassodes long and curved into some loops seminal duct of the male bulbus. This character, as well as long tibial spines on the male palp, shape of embolus, tibial apophysis, and structure of female epigyne and vulva are diagnostic for D. longispinus sp.n.. Females of this species ere very similar to that of D.pseudolesserti, and can be separated by greater size of the body and epigyne and by rounded base of the scape.

Distribution: Tuva only.

Drassodes villosus (THORELL, 1856)

Material examined: Tuva: ER: 1♀, 30-35 km NE of Erzin Vill., upper flow of Ular-Khem River, 1300-1400 m, 11.06.1989 (D.L.); 1♂, 20-25 km W of Erzin Vill., Onchaalan Mt. Range, 1300-1400 m, 27.05.1989 (D.L.). PK: 2♀, West Sayany, Kurtushinski Mt. Range, 10 km NW of Shivilig Vill., 1100-1200 m, 6-8.07.1990 (D.L.). TD: 1♀, Azass Reserve, environs of Azass Lake, 21-22.06.1989 (D.L.); 1♀, environs of Toora-Khem, 18-23.06.1989 (D.L.).

Distribution. Transpalearctic range (OVTSHARENKO, 1982).

Echemus sibiricus sp. n. Figs. 34-36

Material examined: Holotype ♂, Tuva, MT: 3-4 km SE of Mugur-Aksy Vill., 1800-1850 m, 16-20.05.1990 (D.L.).

Description. Male. Total length 3.0. Carapace: 3.0 long, 2.15 wide. Eye sizes and interdistaces: AME 0.16, ALE 0.14, PME 0.13, PLE 0.14, AME-AME 0.08, AME-ALE overlaping, PME-PME 0.10, PME-PLE 0.09, ALE-PLE 0.07, MOG length 0.40, MOQ frontal width 0.37, MOQ back width 0.36. Carapace orange-brown. Abdomen yellow-grey with short red-brown scutum and 3 pairs of muscle dots and with dense cluster of long curved erect setae at the anterior end. Sternum orange, as in Drassodes with many small angles. Legs light-brown, tarsi I-IV lighter than other segments. Tarsi IV, palpal patella and apical part of femur pale. Cymbium and palpal tibial brown. Leg spination: femur I pl, II-III p2, patella III-IV pl and rl., tibia III and IV d7, p3, r2, v2-2-2, metatarsus III p4, r4 and pv3, metatarsus IV p5, r5, v.2-2-2?. Palp (Figs. 34-36) with long tibial apophisis, large median apophysis and curved large embolus.

Diagnosis and comments. E. sibiricus sp.n. can be easily separated from Europian E. angustifrons (WESTRING) by long the tibial apophysis and the large median apophysis.
We had no possibility to compare our specimen with the type species of the genus: E. angustifrons and we placed new species into Echemus according to the diagnosis given in GRIMM (1985) and TYSHCHENKO (1971). Structure of the male genitalia are given poor in the drawings of GRIMM (1985) and TULLGREN (1946). And it is difficult to compare the shape of median apohysis and embolus. So we are not sure about placement of new species in correct the genus.

Note. SIMON (1895) described from SW Siberia two Gnaphosa species: G. potanini and G. mongolica. We examined only one of them, G. potanini (Fig. 37) (which is deposited in Museum National d'Histoire Naturelle, Paris). So, one the species listed below can belongs to G.mongolica, holotype of which we were unable to re-examined. G.mongolica were recorded from Mongolia (LOKSA, 1965, no drawings) and East-Kazakhstan Area (SAVEL'YEVA, 1972, figs. 1-2). Types of G. mongolica were not reexamined by both authors. Drawings in the paper of SAVEL'YEVA are similar to G. punctata.

Gnaphosa borea KULCZYNSKI, 1908

Material examined: Tuva: PK: 1♀, 5-7 km NW of Seserlig Vill., 1000-1100 m, 24-25.07.1989 (D.L.). TK: 1♂, 15-20 km NW of Khol'-Oozhu Vill., Kangay-Kyry Mt., 2000-2100 m, 8-9.07.1989 (D.L.).

Distribution. Siberian-american range (OVTSHARENKO, MARUSIK, 1988), Tuva is south-westernmost point of distribution.

Gnaphosa denisi SCHENKEL, 1963 Figs.81-82

Material examined: Khakassia: AS: 5♀, 8 km E Birikchul' Vill., 16-18.07.1990 (D.L.). Tuva: ER: 23m, 13♀, 20-30 km W of Erzin Vill., Onchalaan Mt. Range, 1200-1400 m, 27.05-12.08.1989 (D.L.); 7♂, 10♀, same locality, Yamaalyg Mt. Range, 1200-1300 m, 9-10.06. 1989 (D.L.). KZ: 1♂, 65 km W of Kyzyl, Otuk-Dash Natural limit, 10.05.1990 (D.L.). PK: 1♀, environs of Ust'-Uyuk Vill, 800-900 m, 21.05.1898 (D.L.). TD: 1♀, Azass Reserve, environs of Azass Lake, 21-22.06.1989 (D.L.). UK: 2♂, 3♀, 8 km S of Torgalyg Vill., 1100-1250 m, 9.05.1990 (D.L.); 8♂, 3♀, 5 km E of Shagonar Town, Khayirkan Mt., 10.05.1990 (D.L.).

Comments. Recently (SONG, 1987) G. acuaria SCHENKEL, 1963 and G. aeditua were synonymized with G. denisi. According to drawings of G. licenti SCHENKEL, 1953 this species belongs to the same species as G. denisi probably. As SCHENKEL's types of 1953 were lost we can not compare types of both species.

Distribution. Earlier the species was known from China only (SONG, 1987). Within Soviet Union this species was also found in East-Kazakhstan Area (Saur Mt. Range).

Gnaphosa glandifera SCHENKEL, 1963 Figs. 38-39

G. glandifera SCHENKEL, 1963: 72-73, fig. 39, holotype ♀ from China, in MNHN, examined.
G. holmi SCHENKEL, 1963: 73-75, fig. 40 (♀), paratype ♀ from China, in MNHN, examined. Syn.n.
G. charitonovi SCHENKEL, 1963: 75-76, fig. 41, holotype from China, in MNHN, not examined. Probably syn.n.
G. mandschurica SCHENKEL, 1963: 71-72, fig. 38, holotype from Mongolia or China, in MNHN, not examined. Probably syn.n.

Material examined: Khakassia: AS: 1♀, 8 km E of Birikchul' Vill., 18.07.1990 (D.L.). SH: 1♀, 3-5 km S of Shira Vill., Itkul' Lake, 22.07.1990 (D.L., S.C.); 4♀, 5 km SE of Shiira Vill, Shira Lake, 21.06.1990 (D.L., V.M.). UZ: 4♀, 20 km N of Kopylovo Vill.,Uchyum Lake, 24.07.1990 (D.L.). Tuva:PK: 1♀, 5-7 km NW of Seserlig Vill., 1000-1400 m, 29.06.1990 (D.L.). TK: 3♀, 10-12 kmNW of Khol'-Oozhu Vill., Belengishch Natural Limit, 1700-1800 m, 9-11.07.1989 (D.L.).

Comments. Types of G. glandifera and G. holmi with no doubts belong to one species. According to SCHENKEL's (1963) and SONG's (1987) drawings of G. charitonovi and G. mandschurica both species are conspecific with G. glandifera. We selected G. glandifera as a senior synonym of G. holmi because the latter species is a homonymum of G. holmi TULLGREN (male= G. orites, female = G. microps), and types of two other species were not reexamined by us.

Gnaphosa gracilior KULCZYNSKI, 1901 Figs. 40-46

Material examined: Khakassia: SH: 1♀, 5 km SE of Shiira Vill, Shira Lake, 21.06.1990 (D.L., V.M.) TA: 1♀, 5 km SW of Khovu-Aksy, Elegest River Valley, 4-6.05.1990 (D.L.). Tuva: ER: 4♀, 20 km NW of Erzin Vill., Dus-Khol' Lake, 800-900 m, 31.05-13.08.1989 (D.L.); 4♂, 1lf, 20-30 km W of Erzin Vill., Onchalaan Mt. Range, 1200-1400 m, 27.05-12.08.1989 (D.L.); 1♂,4♀, environs of Erzin Vill., 1000 m, 23-26.05.1990 (D.L.); 1♀, Tere-Khol' Lake, Eder-Elezin Sands (Desert), 1150-1200 m, 9.08.1989 (D.L.). KZ: 4♀, environs of Kyzyl, 700-900 m, 5.06-22.07.1989 (D.L.); 1♂, 5♀, same locality, 1.05-1.07.1990 (D.L.). MT: 7♂, 33♀, 5-8 km SE of Mugur-Aksy Vill., Kargy River Valley, 1700-1900 m, 16.05.-11.06. 1990 (D.L., O.L.); 1♀, 30-35 km SW of Mugur-Aksy Vill, down flow of Kargy River, Semigorki, 1700m, 15.06.1989 (D.L.); 9♀, 45-50 km W of Mugur-Aksy Vill., Cholchugdug-Khovu Natural limit, 2200-2300 m, 17. 05. 1990 (D.L.); 1♀, Barlyk River Valley, confluence with Onachy River, 6. 06.1 990 (O.L.). PK: 1♀, 5-7 km NW of Seserlig Vill., 1000-1400 m, 2. 05. 1989 (D.L.). TK: 5♀, 10-12 km NW of Khol'-Oozhu Vill., Belengishch Natural Limit, 1700-1800 m, 9-11.07.1989 (D.L.); 2♂, 50 km W of Erzin Vill., Shara-Nur Lake, 3.06.1989 (V.Z.). UK: 6♀, 8 km S of Torgalyg Vill., 1100-1250 m, 9.05.1990 (D.L.).

Comments. Description of this species was based on one female collected in Urga (Ulan-Bator now). Within gnaphosids collected in Mongolia and Tuva we found many species similar to G.gracilior and G. proxima. When male of both species were found (male of G. proxima was recently found near type locality Verkhoyansk, NE Yakutia) it was possible to seperate females. G. gracilior vary in size of genitalia greatly (see figs. 44-46 and scales). Especially big males and females were found near Kyzyl. Males of the two species can be easily separated by the shape and position of the basal embolic ridge, and also by the shape of median and tibial apophyses. Females can be separated only by structure of the vulva. Epigynal glands are in G. proxima thiner, longer and directed to scape, while in G. gracilior they are shorter and thicker and directed dorsally.

Distribution. Mongolia and Tuva. Tuva is northernmost point of distribution, and first record in the USSR.

Gnaphosa inconspecta SIMON 1878 Figs.63-64

Material examined: Tuva: ER, 2♀, 3-5km S of Erzin Vill., Tes-Khem River Valley, valley forest, ≈1100m, 14.08.1989 (D.L.); 1♀, same locality, 1000-1100m, 24.05.1990 (O.L.).

Distribution: Palearctic.

Gnaphosa leporina (L.KOCH, 1866)

Material examined: Tuva: TK: 1♂, 10-12 km NW of Khol'-Oozhu Vill., Belengishch Natural Limit, 1700-1800 m, 9-11.07.1989 (D.L.); 3♂, 15-20 km NW of Khol'-Oozhu Vill., Kangay-Kyry Mt., 2000-2100 m, 8-9.07.1989 (D.L.). KYR: 1♀, 25-30 km N of Aradan Vill, 9.07.1990 (D.L.)

Distribution. European-Middle-Siberian range, from West Europe east to Lena River.

Gnaphosa muscorum (L.KOCH, 1866) Figs. 51-52, 55-56

Material examined: Tuva: KZ: 2♀, 65 km W of Kyzyl, Otuk-Dash Natural limit, 10.05.1990 (D.L.). MT: 1♂, 45-50 km SW of Mugur-Aksy Vill., Khara-Kharagay River, 2200-2300 m, 14.06.1989 (D.L.). PK: 1♂, 4♀, West Sayany, Kurtushinski Mt. Range, 10 km NW of Shivilig Vill., 1100-1200 m, 6-8.07.1990 (D.L.). TA: 2♂, 3♀, environs of Chagytay Lake, 1000-1200 m, 26.06.-2.07.1989 (D.L.). TD: 1♂, 1♀, environs of Toora-Khem, 18-23.06.1989 (D.L.). TK: 17♂, 1♀, 10-12 km NW of Khol'-Oozhu Vill., Belengishch Natural Limit, 1700-1800 m, 9-11.07.1989 (D.L.). UK: 1♂, 5 km E of Shagonar Town, Khayirkan Mt., 10.05.1990 (D.L.)

Distribution. Circumholarctic range.

Gnaphosa nigerrima L.KOCH, 1878

Material examined: Tuva: OV: 4♀, Ubsu-Nur Lake, 12.06.1989 (D.L.).

Distribution. Transpalearctic range (OVTSHARENKO, MARUSIK, 1988), Tuva is southernmost point in Siberia.

Gnaphosa proxima KULCZYNSKI, 1908 Figs. 47-50

Material examined: Tuva: ER: 1♂, 1♀, 3-5 km E of Erzin Vill., 1100-1200 m, 23-25.05.1990 (D.L.). MT: 1♀, 3 km E of Mugur-Aksy Vill., 1800-1850 m, 14.06.1989 (D.L.). OV: 1♀, 15 km E of Khandagayty Vill., Ulatay River Valley, 1000-1100 m, 12.06.1989 (D.L.). TK: 1♀, ≈3 km E of Ak-Erik Vill., Tes-Khem River Valley, 29.05.1990 (O.L.). UK: 1♂, 5-7 km E of Shagonar Town, Khaiykran Mt., 10.05.1990 (D.L.).

Comments. This species is closely related to G .gracilior. We did not found differences in external shape of epigyne but only in size (it is smaller) and position of epigynal glands. Males of G.proxima which are described for the first time can be separated by the smaller size of carapace and palp, as well as by smaller tibial apophysis, and shape of embolic ridge.

Distribution. Siberian range (OVTSHARENKO, MARUSIK, 1988), Tuva is the southwesternmost point of distribution.

Gnaphosa punctata KULCZYNSKI, 1901

Material examined: Tuva: ER: 2♂, 3♀, 20-30 km W of Erzin Vill., Onchalaan Mt. Range, 1200-1400 m, 30.05.-2.06.1989 (D.L.); 1♀, same locality, Yamaalyg Mt. Range, 1200-1300 m, 9-10.06.1989 (D.L.). KZ: 7♂, 5♀, environs of Kyzyl, 700-900 m, 20.05.-22.07. 1989 (D.L.); 1♂, 4♀, same locality, 17.05-1.07.1990 (D.L.); 3♂, 65 km W of Kyzyl, Otuk-Dash Natural limit, 10.05.1990 (D.L.). MT: 1♀, 5-8 km SE of Mugur-Aksy Vill., Kargy River Valley, 1700-1900 m, 18.05.1990 (D.L.); 1♀, 55 km SW of Mugur-Aksy, Eski-Tolayty Lake, 2100-2200 m, 14-15.06.1989 (D.L.). OV: 1♀, 15 km E of Khandagayty Vill., Ulatay River Valley, 1000-1100 m, 12.06.1989 (D. L.); 1♂, 1♀, north bank of Ubsu-Nur,750 m, 12.06.1989 (D.L.). TK: 1♂, 1♀, environs of Khol'-Oozhu Vill., 1200 m, 8.07.1989 (D.L.); 1♀, 50 km W of Erzin Vill., Shara-Nur Lake, 800-900 m, 3.06.1989 (V.Z.). UK: 1♂, 1♀, 5 km E of Shagonar Town, Khayirkan Mt., 10. 05.1990 (D.L.); 1♀, 10-15 km SW of Shagonar Town, Chaaty River, 8.05.1990 (D.L.)

Comments. G.punctata was synonymized with Europian G.spinosa KULCZYNSKI, 1897 by LOKSA (1965). Both species were known by females only. Recently, WEISS and MARCU (1988) described the male of G.spinosa. Males collected in Tuva and in Mongolia together with females of G.punctata are quite different from that of G. spinosa. G.punctata were described several times by SCHENKEL from China under different names: G.auriceps SCHENKEL, 1953 (♂ and ♀), G.chaffanjoni SCHENKEL, 1963 (♂), G.corifera SCHENKEL, 1963 (♀). So, all 3 species should be synonymized with G.punctata. We leave this procedure fo the first revisor of SCHENKEL's gnaphosids or Asian Gnaphosa.

Distribution. This species is very common in all collections from Mongolia, and Tuva, early was recorded from Mongolia (KULCZYNSKI, 1901; LOKSA, 1965) and China (SCHENKEL, 1953, 1963) and Kalmykia, USSR (PONOMARYOV, 1981).

Gnaphosa sticta KULCZYNSKI, 1908

Material examined: Tuva: TK: 1♀, 15-20 km NW of Khol'-Oozhu Vill., Kangay-Kyry Mt., 2000-2100 m, 8-9.07.1989 (D.L.).

Distribution. Transpalearctic range (OVTSHARENKO, MARUSIK, 1988), Tuva is the southernmost point in Siberia.

Gnaphosa tuvinica sp.n. Figs. 57-60

Material examined: Tuva: MT: Holotype ♂, 4-5 km SE of Mugur-Aksy Vill, 2000-2500 m, 7.06.1990 (O.L.); 1♂, 3-4 km SE of Mugur-Aksy, mountain steppe, ≈1900 m, 18.05.1990 (D.L.); 5♀, ≈5 km E of Mugur-Aksy Vill., upper flow of Kuge-Davaa River, 2000 m, 18.05. 1990 (D.L.).

Description. Total length (male/female) 9.7-10.5/10.4-13.6. Carapace: 5.0-5.3/4.3-5.4 long, 3.8-4.0/3.3-4.0 wide. Colouration as in G.muscorum. Abdomen in male dark-grey, and grey in female. Femur I in male with p2, tibia I v2-2-2, in female tibia Iv0-1-2. ♂-palp (figs. 57-58) with long embolus and median apophysis, high tegulum, short tibial apophysis. Embolus with small ridge in basal third. Epigyne (figs. 59-60) with relativelly long scape, short fovea margins and glands.

Diagnosis. The new species belongs to the G. lugubris-group (sensu PLATNICK, SHADAB, 1975). Within south Siberian species of Gnaphosa G.tuvinica sp.n. is similar to G.muscorum, from which it can be distinguished by the more apical position of embolus, absence of erectile basal spur, higher position of tegulum, and by the shape of epigyne. The new species is not similar to any species described by SCHENKEL from China.

Distribution. The species known from Mongun-Taiga District only. As G.tuvinica sp.n. it is high mountain species and is probably endemic of Tuva.

Gnaphosa wiehlei SCHENKEL, 1963 Figs.69-70

Material examined: Tuva: ER: ≈20km W of Erzin, Onchalan Mt. Range, 1100-1800m, 4.06.1990 (D.L.).

Comments: This species is similar to muscorum from which it can be separated by the shape of the scape and smaller size.

Gnaphosa sp. 1 Figs. 61-62

Material examined: Khakassia: SH: 19♀, ≈1 km S of Kommunar Vill., lichen-stony mountain tundra, 1300-1400 m, 23.07.1990 (D.L.). KYR: 6♀, Sayany, Oisky Pass, 8-10 km S od Oiskoye Lake, 1700-1800 m, 27.06.-10.07.1990 (D.L.).

Comments. This probably new species is similar to G.petrobia L.KOCH (see figs. 58-59 in GRIMM, 1985), which is known from Europe only. It is differ from europian species by the shape of epigynal fovea margins, wider openning, and by the structure of the vulva.

Gnaphosa sp. 2 Figs. 65-66

Material examined: Tuva: UK: 1♀, ≈8 km S of Torgalyg Vill.,gravely bank of the Torgalyg River, 900-950 m, 8-9.05.1990 (D.L.).

Comments. This species is similar to G.davidi SCHENKEL, 1963, described from China and belongs to same species probably.

Gnaphosa sp. 3 Figs. 67-68

Material examined: Tuva: MT: 2♀, Barlyk River Valley near coinfluence with Onchalan River, 6.06.1990 (O.L.).

Comments. Gnaphosa sp. 3 is similar to G.orites CHAMBERLIN, G. opaca HERMAN and G.lapponum (L.KOCH) but can be separated from all of them by the shape of epigynal fovea, scape, openings and structure of vulva.

Haplodrassus hiemalis EMERTON, 1909 Figs. 71-75

Material examined: Khakassia: AS: 3♀, 8 km E Birikchul' Vill., 16-18.07.1990 (D.L.).

Comments. H.hiemalis is very similar to H.moderatus.

Diagnosis of both species see below (moderatus).

Distribution. Siberian-american range (OVTSHARENKO, MARUSIK, 1988), Khakassia is southwesternmost point of distribution.

Haplodrassus moderatus (KULCZYNSKI, 1897) Figs. 76-80

Material examined: Tuva: PK: 3♀, West Sayany, Kurtushinski Mt. Range, 10 km NW of Shivilig Vill., 1100-1200 m, 6-8.07.1990 (D.L.). TD: 3♀, Azass Reserve, 19-23.06.1989 (D.L.).

Comments. H.moderatus is closely related to H.hiemalis. Females can be easily distinguished by the shape of epigynal fovea margins. Males of two species are very similar. They can be distingushed by the shape of embolus and terminal apophyses. H.moderatus has greater terminal apophysis, pointed embolus and small embolic dent.

Distribution. Transpalearctic range, from Europe east to NE Siberia (enviorons of Magadan).

Haplodrassus pugnans (SIMON, 1885)

Material examined: Khakassia: SH: 2♀, 3-5km S of Shira Vill., Itkul' Lake, 22.07.1990 (D.L., S.C.). Tuva: ER: 3♀, 20-30 km W of Erzin Vill., Onchalaan Mt. Range, 1200-1400 m, 27-30.05.1989 (D.L.); 2♀, 30-35 km NE of Erzin Vill., Upper flow of Ular-Khem River, 1300-1400 m, 11.06.1989 (D.L.). KZ: 1♀, 5-7 km W of Kyzyl Town, Yenisey River Valley, 700 m, 4-7.06.1989 (D.L.). MT: 2♂, 11♀, 5-8 km SEE of Mugur-Aksy Vill., Kargy River Valley, 1700-1900 m, 16-20.05.1990 (D.L.); 1♀, same locality, 14.06.1989 (D. L.); 5 ♀, Barlyk River Valley, conafluence with Onachy River, 6.06.1990 (O.L.); 1♀, 45-50 km W of Mugur-Aksy Vill., Cholchugdug-Khovu Natural limit, 2200-2300 m, 17.05.1990 (D.L.); 1♀, 3-5 km N of Kyzyl-Khaya Vill., bank of Mogen-Buren River, 15.06.1989 (D.L.). PK: 1♀, 5-7 km NW of Seserlig Vill., 1000-1400m, 2.05. 1990 (D.L.). TK: 1♀, 10-12 km NW of Khol'-Oozhu Vill., Belengishch Natural Limit, 1700-1800 m, 9-11.07.1989 (D.L.); 2♀, 8 km NE of Khol'-Oozhu Vill., 1-2 km Aryskanny-Khem River, near Alak Mt., 1300-1800 m, 14.07.1989 (D.L.).

Distribution. Widespread siberian species (OVTSHARENKO, MARUSIK, 1988), early was known from Central Siberia, Magadan Area, Japan and China. Tuva is the northwesternmost point of its distribution.

Haplodrassus signifer (C.L.KOCH, 1879)

Material examined: Tuva: PK: 1♂, West Sayany, Kurtushinski Mt. Range, 10 km NW of Shivilig Vill., 1100-1200 m, 6-8.07.1990 (D. L.). TK: 2♂, 9♀, 15-20 km NW of Khol'-Oozhu Vill., Kangay-Kyry Mt., 2000-2100 m, 8-9.07.1989 (D.L.).

Distribution. Circumholarctic range (OVTSHARENKO, MARUSIK, 1988).

Haplodrassus soerenseni (STRAND, 1900)

Material examined: Tuva: PK: 1♀, 5-7 km NW of Seserlig Vill., 1000-1100 m, 24-25.07.1989 (D.L.); 1♀, West Sayany, Kurtushinski Mt. Range, 10 km NW of Shivilig Vill., 1100-1200 m, 6-8.07.1990 (D.L.). KYR: 1♀, West Sayany, Oiski Mt. Range, 8-10 km S of Oiskoye Lake, Oisky Pass, 1400 m, 27-28.06.1990 (D.L.).

Distribution. Transpalearctic range (OVTSHARENKO, MARUSIK, 1988), from Europe east to Magadan Area.

Phaeocedus braccatus (L.KOCH, 1866)

Material examined: Khakassia: AS: 3♀, 8 km E Birikchul' Vill.,

16-18.07.1990 (D.L.); 3♀, 25-27 km NE of Askiz Vill., 19.07.1990 (D.L.). Tuva: ER: 8♀, 20 km NW of Erzin Vill., Dus-Khol' Lake, 800-900 m, 13-15.08.1989 (D.L.); 3♀, 20-30 km W of Erzin Vill., Onchalaan Mt. Range, 1200-1400 m, 11-12.08.1989 (D.L.). KZ: 1♀, 5-7 km W of Kyzyl, Yenisei River Valley, 700 m, 4-7.06.1989 (D.L.). PK: 1♀, 5-7 km NW of Seserlig Vill., 1000-1400 m, 24-25.07.1989 (D.L.). TK: 1♀, 10-12 km NW of Khol'-Oozhu Vill., Belengishch Natural Limit, 1700-1800 m, 9-11.07.1989 (D.L.); 2♂, 2♀, 8 km NE of Khol'-Oozhu Vill., 1-2 km Aryskanny-Khem River, near Alak Mt., 1300-1800 m, 14.07.1989 (D.L.); 1♂, environs of Khol'-Oozhu, 1200 m, 8.07.1989 (D.L.).

Distribution. European-Middle Siberian species.

Tuvadrassus gen.n.

Type species: Drassodes tegulatus SCHENKEL, 1963.

Diagnosis. The new genus belongs to Drassodinae and is related to Haplodrassus and Drassodes. From both genera Tuvadrassus gen.n. can be separated by the eye spacing (AME aproximated on less than diameter), and by the shape of genitalia. Embolic division of Tuvadrassus gen.n. with terminal apophysis as all Haplodrassus species, but it is strongly reduced, and smaller than embolus. Embolus unlike as in Haplodrassus long and thin, but wider than in Drassodes. Seminal duct as in Haplodrassus. Transparent unsclerotized conductor situated in retrolateral apical part of tegulum (in Drassodes it is apical-prolateral, and abscent in Haplodrassus). Palpal tibia longer than in Haplodrassus and shorter than in majority of Drassodes species. It is similar to that in Parasyrisca. Palpal tibial apophysis longer than in Haplodrassus and pointed apically. It is longer than in Drassodes also, and has no denticles. As palpal tibia, tibial opophyses is somewhat similar to that in Parasyrisca. Epigyne similar to that in Haplodrassus, but anterior ridge (pocket) curved (only few species Haplodrassus species have ridge, but it is straight) and has real pocket (see Figs. 86-87) which is absent in Haplodrassus. Lateral margins of epigynal fovea are nearly parallel and constricted apically in Tuvadrassus gen. n., while in Haplodrassus they are curved and often diverging apically. So Tuvadrassus gen.n. combines characters of Drassodes (presence of conductor, long palpal tibia) and Haplodrassus (presence of terminal and median apophyses, similar shape of seminal duct, distinct lateral and anterior margins of epigynal fovea, etc).

Tuvadrassus tegulatus (SCHENKEL, 1963) comb.n. Figs. 83-87

Drassodes tegulatus SCHENKEL,1963: 40-41, fig. 18 (♀), from Kansu, in MNHN, not examined.

Material examined: Tuva: ER: 1♀, Tere-Khol' Lake, Eder-Elesin

Sands, 1150-1200 m, 26.05.1989 (D.L.). MT: 1♀, 45-50 km W of Mugur-Aksy Vill., upper flow of Kargy River, Kholchugdug Natural limit, 2200-2300 m, 20.05.1990 (O.L.); 4-5 km SE of Mugur-Aksy Vill., 1750-1800 m, desert like steppe, 18.05.1990 (D.L.).

Measurements (male/female). Total length 6.2/8.5-9.0. Carapace: 3.3/3.7 long, 2.5/2.75 wide. Eye sizes and interdistances: AME 0.14/0.16, ALE 0.14/0.14, PME 0.11/0.13, AME-AME 0.13/0.13, AME-PME 0.17/0.19, AME-ALE 0.03/0.03, ALE-PLE 0.14/0.13, PME-PME 0.06/0.06, PME-PLE 0.16/0.24, MOQ length 0.43/0.49, MOQ frontal width 0.36/0.44, MOQ back width 0.43/0.44.

Description. Colouration same as in Haplodrassus and Drassodes: carapace yellow or orange, cephalic part, chelicerae, maxillae and labium brown, sternum yellow-brown, abdomen grey, femora ventrally and coxae pale white. Chelicerae with 2 retromarginal teeth. Coxae I and II longer that III and IV. Leg spination same in male and female. Femora I-III with 1p, 2d, femora III and IV with 1r, metatrsus II with 2v, tibia III and IV v2-2-2, p3, r2, metatarsus III and IV v2-1-2, p2-2, r2-2 (apically with 6 spines 2v, 2p and 2r). Male palp as in figs. 83-85, with 2d on femora, 1p on tibia and 6 on cymbium, terminal apophysis strongly reduced, coductor small and transparent, tibial apophysis long and pointed. Female epigyne (figs. 86-87) with parallel margins of fovea, and sclerotized anterior ridge (pocket).

Diagnosis. T. tegulatus is a single species of the Tuvadrassus gen.n. It can be easily separated from representatives of related genera by the shape of male palp and epigyne.

Zelotes baltistanus CAPORIACCO, 1935

Material examined: Tuva: ER: 4♂, 9♀, 20-30 km W of Erzin Vill., Onchalaan Mt. Range, 1200-1400 m, 27.05-12.08.1989 (D.L.); 5♂, 2♀, Tere-Khol' Lake, Eder-Elezin Sands (Desert), 1150-1200 m, 8-13.08.1989 (D.L.). MT: 1♀, 5-8 km SE of Mugur-Aksy Vill., Kargy River Valley, 1700-1900 m, 18.05.1990 (D.L.). OV: 1♂, north bank of Ubsu-Nur, 750 m, 12.06.1989 (D.L.).

Distribution. From Karakoram Range at the south through Mongolia and Tuva north to East Yakutia and Upper Kolyma (OVTSHARENKO, MARUSIK, 1988).

Zelotes barkol PLATNICK et SONG, 1986

Material examined: Tuva: ER: 5♂, 5♀, 20 km NW of Erzin Vill., Tes-Khem River Valley, 800-900 m, 13-15.08.1989 (D.L.). TA: 1♀, 5km SW of Khovu-Aksy, Elegest River Valley, 4-6.05.1990 (D.L.).

Distribution. First record in Russia and northwesternmost point of distribution. Earlier it was recorded from China (PLATNICK,

SONG, 1986) and Mongolia (OVTSHARENKO, personal communication).

Zelotes fratris CHAMBERLIN, 1920

Material examined: Khakassia: AS: 6♀, Asskiz Reserve, 8 km E of Birikchul', 17-18.07.1990 (D.L.). KYR: 9♂, 24♀, 14 km SW Tanzybei Vill., Filin Spring, 400-500 m, 13.07.1990 (D.L.).

Distribution. Siberian-American range (OVTSHARENKO, MARUSIK,1988), Khakassia is the southwesternmost point of distribution.

Zelotes cf. fratris CHAMBERLIN, 1920

Material examined: Tuva: UK: 1♀, 8 km S of Torgalyg Vill., Torgalyg River, 900-950 m, 8-9.05.1990 (D.L.).

Distribution: Holarctic.

Zelotes longipes (L.KOCH, 1866)

Material examined: Khakassia: AS: 1♂, 8 km E Birikchul' Vill., 16-18.07.1990 (D.L.).

Distribution. Transpalearctic range (PLATNICK, SONG, 1986).

Zelotes potanini SCHENKEL, 1963

Material examined: Khakassia: AT: 1♂, 40 km SE of Bely-Yar Vill., 15-18 km E of Novorosiyskoye Vill., 380-400 m, 23-24.06.1990 (D. L.). SH: 1♂, 4♀, 5 km SE of Shiira Vill, Shira Lake, 21.06.1990 (D.L., V.M.). Tuva: ER: 5♂, 3♀, 20-30 km W of Erzin Vill., Oncha-laan Mt. Range, 1200-1400 m, 27.05-2.06.1989 (D.L.); 1♀, same locality, 28.05.1990 (O.L.); 2♀, same locality, Yamaalyg Mt.Range, 1200-1300 m, 9-10.06.1989 (D.L.). KZ: 7♂, 6♀, environs of Kyzyl, 700-900 m, 5.06-3.07.1989 (D.L.); 2♀, same locality, 7.05.1990 (D.L.); 1♂, 5-7 km W of Kyzyl, Yenisei River Valley, 700 m, 4-7.06.1989 (D.L.); 1♂, 4♀, environs of Erzin Vll., Erzin River Valley, 1000m, 23.05.1990 (D.L.).MT: 8♂, 7♀,≈5-8km SE of Mugur-Asky Vill., Kargy River Valley, 1700-1900 m, 16-20.05.1990 (D. L.); 1♂, 1♀, 30-35 km SW of Mugur-Aksy Vill, down flow of Kargy River, Semigorki, 1700 m, 15.06.1989 (D.L.); 1♀, 45-50 km W of Mugur-Aksy Vill., Chalyyasha Natural limit, 2200-2300 m, 13.05. 1990 (D.L.). OV: 1♀, 15 km E of Khandagayty Vill., Ulatay River Valley, 1000-1100 m, 12.06.1989 (D.L.). PK: 1♀, 4-5 km NW of Cherbi Vill., 850-1000 m, 1.07.1990 (D.L.). TK: 1♂, ♀f, 8 km NE of Khol'-Oozhu Vill., 1-2 km Aryskanny-Khem River, 1150-1200 m, 14.07.1989 (D.L.); 1♀, Upper flow of Nariyn-Gol River, 900 m,

10.06.1989 (D.L.); 1♂, 50 km W of Erzin Vill., Shara-Nur Lake, 800-900 m, 3.06.1989 (V.Z.). UK: 1♀, 8 km S of Torgalyg Vill., 1100-1250 m, 9.05.1990 (D.L.); 1♂, 5 km E of Shagonar Town, Khayirkan Mt., 10.05.1990 (D.L.); 1♀, 10-15 km SW of Shagonar Town, Chaaty River, 8.05.1990 (D.L.).

Distribution. Widespread Siberian species, north from Central Yakutia, west to East-Kazakhstan Area, south to Mongolia, China and Japan.

Zelotes puritanus CHAMBERLIN, 1922

Material examined: Tuva: TK: 1♀, 10-12 km NW of Khol'-Oozhu Vill., Belengishch Natural Limit, 1700-1800 m, 9-11.07.1989 (D.L.).

Distribution. Circumholarctic disjunctive range (OVTSHARENKO, MARUSIK, 1988).

Zelotes sula LOWRIE et GERTSCH, 1955

Material examined: Tuva: PK: 3♂, 4♀, 5-7 km NW of Seserlig Vill., 1000-1400 m, 24-25.07.1989 (D.L.). TA: 2♂, 5km SW of Khovu-Aksy, 4-6.05.1990 (D.L.). UK: 2♀, 8 km S of Torgalyg Vill., 1100-1250 m, 9.05.1990 (D.L.).

Distribution. Siberian-American range (OVTSHARENKO, MARUSIK, 1988), Tuva is the southwesternmost point of distribution.

Zelotes yutian PLATNICK et SONG, 1986 Figs. 88-90

Material examined: Khakassia: AT: 1♂, 1♀, 40 km SE of Bely-Yar Vill., 15-18 km E of Novorosiyskoye Vill., 380-400 m, 23-24.06. 1990 (D.L.). Tuva: MT: 1♀, 30-35 km SW of Mugur-Aksy Vill, down flow of Kargy River, Semigorki, 1700 m, 15.06.1989 (D.L.). UK: 1♂, 8 km S of Torgalyg Vill., 1100-1250 m, 9.05.1990 (D.L.).

Distribution. This species is new for USSR fauna. According to our collections it is also present in Buryatia (Selenga Distr.), Saur Mt. Range (East-Kazakhstan Area) and in Central Yakutia. Earlier it was known from China (PLATNICK, SONG, 1986) only.

Parasyrisca lugubris (SCHENKEL, 1963)

Material examined: Tuva: ER: 1♂, 5-7 km SW of Erzin Vill., Tes-Khem River Valley, 1000-1100 m, 24.05.1990 (D.L.). KZ: 6♀, 5km W of Kyzyl Town, 700 m, 25.05.1989 (D.L.); 4♀, same locality,

13-22.05.1990 (D.L.). PK: 1♀, 10 km SE of Seserlig Vill., 1100-1200 m, 2.05.1990 (D.L.).

Parasyrisca sp. 1

Material examined: Tuva: TK: 1♂, 20 km NW of Khol'-Oozhu Vill., Kangay-Kyry Mt., 2100-2173 m, 8-9.07.1989 (D.L.).

Parasyrisca sp. 2

Material examined: Tuva: MT: ♀♀ in different localities.

Parasyrisca sp. 3

Material examined: Tuva: MT: 1♀, environs of Mugur-Aksy Vill., 2500-2700 m, 19.05.1990 m (D.L.); 2♀, Barlyk River Valley, confluence with Onachy River, 6.06.1990 (O.L.).

Parasyrisca sp. 4

Material examined: Khakassia: AS: 1♂, 8 km E of Birikchul' Vill., 18.07.1990 (D.L.).

Addendum: New material was obtained from Altai, environs of Kosh-Agach Vill., Kurai Mt. Range, 16.VI.1971, A. P. KONONENKO leg.:

Berlandina schenkeli sp.n., 1♂ paratype,
Drassodes neglectus 1♂,
Gnaphosa braendegaardi, 1♂,
Haplodrassus pugnans, 4♂1♀,
Tuvadrassus tegulatus, ♀♂,
Zelotes potanini, 104♂3♀.

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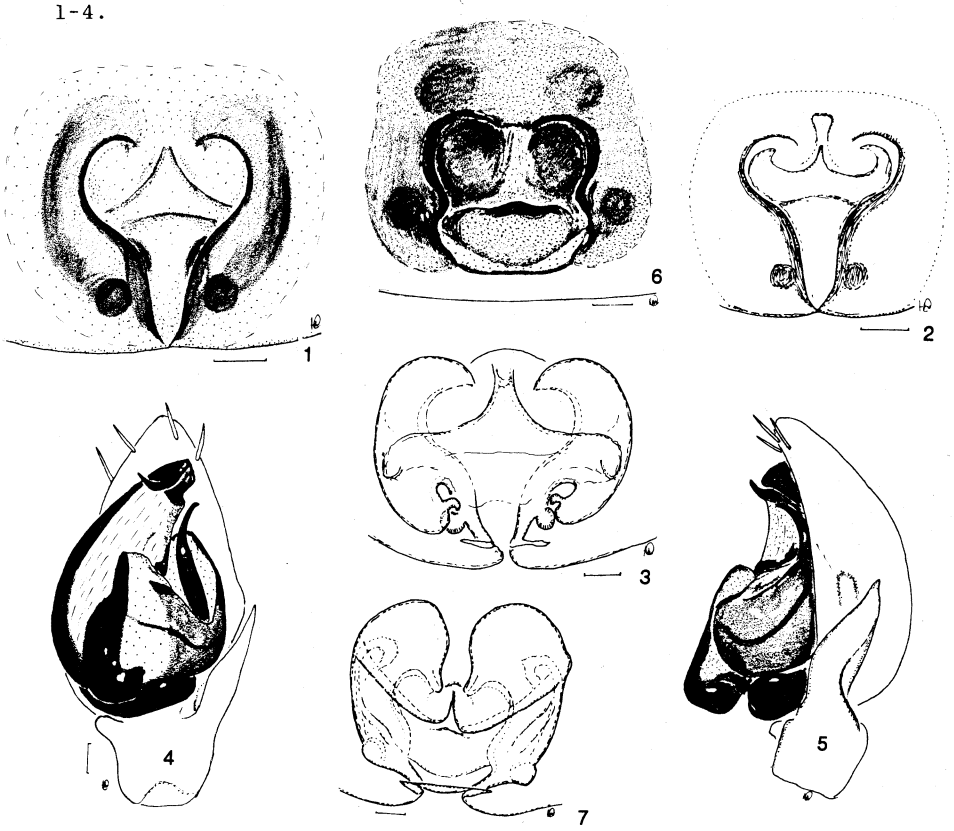
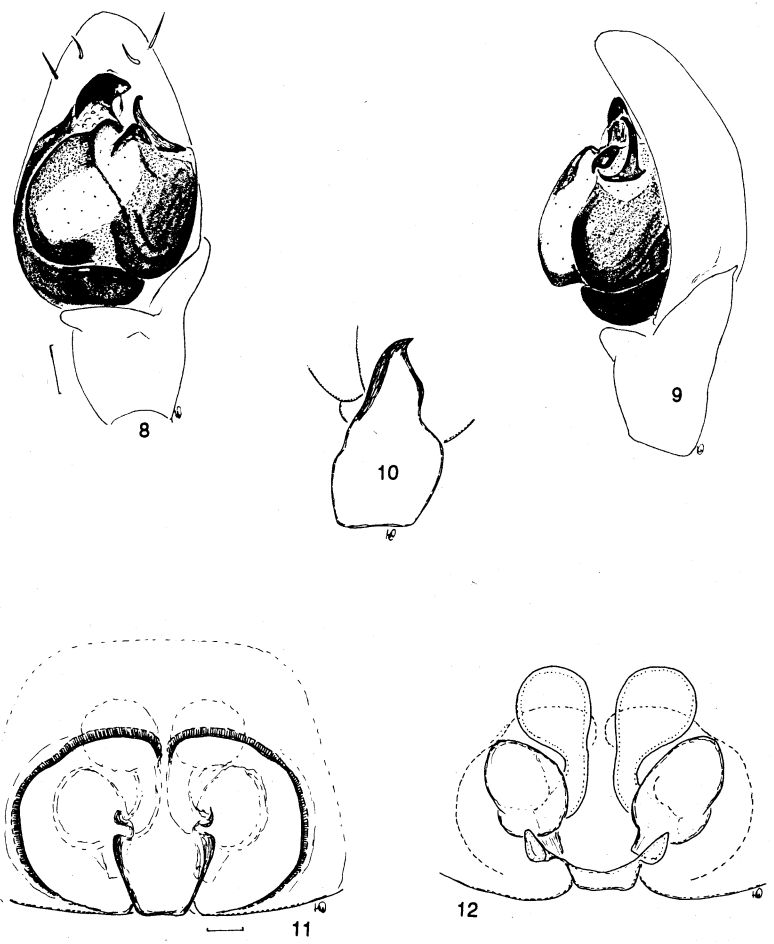


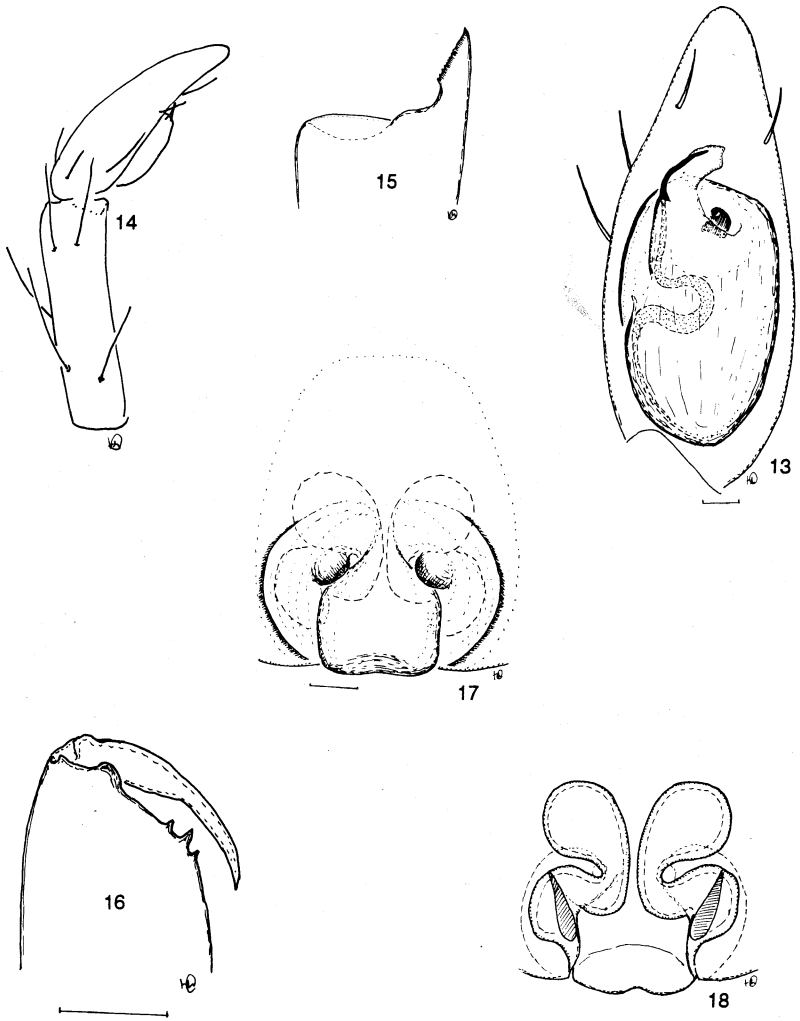
Figs. 1-3. Berlandina potanini; 1-2) ♀, epigyne, ventral view; 3) epigyne, dorsal view.

Figs. 4-7. Berlandina schenkeli sp.n.; 4) ♂-palp, ventral view; 5) ♂-palp, retrolateral view; 6) ♀, epigyne, ventral view; 7) ♀, epigyne, dorsal view.

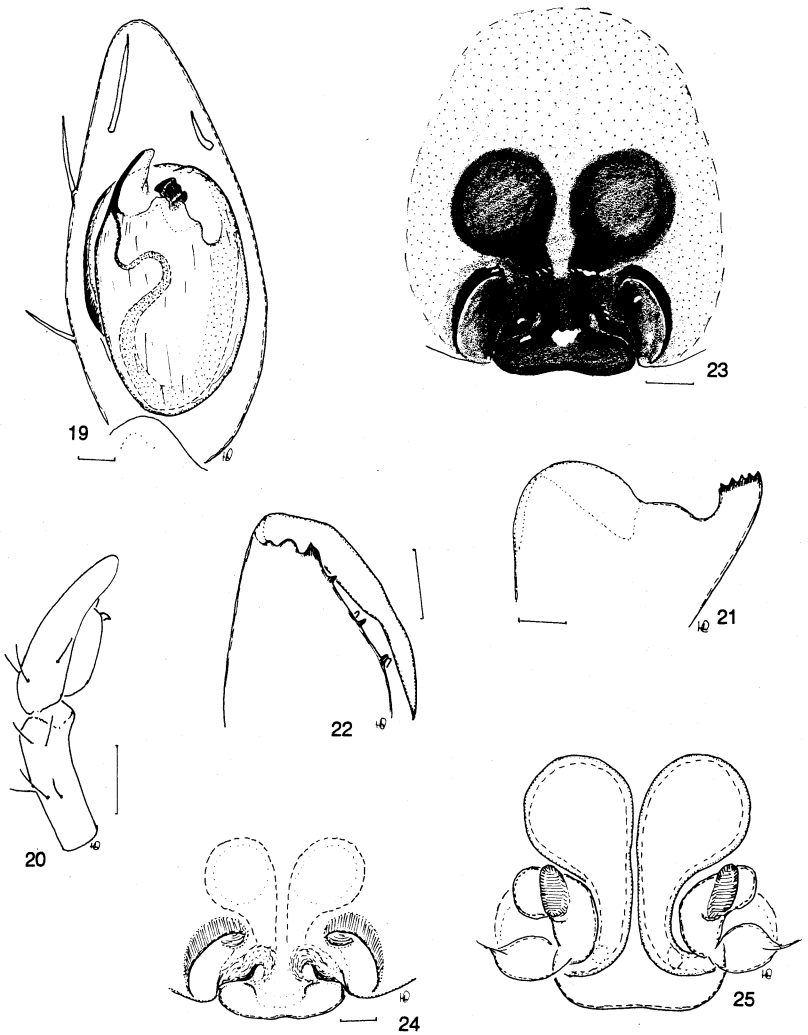


Figs. 8-10. Berlandina ubsunurica sp.n.; 8) ♂-palp, ventral view; 9) ♂-palp, retrolateral view; 10) tibia of the ♂-palp, retrolateral view.

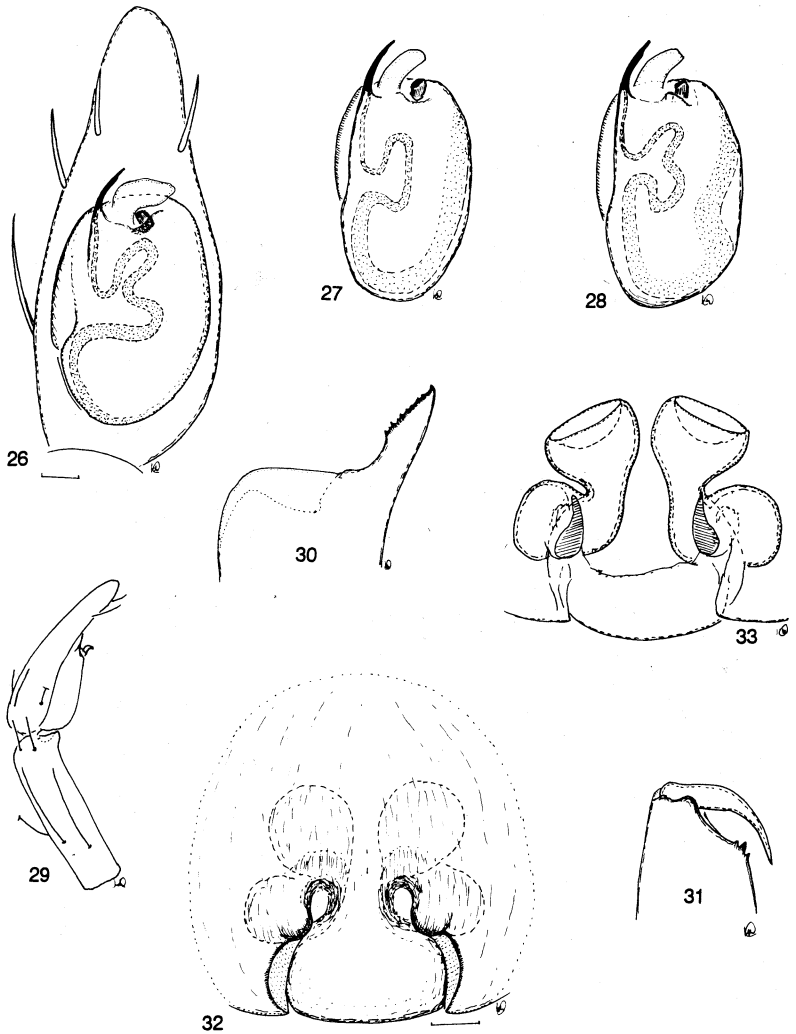
Figs. 11-12. Drassodes kaszabi, ♀; 11) epigyne, ventral view; 12) epigyne, dorsal view.



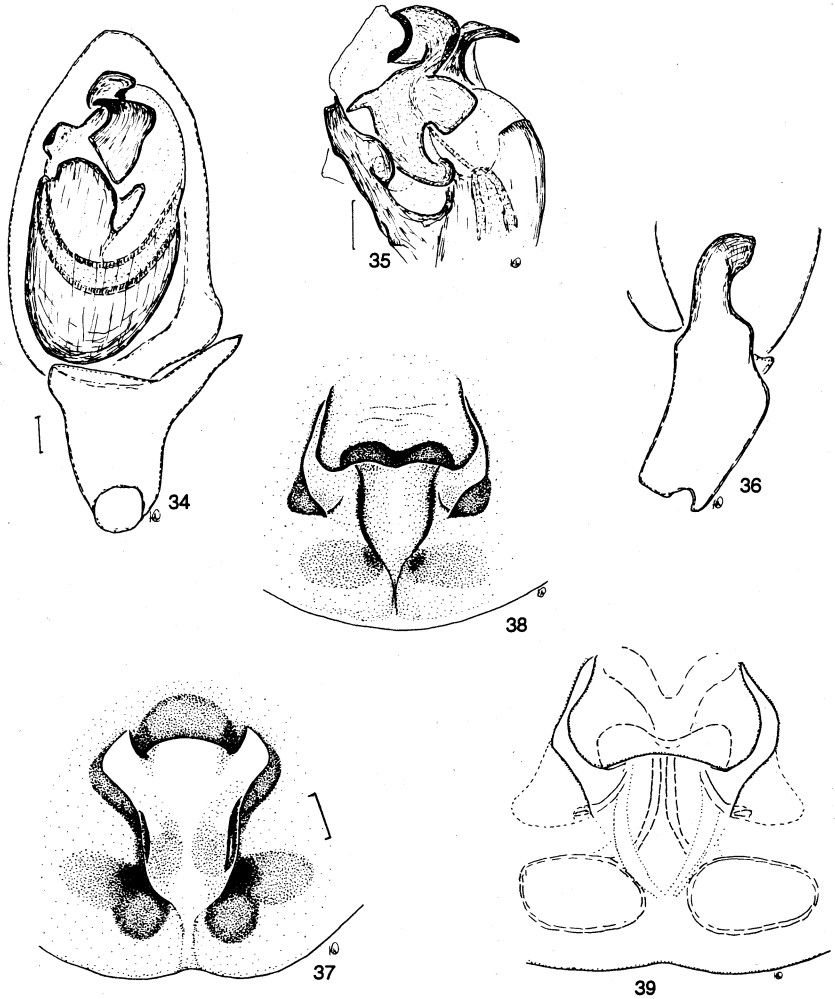
Figs. 13-18. Drassodes lesserti; 13) ♂-palp, ventral view; 14) ♂-palp, prolateral view; 15) tibial apophysis, ventral view; 16) apical half of ♂-chelicera; 17) ♀, epigyne, ventral view; 18) ♀, epigyne, dorsal view.



Figs. 19-25. Drassodes serratidens 19 ♂-palp, ventral view; 20) ♂-palp, prolateral view; 21 tibial apophysis, ventral view; 22) apical half of male chelicera; 23) and 24) ♀, epigyne, ventral view; 25) epigyne, dorsal view.



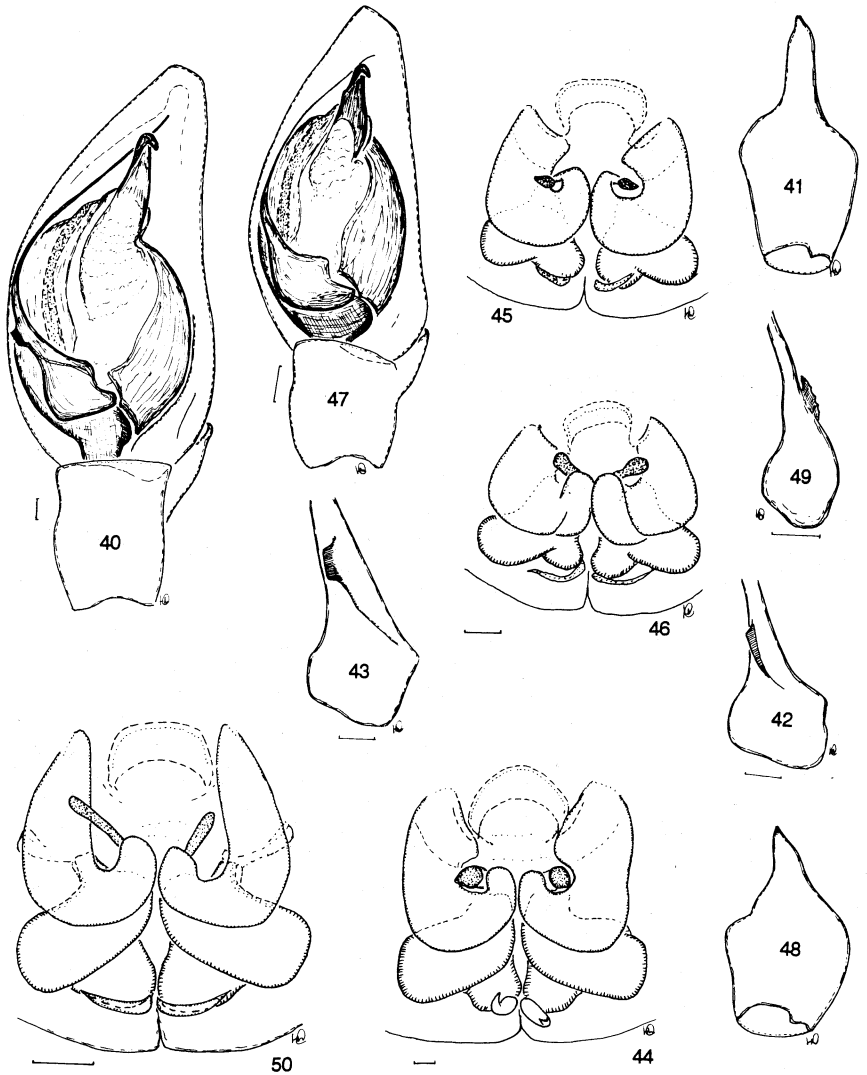
Figs. 26-33. Drassodes longispinus sp.n.; 26) ♂-palp, ventral view; 27) and 28) bulbus, ventral view; 29) ♂-palp, prolateral view; 30) tibial apophysis, ventral view; 31) apical half of male chelicera; 32) ♀,epigyne, ventral view; 33) epigyne, dorsal view.



Figs. 34-36. Echemus sibiricus sp.n., ♂; 34) palp, ventral view; 35) embolic division, prolateral view; 36) tibia of the palp, retrolateral view.

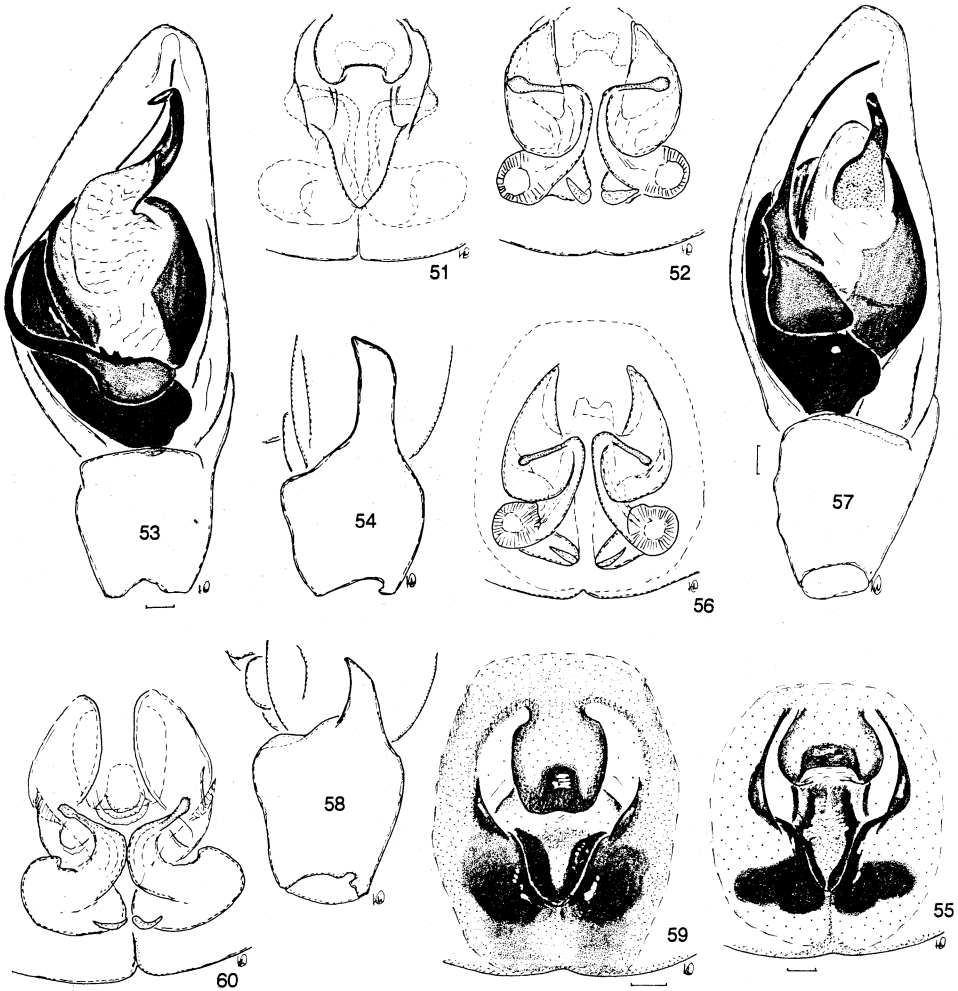
Fig. 37. Gnaphosa potanini ♀, holotype, epigyne, ventral view.

Figs. 38-39. Gnaphosa glandifera, ♀; 38) holotype), 39) paratype of G. holmi, epigyne, ventral view.



Figs. 40-46. Gnaphosa gracilior; 40) ♂-palp, ventral view; 41) tibia of the ♂-palp, retrolateral view; 42) and 43) basal part of the embolus, prolateral view; 44-46) epigyne, dorsal view.

Figs. 47-50. Gnaphosa proxima; 47) ♂-palp, ventral view; 48) tibia of the ♂-palp, retrolateral view; 49) basal part of the embolus, prolateral view; 50) ♀, epigyne, dorsal view.

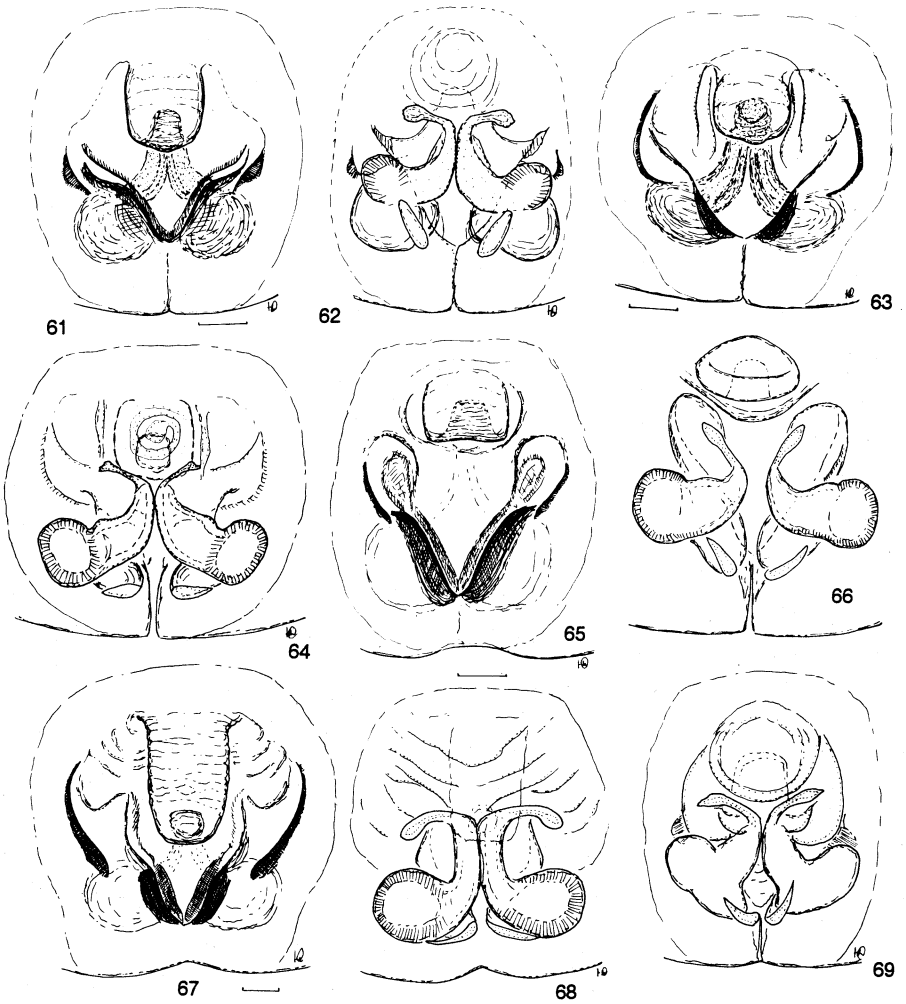


Figs. 51-52. Gnaphosa muscorum, ♀; 5)1 epigyne after maceration, ventral view; 52) epigyne, dorsal view.

Figs. 53-54. Gnaphosa mandschurica SCHENKEL, 1963, ♂; 53) palp, ventral view; 54) tibia of the palp, retrolateral view.

Figs. 55-56. Gnaphosa muscorum (L. KOCH, 1866), ♀; 55) epigyne, ventral view; 56) epigyne, dorsal view.

Figs. 57-60. Gnaphosa tuvinica sp.n.; 57) ♂-palp, ventral view; 58) tibia of the ♂-palp, retrolateral view; 59) ♀, epigyne, ventral view; 60) epigyne, dorsal view.



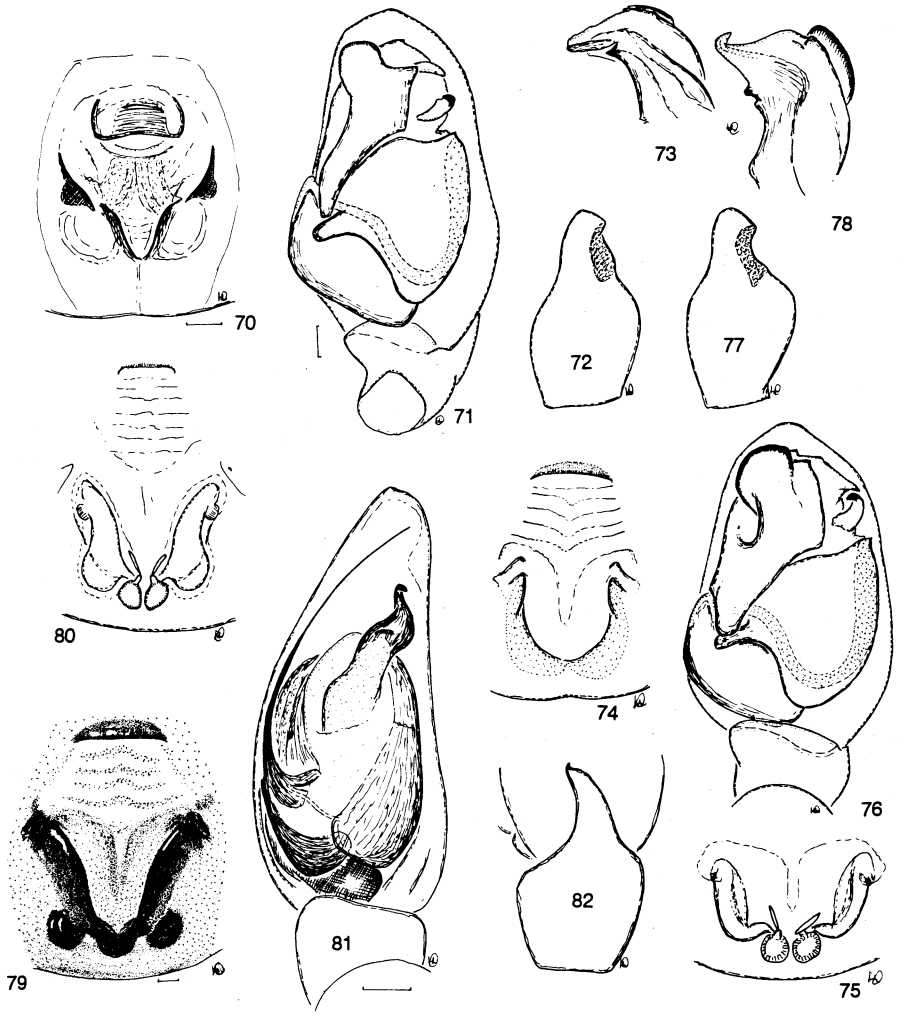
Figs. 61-62. Gnaphosa sp. 1, ♀; 63) epigyne, ventral view; 64) epigyne, dorsal view.

Figs. 63-64. Gnaphosa inconspecta SIMON, 1878, ♀; 63) epigyne, ventral view; 64) epigyne, dorsal view.

Figs. 65-66. Gnaphosa sp. 2, ♀; 65) epigyne, ventral view; 66) epigyne, dorsal view.

Figs. 67-68. Gnaphosa sp. 3, ♀; 67) epigyne, ventral view; 68) epigyne, dorsal view.

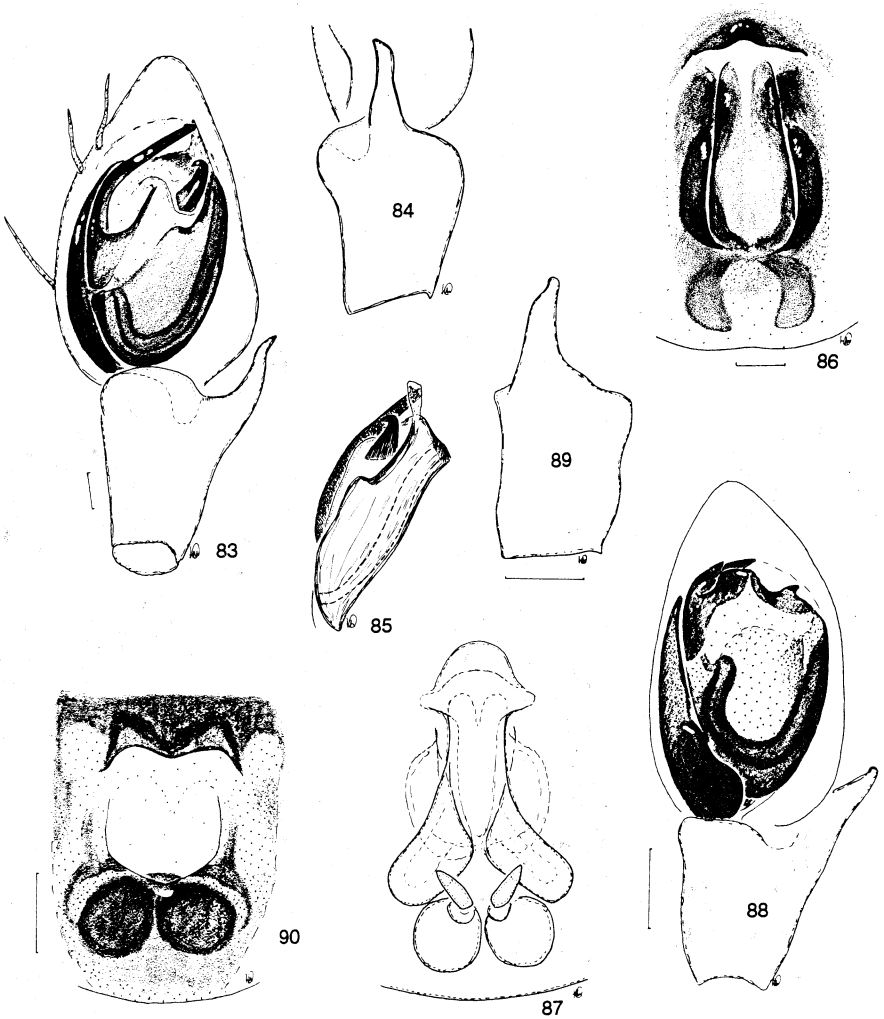
Figs. 69-70. Gnaphosa wiehlei SCHENKEL, 1963, ♀; 69) epigyne, ventral view; 70) epigyne, dorsal view. →



Figs. 71-75. Hapodrassus hiemalis (♂ from Magadan Area); 71) ♂-palp, ventral view; 72) tibia of the male palp, retroapical view; 73) apical part of embolus, apical view; 74) ♀, epigyne, ventral view; 75) epigyne, dorsal view.

Figs. 76-80. Haplodrassus moderatus (male from Finland); 76) ♂-palp, ventral view; 77) tibia of the ♂-palp, retroapical view; 78) apical part of the embolus, apical view; 79) ♀, epigyne, ventral view; 80) epigyne, dorsal view.

Figs. 81-82. Gnaphosa denisi, ♂; 81) palp, ventral view 82) tibia of the palp, retrolateral view.



Figs. 83-87. Tuvadrassus tegulatus (SCHENKEL, 1963); 83) ♂-palp, ventral view; 84) tibia of the ♂-palp, retroapical view; 85) apical part of the bulbus, retrolateral view; 86) ♀, epigyne, ventral view; 87) epigyne, dorsal view.

Figs. 88-90. Zelotes yutian (specimens from Yakutia); 88) ♂-palp, ventral view; 89) tibia of the ♂-palp, retrolateral view; 90) ♀, epigyne, ventral view.

BEITR. ARANEOL., 4 (1994)

A NEW SPECIES AND TWO INTERESTING RECORDS OF THE BLACK-WIDOW SPIDERS FROM MIDDLE ASIA AND THE CAUCASUS (Aranei, Theridiidae)

MARUSIK, Y.M., Institute for Biological Problems of the North (IBPN), K. Marx Pr. 24, Magadan 685010, Russsia &
TARABAEV, C.K., Institute for Zoology (IZA), Akademgorod, Alma-Ata 480032, Kazakhstan.

Abstract: Latrodectus tadzhicus n.sp. (Aranei: Theridiidae) from Russia is described and compared with its sibling species L. dahli.

Introduction

The members of the genus Latrodectus are of considerable importance as their venom is poisonous to mammals. Three species of karakurts (the local Asian name for widow spiders, which means "kara" - black, "kurt" small invertebrate or insect) are known to be distributed in what was formely the USSR. They are: L. tredecimguttatus ROSSI, L. pallidus O.P.-CAMBRIDGE and L. dahli LEVI (TYSHCHENKO, ERGASHEV, 1974). Despite numerous publications devoted to the widow spiders of the Soviet Union (see references in MARIKOVSKI, 1956 and ERGASHEV, 1990), this group of spiders is still poorly known. Poor knowledge of karakurts can be illustrated by the present paper, in which a new species is described