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New data on the jumping spiders of the Palearctic fauna (Aranei Salticidae).

Новые данные о пауках-скакунчиках фауны Палеарктики (Aranei Salticidae).

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KEY WORDS: taxonomy, distribution, Siberia, *Pellenes*, *Evarcha*, *Dendryphantes*, *Talavera*, *Heliophanus*.

КЛЮЧЕВЫЕ СЛОВА: таксономия, распространение, Сибирь, *Pellenes*, *Evarcha*, *Dendryphantes*, *Talavera*, *Heliophanus*.

ABSTRACT. The paper presents new data on the taxonomy and distribution of nine salticid species from the genera *Dendryphantes*, *Pellenes*, *Talavera*, *Heliophanus* and *Evarcha*. Two new species, *Dendryphantes ovchinnikovi* sp.n., from Kirghizia, and *Pellenes sibiricus* sp.n., from East Siberia, are described. Taxonomic notes on and redescriptions of further three species are provided: *Dendryphantes biankii* Prószyński, *Pellenes seriatus* Thorell, and *Pellenes tripunctatus* (Walckenaer). New faunistic records, mainly in Siberia, are given for *Evarcha laetabunda* (C.L.Koch), *Heliophanus ussuricus* Kulczyński, *Pellenes gobiensis* Schenkel, and *Talavera aequipes* (O.P.-Cambridge).

РЕЗЮМЕ. В статье представлены новые данные по таксономии и распространению девяти видов сальтицид из родов *Dendryphantes*, *Pellenes*, *Talavera*, *Heliophanus* и *Evarcha*. Описано два новых вида: *Dendryphantes ovchinnikovi* sp.n. из Киргизии и *Pellenes sibiricus* sp.n. из Восточной Сибири. Даны таксономические замечания и переописания трех других видов: *Dendryphantes biankii* Prószyński, *Pellenes seriatus* Thorell и *Pellenes tripunctatus* (Walckenaer). Обсуждаются новые фаунистические находки *Evarcha laetabunda* (C.L.Koch), *Heliophanus ussuricus* Kulczyński, *Pellenes gobiensis* Schenkel и *Talavera aequipes* (O.P.-Cambridge), главным образом из Сибири.

Introduction.

The following notes and descriptions of new species continue our reports on North Asian Salticidae [Logunov, 1991, 1992a, 1993; Logunov & Marusik, 1991; Logunov & Wesolowska, 1992; Wesolowska & Marusik, 1990].

A new species of the genus *Dendryphantes* has since been received from Kirghizia (= Kyrghyzstan), and its description is provided here. Redescription of another dendryphantine species, *Dendryphantes biankii* Prószyński, hitherto formally known from the ♀ sex only [Prószyński, 1979], is also given here as based on both ♂ and ♀. As now evident, the ♂ of *D. biankii* has long been described and known under the name of *Dendryphantes thorelli* Kulczyński [Kulczyński, 1895: ♂ only].

In addition, while examining materials of salticid spiders from Europe and Siberia deriving from various museum collections, we have discovered that specimens from Siberia and Mongolia previously reported as *Pellenes tripunctatus* (Walckenaer) [Kulczyński, 1895; Sternbergs, 1977, 1981; Prószyński, 1979,1982; Marusik, 1988; Danilov, 1989; Izmailova, 1989; Marusik et al., 1992] belong in fact to a new species. Furthermore, almost all records of this species in Middle Asia [Andreeva, 1976; Prószyński, 1979; Nenilin, 1984a, b] should actually be assigned to *P. seriatus* Thorell. Hence, instead of one, there are three species currently known in North Asia, all closely related and belonging to the "*tripunctatus*" species-group.

Recently, specimens of four additional species, *Pellenes gobiensis* Schenkel, *Heliophanus ussuricus* Kulczyński, *Talavera aequipes* (O.P.-Cambridge), and *Evarcha laetabunda* (C.L.Koch), have been collected from the northern regions of East Siberia, those records precising the distribution patterns of these species.

Material and methods.

Specimens for this study have been borrowed from or have been housed in the following museums: BI, the Zoological Museum of the Biological Institute, Novosibirsk, Russia; ZMMU, the Zoological Museum of the Moscow State University, Moscow, Russia; ZIP, the Zoological Institute of the Russian Academy of Sciences, Sankt-Petersburg, Russia; HNHM, the Hungarian Natural History Museum, Budapest, Hungary; SMNH, the Swedish Museum of Natural History, Stockholm, Sweden.

The following abbreviations have been accepted in the text: AME — anterior medial eyes, d. — dorsally, v. — ventrally, pr. — prolaterally, rt. — retrolaterally, ap. — apically, Fm. — femur, Pt. — patella, Tb. — tibia, Mt. — metatarsus. The sequence of leg segments in measurement data is as follows: femur + patella + tibia + metatarsus + tarsus. For leg spination, the system adopted is that used by H. Ono [1988]. The terms for distribution patterns are those proposed by Gorodkov [1984]. All measurements are in mm.

Descriptions.

Dendryphantes ovchinnikovi **sp.n.**

Fig. 1.

MATERIAL. Holotype: ♂ (BI 1347), KIRGHIZIA, Boomskoye Canyon, Kyz-Kuye Town, 28.06.1991, leg. S.V. Ovchinnikov. - Paratypes: KIRGHIZIA: 1 ♀ (BI 1349), S slope of the Terskei Ala-Too Mt. Range, Molo Valley, 3,100 m alt., 15.07.1983, leg. S.V. Ovchinnikov; 1 ♀ (BI 1351), Issyk-Kul Area, Santash Valley, 17.07.1984, leg. S.V. Ovchinnikov; 1 ♀ (BI 1350), Kaindy Mt. Range, 3,000 m alt., 17.07.1983, leg. S.V. Ovchinnikov. KAZAKHSTAN: 1 ♂ (BI 1348), Alma-Ata Area, Talgarski Distr., Alma-Atinsky State Reserve, Praviy Talgar River, 26.08.1986, leg. A.V. Abramov.

DIAGNOSIS. The new species is closely related to *D. fusconotatus* (Grube, 1861) and *D. biankii* Prószyński, 1979, both from Siberia (Fig. 2), but it can be easily separated from them by certain details of the structure of the embolic division (Fig. 1A-C) and position of the copulatory openings and vulval structure (Fig. 1D-E).

DISTRIBUTION. Kyrghyzstan and southeastern Kazakhstan, Central Asia, where it occurs only high in the mountains.

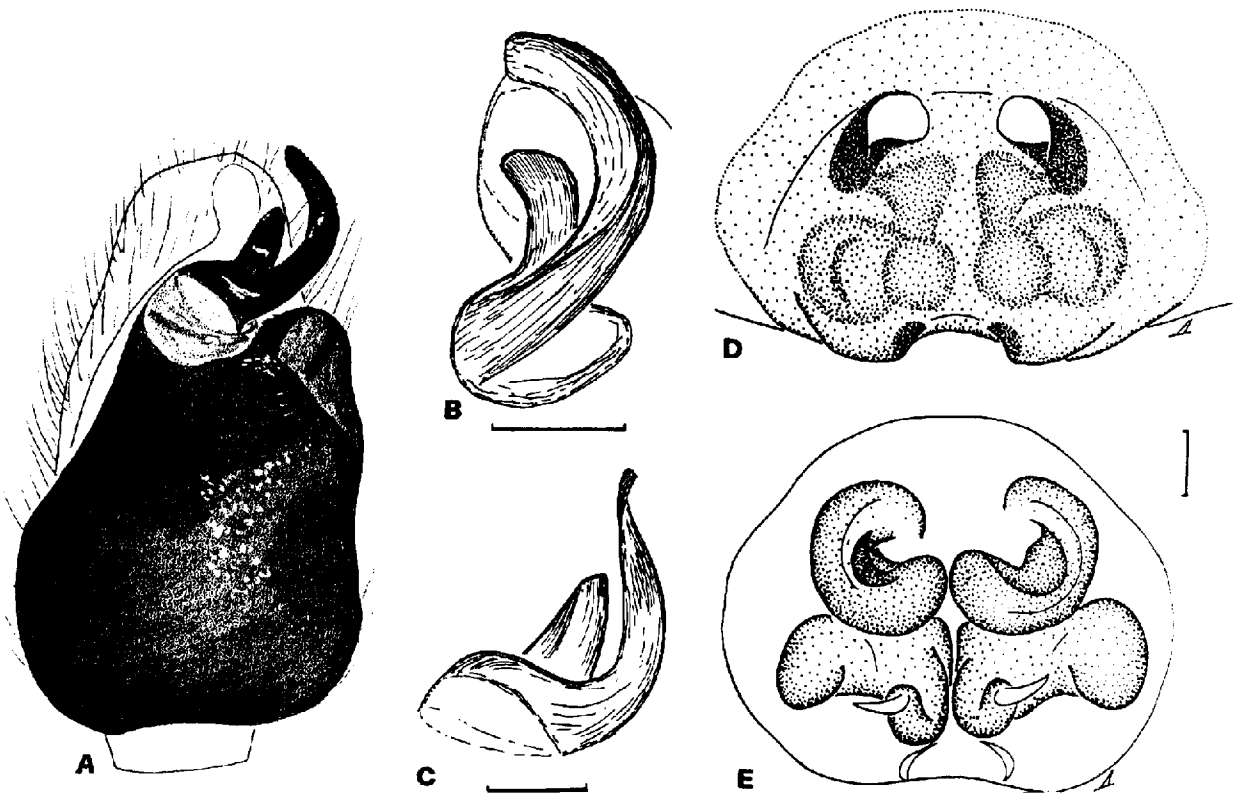


Fig. 1. *Dendryphantes ovchinnikovi* sp.n.: a — male palp, ventral; b,c — embolic division, lateral and apical, respectively; d — epigyne; e — spermathecae. Scale 0.1 mm.

Рис. 1. *Dendryphantes ovchinnikovi* sp.n.: a — пальпа самца; вид снизу; b,c — подразделение эмболюса, соответственно латерально и спереди; d — эпигина; e — сперматека. Масштаб 0,1 мм.

DESCRIPTION. MALE. Measurements. Carapace 2.25-2.70 long, 1.80-2.13 wide, 1.00-1.30 high at PLE. Ocular area 1.05-1.28 long, 1.28-1.50 wide anteriorly and 1.43-1.73 wide posteriorly. Diameter of AME 0.38-0.43. Abdomen 2.58-3.10 long, 1.70-2.00 wide. Cheliceral length 0.85-1.13. Clypeal height 0.13. Length of leg segments: leg I - 1.40-1.93 + 0.85-1.13 + 1.08-1.45 + 0.85-1.18 + 0.60-0.80; leg II - 1.15-1.30 + 0.58-0.85 + 0.70-0.78 + 0.65-0.83 + 0.45-0.55; leg III - 1.08-1.35 + 0.60-0.73 + 0.58-0.70 + 0.65-0.85 + 0.45-0.53; leg IV - 1.38-1.70 + 0.70-0.85 + 0.85-1.00 + 0.85-0.98 + 0.48-0.63. Leg spination. Leg I: Fm. d.0-1-1-3; Tb. v.0-2-2-2ap.; Mt. v.2-2ap. Leg II: Fm. d.0-1-1-3; Tb. pr.0-1, v.1-1-1ap.; Mt. v.2-2ap. Leg III: Fm. d.0-1-1-3; Tb. pr. and rt.0-1-0, v.2ap; Mt. pr., rt. and v.2ap. Leg IV: Fm. d.1-1-1; Tb. v.1-2ap.; Mt. pr.1-0-2ap., rt. and v.2ap. Coloration. Carapace dark, red-brownish, with a white strip of hairs on each side below eyes. Eye field black. Clypeus and "cheeks" reddish, hairless. Sternum, maxillae, labium and chelicerae brown to red-brown. Abdomen dark grey, but dorsum brown with three rows of white patchs. Book-lung covers grey. Spinnerets yellow-brownish. Legs: coxae yellow to yellow-brown; remaining segments red-brown with yellow rings. Palpi red-brownish, their structure as in Fig. 1A-C.

FEMALE. Measurements. Carapace 2.28-2.88 long, 1.85-2.18 wide, 1.00-1.30 high at PLE. Ocular area 1.10-1.18 long, 1.33-1.53 wide anteriorly and 1.58-1.83 wide posteriorly. Diameter of AME 0.38-0.40. Abdomen 3.75-3.83 long, 2.70 wide. Cheliceral length 0.90-1.00. Clypeal height 0.15-0.18. Length of leg segments: leg I - 1.35-1.60 + 0.88-0.93 + 0.88-1.05 + 0.75-0.85 + 0.50-0.58; leg II - 1.15-1.38 + 0.65-0.78 + 0.60-0.75 + 0.63-0.70 + 0.43-0.50; leg III - 1.13-1.38 + 0.60-0.70 + 0.53-0.68 + 0.58-0.83 + 0.53-0.55; leg IV - 1.50-1.73 + 0.75-0.83 + 0.90-1.13 + 0.90-1.10 + 0.53. Leg spination. Leg I: Fm. d.1-1-3; Tb. v.0-2-2-2ap.; Mt.2-2ap. Leg II: Fm. d.0-1-1-3; Tb. v.1-1-2ap.; Mt.2-2ap. Leg III: Fm. d.1-1-2; Tb. pr.0-1, v.2ap.; Mt.pr., rt. and v.2ap. Leg IV: Fm. d.1-1-1; Tb. rt.0-1, v.1-2ap.; Mt. pr. and rt.1ap., v.2ap. Coloration as described for ♂, except as follows: ♀♀ paler; clypeus covered with dense white hairs; chelicerae and venter yellow. Epigyne and vulva as in Fig. 1D-E.

ETYMOLOGY. The species honors Mr. S.V. Ovchinnikov, an arachnologist from Bishkek, who has collected the bulk of type material of this species.

Dendryphantes biankii Prószyński, 1979.
Fig. 2A-E.

Dendryphantes biankii Prószyński, 1979: 304, figs. 30-33; Nenilin, 1985: 130; Danilov & Kurtova, 1991: 34.

Attus thorelli Kulczyński, 1895: 68 (♂ only).

Dendryphantes fusconotatus: Prószyński, 1979 : 305 (pro parte); Izmailova, 1989: 153, fig. 152, sub *Evarcha albaria*.

Dendryphantes cf. *fusconotatus*: Logunov & Wesolowska, 1992: 115.

MATERIAL. IRKUTSK AREA: 1 ♂ (ZIP), "Kursan-Kursits", 1867, leg. S.A. Manowski. BURYATIA: 1 ♀ (BI), environs of Ulan-Ude City, 24.07.1990, leg. M.T. Sternbergs; 1 ♀ (BI), basin of Selenga River, Murzino, 29.06.1982, leg. B.P. Zakharov. CHITA AREA: 1 ♂ (BI), Kyra Distr., 3-5 km E of Kyra, valley of Kyra River, 850-900 m alt., on *Populus* trunk, 19.06.1991, leg. D.V. Logunov; 2 ♀♀ (BI), same area and district, Sokhondo State Reserve, valley of Agutsa River, 1,000-1,100 m, dry meadow, 14-15.06.1991, leg. V.P. Pekin. YAKUTIA (= YAKUT-SAKHA REPUBLIC): 1 ♀ (ZIP No 46-926, holotype), Ontchkutchak Spring, tributary of Menda River, 17.07.1925, A. Bianki; 2♀♀ (ZIP No 2-927), Kkhamurgan, Arbyn, Namoksky Ulus, 29.06.1926, A. Bianki; 1 ♂ (ZIP No 42-1903), environs of Yakutsk, Tulaginsky Nasleg, June 1899, leg. P.V. Olenin. AMURSKAYA AREA: 1 ♀ (ZIP), Zeisky Distr., Zeisky State Reserve, Teplyi Klyutch, 15.08.1978, leg. K.Y. Eskov. KHABAROVSK PROV.: 3 ♂♂ (BI), 20-25 km SE of Khabarovsk, Bolshekhekhtsyrsky State Reserve, Belaya River, 100-150 m alt., 17-19.06.1987, leg. D.V. Logunov.

DIAGNOSIS. *Dendryphantes biankii* Prószyński is closely related to *D. fusconotatus* (Grube) and, especially, *D. ovchinnikovi* sp.n. (see above), but the ♂ can be easily distinguished by the structure of the embolic division in the palpal bulb (s. Fig. 2) as well as by the size and shape of the cheliceral tooth (Fig. 2E-F). The ♀ differs from both related species in having the smooth edges of the copulatory openings (Fig. 2C) and noticeably disjunct structure of the spermathecae (Fig. 2D).

DISTRIBUTION. This species has a Siberian boreal distribution pattern. All records in Siberia are shown in Fig. 3.

For comparative purposes, we have mapped also the distribution of the related and sympatric species *D. fusconotatus* (Grube) (Fig. 3). Following the original description by Grube [1861] and Proszynski's [1971] redescription, the records by Proszynski [1979], Dunin [1984], Wesolowska [1981, sub *D. thorelli*], Marusik [1988], Eskov [1988] and Danilov [1989] indeed refer to this species.

Since Schenkel's [1936] record of *D. thorelli* Kulczyński in China (Gansu) is based on juveniles (material restudied, courtesy of Dr. T. Kronestedt) [s. Logunov, 1993], it is omitted here.

REMARKS. Proszynski [1979] was the first to synonymize *Dendryphantes thorelli* Kulczyński under *D. fusconotatus* (Grube) and, in doing so, he designated the lectotype (♀) and a paralectotype (♂) from the type series of the former species. In

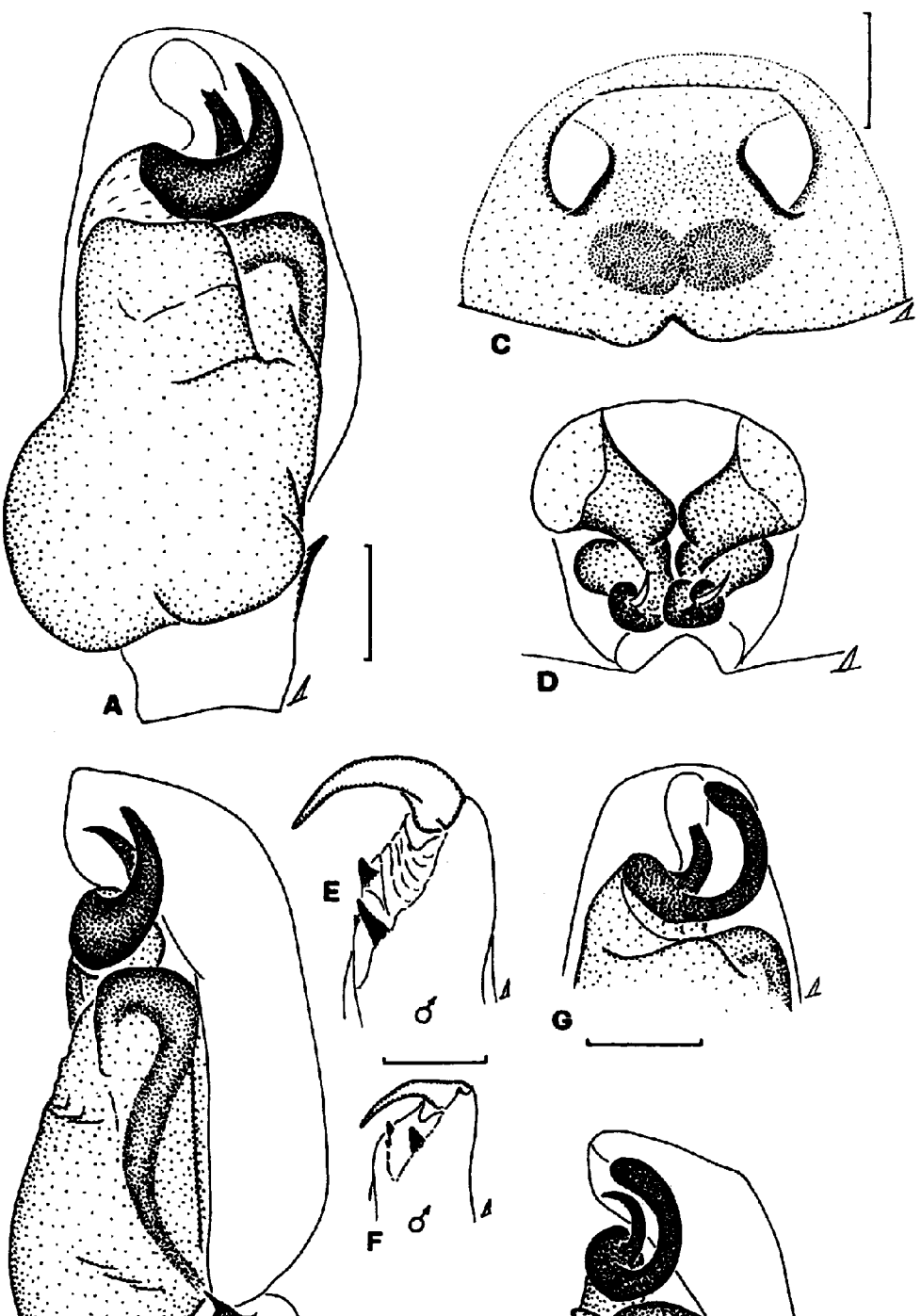
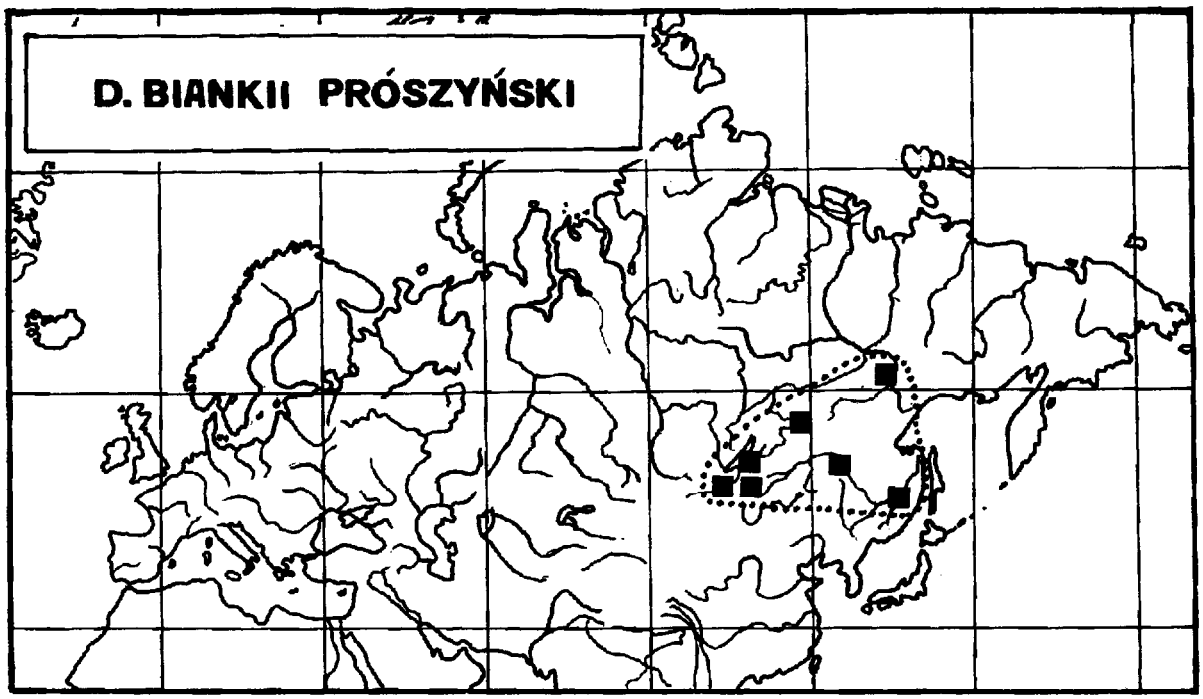


Fig.2. *Dendryphantes biankii* Prószyński (a-d) and *D. fusconotatus* (Grube) (f-i): a, b — male palp, ventral and lateral, respectively; c — epigyne; d — spermathecae; e-f — ♂ chelicerae, ventral; g-i — apical division of ♂ bulb, ventral view and lateral, respectively. Scale 0.2 mm.

Рис.2. *Dendryphantes biankii* Prószyński (a-d) и *D. fusconotatus* (Grube) (f-i): a,b — пальпа самца, соответственно снизу и сбоку, c — эпигина; d — сперматека; e-f — хелицеры самца, снизу; g,i — апикальное подразделение бульбуса, соответственно снизу и сбоку. Масштаб 0,2 мм.



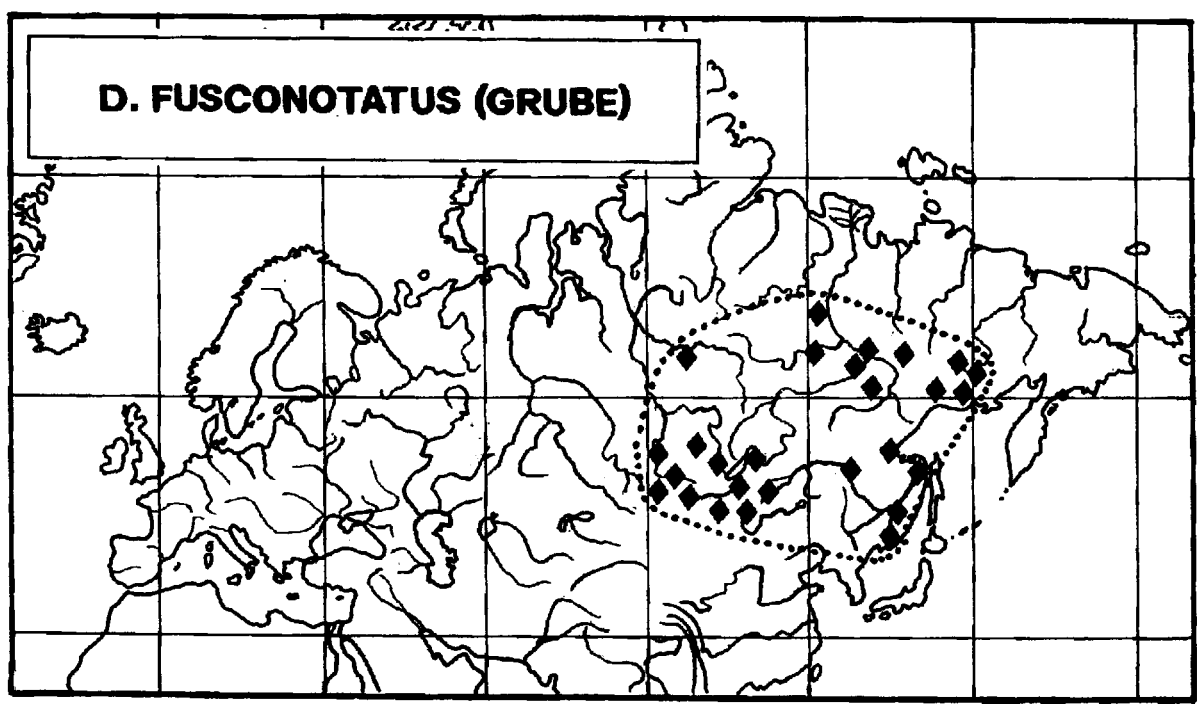


Fig 3. Distributional patterns of two *Dendryphantes* species.
Рис.3. Распространение двух видов из рода *Dendryphantes*.

the same paper, he also described a new species, *D. biankii* Prószyński, based on two ♀♀.

Judged from Prószyński's drawings alone [1979, figs. 37-43], the type series of *D. thorelli* appears to be heterogeneous. We believe that the ♀ lectotype of the latter taxon is actually conspecific with *D. fusconotatus* (Grube), whereas the paralectotype certainly belongs to a different species.

Examination of abundant *Dendryphantes* materials from Siberia allows us to establish that both the ♂ (paralectotype) of *Dendryphantes thorelli* Kulczyński and the ♀ of *Dendryphantes biankii* Prószyński are in fact conspecific. However, *D. thorelli* is invalid as a junior synonym of *D. fusconotatus* (see above), while *D. biankii* is valid for the accomodation of the species concerned.

REDESCRIPTION (based on specimens from Sokhondo Reserve, Chita Area). MALE. Measurements. Carapace 2.95 long, 2.25 wide, 1.35 high at PLE. Ocular area 1.28 long, 1.63 wide anteriorly and 1.73 wide posteriorly. Diameter of AME 0.48. Abdomen 3.10 long, 2.00 wide. Cheliceral length 1.28. Clypeal height 0.15. Length of leg segments: leg I - 2.03 + 1.28 + 1.65 + 1.45 + 0.85; leg II - 1.40 + 0.73 + 0.80 + 0.90 + 0.55; leg III - 1.58 + 0.83 + 0.83 + 1.05 + 0.58; leg IV - 1.90 + 0.88 + 1.18 + 1.35 + 0.63. Leg spination. Leg I: Fm. d.0-1-1-3; Tb. v.0-2-1-2ap.; Mt. v.2-2ap. Leg II: Fm. d.5ap.; Tb. v.2ap.; Mt. pr.1ap., v.0-1-2ap. Leg III: Fm. d.1-1-4; Pt. rt.0-1-0; Tb. pr.0-1, rt.1-1, v.2ap.; Mt.6ap. Leg IV: Fm. d.1-1-3; Pt. rt.0-1-0; Tb. pr.0-1-0, rt.1-1, v.1-2ap.; Mt.6ap. Coloration usual, like in all Siberian congeners.

Carapace dark brown, with a black eye field. White lines of hairs above first row of eyes present. Similar lines on both sides of carapace under eyes. Clypeus reddish-brown. Sternum, labium, maxillae and chelicerae dark brown. Maxillae with white tips. Abdomen reddish-grey, covered with sparse, shiny scales. Dorsum with 4 pairs of transverse spots of white hairs. Book-lung covers grey. Spinnerets reddish. All legs uniformly coloured: metatarsi and tarsi II-IV as well as tarsi I yellow; patellae red-brown; remaining segments dark brown. Palp brown, its structure as in Fig. 2A-B.

FEMALE. Measurements. Carapace 3.40 long, 2.55 wide, 1.58 high at PLE. Ocular area 1.45 long, 1.80 wide anteriorly and 2.05 wide posteriorly. Diameter of AME 0.50. Abdomen 1.45 long, 3.15 wide. Cheliceral length 1.04. Clypeal height 0.15. Length of leg segments: leg I - 2.15 + 1.25 + 1.53 + 1.17 + 0.75; leg II - 1.75 + 1.10 + 1.10 + 1.00 + 0.60; leg III - 1.75 + 0.75 + 0.95 + 1.20 + 0.65; leg IV - 2.20 + 1.10 + 1.45 + 1.55 + 0.70. Leg spination. Leg I: Fm. d.0-1-1-3; Tb. v.0-2-2-2ap.; Mt. v.2-2ap. Leg II: Fm. d.0-1-1-3; Tb. pr.0-1, v.0-1-1-2ap.; Mt. v.2-2ap. Leg III: Fm. d.0-0-1-4; Pt. rt.0-1-0; Tb. rt.0-1, v.2ap.; Mt. 4 or 5 ap. Leg IV: Fm. d.1-1-2; Pt. rt.0-1-0; Tb. rt.1-1, v.1-0-2ap.; Mt. 5ap. Coloration as described for the ♂, except as follows: clypeus covered with dense, white hairs, legs lighter. Epigyne and vulva as in Fig. 2C-D.

Pellenes seriatus (Thorell, 1875).
Fig. 4.

Attus seriatus Thorell 1875a: 116; Ibid., 1875b: 185-186.

Pellenes seriatus: Simon, 1876: 101; Spassky, 1927: 8; Spassky & Shnitnikov, 1937: 296; Nenilin, 1985: 130; Poltshaninova, 1988: 43; Ponomaryov, 1988: 53; Zyuzin et al., 1993: 280.

Pellenes tripunctatus: Prószyński, 1979: 314, Fig. 234; Flanczewska, 1981: 215, figs 77-79; Fet, 1983: 843; Nenilin, 1984a: 24 (pro parte); Ibid., 1984b: 139 (pro parte).

MATERIAL. (Materials of Spassky, Poltshaninova, and Nenilin restudied). VOLGOGRAD AREA: 2 ♂♂, 1 ♀, 6 juv. (SMNH no. 1753), Jeny Sala, Alv. Nord. Sarepta, leg. Becker. CRIMEA: 1 ♂, 1 ♀ (ZIP), Feodosia, 17-18.06.1910, leg. B. Shumakov; 1 ♂ (lectotype, designated herewith), 4 ♂, 1 ♀ (paralectotypes) (SMNH no 128), Tauria, Jeny Sala, Samanah, 8.05.1861, coll. Nordmann; 1 ♂ (ZMMU), Belgorodsky Distr., Karasyovka, date ?, leg. V.A. Bragina; 3 ♂♂, 1 ♀ (BI), KHERSON AREA, Golopristanski Distr., Geroiskoye, Tchernomorski Reserve, summer 1985, leg. N.Y. Poltshaninova. IRAN: 1 ♀ (ZIP no. 192-1914), Astrabad, 26.05.1914, A. Kiritchenko. UZBEKISTAN: 1 ♀ (ZMMU Ta-3421), Tashkent Area, Bostanlyk Distr., Kainar-Sai Canyon, 10.05.1981, A.B. Nenilin; 1 ♀ (ZIP), Dal'werzin, date unknown, leg. A.B. Nenilin. KYRGHYZSTAN: 1 ♀ (ZMMU), Aleksandrovskiy Mt. Range, Karabalty Canyon, June 1937, leg. B. Tsvetkova; 1 ♂ (ZIP), foothills of Kirghizski Mt. Range, Kok-Dzhare, date unknown, leg. S.V. Ovchinnikov; 1 ♂ (BI), Chu River valley (= Chuiskaya Dolina), Kamyshinovka, 3.07.1985, leg. S.V. Ovchinnikov; 1 ♀ (BI), Talasskaya Area, Toktogul Distr., 29 km NW of Toktogul, Chichkan River, 28.06.1992, leg. A.A. Fedorov & A.A. Zyuzin; 1 ♂ (BI), Dzhalalabad Area, Dzhany-Dzhal Distr., 10 km NE of Arkit, Irikol Lake, 1,900 m alt., 18.06.1992, leg. A.A. Fedorov & A.A. Zyuzin; 1 ♂ (BI), same area and district, 4 km NW of Arkit, valley of Tumanyak River, 20.06.1992, leg. A.A. Fedorov & A.A. Zyuzin. KAZAKHSTAN: 2 ♂♂ (BI), Alma-Ata, 6.05.1992, A.V. Gromov; 3 ♀♀ (ZIP), environs of Alma-Ata, 1922, leg. S.A. Spassky; 1 ♂ (BI), same locality, 12 road-km to Medeo, 22.05.1992, leg. E.E. Koptykbayev; 1 ♀ (BI), Chimkent Area, Turkestansky Distr., Bayaldyr Canyon, Karatau Mt. Range, 11.06.1989, leg. A.A. Zyuzin & T.K. Tarabaev; 1 ♂ (BI), same locality, 5.05.1984, coll.?; 5 ♀♀ (ZMMU), Uralsk Area, Lake Sorkul, 15.06.1982, leg. K.G. Mikhailov. TURKMENISTAN: 1 ♂ (ZIP), West Kopetdagh Mts, Koshtemir, summer 1985, leg. V.Y. Fet.

DIAGNOSIS. This species can be easily distinguished from the most closely related *P. tripunctatus* (Walckenaer) and *P. sibiricus* sp.n. by the absence of a dorsal cymbial process in the ♂ palp (Fig. 4C) and presence of a deep anterior pocket of the epigyne (Fig. 4D).

DISTRIBUTION. The species has a Euro-Middle Asian subboreal distribution pattern (Fig. 5), apparently being a (parapatric) vicariant of *P. tripunctatus* and *P. sibiricus* sp.n. A similar pattern of vicariance is known for three Palearctic species

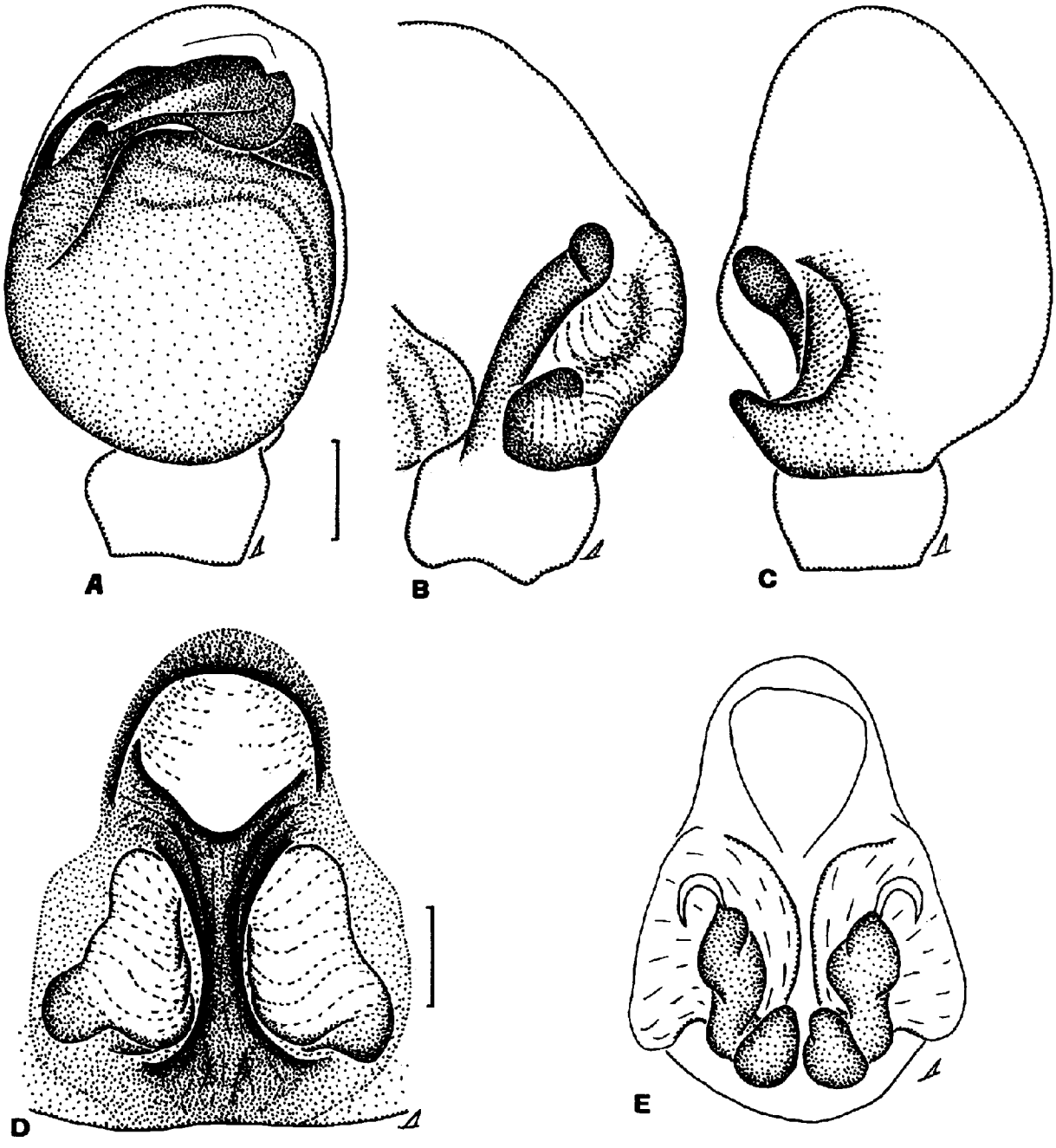


Fig.4. *Pellenes seriatus* (Thorell): a-c — ♂ palp, ventral, lateral and caudal, respectively; d — epigyne; e — spermathecae. Scale 0.2 mm.
Рис.4. *Pellenes seriatus* (Thorell): a-c — пальпа ♂, соответственно снизу, сбоку и сзади; d — эпигина; e — сперматека. Масштаб 0,2 мм.

of the genus *Pirata*: *P. piraticus* (Clerck, 1757), with a European temperate pattern; *P. tenuitarsis* Simon, 1876, with a South European-Middle Asian subboreal pattern; and *P. praedo* Kulczyński, 1885, with a Siberian temperate distribution pattern [s. Logunov, 1992b].

It should be noted also that some previous records of *P. tripunctatus* (Walckenaer) [Flanczewska, 1981; Prószyński, 1979 (pro parte); Nenilin 1984a, b (pro parte)] actually belong to *P. seriatus* Thorell.

REDESCRIPTION. MALE. Measurements. Carapace 3.00-3.88 long, 2.20-2.95 wide, 1.30-1.55 high at PLE. Ocular area 1.25-1.55 long, 1.58-1.85 wide anteriorly and 1.78-2.20 wide posteriorly. Diameter of AME 0.45-0.58. Abdomen 2.63-3.83 long, 1.95-2.75 wide. Cheliceral length 0.95-1.50. Clypeal height 0.15-0.25. Length of leg segments:

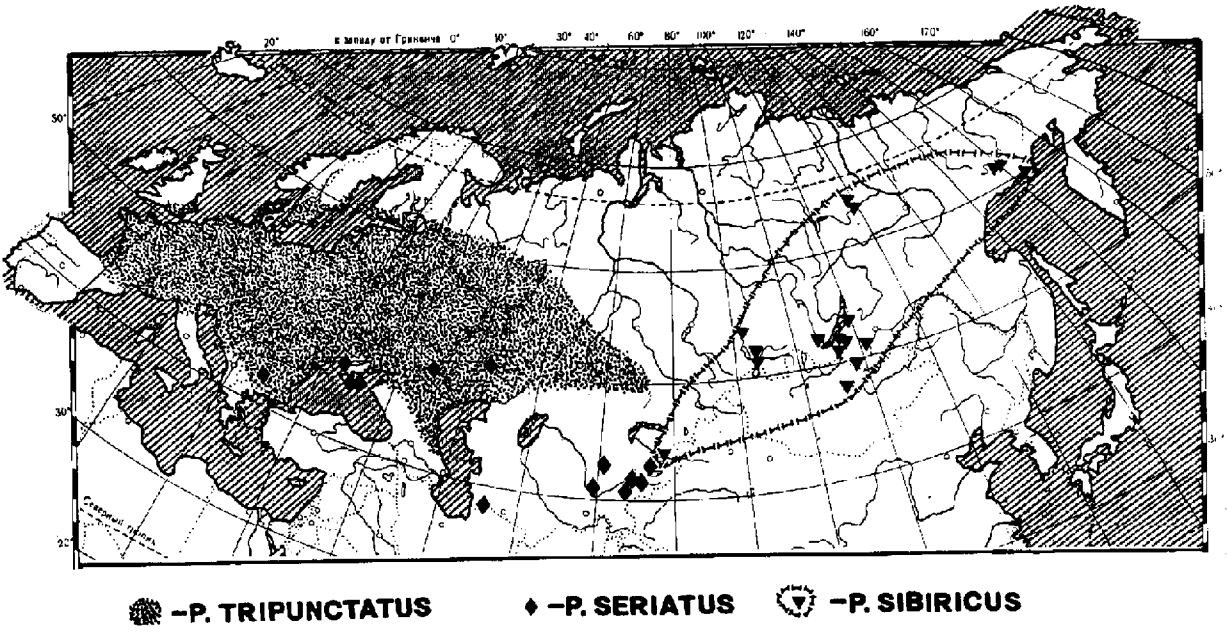


Fig.5. Distributional patterns of three *Pellenes* species from the "*tripunctatus*" species group
Рис.5. Распространение трех видов из группы "*tripunctatus*" рода *Pellenes*.

leg I - 2.00-2.75 + 1.38-1.80 + 1.65-2.53 + 1.15-1.85 + 0.70-1.03; leg II - 1.30-1.80 + 0.85-1.20 + 0.75-1.08 + 0.63-0.95 + 0.48-0.60; leg III - 2.00-2.63 + 1.03-1.38 + 0.98-1.38 + 0.93-1.33 + 0.63-0.70; leg IV - 1.58-2.25 + 0.80-1.08 + 0.80-1.20 + 0.93-1.25 + 0.58-1.95. Leg spination. Leg I: Fm. d.0-1-1-3 or 0-1-1-2; Pt. pr.0-1-0 or without spines; Tb. v.2-2-2ap; Mt. v.2-2ap. Leg II: Fm. d.0-1-3 or 0-1-4; Pt. pr.0-1-0; Tb. pr.0-1, v.1-1-2ap.; Mt. v.2-2ap. Leg III: Fm. d.0-0-1-3 or 0-0-1-2; Pt. pr. and rt.0-1-0; Tb. pr.1-1, rt.1-1-1, v.2ap.; Mt. pr. and rt.2-2ap. Leg IV: Fm. d.0-1-1; Pt. rt.0-1-0; Tb. pr.0-1-0 or without spines, rt.1-1-1, v.2ap.; Mt. pr.1-1-2ap or 1-0-2ap., rt.1-0-2ap., v.2ap. Coloration. Carapace dark brown, sparsely covered with white hairs. Eye field black. Clypeus dark brown, densely orange haired. Sternum, maxillae, labium and chelicerae dark brown. Dorsum brown-grey with a white longitudinal line. Venter yellowish-grey. Book-lung covers yellow-greyish. Spinnerets brown. Legs dark brown, covered with dense, dark hairs. Palp dark brown, with femoral and tibial apices densely white hirsute. Palp structure as in Fig. 4A-C.

FEMALE. Measurements. Carapace 3.28-4.00 long, 2.48-2.93 wide, 1.38-1.63 high at PLE. Ocular area 1.33-1.65 long, 1.60-1.95 wide anteriorly and 1.90-2.35 wide posteriorly. Diameter of AME 0.50-0.55. Abdomen 3.50-5.90 long, 2.55-3.88 wide. Cheliceral length 1.13-1.75. Clypeal height 0.14-0.20. Length of leg segments: leg I - 1.75-2.23 + 1.20-1.40 + 1.18-1.58 + 0.88-1.20 + 0.60-0.75; leg II - 1.43-1.83 + 0.93-1.20 + 0.80-1.03 + 0.65-0.95 + 0.50-0.60; leg III - 2.30-2.70 + 1.15-1.40 + 1.18-1.30 + 1.10-1.40 + 0.65-0.78; leg IV - 1.93-2.25 + 0.83-1.18 + 1.00-1.25 + 1.15-1.48 + 0.60-0.63. Leg spination. Leg I: Fm. d.0-1-3; Tb. v.2-2-2ap.; Mt. v.2-2ap. Leg II: Fm. d.0-1-4 or 0-1-3; Pt. pr.0-1-0; Tb. pr.0-1, v.1-1-2ap.; Mt. v.2-2ap. Leg III: Fm. d.0-0-1-4 or 0-0-1; Pt. pr. and rt.0-1-0; Tb. pr.1-1; rt.1-1-1, v.2ap.; Mt. pr. and rt.2-2ap., v.2ap. Leg IV: Fm. d.0-1-1 or 0-0-1; Pt. pr.0-1-0; Tb. pr.0-1-0, rt.1-1-1, v.2ap.; Mt. pr.1-0-2ap., rt.1-1-2ap., v.2ap. Coloration. Carapace dark brown, sparsely covered with white hairs. Clypeus reddish, densely white haired. AME surrounded by dense orange hairs. Sternum dark brown, covered with dark hairs. Maxillae, labium and chelicerae dark brown. Dorsum dark brown with a white longitudinal line. Sides of abdomen white-grey. Venter grey-yellowish. Book-lung covers grey-yellowish. Spinnerets brown. Legs: coxae, patellae and proximal parts of femora yellow; remaining parts and other segments brown. Palp: coxa brown-yellow, other segments yellow. Epigyne and spermathecae as in Fig. 4D-E.

Pellenes sibiricus **sp.n.**
Figs 6-8.

Pellenes tripunctatus: Kulczyński, 1895: 82, figs 37-40; Sternbergs, 1977: 88, 1981: 131; Prószyński, 1979: 314 (pro parte), 1982: 287-288; Nenilin, 1984b: 139 (pro parte), 1985: 130 (pro parte); Marusik, 1988: 1482; Izmailova, 1989: 161, fig. 161; Danilov, 1989: 167; Marusik et al., 1992: 151.

Pellenes cf. *tripunctatus*: Logunov, 1992a: 63.

MATERIAL. Holotype: ♂ (BI 1344), MAGADAN AREA, Tenkinski Distr., Sibit-Tyellakh, Aborigen Station, 7.06.1983, leg. N. Kartash. - Paratypes: 2 ♂♂, 3 ♀♀ (BI 1345), together with holotype; 1 ♀ (BI 434), same locality, summer 1987, 3 ♂♂, 4 ♀♀ (ZIP), same locality, 22.06-16.07.1983; 1 ♂ (BI 1769), upper flow of Ola River, Bulum Spring, 15.07.1992, all leg. Y.M. Marusik. CHITA AREA: 1 ♂ (BI 1343), Kyra Distr., Sokhondo State Reserve, 1,400-1,500 m alt., 2-3.06.1991, leg. D.V. Logunov. TUVA: 1 ♂, 7 ♀♀ (BI 437), 1 ♂, 1 ♀ (Richman's collection), Tandinski Distr., Chagytai Lake, 1,100-1,200 m alt., 26-28.06.1989, leg. D.V. Logunov; 1 ♂, 3 ♀ (BI 1771), West Sayan Mts, Piy-Khemski Distr., 10 km NW of Shivilig, Kurtushibinskiy Mt. Range, 5-6.07.1990, leg. D.V. Logunov; 1 ♂ (BI 1781), Kyzyl, 9.07.1993, leg. S.E. Chernyshov; 1 ♀ (BI 1782), Tes-Khemski Distr., 8 km N of Samagaltai, 10.07.1993, leg. D.V. Logunov; 2 ♀♀ (BI 1780), Ovyurski Distr., 35 km W of Oo-Shinaa, Lake Amdagyn (Amdygain-Khol), 19.07.1993, leg. D.V. Logunov. MONGOLIA: 1 ♀ (BI 1346), Central Aimak, Badula Mt., Shakhin-Khurakhyn River, 11.08.1985, leg. D. Teshezhargal; 1 ♀ (HNHM No 926/a), same aimak, Tosgoni ovoo, 5-10 km N Ulan-Baator, 1,700-1,900 m alt., 23-24.07.1967, leg. Exp. Kaszab; 1 ♂ (HNHM No. 942), same aimak, Ulan-Baator, Zaisan im Bogdo ul Gebirge, 5 km S v. Zentrum, 1,600 m alt., 11.06.1968, leg. Exp. Kaszab. BURYATIA: 1 ♀ (ZMMU Ta-4783), Mostovoi, 24.07.1984, leg. S.N. Danilov; 1 ♀ (ZMMU Ta-4782), Selenginski Distr., Shyutche Lake, 8.07.1989, leg. S.N. Danilov. KAZAKHSTAN: 1 ♂ (ZMMU Ta-4784), valley of Irisu River, tributary of Karkara River, 13.07.1983, leg. S.V. Ovchinnikov; 1 ♂ (BI 1772), Taldy-Kurgan Area, 40 km NE of Tekeli, upper flow of Kora River, 2,000 m asl., VI.1993, leg. V.K. Zinchenko. KIRGHIZIA: 1 ♂ (ZMMU Ta-4793), Issyk-Kul Area, Teploklyuchenka village, 15-19.06.1993, leg. D.A. Milko.

DIAGNOSIS. This species is closely related to *P. tripunctatus* (Walck.), but the ♂ can be easily distinguished by the pointed tibial apophysis in the palp and wider dorsal process of the cymbium (s. Fig. 6), while the ♀ possesses a notable anterior epigynal pocket and more rounded epigynal "wings" (Fig. 8A, C).

This was already Kulczyński [1895] who noted the differences between Europen and Siberian specimens of *P. tripunctatus*, but he allotted them no taxonomic status. Contrary to that opinion, we regard them as species-characteristic. Some previous records of *P. tripunctatus* [Prószyński, 1979, 1982; Nenilin, 1984b (pro parte); Marusik, 1988, etc.] actually belong to *P. sibiricus* sp.n.

DISTRIBUTION. The species has a Siberian temperate distribution pattern (Fig. 5).

HABITAT. See Logunov [1992a], under *P.* cf. *tripunctatus*.

DESCRIPTION. MALE. Measurements. Carapace 2.15-3.05 long, 1.70-2.23 wide, 0.95-1.28 high at PLE. Ocular area 1.08-1.33 long, 1.30-1.53 wide anteriorly and 1.50-1.75 wide posteriorly. Diameter of AME 0.43-0.48. Abdomen 2.40-2.88 long, 1.68-2.08 wide. Cheliceral length 0.88-1.33. Clypeal height 0.13-0.20. Length of leg segments: leg I - 1.33-1.85 + 0.78-1.20 + 0.95-1.48 + 0.73-0.98 + 0.50-0.65; leg II - 1.08-1.40 + 0.60-0.85 + 0.60-0.75 + 0.50-0.65 + 0.43-0.48; leg III - 1.68-2.15 + 0.88-1.13 + 0.88-1.03 + 0.85-1.05 + 0.53-0.65; leg IV - 1.40-1.63 + 0.67-0.79 + 0.70-0.95 + 0.75-1.05 + 0.55-0.58. Leg spination. Leg I: Fm. d.0-1-1-3; Pt. pr.0-1-0; Tb. v.2-2-2ap.; Mt. v.2-2ap. Leg II: Fm. d.1-0-3; Pt. pr.0-1-0; Tb. v.1-1-2ap.; Mt. v.2-2ap. Leg III: Fm. d.0-0-2-3 or 0-0-1-3; Pt. 0-1-0; Tb. pr.1-1-1, rt.1-1, v.1-0-2ap.; Mt. pr. and rt.2-0-2ap., v.2ap. Leg IV: Fm. d.1-1-1; Pt. rt.0-1-0; Tb. pr.0-1, rt.1-1-1, v.2-0-2ap.; Mt. pr.0-1-2ap., rt.1-2-0-2ap., v.2ap. Coloration. Carapace dark brown, eye field black. Dense orange hairs around eyes of first row and on clypeus. Clypeus brown with a bind of white hairs. Sternum, maxillae, labium and chelicerae dark brown. Sternum covered with white hairs. Dorsum dark brown with a longitudinal white line and a transverse white line in caudal part. Venter spotted, yellow-brown. Book-lung covers grey-yellow. Spinnerets brown. All legs dark brown, densely dark pilose. Coxae II-IV and all tarsi usually yellow to yellow-brown. Proximal part of femora red. Palp dark brown, with apices of femora and tibiae dorsally covered with dense white hairs. Palp structure as in Figs 6A-C & 7A-B.

FEMALE. Measurements. Carapace 3.05-3.58 long, 2.25-2.70 wide, 1.23-1.50 high at PLE. Ocular area 1.43-1.45 long, 1.60-1.73 wide anteriorly and 1.88-2.13 wide posteriorly. Diameter of AME 0.50. Abdomen 3.93-4.38 long, 3.00-3.28 wide. Cheliceral length 1.33-1.50. Clypeal height 0.25. Length of leg segments: leg I - 1.70-1.85 + 1.05-1.23 + 1.13-1.25 + 0.83-1.00 + 0.63; leg II - 1.40-1.55 + 0.93-1.03 + 0.78-0.85 + 0.60-0.75 + 0.55-0.58; leg III - 2.25-2.53 + 1.15-1.35 + 1.10-1.25 + 1.10-1.20 + 0.65-0.75; leg IV - 1.88-2.10 + 0.83-1.00 + 1.00-1.13 + 1.15-1.25 + 0.65-0.70. Leg spination. Leg I: Fm. d.0-1-2 or 0-1-1-2; Tb. v.1-2-2ap.; Mt. v.2-2ap. Leg II: Fm. d.0-1-4; Pt. pr.0-1-0; Tb. pr.0-1, v.1-2-2ap.; Mt. v.2-2ap. Leg III: Fm. d.0-0-1-3; Pt. pr. and rt.0-1-0; Tb. pr.1-1, rt.1-1-1, v.1-2ap.; Mt. pr. and rt.2-0-2ap., v.2ap. Leg IV: Fm. d.1-1-1; Pt. rt.0-1-0; Tb. pr.0-1, rt.1-1-1, v.1-2ap.; Mt. pr. and rt.1-0-2ap., v.2ap. Coloration. Carapace dark brown to black, covered with sparse white hairs. Clypeus densely white pilose. Sternum, maxillae, labium and chelicerae dark brown. Sternum covered with white hairs. Abdomen with brown dorsum and sides. Dorsum also with a longitudinal white line and a similar transverse line in caudal part of abdomen. Sides with inclined white lines. Venter brown-yellow. Book-lung covers grey-yellow. Spinnerets brown.

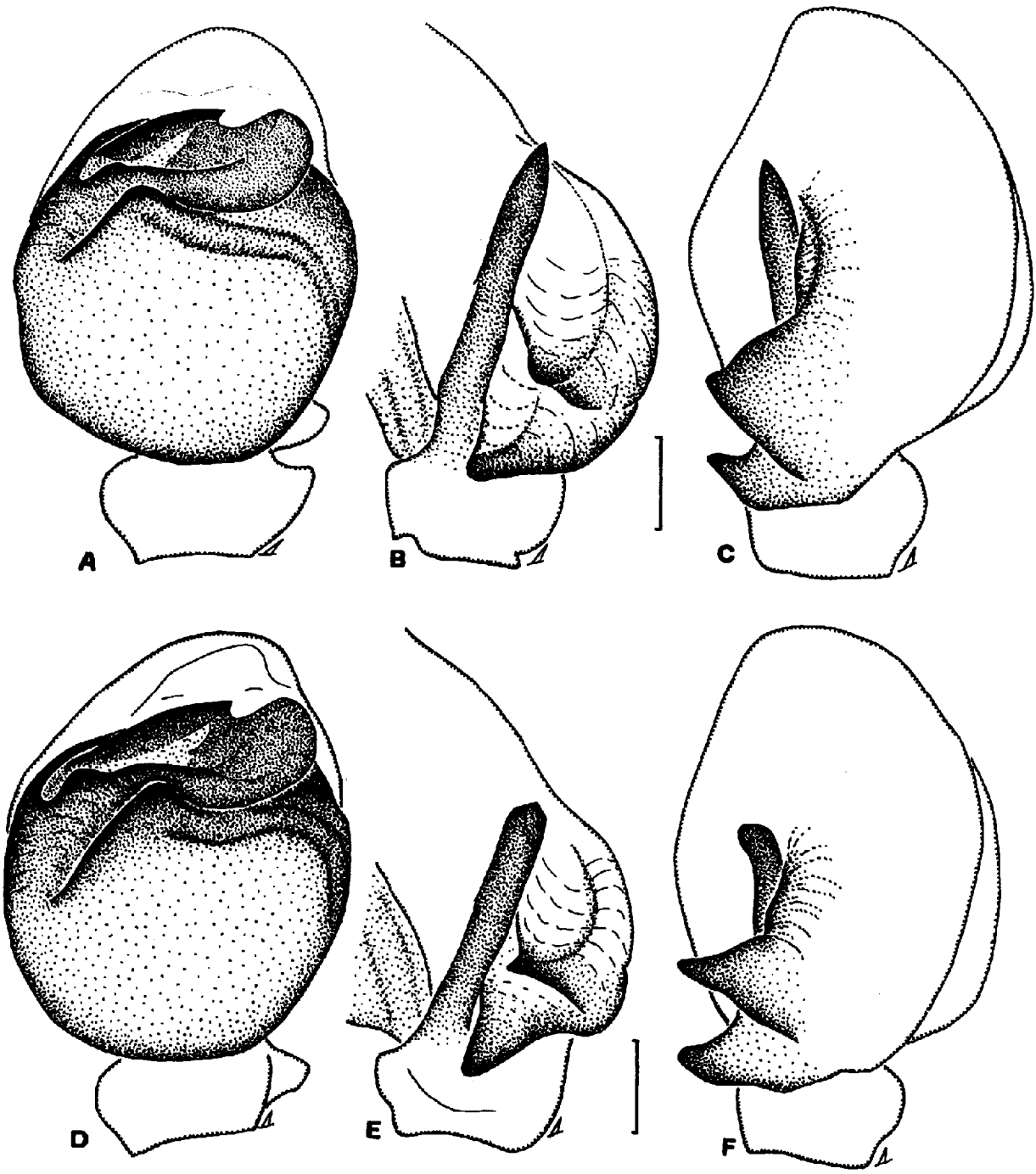


Fig. 6. ♂ palps of *Pellenes sibiricus* sp.n (a-c) and *P. tripunctatus* (Walsckenaer) (d-f): a, d — ventral; b,e — lateral; c, f — caudal. Scale 0.2 mm.
Рис. 6. Пальпы ♂ *Pellenes sibiricus* sp.n (a-c) и *P. tripunctatus* (Walsckenaer) (d-f): a, d — снизу; b,e — сбоку; c, f — сзади. Масштаб 0,2 мм

Legs: coxae, and proximal parts of femora yellow, remaining parts and other segments brown. Palp yellow, with basal part of femur brown. Epigyne and vulva as in Fig. 8.

Pellenes tripunctatus (Walckenaer, 1802).
Figs 6, 7, 9.

The main literature sources see in Prószyński [1990: 261-262].

MATERIAL. BELGIUM: 1 ♂ (BI), Ozo (Izier), 6.06.1958, leg. J. Kekenbosch; 1 ♀ (BI), As-en-Campine, 3.08.1962, leg. T. Kekenbosch. FINLAND: 1 ♀ (SMNH), Uto, Krokarna, 25.08.1948, Helf. Tullgren; 1 ♂ (SMHN), H. Hornejon. n.str., 26.05.1920, leg. A. Jansson. POLAND: 1 ♀ (ZIP no. 445-913), Belostok, 7.08.1913, leg. Pereleshina; 1 ♂ (IZW), Lance, 15.05.1982, leg. Dobrowonka. CAUCASUS: 4 ♂♂, 2 ♀♀ (BI), Azerbajan, Shemakha Distr., Pirkulinskiy Reserve, 25.05-2.06.1984,

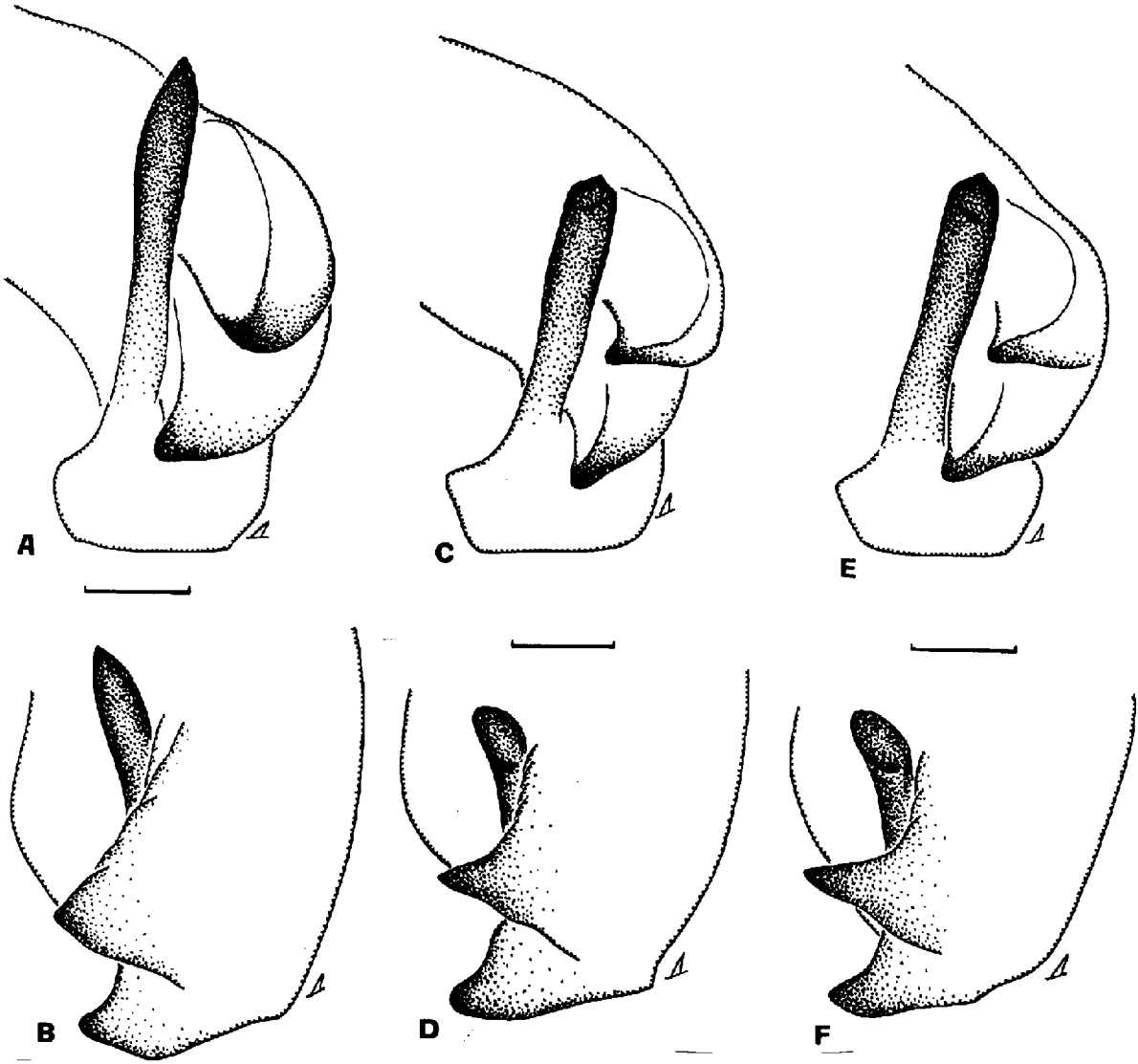


Fig.7. Tibial apophyses and cymbial processes of *Pellenes sibiricus* sp.n (a,b) and *P. tripunctatus* (Walckenaer) (c-f): a,c,e — lateral; b,d,f — caudal. Scale 0.2 mm.

Рис.7. Отростки голени и цимбиума *Pellenes sibiricus* sp.n (a,b) и *P. tripunctatus* (Walckenaer) (c-f): a,c,e — сбоку; b,d,f — сзади. Масштаб 0,2 мм.

leg. D.V. Logunov. KAZAKHSTAN: 1 ♀ (ZIP), Turgai Area, Arkalyk Distr., Kokshetau Mt., 27.05.1957, leg. V.P. Tyshchenko.

DIAGNOSIS. See under *P. sibiricus* sp.n.

DISTRIBUTION. This species has a European distribution pattern (Fig. 5).

REDESCRIPTION. MALE. Measurements. Carapace 2.83 long, 2.18 wide, 1.40 high at PLE. Ocular area 1.15 long, 1.45 wide anteriorly and 1.75 wide posteriorly. Diameter of AME 0.45. Abdomen 2.55 long, 3.13 wide. Cheliceral length 1.50. Clypeal height 0.15. Length of leg segments: leg I - 1.88 + 1.03 + 1.35 + 0.95 + 0.63; leg II - 1.28 + 0.80 + 0.75 + 0.63 + 0.50; leg III - 2.13 + 1.03 + 1.00 + 1.03 + 0.58; leg IV - 1.75 + 0.75 + 0.90 + 0.95 + 0.60. Leg spination. Leg I: Fm. d.0-1-1-3; Pt. pr.0-1-0; Tb. v.2-1-2ap.; Mt. v.2-2ap. Leg II: Fm. d.0-1-1-4; Pt. pr.0-1-0; Tb. v.1-2ap.; Mt. pr.1ap., v.2-2ap. Leg III: Fm. d.0-1-1-4; Pt. pr. and rt.0-1-0; Tb. pr.0-1, rt.1-1, v.1-2ap.; Mt. pr.2-2ap., rt.1-2ap., v.2ap. Leg IV: Fm. d.0-1-3; Pt. rt.0-1-0; Tb. v.2-2-2ap.; Mt. pr.1-0-2ap., rt.1-1-0-2ap., v.2ap. Coloration like that of *P. sibiricus* sp.n. Carapace dark brown, covered with sparse white hairs. Clypeus covered with orange hairs, same hairs around eyes of first row. Edge of clypeus white pilose. Sternum, maxillae, labium and chelicerae dark brown. Dorsum dark brown with a longitudinal white line. Sides of abdomen and venter brown-yellowish. Book-lung covers brown-yellowish. Spinnerets brown. Legs brown, but

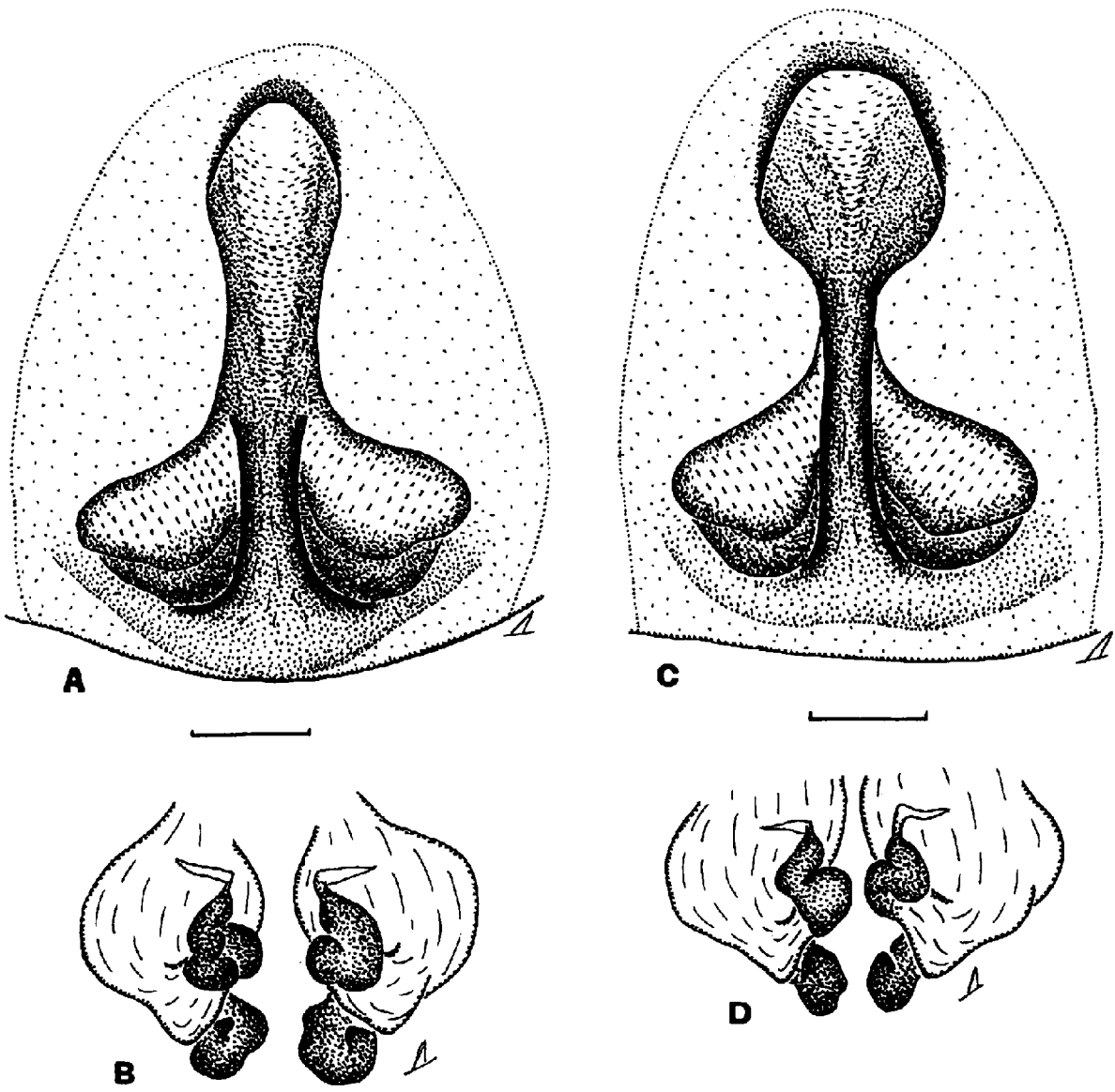


Fig.8. *Pellenes sibiricus* sp.n.: a,c — epigyne; b,d — spermathecae. Scale 0.2 mm.
Рис.8. *Pellenes sibiricus* sp.n.: a,c — эпигина; b,d — сперматека. Масштаб 0,2 мм.

tibiae I proximally red, and all tarsi yellow. Legs also covered with dense dark hairs. Palp dark brown, but apices of femur and tibia covered with white hairs. Palpal structure as in Figs 6D-F & 7C-F.

FEMALE. Measurements. Carapace 3.25 long, 2.55 wide, 1.35 high at PLE. Ocular area 1.38 long, 1.73 wide anteriorly and 1.95 wide posteriorly. Diameter of AME 0.50. Abdomen 4.13 long, 3.13 wide. Cheliceral length 1.00. Clypeal height 0.23. Length of leg segments: leg I - 1.65 + 1.03 + 1.08 + 0.80 + 0.58; leg II - 1.35 + 0.85 + 0.78 + 0.63 + 0.50; leg III - 2.33 + 1.18 + 1.18 + 1.15 + 0.65; leg IV - 1.85 + 0.80 + 1.05 + 1.15 + 0.65. Leg spination. Leg I: Fm. d.0-1-3; Tb. v.2-2-2ap.; Mt. v.2-2ap. Leg II: Fm. d.0-1-3; Pt. pr.0-1-0; Tb. pr.0-1, v.1-1-2ap.; Mt. pr.1ap., v.2-2ap. Leg III: Fm. d.0-0-1-3; Pt. pr. and rt.0-1-0; Tb. pr.1-1, rt.1-1-1, v.2ap.; Mt. pr. and rt.2-0-2ap., v.2ap. Leg IV: Fm. d.0-1-1; Pt. rt.0-1-0; Tb. rt.1-1, v.2ap.; Mt. pr. and rt.1-2ap., v.2ap. Coloration. Carapace dark brown, covered with sparse, white hairs. Clypeus densely white pilose. Sternum, maxillae, labium and chelicerae dark brown. Sternum covered with white hairs. Dorsum brown with a longitudinal white line and a similar transverse white line caudally. Sides of abdomen and venter brown-yellow. Book-lung covers brown-yellow. Spinnerets brown. Legs: coxae, patellae and proximal parts of femora yellow; remaining parts and other segments brown. Palp yellow. Epigyne and vulva as in Fig. 9.

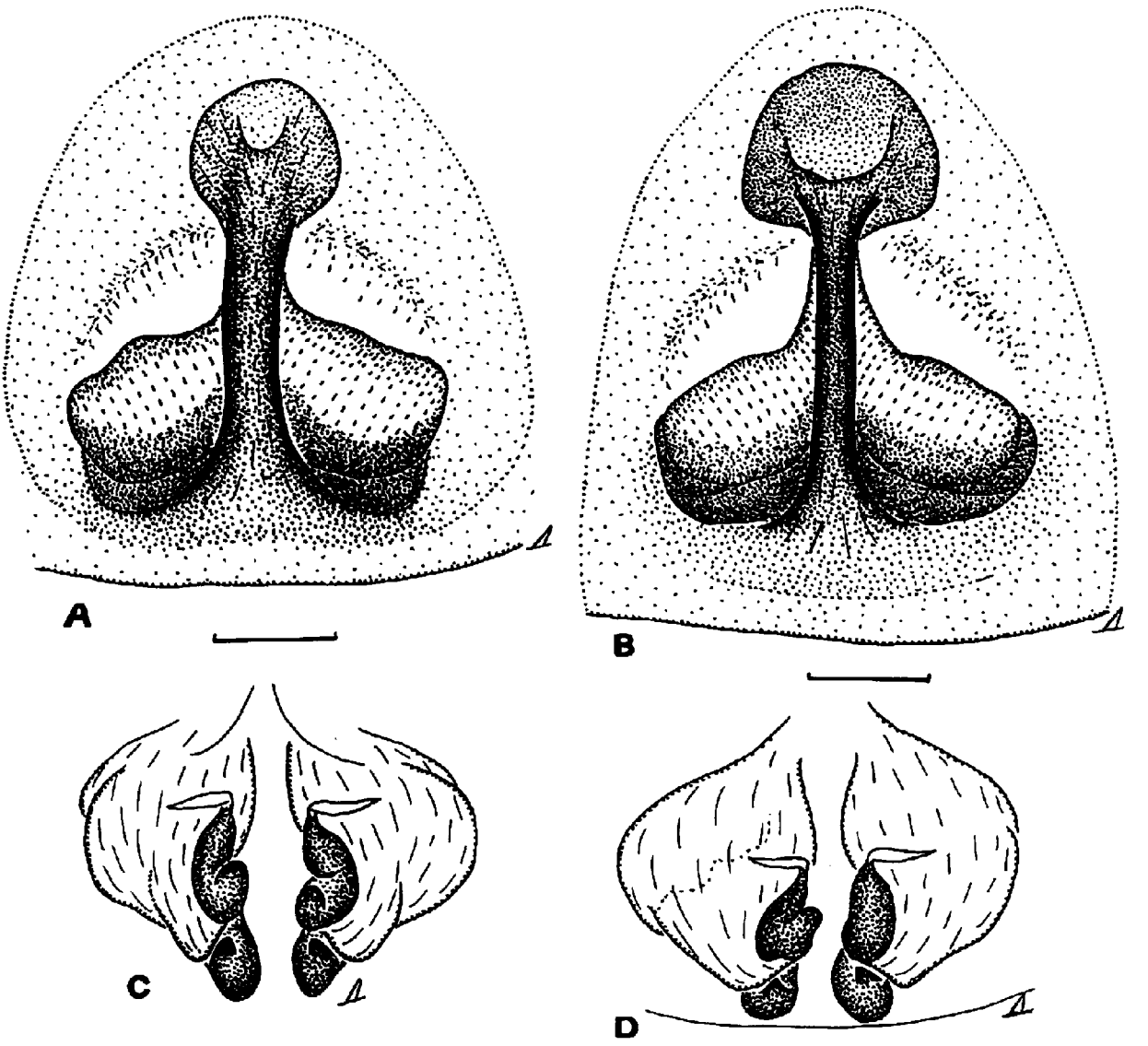


Fig.9. *Pellenes tripunctatus* (Walckenaer): a,c — epigyne; b,d — spermathecae. Scale 0.2 mm.
Рис.9. *Pellenes tripunctatus* (Walckenaer): a,c — эпигина; b,d — сперматека. Масштаб 0,2 мм.

New faunistic records.

Evarcha laetabunda (C.L.Koch, 1848).

MATERIAL. 1 ♂ (BI), Magadan Area, upper flow of Kolyma River, Lake Dzheka-Londona (Jack London Lake), 20-21.06.1974, leg. E.G. Matis.

REMARKS. The easternmost records of this species have heretofore been restricted to Sakhalin and the Maritime Province [Dunin, 1984; Logunov, 1992a]. The Magadan Area seems to represent the northeasternmost locality of the species.

Heliophanus ussuricus Kulczyński, 1895.

MATERIAL. 1 ♂ (BI), Novosibirsk Area, "Bugotakskiye Sopki" Mts., 14.06.1983, leg. V.D. Bakurov.

REMARKS. This species displays a Siberio-Far Eastern subboreal distribution pattern, the Novosibirsk Area presently being the westernmost limit of its range [cp. Prószyński, 1976, map 92].

Pellenes gobiensis Schenkel, 1936.

MATERIAL. 1 ♀ (BI), Magadan Area, 3 km N of Shirokoye, 7.07.1974, leg. E.G. Matis.

REMARKS. This is the easternmost record for the species, up to now it has been known only from China (Inner Mongolia) and Tuva [Schenkel, 1936; Logunov, 1992a].

Talavera aequipes (O.P.-Cambridge, 1871).

MATERAIL STUDIED. 1 ♀ (BI), Yakutia (= Yakut-Sakha Republik), Byadi, 21-23.06.1993, leg. A.A. Alekseev.

REMARKS. The presently northeasternmost locality of this species lies in Yakutia, while the species has hitherto been reported from South Siberia only [Logunov, 1992b; Logunov et al., 1993].

ACKNOWLEDGEMENTS. We wish to thank Drs. K.G. Mikhailov, of the ZMMU, V.I. Ovtsharenko, of the ZIP, T. Kronestedt, of the SMNH, and S. Mahunka, of the HNHM, for the opportunity to study some materials under their care. We are also grateful to Mr. D.A. Milko (Bishkek) for supplying us with interesting specimens. The work has been supported in part by the Soros Foundation, Biodiversity Project.

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