Bösenberg, W. & Strand, E. 1906: Japanische Spinnen. — Abh. Senck. Naturf. Ges. 30:93–422.

Chikuni, Y. 1989: Some interesting japanese spiders of the families Amaurobiidae, Araneidae and Salticidae. — In: Nishikawa, Y. & Ono, H. (eds.), Arachnol. Pap. presented to T. Yaginuma in the occasion of his retirement, Arachnologists' group: 133–159. Osaka.

Chikuni, Y. & Yaginuma, T. 1976: Marpissa magister and Marpissa elongata. (In Japanese) — Atypus 67:33–35.

Dunin, P. M. (Дунин, П. М.) 1984: [Materials on the spider fauna from the Far East (Arachnida, Araneae). Family Salticidae.] (In Russian) — In: Lev, P. (Лев, П.) (ed.), [Fauna and ecology of insects of Southern part of the Far East.]: 128–140. Sbornik nauchnykh trudov. Vladivostok.

Eskov, K. Yu. (Еськов, К. Ю.) 1988: [Araneae of Central Siberia.] (In Russian) — In: Rogacheva, E. (Рогачева, Е.) (ed.), [Faunistic materials from Middle Siberia and neighbouring regions of Mongolia.]: 101–155. Moscow.

Grube, A. E. 1861: Beschreibung neuer, von den Herren L. v. Schrenck, Maack, C. v. Dittmar u. a. im Amurlande und in Ostsiberien gesammelter Araneiden. — Bull. Acad. Imp. Sci. S.Pétersburg 4:161–180.

Izmailova, M. V. (Измайлова, М. В.) 1980: [Spiders of Charskaya Kotlovina.] (In Russian) — In: Kulik, S. (Кулик, С.) (ed.), [Arthropoda of the Siberia and Far East.]: 108–112. Irkutsk.

Karsch, F. 1879: Baustoffe zu einer Spinnenfauna von Japan. — Verh. Naturh. Ver. Preuss. Rheinl. Westf. 36:57–105.

Kharitonov, D. E. (Харитонов, Д. Е.) 1932: [Catalogue of spiders of the USSR.] (In Russian) — Ezhegod. Zool. Mus. AN SSSR, 32: suppl. 206 pp.

Kulczyński, W. 1895: Attidae Muzei Zoologici Varsoviensis in Siberia orientali collecti. — Rozpr. Spraw. Wydz. Mat. Przyr. Akad. Umiej. 32:1–54.

— 1926: Arachnoidea Camtschdalica. — Ann. Mus. Zool. Acad. Sci. USSR. 27:29–72.

Logunov, D. V. (Логунов, Д. В.) 1991: The spider family Salticidae (Aranei) from Touva. 1. Six new species of the genera Sitticus, Bianor and Dendryphantes. (In Russian with English summary) — Zool. Zh. 70:50–60.

Logunov, D. V. & Marusik, Yu. M. (Логунов, Д. В. & Марусик, Ю. М.) 1991: Redescriptions and morphological differences of Bianor aurocinctus (Ohlert) and B. aemulus (Gertsch) (Aranei, Salticidae). (In Russian with English summary) — Sibir. Biol. Zh. 2:39–47.

Marusik, Yu. M. (Марусик, Ю. М.) 1988: New species of spiders (Aranei) from the upper Kolyma. (In Russian with English summary) — Zool. Zh. 67:1469–1482.

Marusik, Yu. M. & Logunov, D. V. (Марусик, Ю. М. & Логунов, Д. В.) (in press): Little known species of spiders of the families Salticidae and Thomisidae (Aranei) from the Far East of the USSR. — Sibir. Biol. Zh.

Matsumoto, S. 1989: Colour variation in the prolateral side of carapace and appendages of jumping spider of the genus Phintella (Araneida: Salticidae). — In: Nishikawa, Y. & Ono, H. (eds.), Arachnol. Pap. presented to T. Yaginuma in the occasion of his retirement, Arachnologists' group: 123–131. Osaka.

Nenilin, A. B. (Ненилин, А. Б.) 1984: On the taxonomy of spiders of the family Salticidae of the fauna of the USSR and neighbouring countries. (In Russian with English summary) — Zool. Zh. 63:1175–1180.

— 1985: [Materials on the fauna of the spider family Salticidae of the USSR. II. Results of the study in the USSR.] (In Russian) — In: Ovcharenko, V. (Овчаренко, В.) (ed.), [Fauna and ecology of spiders of the USSR.]: 129–134. Leningrad.

Oliger, T. I. (Олигер, Т. И.) 1984: [Materials on the spiders of Lasovskii reserve.] (In Russian) — In: Utochkin, A. (Уточкин, А.) (ed.), [Fauna and ecology of Arachnids.]: 120–127. Univ. of Perm.

Paik, K. Y. 1987: Studies on the Korean Salticid (Araneae). III. Some new record species from Korea or South Korea and supplementary describe for two species. — Korean Arachnol. 3:3–21.

Prószynski, J. 1971: Redescriptions of the A. E. Grube's East Siberian species of Salticidae (Aranei) in the collection of the Wrocław Zoological Museum. — Ann. Zool. 28:205–226.

— 1973: Systematic studies on East Palaearctic Salticiade. II. Redescriptions of Japanese Salticidae of the Zoological Museum in Berlin. — Ann. Zool. 30:97–128.

— 1976: Studium systematyczno-zoogeograficzne nad rodziną Salticidae (Aranei) Regionów Paleaerktycznego i Nearktycznego. — Rozpr. WSP, 6. Siedlce. 260 pp.

— 1978: Distributional patterns of the Palaearctic Salticidae (Araneae). — Proc. Zool. Soc. 42:335–343.

— 1979: Systematic studies on East Palaearctic Salticidae. III. Remarks on Salticidae of the USSR. — Ann. Zool. 34:299–369.

— 1980: Revision of the spider genus Sitticus Simon, 1901 (Aranei, Salticidae) IV. Sitticus floricola (C. L. Koch) group. — Ann. Zool. 36:1–35.

— 1983: Tracing the history of a genus from its geographical range by the example of Sitticus (Arachnida: Araneae: Salticidae). — Verh. Naturwiss. Ver. Hamburg 26:161–179.

Schenkel, E. 1963: Ostasiatische Spinnen aus dem Muséum d'Histoire Naturelle de Paris. — Mem. Mus. Hist. Nat. 25:289–481.

Shternbergs, M. T. (Штернбергс, М. Т.) 1988: [Materials on the spider fauna of the Primore.] (In Russian) — In: Utochkin, A. (Утоцкин, А.) (ed.), [Fauna and ecology.]: 92–97. Univ. of Perm.

Wesołowska, W. 1981a: Salticidae (Aranei) from North Korea, China and Mongolia. — Ann. Zool. 36:45–83.

— 1981b: Redescriptions of the E. Schenkel's East Asiatic Salticidae (Aranei). — Ann. Zool. 36:127–160.

Żabka, M. 1985: Systematic and zoogeographic study on the family Salticidae (Araneae) from Viet-Nam. — Ann. Zool. 39:1–485.

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# The jumping spiders (Araneae, Salticidae) of Khabarovsk Province (Russian Far East)

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The paper presents data on the Salticidae (except of the genus *Euophrys*) of Khabarovsk Province (Russian Far East). Thirty-six species are reported; among them three are described as new (*Harmochirus nigriculus*, *Marpissa dersuuzalai*, *Marpissa zebra*), four are new for Russia (*Harmochirus pullus*, *Marpissa pulchra*, *Phintella linea*, *P. parva*) and twelve are new for Khabarovsk Province (*Harmochirus latens*, *Evarcha albaria*, *Heliophanus dubius*, *Marpissa dybowskii*, *M. elongata*, *M. pulla*, *Myrmarachne formicaria*, *M. lugubris*, *Phintella arenicolor*, *P. popovi*, *Salticus cingulatus*, *Sitticus cutleri*). Two names are synonimized (*Yaginumaella ususudi* with *Y. striatipes* and *Phintella mellotei* with *P. arenicolor*). The neotype of *Phintella castriesiana* is designated. *Bianor latens* is assigned to the genus *Harmochirus*, and the first description of the male of this species is provided. The differentiating diagnoses of poorly known Eastern Palaearctic species of the genera *Marpissa*, *Myrmarachne* and *Phintella* are given.

## 1. Introduction

Our knowledge of the Salticidae from different parts of the Palaearctic is very biased; whereas the Western Palaearctic species are relatively well known, our knowledge of the Central and Eastern Palaearctic species is grossly inadequate.

The current distribution of the Palaearctic species was shaped to a large extent by the Ice Age. After the retreat of the glaciers the species recolonized the Palaearctic from the refugia. Prószynski (1976) put forward a hypothesis that the species spreading from Western Palaearctic refugia were more expansive, colonizing large areas, and reaching in some cases to the shores of the Pacific Ocean. On the other hand, the species from the Eastern centres of dispersal were less dynamic, and this resulted in the small ranges of the Eastern Palaearctic species. To verify this hypothesis one needs to have a much better idea of species distribution patterns in the Central and Eastern Palaearctic. This demands not only faunistic studies in poorly known areas, but taxonomic work as well. The Asiatic species are

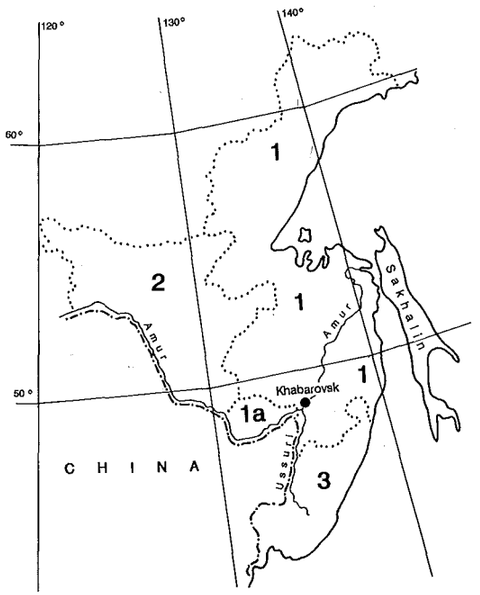



Fig. 1. Map of study area. — 1: Khabarovskii Krai. — 1a: Evreiskaya Autonomna Oblast (separate administrative unit constituting part of Khabarovskii Krai). — 2: Amurskaya Oblast. — 3: Primore.

insufficiently known, and for many of them good descriptions and diagnoses are lacking, making their correct identification practically impossible.

Our knowledge of the Salticidae of the Khabarovsk Province (Khabarovskii Krai) (Fig. 1) stems from only a few publications. Initial information was provided by Grube (1861), who reported eight species from there. It was not until more than a century later that papers by Prószynski (1979) and Dunin (1984) allowed us to extend the list of species known from this area to twenty. Four of the species from this list have not been found in our material. These are: *Evarcha laetabunda* (C. L. Koch), *Pellenes ignifrons* (Grube), *Sitticus caricis* (Westring) and *Sitticus pubescens* (Fabricius). The latter species was recorded in the Amur river valley by Grube (1861). This information was repeated by Kharitonov (1932), Azheganova & Stenchenko (1977), Dunin (1984) and Nenilin (1985). Unfortunately, the specimen has disappeared from Grube's collection (Prószynski 1971), so verification of this record is impossible. As this European species has never again been found East of the Urals (see Prószynski 1983: fig. 5), it seems that its inclusion in the fauna of Khabarovskii Krai is based on a mistake.

This paper is based on the rather large amount of material collected by D. V. Logunov in Bolshekhekhtsirskii reserve (referred to as BR in the text), situated 15–20 km South of Khabarovsk, in 1987. Smaller collections were accumulated by D. K. Kurenshchikov and Dr. N. A. Ryabinin (Institute of Water and Ecological Problems, Khabarovsk) and of S. V. Ivanov (Bolshekhekhtsirskii reserve). The material in the Zoological Museum of Moscow University (collection of V. I. Sychevskaya) and in the Museum of Natural History in Wrocław (collection of A. E. Grube) was studied as well.

Both the previous information and our data refer to the southern part of Khabarovskii Krai, mainly the Amur river valley (see Fig. 1). For some species data from the neighbouring Amurskaya Oblast and Primore are included as well. For *Phintella popovi* and *Sitticus cutleri* data from Khakassya (South of Krasnoyarskii Krai) and for *Harmochirus latens* data from Khakassya and Buryatya are added too.

All the Salticidae species apart from those of the genus *Euophrys* are dealt with here. The latter genus will be treated separately, as its Eastern Palaearctic species demand a thorough taxonomic revision. Most probably 2–3 *Euophrys* species occur within the study area.

The material forming the foundations of this paper originates from the following collections:

| | |
|---|---|
| BI | Zoological Museum of Institute of Biology, the Russian Academy of Sciences, Novosibirsk |
| MNH | Museum of Natural History, Wrocław University, Wrocław |
| ZMMU | Zoological Museum of Moscow University, Moscow |
| ZI | Zoological Institute, the Russian Academy of Sciences, St. Petersburg |
| IWP | Institute of Water and Ecological Problems, the Russian Academy of Sciences, Khabarovsk |
| IBS | Biological Institute of WSRP, Siedlce |
| ZMT | Zoological Museum, Turku University, Turku. |



## 2. Methods

Specimens were examined in a dish with alcohol. Descriptions of colours pertain to wet specimens. The drawings were made with the aid of a reticular eyepiece attached to a stereomicroscope with a magnification of 7.5 to 48 times. If not stated otherwise, specimens from Khabarovskii Krai are shown in the figures. The male pedipalp and epigyne were removed for the study. The epigyne was cleared in warm lactic acid or macerated in 10% KOH for 48 hours at normal room temperature and cleared in xylene. After drawing, the genitalia were placed in microvials with alcohol.

All measurements are given in mm. In the descriptions the following abbreviations are used:

| | |
|---|---|
| AM | diameter of anterior median eyes |
| AL | distance between anterior lateral eyes |
| PL | distance between posterior eyes. |

## 3. Taxonomic survey of species

### *Aelurillus festivus* (C. L. Koch, 1834)

Material: Khabarovskii Krai, BR, the Ussuri river, 2♂, 1♀, 10.IX.1987, S. Ivanov (BI, No 150, 155).

*Habitat.* Collected on rocky river shore among stones.

*Distribution.* Widely distributed Palaearctic species, recorded from the Russian Far East by Grube (1861), Kulczyński (1895), Prószynski (1976: map 1, 1979), Dunin (1984), Nenilin (1985) and Shternbergs (1988).

### *Carrhotus xanthogramma* (Latreille, 1819)

Material: Khabarovskii Krai, BR, 2♂, 5♀, 5–19.VI. 1987, D. Logunov (BI, No 690, 694, 898, 900), 1♂, 1♀ (MNH), 1♀, 8–10.VIII.1987, S. Ivanov (BI); BR, Bychikha village, 2♂, 3♀, 2–31.V.1988, S. Ivanov (BI, No 692), 2♂ (MNH); Nanaiskii distr., Slavyanka, 1♀, 1983, N. Ryabinin (ZMMU); the Amur river, 2♀, [leg.] Maack, coll. Grube (MNH).

*Habitat.* This species was collected by sweeping grass in deciduous woods (aspen, birch, oak); also recorded in coastal vegetation on stream submersion areas.

*Distribution.* Widely distributed Palaearctic species, recorded from the Russian Far East by Kulczyński (1895), Prószynski (1971, 1976: map 66, 1979), Dunin (1984), Nenilin (1985) and Shternbergs (1988).

### *Dendryphantes fusconotatus* (Grube, 1861) ?

Material: Khabarovskii Krai, BR, 2♂, 17–19.VI.1987, D. Logunov (BI, No 1117, 1118).

*Distribution.* Eastern Palaearctic species, recorded repeatedly in Khabarovskii Krai and Primore (Grube 1861, Kharitonov 1932, Prószynski 1971, 1976: map 44, 1979, Azheganova & Stenchenko 1977, Izmailova 1980, Dunin 1984, Nenilin 1985 and Marusik 1988).

These specimens differ slightly from the type. Perhaps they belong to another, closely related species. Settlement of this question will be possible only after thorough study.

### *Evarcha albaria* (L. Koch, 1878)

Material: Khabarovskii Krai, BR, 7♂, 1♀, 2–19.VI. 1987, D. Logunov (BI, No 678, 681), 2♂, 2♀ (MNH), 1♂, 8–10.VIII.1987, S. Ivanov (BI, No 680).

*Habitat.* Collected by sweeping grass and bushes in deciduous forest (aspen, birch, oak), as well as in litter.

*Distribution.* Eastern Palaearctic species. New for Khabarovskii Krai, previously recorded in the Russian Far East only from Primore (Kulczyński 1895, Kharitonov 1932, Prószynski 1976: map 128, 1979, Dunin 1984, Nenilin 1985).

### *Evarcha arcuata* (Clerck, 1757)

Material: Khabarovskii Krai, BR, 14♂, 6♀, 2–19.VI. 1987, D. Logunov (BI, No 280, 291, 316, 321, 323, 324, 327), 1♂, 1♀ (MNH), 1♀ (IBS); the Amur river, Rybachii island, 2♀, 21.VI.1987, D. Kurenshchikov (BI, No 317).

*Habitat.* Collected by sweeping both in dry deciduous woods (aspen, birch, oak) and in moister places (among sparse ferns in alder carr with single larches), as well as in clearings and on meadows.

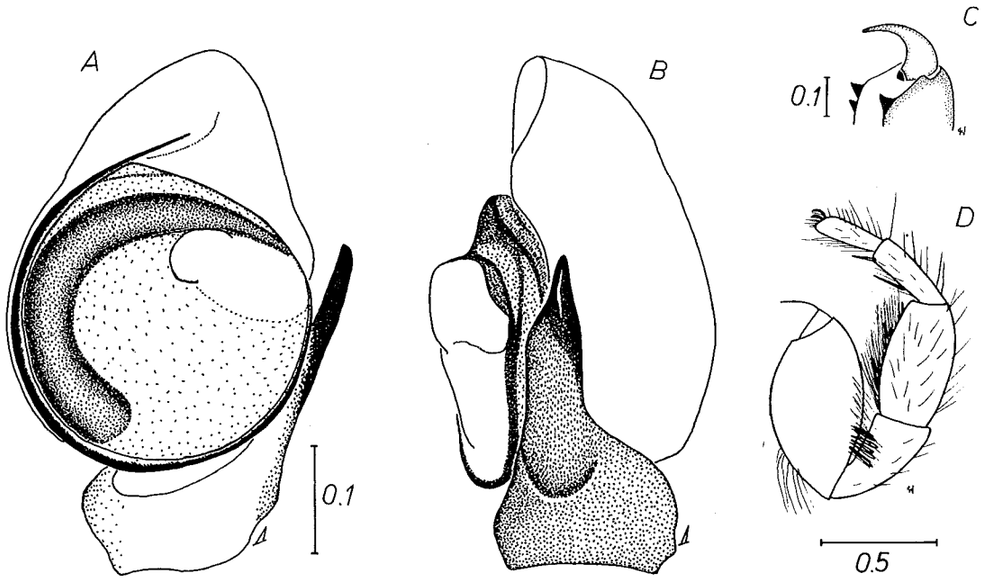



Fig. 2. *Harmochirus latens* (Logunov), male. — A–B: palpal organ, ventral and lateral views. — C: cheliceral dentition. — D: first leg.

*Distribution*. Widely distributed Palaearctic species, recorded from the Russian Far East by Prószynski (1976: map 130, 1979), Azheganova & Stenchenko (1977), Dunin (1984), Nenilin (1985) and Marusik (1988).

### *Evarcha falcata* (Clerck, 1757)

Material: Khabarovskii Krai, BR, 2♂, 6♀, 15–22.VI. 1987, D. Logunov (BI, No 181, 197, 201, 202, 205).

*Habitat*. Collected by sweeping in deciduous woods (aspen, birch, oak) and at wood edges.

*Distribution*. Widely distributed Holarctic species, recorded repeatedly in the Russian Far East (Kulczyński 1895, Prószynski 1976: map 131, 1979, Azheganova & Stentchenko 1977, Dunin 1984, Nenilin 1985).

### *Harmochirus latens* (Logunov, 1991) comb. n.

Figs. 2–3

*Bianor latens* Logunov, 1991

Material: Khabarovskii Krai, BR, 2♂, 10–19.VI.1987, D. Logunov (BI, No 645, 646); Amurskaya Oblast, Khinganskii reserve, Antonovskoe forest- range, 1♀, 1.VIII.1983, Yu. Marusik (ZI); Primore, Khasanskii distr., near Primorskaya station, 1♂, 1♀, 31.V.1978, B. Zakharov (ZI); Buryatya, Selenginskii distr., Taezhnoe village, 1♀, 13.VIII.1984, B. Zakharov (BI, No 644); South of Krasnoyarskii Krai, Khakassya, Altaiskii distr., 40 km SE of Belyi Yar, 15–17 km E of Novorossiiskoe, the Jenisej river, 1♂, 24.VI.1990, D. Logunov (BI, No 1115).

*Diagnosis*. The shape of epigyne and swollen tibiae of front legs in males suggest that this species should be placed in the genus *Harmochirus*. Exact delimitation of *Bianor* and *Harmochirus*, though, calls for future detailed studies. The male similar to *Bianor aurocinctus* (Ohlert) and *Bianor aemulus* (Gertsch), may be distinguished by stronger tibial apophysis, flatter tegulum and position of seminal ducts (Fig. 2A–B). The female may be easy recognized by long sideward depressions of epigyne (Fig. 3A–B).

*Description*. Measurements (male/female). Cephalothorax: length 1.47/1.89, width 1.10/1.40, height 0.61/0.77. Abdomen: length 1.50/2.57, width 1.07/1.76. Eye field: length 0.83/1.03, AL 0.89/1.13, PL 1.07/1.46. AM 0.29/0.37. Legs: I 0.79/0.97 + 0.51/0.56 + 0.54/0.63 + 0.40/0.47 + 0.34/0.37; II 0.57/0.81 + 0.37/0.50 + 0.30/0.44 + 0.29/0.40 + 0.29/0.34; III 0.73/1.00 + 0.46/0.49 + 0.34/0.46 + 0.36/0.53 + 0.29/0.34; IV 0.71/1.03 + 0.36/0.50 + 0.41/0.60 + 0.43/0.63 + 0.29/0.37. — Male. Carapace flattened, much swollen in the area of eyes III, dark brown, eye field with metallic shine. Scarce brown bristles on carapace, few white scales behind posterior eyes. Clypeus low with long hairs. Chelicerae (Fig. 2C), maxillae, labium and sternum brown. Abdomen rounded, dark brown with gleaming scutum. Legs I thick dark brown with long dense black hairs on ventral surface of femora and tibiae (Fig. 2D). Remaining legs pale brown. Pedipalp dark with single straight tibial apophysis, bulbus more or less rounded, embolus very thin (Fig. 2A–B). — Female. Carapace dark brown, eye field black. Sides on cephalothorax and clypeus covered with white hairs. Sternum brown with white hairs. Labium, maxillae and chelicerae brown. Abdomen and spinnerets dark grey. Legs I with thicken dark brown femora, patellae reddish-brown or brown, tibiae red with brown band on their distal parts, metatarsi and tarsi yellow or yellowish-grey. Remaining legs brown, their distal parts yellow or yellowish-grey. Pedipalp yellow or grey, its femur brown. Epigyne is given in Fig. 3A–B, its internal structures in Fig. 3C–D.

*Habitat*. Collected by sweeping grass in woods and floodplains, as well as in litter in poplar woods.

*Distribution*. Siberia: Khakassya, Tuva, Buryatya, Khabarovskii Krai, Amurskaya Oblast, Primore.

This species was described by Logunov (1991) on the basis of a female from Tuva. The male is described here for the first time.



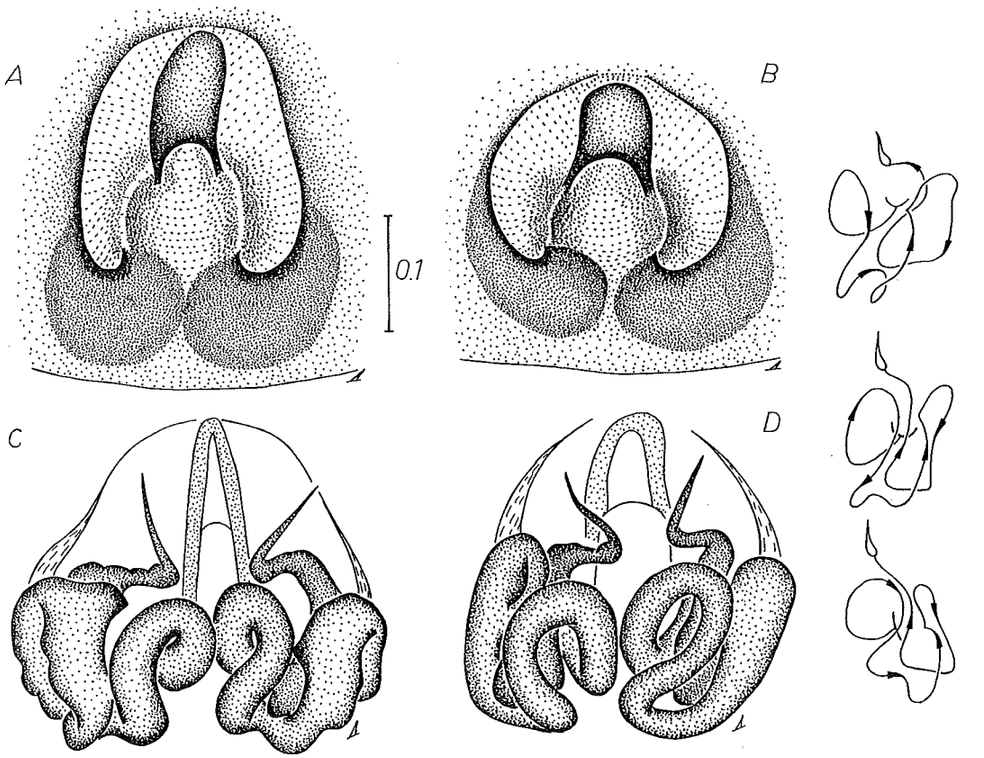



Fig. 3. *Harmochirus latens* (Logunov), female, epigyne and its internal structures. — A, C: specimen from Primore. — B, D: specimen from Amurskaya Oblast.

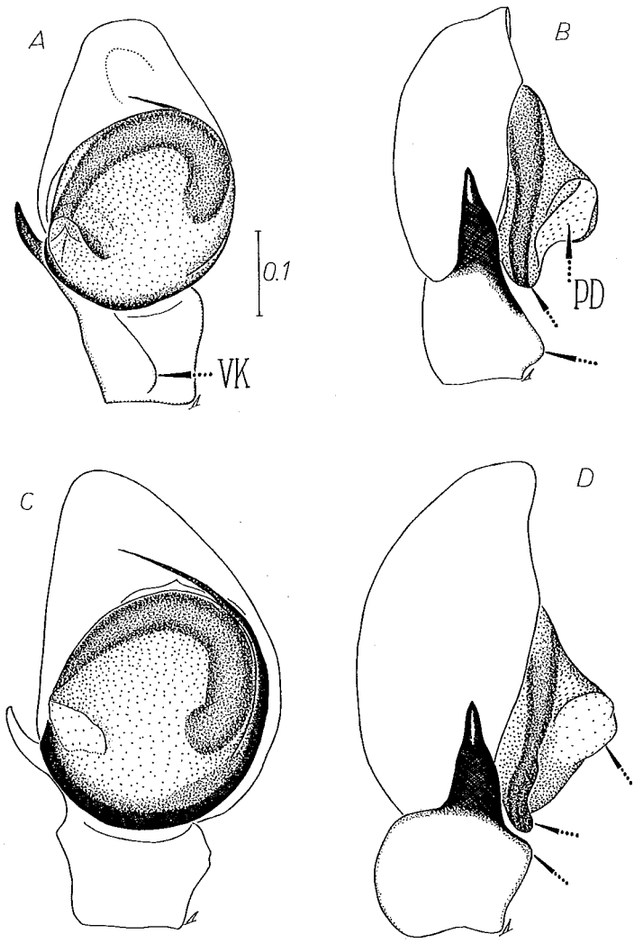



Fig. 4. *Harmochirus nigriculus* sp. n. and *Bianor aurocinctus* (Ohlert), males. — A–B: *H. nigriculus*, holotype, palpal organ, ventral and lateral views. — C–D: *B. aurocinctus*, specimen from Sakhalin, palpal organ, ventral and lateral views. — VK: ventral knob on palpal tibia. — PD: pear-shaped depression in the tegulum cone.

***Harmochirus nigriculus* sp. n.**

Figs. 4–5

Material: Holotype: Khabarovskii Krai, environs of Khabarovsk, the Amur river, Zelonyi island, 1♂, 29.VI. 1936, V. Sychevskaya (ZMMU, Ta-4658). — Paratypes: Khabarovskii Krai, Nanaiskii distr., the Amur river, Slavyanskii island, 1♀, 20.VI.1989, D. Kurenshchikov (BI, No 647); Amurskaya Oblast, Tambovskii distr., Kozmodemyanovka village, 3♀, VI.1990, G. Ganin (BI, No 1116); Primore, Skotovskii distr., Kangauz, 1♀ (incorrectly determined as "*B. aurocinctus*"), 12.VII.1968, V. Popov (ZI), 1♀ (incorrectly determined as "*B. aurocinctus*"), IX.1968, N. Ustimenko (ZI).

*Diagnosis*. The species clearly shows affinities with *Bianor aurocinctus* (Ohlert). The male may be distinguished by more clearly marked pear-shaped depression in tegulum cone (PD, cf. Fig. 4B and 4D), by position of turn of seminal duct, presence and situation of ventral knob on palpal tibia (VK, cf. Fig. 4A and 4C), and by smaller size of both pedipalp and whole body. The female can be separated by position of loops of insemination ducts (cf. Fig. 5B and 5C). It seems also to have differently coloured legs: *H. nigriculus* has brown patellae I and greyish-brown



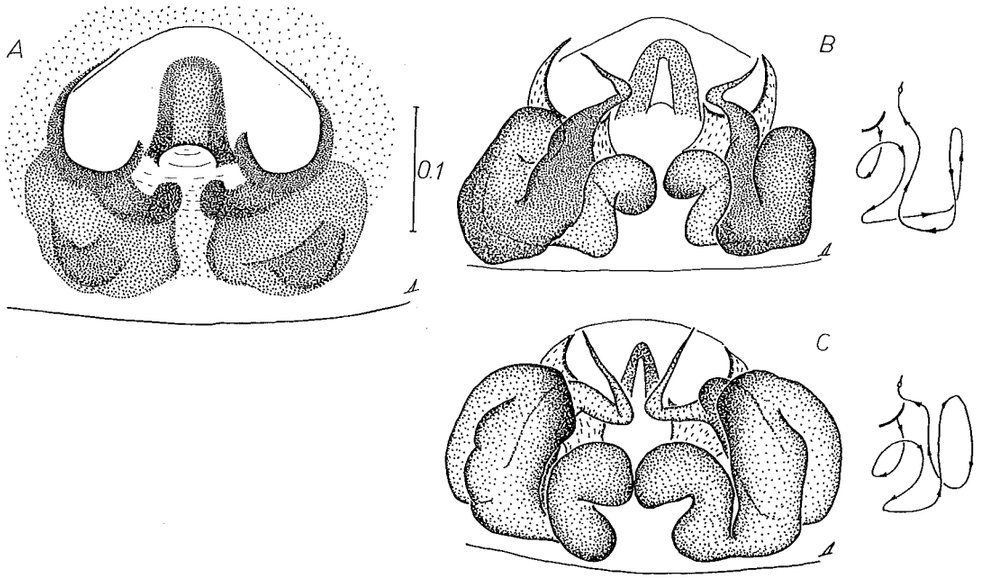



Fig. 5. *Harmochirus nigriculus* sp. n. and *Bianor aurocinctus* (Ohlert), females. — A–B: *H. nigriculus*, paratype, epigyne and its internal structures. — C: *B. aurocinctus*, specimen from Sakhalin, internal structures of epigyne.

legs II–IV, while *B. aurocinctus* has red patellae I and yellow legs II–IV (see also Logunov & Marusik 1991).

*Description*. Measurements (male/female). Cephalothorax: length 1.42/1.73, width 1.10/1.28, height 0.56/0.75. Abdomen: length 1.71/2.50, width 1.19/1.50. Eye field: length 0.86/0.95, AL 0.91/1.05, PL 1.10/1.30. AM 0.29/0.34. Legs: I 1.09/0.93 + 0.64/0.58 + 0.68/0.60 + 0.64/0.35 + 0.34/0.35; II 0.61/0.70 + 0.36/0.45 + 0.38/0.40 + 0.34/0.40 + 0.48/0.28; III 0.79/0.93 + 0.37/0.50 + 0.34/0.43 + 0.57/0.45 + 0.29/0.30; IV 0.83/0.93 + 0.37/0.50 + 0.49/0.55 + 0.57/0.58 + 0.27/0.30. — Male. Carapace brownish, eyes surrounded with black. Sternum brownish. Labium, maxillae and chelicerae reddish-brown. Abdomen greyish-brown, with scutum. Spinnerets greyish-brown. Legs I brown with strong flat femora. Pedipalp structure shown in Fig. 4A–B. — Female. Carapace dark brown with black reticulate pattern, eyes surrounded by black rings. Whole surface of carapace with white adherent hairs. Abdomen grey with indistinct longitudinal streak. Legs I dark brown, remaining ones greyish-brown. Epigyne with central pocket (Fig. 5A), its internal structures shown in Fig. 5B.

*Habitat*. Collected by sweeping in mixed woods, on meadows and dry places on the ground.

*Distribution*. Khabarovskii Krai and Primore.

Repeated study of specimens from Primore identified as *B. aurocinctus* by (Prószynski 1979 and Nenilin 1985) showed that they belonged to *H. nigriculus*.

***Harmochirus pullus* (Bösenberg et Strand, 1906)**

Figs. 6–7

Material: Khabarovskii Krai, BR, 1♀, 18.VI.1987, D. Logunov (BI, No 667); Primore, Furugelm island, 1♂, 1♀ (incorrectly determined as "*Siler cupreus*"), 17–19.VII. 1975, M. Shternbergs (BI, No 668, 669).

*Description*. Measurements (male/female). Cephalothorax: length 1.54/1.63, width 1.24/1.40, heigth 0.74/0.78. Abdomen: length 1.50/1.88, width 1.21/1.45. Eye field: length 0.93/1.03, AL

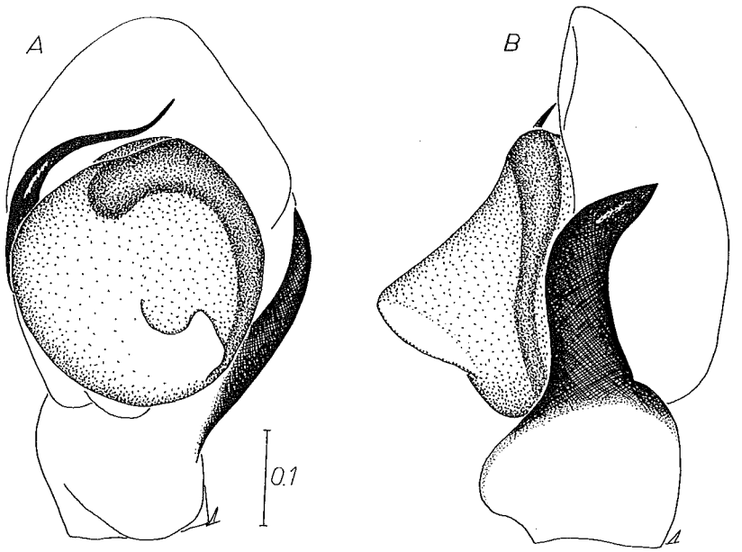



Fig. 6. *Harmochirus pullus* (Bösenberg et Strand), male, palpal organ. — A: ventral view. — B: lateral view.

1.03/1.15, PL 1.22/1.40. AM 0.36/0.36. Legs: I 1.03/0.90 + 0.59/0.50 + 0.81/0.58 + 0.53/0.53 + 0.39/0.35; II 0.69/0.73 + 0.38/0.45 + 0.41/0.40 + 0.37/0.43 + 0.30/0.30; III 0.88/0.93 + 0.41/0.48 + 0.44/0.50 + 0.44/0.53 + 0.32/0.35; IV 0.90/1.05 + 0.37/0.48 + 0.49/0.58 + 0.53/0.63 + 0.34/0.38. — Male. Colouration typical for the genus. Carapace convex uniform reddish-brown, surroundings of eyes black. Adherent white hairs on lateral surfaces of carapace. Sternum, labium, maxillae and chelicerae reddish-brown. Abdomen uniform dark grey with gleaming scutum. Spinnerets dark grey. Legs I: femora, patellae and tibiae reddish-brown, coxae, metatarsi and tarsi yellow. Femora with rows of scale-like black hairs on ventral surfaces, the same hairs on dorsal surfaces of tibiae (Fig. 7B). Remaining legs yellow. Pedipalp with long curved tibial apophysis (Fig. 6). — Female. Colouration resembling male. Abdomen without scutum. Young specimens yellow-greyish with white legs. Epigyne with large central depression and small pocket Fig. 7A).

*Habitat*. Collected on moist clearing with *Stratiotes sp*.

*Distribution*. New for Russia. Earlier known from Japan (Bösenberg & Strand 1906 and Bohdanowicz & Prószynski 1987) and from Korea (Wesołowska 1981a and Paik 1987).

This species was recorded from Primore by Shternbergs (1988), but erroneously identified as *Siler cupreus* Simon.

### *Heliophanus dubius* C. L. Koch, 1835

Material: Khabarovskii Krai, BR, 1♀, 14.VI.1987, D. Logunov (MNH).

*Habitat*. Collected by sweeping in deciduous forest.

*Distribution*. Widely distributed Palaearctic species, new for Khabarovskii Krai. Recorded from the Russian Far East by Grube (1861), Dunin (1984), Nenilin (1985), Shternbergs (1988) and Marusik (1988).

### *Heliophanus lineiventris* Simon, 1868

Material: Khabarovskii Krai, Nanaiskii distr., environs of Khabarovsk, 1♂, 15.VI.1931, V. Sychevskaya (ZMMU); the Amur river, Slavyanskii distr., 1♀, 20.VI.1989, D. Kurenshchikov (MNH), Amurskii distr., shore of Bolon lake, 51 km SW of Achat village, 3♀, 2.VI.1990, D. Kurenshchikov (IWP).



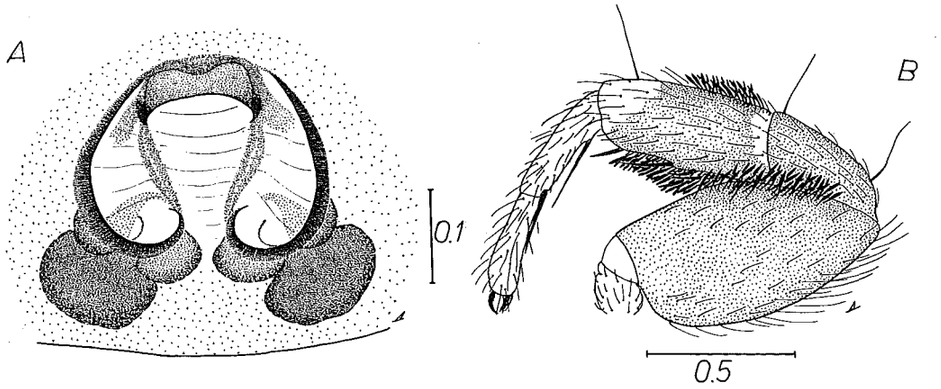



Fig. 7. *Harmochirus pullus* (Bösenberg et Strand), female. — A: epigyne. — B: first leg.

*Habitat*. Collected by sweeping in grass and shrubs.

*Distribution*. Widely distributed Palaearctic species, recorded from the Russian Far East by Kulczyński (1895), Prószynski (1976: map 74, 1979), Dunin (1985) and Nenilin (1985).

### *Heliophanus ussuricus* Kulczyński, 1895

Material: Khabarovskii Krai, BR, 1♀, 5–17.VI.1987, D. Logunov (BI, No 498), 2♀ (MNH), 2♂, 2♀ (IBS); BR, the Chirka river, Akman village, 3♀, 15.VI.1989, S. Ivanov (BI, No 509).

*Habitat*. Collected by sweeping both in dry deciduous woods and in moister places (among sparse mosses and ferns in alder carr) as well as in clearings and on meadows.

*Distribution*. Eastern Palaearctic species, reported from the Russian Far East by Kulczyński (1895), Prószynski (1976: map 92, 1979), Dunin (1984), Nenilin (1985) and Marusik (1988).

### *Marpissa dersuuzalai* sp. n.

Figs. 8–10

Material: Holotype: Khabarovskii Krai, BR, 1♂, 16–17.VI.1987, D. Logunov (BI, No 1119). — Paratypes: together with holotype, 6♂, 10♀ (BI, No 1120), 4♂, 3♀ (ZMMU, Ta-4665), 3♂, 4♀ (MNH, No 626); Amurskaya Oblast, Khinganskii reserve, 1♂, 15.VIII.1983, Yu. Marusik (ZMMU, Ta-4666). — Comparative material: Holotype of *Marpissa ibarakiensis*, Japan, Ibaraki, 1♀, 25.VI.1966, [leg.] Y. Suganami, coll. Yaginuma (IBS).

*Diagnosis*. The male in general appearance and colouration very similar to *Marpissa pulchra* Prószynski, *Marpissa magister* (Karsch), *Marpissa elongata* (Karsch) and *Marpissa nobilis* (Grube). May be easily told apart from them by bifurcared tibial apophysis (Fig. 8D). Similar, though not identical, apophysis possessed by "species 4" of Chikuni & Yaginuma (1976). The female closely resembles *Marpissa ibarakiensis* Bohdanowicz et Prószynski, but can be separated by configuration of spermathecae loops (cf. Figs. 10C and 11). For complete list of differences between females of *M. dersuuzalai* and *M. ibarakiensis* see Table 1. It is

Table 1. Differences between *Marpissa dersuuzalai* and *M. ibarakiensis*.

| | *M. dersuuzalai* | *M. ibarakiensis* |
|---|---|---|
| Size | ca 7 mm | >10 mm |
| Cephalothorax length | ca 3 mm | >4 mm |
| Sternum | pale with dark margins | dark |
| Abdomen ventrally | 3 thin lines | 3 wide bands |
| Legs I | uniform | with contrasting Me, Ta |
| Insemination ducts | short, strongly coiled | long, slightly coiled |

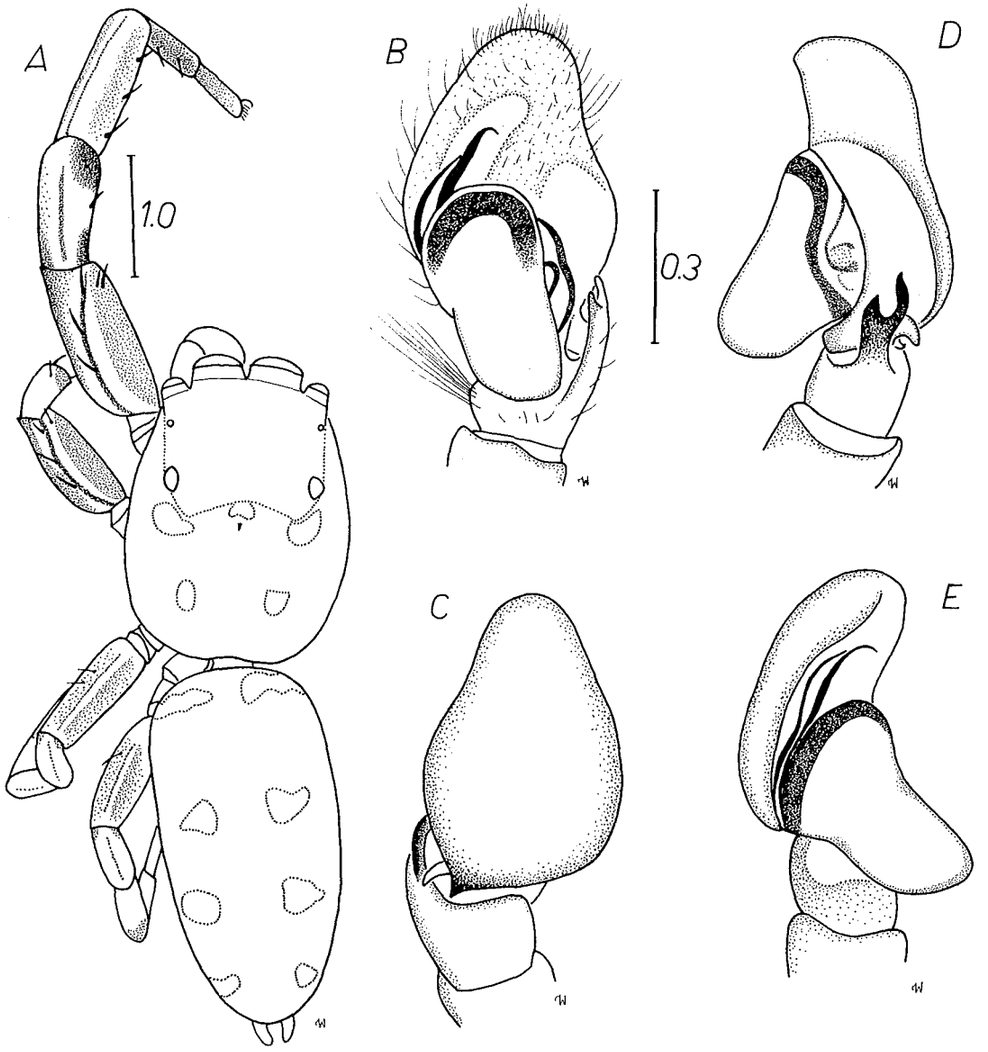



Fig. 8. *Marpissa dersuuzalai* sp. n., paratype, male. — A: general appearance. — B–D: palpal organ, ventral, dorsal and two lateral views.

very likely that *M. ibarakiensis* and the female of Chikuni & Yaginuma (1976), "species 4", are conspecific.

*Description*. Measurements (male/female). Cephalothorax: length 2.53–2.88/2.85–3.02, width 1.80–2.05/1.95–2.30, height 0.85–1.03/0.93–1.20. Abdomen: length 2.88–3.45/2.85–3.02, width 1.45–1.70/1.95–2.30. Eye field: length 1.08–1.30/1.20–1.43, AL 1.33–1.48/1.40–1.63, PL 1.38–1.65/1.20–1.43. AM 0.40–0.43/0.47–0.50. Legs: I 1.63–1.95/1.55–2.00 + 0.88–1.20/0.95–1.15 + 1.38–1.68/1.20–1.45 + 0.98–1.2 5/0.85–1.05 + 0.53–0.63/0.45–0.55; II 1.15–1.33/1.20–1.45 + 0.65–0.73/0.75–0.90 + 0.73–0.83/0.70–0.95 + 0.70–0.85/0.65–0.90 + 0.43–0.48/0.40–0.50; III 1.20–1.40/1.25–1.50 + 0.65–0.73/



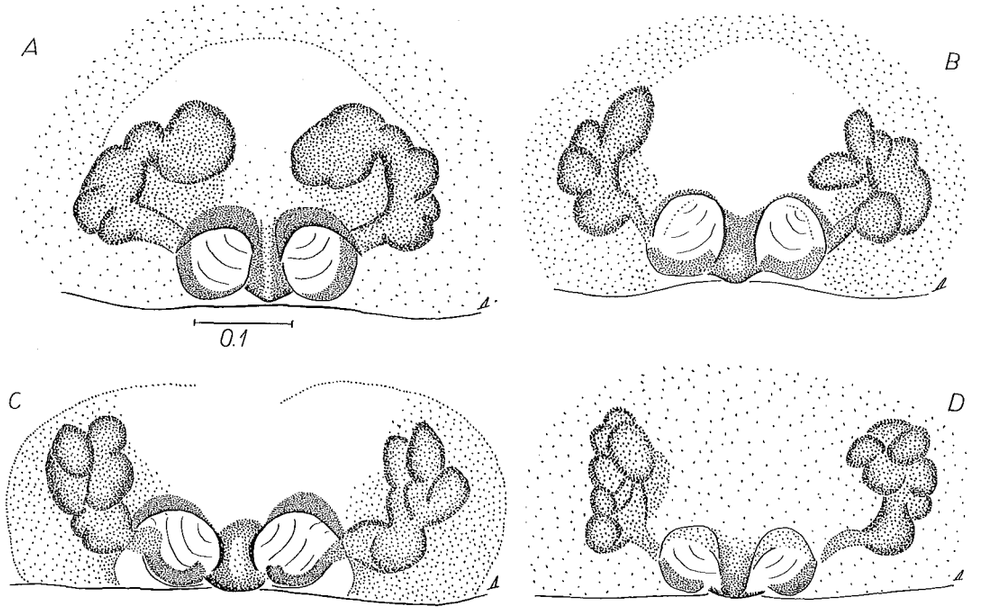



Fig. 9. *Marpissa dersuuzalai* sp. n., paratypes, female, epigyne.

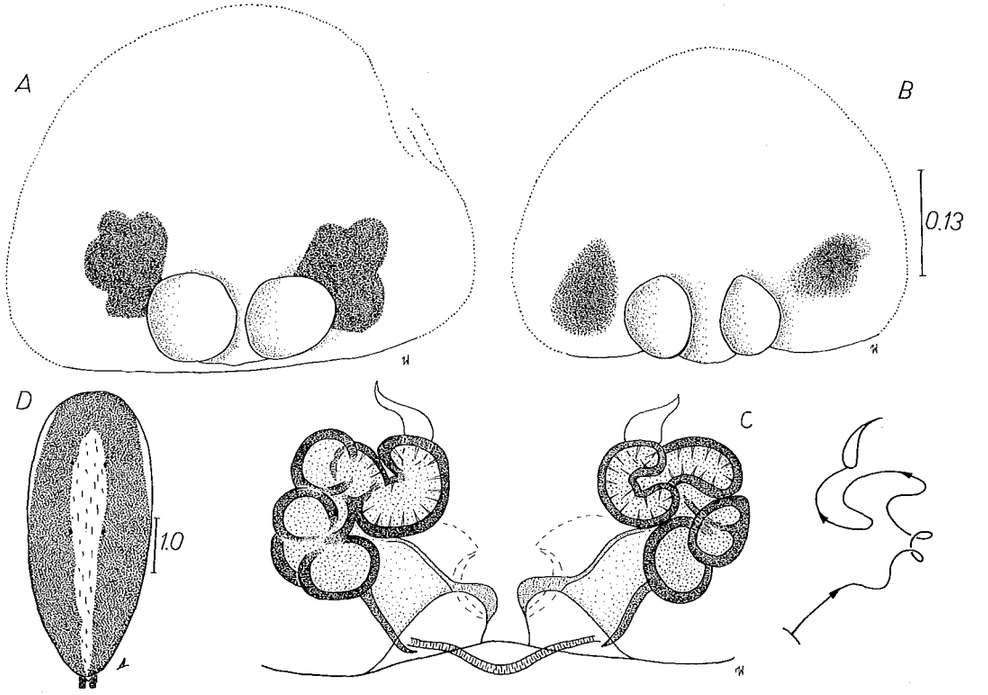



Fig. 10. *Marpissa dersuuzalai* sp. n., paratypes, female. — A–C: epigyne and its internal structures. — D: abdominal pattern.

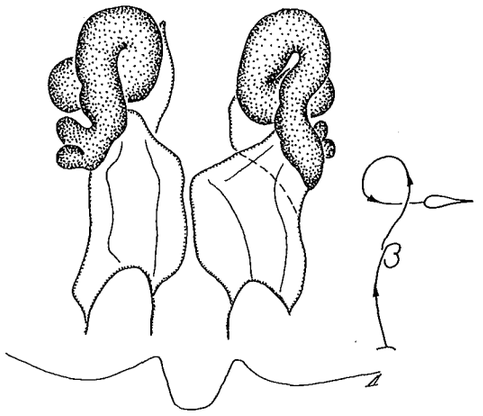


Fig. 11. *Marpissa ibarakiensis* Bohdanowicz et Prószynski, holotype (from Japan), female, internal structures of epigyne.

0.70–0.80 + 0.63–0.83/0.75–0.80 + 0.75–0.9 0/0.75–1.00 + 0.48–0.53/0.45–0.50; IV 1.28–1.63/1.50–1.80 + 0.68–0.83/0.75–1.00 + 0.98–1.20/1.05–1.30 + 0.88–1.0 8/1.00–1.20 + 0.50–0.53/0.50–0.55. — Male. Whole body elongated (Fig. 8A). Carapace dark brown with almost black punctured-reticulate eye field, behind eye field five spots formed by white hairs. Lateral edges of carapace with white narrow band. Sparse thin dark hairs on carapace. In vicinity of eyes few brown setae. Sternum dark brown. Clypeus brown, very low. Labium and maxillae dark brown with light margins. Chelicerae dark brown, promargin with two teeth, retromargin with single tooth. Abdomen black with bright golden shine and four pairs of white spots surrounded by black mat rings. Abdomen covered with thin dark hairs, denser at anterior margin. Ventrally abdomen dark with two longitudinal light lines, laterally additional lines formed by rows of points. Spinnerets dark. Legs brown with darker femora. Lateral surfaces of remaining segments of legs dark. Legs I thick. All legs with numerous thin dark hairs and brown spines. Pedipalp small, dark brown. Tibial apophysis two-cleft, pincers-shaped, posterior edge of cymbium with additional process, bulbus elongated, embolus geminate (Fig. 8B–D). — Female. Carapace brown with yellow or orange edges, eye field black; in some specimens whole carapace black. Whitish-grey dense hairs cover carapace, near eyes sparse brown setae. Sternum yellow with dark margins. Labium and maxillae brown, sometimes with yellow margins. Chelicerae yellow or brown. Abdomen brown with golden shine, medially light streak formed by white hairs (Fig. 10D), in some specimens streak not visible. Ventrally abdomen light with three longitudinal dark stripes. Spinnerets brown. Legs yellow, in some specimens legs I brown. Pedipalp yellow. Epigyne small with two round copulatory openings (Figs. 9 and 10A–B). Insemination ducts rather short, weakly sclerotized, spermathecae multi-chambered (Fig. 10C).

*Habitat*. Collected by sweeping on meadows and wet places in clear woods (aspen, larch).

*Distribution*. Khabarovskii Krai and Amurskaya Oblast.

*Etymology*. Species named after Dersu Uzala, the legendary hero of V. A. Arsenev's novel, who supposedly died near the type locality.

### *Marpissa dybowskii* (Kulczyński, 1895)

Material: Khabarovskii Krai, Evreiskaya Autonomna Oblast, Digun (?), 1♀, 13–18.VIII.1978, Belov (ZI); Primore, Ryazanovka, 1♀, VIII.1980, G. Belova (ZI).

*Diagnosis*. The species closely resembles *Marpissa pomatia* (Walckenaer). The main diagnostic differences are given in Prószynski (1979) and Bohdanowicz & Prószynski (1987).

*Distribution*. Eastern Palaearctic species, new for Khabarovskii Krai. Previously recorded from Primore by Prószynski (1976: map 118, 1979), Dunin (1984), Nenilin (1985) and Shternbergs (1988).

### *Marpissa elongata* (Karsch, 1879)

Material: Khabarovskii Krai, environs of Khabarovsk, the Amur river, Zelonyi island, 1♂, 7.VII.1931, V. Sychevskaya (ZMMU); Amurskaya Oblast, Khinganskii reserve, Lebedinskoe forest-range, 1♂, 2♀, 8.VIII.1983, Yu. Marusik (ZI); Lebedinskoe lake, 4♂, 2–3.VIII.1991, D. Kurenshchikov (BI, No 1121); Primore, Chernigovskii distr., Dmitrevka, 1♂, 16.VII.1989, A. Borok (BI, No 1122); Prikhankaiskii distr., Khazan lake, Kamen-Rybolov village, 2♂, 2♀, 4.V–24.VII.1908, A. Cherskii (ZI).



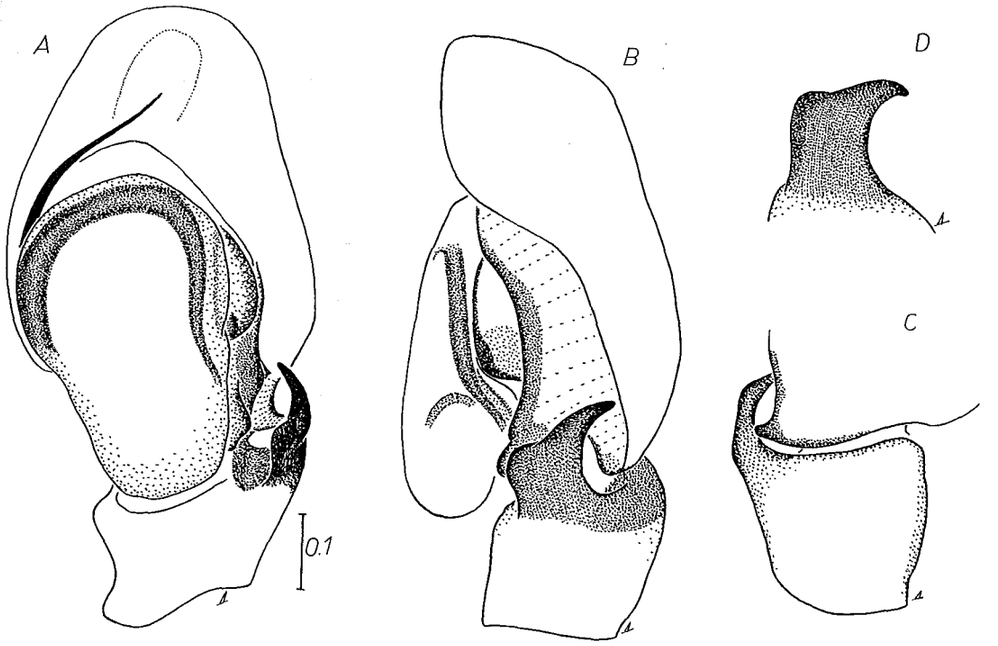



Fig. 12. *Marpissa magister* (Karsch), male. — A–C: palpal organ, ventral, lateral and dorsal views. — D: lateral view of tibial apophysis.

*Diagnosis*. The species resembles *Marpissa nobilis* (Grube) and *Marpissa pulchra* Prószynski. The diagnostic features are given in Prószynski (1973), Chikuni & Yaginuma (1976), Wesołowska (1981a), as well as Bohdanowicz & Prószynski (1987).

*Habitat*. Collected by sweeping grass.

*Distribution*. Eastern Palaearctic species, new for Khabarovskii Krai. From the Russian Far East reported from Primore (Prószynski 1976: map 121, 1979, Dunin 1984, Nenilin 1985, and Shternbergs 1987).

### *Marpissa magister* (Karsch, 1879)

Figs. 12–13

Material: Khabarovskii Krai, BR, 1♀, 19.VI.1987, D. Logunov (BI, No 1123), 1♂, 17.VII. 1987, D. Logunov (MNH); Nizhnespaskoe, 53 km SE of Khabarovsk, 1♂, 15.VI.1988, D. Kurenshchikov (BI, No 1124); Primore, Khazanskii distr., Talmi lake, Khazan village, 1♀, 27.VII. 1976, B. Zakharov (BI, No 1125).

*Diagnosis*. From other similar *Marpissa* species the male is told apart by broader tibial apophysis (Fig. 12 B and 12 D), the female by shape of epigyne and spermathecae (Fig. 13 C, see also Chikuni & Yaginuma 1976 and Bohdanowicz & Prószynski 1987).

*Description*. Measurements (male/female). Cephalothorax: length 2.93/2.55, width 2.00/1.73, height 0.98/0.78. Abdomen: length 3.65/3.40, width 1.75/1.45. Eye field: no measurements. AM 0.46/0.49. Legs: I 2.25/1.45 + 1.15/0.85 + 1.60/1.15 + 1.10/0.80 + 0.55/0.45; II 1.25/1.00 + 0.75/0.65 + 0.75/0.65 + 0.65/0.60 + 0.45/0.40; III 1.25/1.00 + 0.60/0.65 + 0.70/0.55 + 0.70/0.60 + 0.45/0.45; IV 1.60/1.35 + 0.75/0.75 + 1.10/0.95 + 0.95/0.85 + 0.45/0.45. — Male. Whole body coloured dark brown. White hairs form separate spots on carapace and abdomen (Fig. 13A). At anterior margin of abdomen narrow white band. Sternum black, labium and maxillae black with yellow margins. Legs brown with yellow trochanters and tarsi. Pedipalp shown in Fig. 12. Tibial apophysis broad (Fig. 12B and 12D).

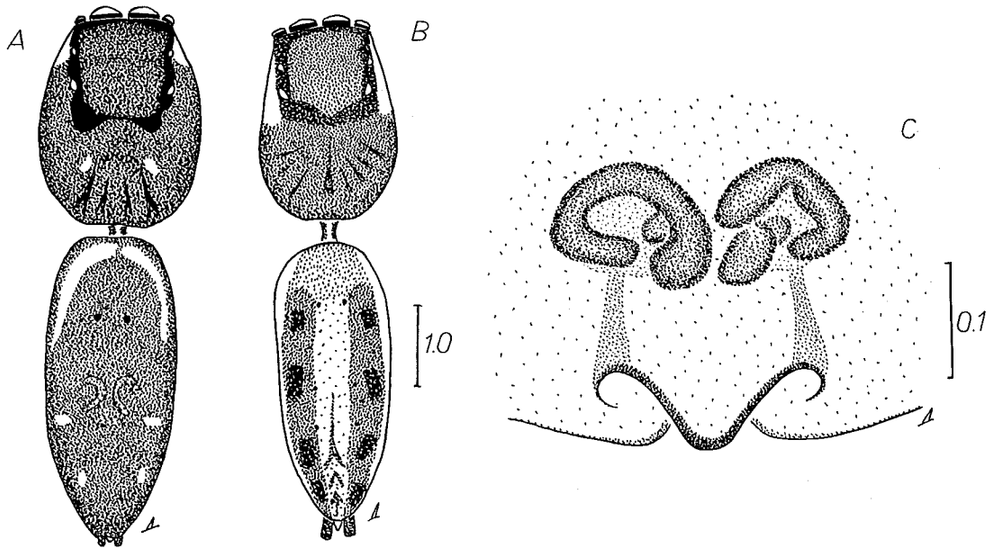



Fig. 13. *Marpissa magister* (Karsch), male and female. — A: general appearance of male. — B: general appearance of female. — C: epigyne.

— Female. Carapace light brown with darker eye field, eyes surrounded with black. Sternum centrally yellow, marginally brown. Labium grey with lighter margin, maxillae yellow, chelicerae orange. Abdomen with two longitudinal broad brown stripes with golden shine and four pairs of square black spots (Fig. 13B). Ventrally abdomen yellowish brown with three longitudinal brown streaks. Spinnerets yellow with dark dots. Legs yellowish-brown, legs I a little darker. Epigyne small with depression in posterior part, divided by triangular median ridge (Fig. 13C).

*Habitat*. Collected by sweeping in dry deciduous woods and meadows, as well as in moister places.

*Distribution*. In the Russian Far East: Khabarovskii Krai and Primore (Dunin 1984 — incorrectly determined as "*M. pichoni*", Marusik & Logunov in press). Earlier known from Japan, Viet-Nam and China (after Żabka 1985).

Dunin's (1984) records of *Marpissa pichoni* (Schenkel) from Primore actually refer to *M. magister*, as can clearly be seen from his figures (42–44).

### *Marpissa nobilis* (Grube, 1861)

Figs. 14–15

Material: Khabarovskii Krai, BR, 1♂, 1♀, 16–17.VI. 1985, D. Logunov (BI, No 1126, 1127); Amurskaya Oblast, Khinganskii reserve, 3♂, 1–24.VIII.1983, Yu. Marusik (ZMMU), 3♂ (ZI); the Ussuri river, 1♂ lectotype, 1♂ paralectotype, [leg.] Schrenk, coll. Grube (MNH, No 436).

*Diagnosis*. The species very close to *Marpissa pulchra* Prószynski. The male can be separated by lack of tooth on tibial apophysis (cf. Figs. 14B–E and 16A–C) and by colouration of legs. Patellae and tibiae II–IV of *M. nobilis* are yellow, whereas those of *M. pulchra* are brown. The female may be easily recognized by structure of vulva (cf. Figs. 15C and 17C).

*Description*. Measurements (male/female). Cephalothorax: length 3.13/3.03, width 2.20/2.03, height 1.05/0.98. Abdomen: length 3.90/5.25, width 1.80/2.25. Eye field: length 1.38/1.28, AL 1.55/1.48, PL 1.55/1.55. AM 0.54/0.41. Legs: I 3.20/1.70 + 1.60/1.10 + 2.90/1.50 + 1.90/1.05 + 0.50/0.50; II 1.55/1.25 + 0.85/0.95 + 1.10/0.80 + 0.90/0.75 + 0.50/0.40; III 1.50/1.35 + 0.80/0.75 + 0.95/0.75 + 1.00/0.85 + 0.55/0.55; IV 1.90/1.60 + 0.85/1.25 + 1.50/0.85 + 1.30/1.15 + 0.55/0.45. — Male. Whole body coloured dark brown, eyes surrounded by black. Carapace and abdomen with ornament composed of white hair spots (Fig. 14A). Abdomen ventrally with two thin light longitudinal lines. Legs I dark brown with yellowish tarsi. Remaining legs yellow, only femora brown with yellow streaks. Pedipalp structure similar to *M. pulchra*, details of structure of tibial apophysis shown in Fig. 14B–E. — Female. Carapace brown with orange margins, eye field black. Sternum yellowish-brown. Labium and chelicerae brown, maxillae yellow. Abdomen yellowish with two broad dark longitudinal bands (Fig. 15A), ventrally with three thin brown lines. Spinnerets yellow. All legs yellow, only patella, tibia and metatarsus of leg I brownish. Epigyne with small depression in posterior part, partially divided by wide median ridge (Fig. 15B). Its internal structures as in Fig. 15C.



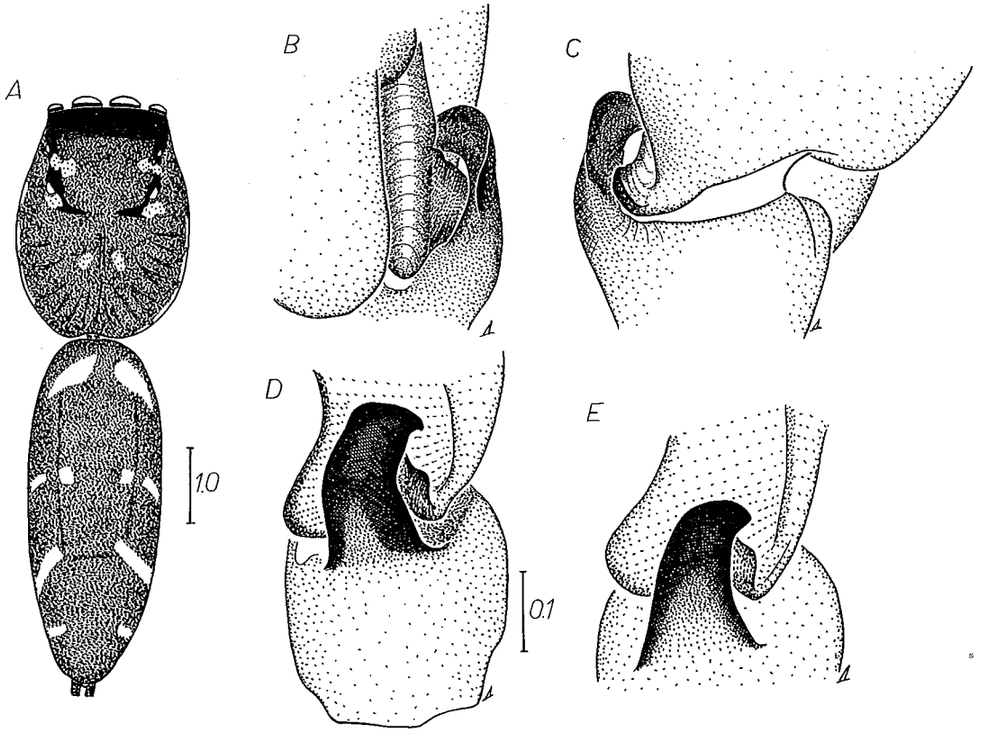



Fig. 14. *Marpissa nobilis* (Grube), male. — A: general appearance. — B–D: tibial apophysis, ventral, dorsal and lateral views. — E: paralectotype, lateral view of tibial apophysis.

*Habitat*. Collected by sweeping on meadows and in swampy woods.

*Distribution*. Eastern Palaearctic species, reported from the Russian Far East (Grube 1861, Prószynski 1971, 1979) and China (Schenkel 1963 and Wesołowska 1981b).

### *Marpissa pomatia* (Walckenaer, 1802)

Material: Khabarovskii Krai, BR, 3♂, 12♀, 14–15. VI.1987, D. Logunov (BI, No 896, 1128), 2♂, 4♀ (MNH); BR, Bychikha village, 2♀, 15.V.1988, S. Ivanov (BI, No 891); BR, the Chirka river, 3♀, 26–31.V.1988, S. Ivanov (BI, No 882, 892); Ulchskii distr., the Asyat river, 1♀, 25.VI.1990, D. Kurenshchikov (IWP); Amurskaya Oblast, Selemdzhinsk, 1♂, VI–VII.1985, A. Kudryavtsev (ZMMU).

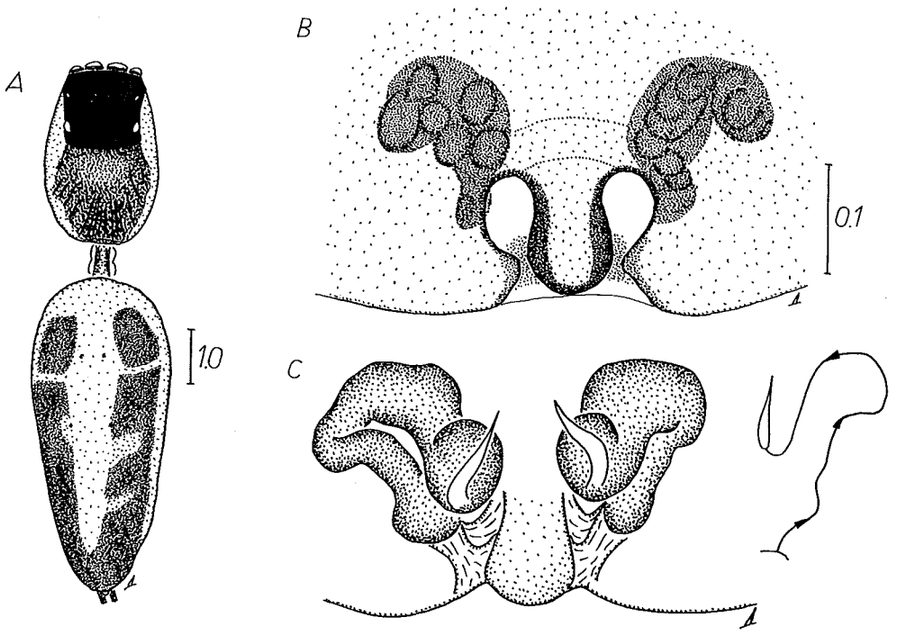



Fig. 15. *Marpissa nobilis* (Grube), female. — A: general appearance. — B–C: epigyne and its internal structures.

*Diagnosis*. Resembles *Marpissa dybowskii* Kulczyński. Good diagnostic figures in Prószynski (1979: figs. 188–199 only).

*Habitat*. Collected by sweeping in deciduous woods and in clearings.

*Distribution*. Widely distributed Palaearctic species. Recorded from the Russian Far East by Kulczyński (1926), Prószynski (1976: map 114, 1979), Azheganova & Stenchenko (1977), Dunin (1984) and Nenilin (1985).

### *Marpissa pulchra* Prószynski, 1976

Figs. 16–17

Material: Khabarovskii Krai, BR, 1♂, 6♀, 16–19.VI. 1987, D. Logunov (BI, No 1129, 1131), 2♀ (MNH); Amurskaya Oblast, Arkhara village, 1♂, 24.VIII.1983, Yu. Marusik (BI, No 1132).

*Diagnosis*. See under *Marpissa nobilis*. Good diagnosis of *M. pulchra* is given in Chikuni (1989: figs. 14–17).

*Description*. Measurements (male/female). Cephalothorax: length 2.53/2.88–3.00, width 1.70/1.95–2.05, height 0.88/0.80–1.00. Abdomen: length 3.45/5.30, width 1.40/2.15. Eye field: length 1.10/1.28–1.38, AL 1.28/1.30–1.80, PL 1.28/1.45–1.80. AM 0.42/0.46–0.50. Legs: I 1.85/1.80–2.00 + 1.15/1.00–1.20 + 1.80/1.60–1.80 + 1.05/1.05–1.25 + 0.60/0.60; II 1.20/1.15–1.35 + 0.65/0.70–0.75 + 0.75/0.75–0.85 + 0.65/0.65–0.80 + 0.40/0.50; III 1.05/1.20–1.35 + 0.60/0.60–0.65 + 0.70/0.65–0.75 + 0.70/0.80–0.85 + 0.50/0.45–0.55; IV 1.20/1.50–1.65 + 0.70/0.80–0.85 + 1.05/1.15–1.20 + 0.95/1.00–1.15 + 0.50/0.50–0.55. — Male. Carapace dark brown, eye field black, behind eye field two white spots. Sternum and chelicerae dark brown, labium and maxillae brown with yellow margins. Abdomen brown with golden gleam, with scutum. Four pairs of white spots, composed of hairs, on abdomen (Fig. 16D). Spinnerets brown. All legs dark brown, only tarsi yellowish. Pedipalp structure shown in Fig. 16A–C, characteristic small tooth on apex of tibial apophysis. — Female. Carapace brown, covered with white hairs, eye field black. Abdomen grey with medial longitudinal broad white band and four pairs of black spots (Fig. 17D).



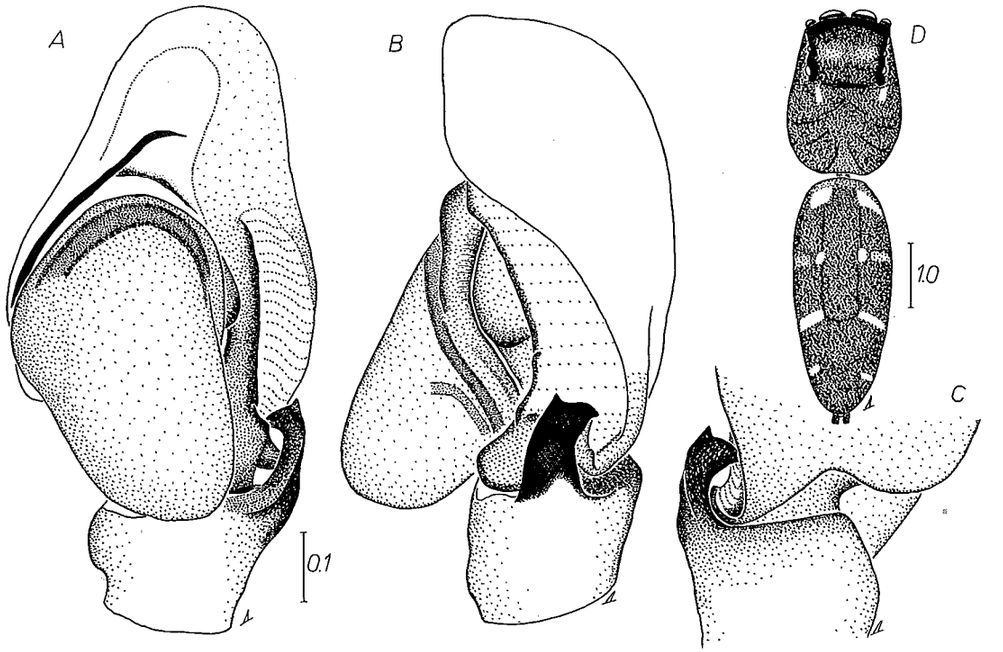



Fig. 16. *Marpissa pulchra* Prószynski, male. — A–C: palpal organ, ventral, lateral and dorsal views. — D: general appearance.

Sides of abdomen yellow, ventrally abdomen with wide longitudinal brown band and two thin yellow lines. Legs I brown with yellow metatarsi and tarsi, remaining ones yellow with brownish proximal parts of tarsi. Pedipalp yellow with brownish tarsus. Epigyne and its internal structures shown in Fig. 17A–C.

*Habitat*. Collected on grass in paludal forest.

*Distribution*. New for Russia. Earlier known from Japan (Prószynski 1976, Chikuni & Yaginuma 1976 — as "species 3", Chikuni 1989, Bohdanowicz & Prószynski 1987) and Korea (Wesołowska 1981a).

### *Marpissa pulla* (Karsch, 1879)

Material: Khabarovskii Krai, BR, 1♀, 16.VI.1987, D. Logunov (BI, No 1133), 1♀, 19.VI.1987 (MNH); Primore, Sadgorod, 1♀, 13.VI.1978, Belov (ZI).

*Diagnosis*. The species similar to *Marpissa dybowskii* Kulczyński and *Marpissa pomatia* (Walckenaer). Good diagnostic figures in Wesołowska (1981b) and Bohdanowicz & Prószynski (1987).

*Habitat*. Collected by sweeping grass on forest clearing.

*Distribution*. Eastern Palaearctic species, new for Khabarovskii Krai. Previously recorded in the Russian Far East from Primore by Prószynski (1979 — incorrectly determined as "*M. pomatia*"), Nenilin (1985) and from Furugelm island by Shternbergs (1988).

Among specimens treated by Prószynski (1979) as *M. pomatia*, there were also individuals of *M. pulla*, as is clearly visible in his figures (184–187).

### *Marpissa zebra* sp. n.

Fig. 18

Material: Holotype: Khabarovskii Krai, BR, 1♂, 17.VI. 1987, D. Logunov (BI, No 1134). — Paratype: Amurskaya Oblast, Khinganskii reserve, 1♂, 4.VIII.1983, Yu. Marusik (ZI).

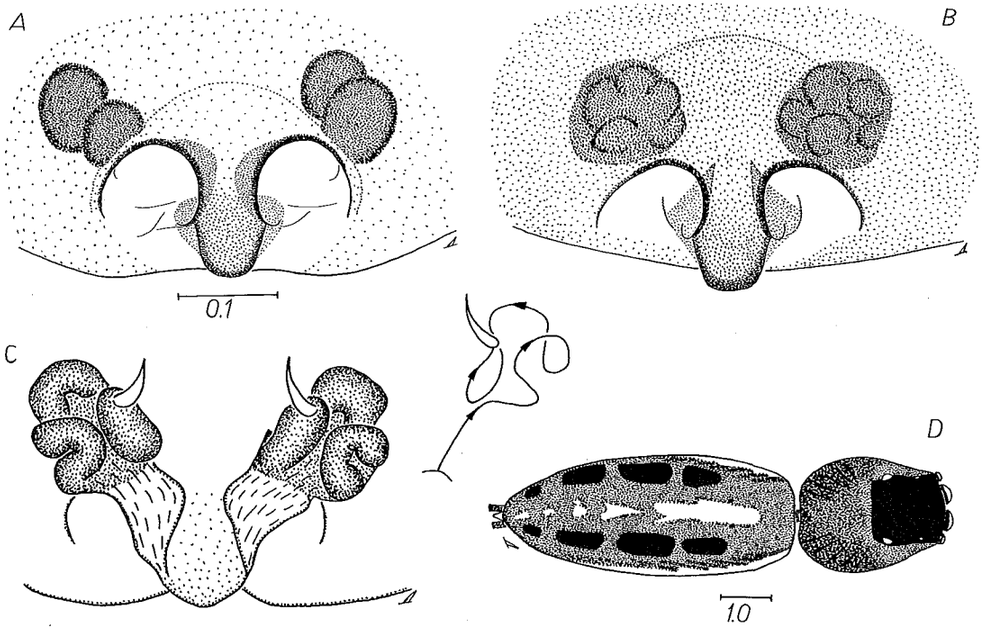



Fig. 17. *Marpissa pulchra* Prószynski, female. — A–C: epigyne and its internal structures. — D: general appearance.

*Diagnosis*. The species can be easily distinguished from other *Marpissa* species by its very characteristic colouration pattern (Fig. 18C) and small size. Palpal structure very similar to *Marpissa elongata* (Karsch), *Marpissa nobilis* (Grube) and *Marpissa pulchra* Prószynski, but may be separated by yellow colouration of cymbium and configuration of tibial apophysis and embolus.

*Description*. Measurements (holotype). Cephalothorax: length 1.98, width 1.35, height 0.65. Abdomen: length 2.53, width 1.02. Eye field: length 0.90, AL 1.00, PL 1.05. AM 0.60. Legs: I 1.18 + 0.70 + 1.05 + 0.85 + 0.43; II 0.83 + 0.35 + 0.55 + 0.50 + 0.30; III 0.80 + 0.40 + 0.50 + 0.50 + 0.33; IV 0.95 + 0.53 + 0.73 + 0.65 + 0.35. — Male. Carapace yellow with brown reticulate pattern, near eyes black. Sternum, maxillae and chelicerae yellow, labium brown with light margin. Abdomen yellow with four transversal brown streaks and narrow median line along anterior third of its length (Fig. 18C). Ventrally abdomen light yellow with three longitudinal dark streaks. Legs I yellow with darker metatarsi and tarsi, remaining legs yellow with longitudinal dark lines, on tibiae elongated brown spots. Pedipalp shown in Fig. 18A–B. — Female unknown.

*Habitat*. Collected from wet places in mixed woods and on meadows.

*Distribution*. Khabarovskii Krai and Amurskaya Oblast.

### *Myrmarachne formicaria* (De Geer, 1778)

Figs. 19–21

Material: Khabarovskii Krai, BR, 1♂, 1♀, 16.VI.1987, D. Logunov (BI, No 901, 902); Nanaiskii distr., 1♂, 1983, N. Ryabinin (ZMMU); Amurskaya Oblast, Khinganskii reserve, Antonovskoe forest-range, 1♀, 2–3.VIII.1983, Yu. Marusik (ZI); the Ussuri river, 1♀, 10.VII.1931, V. Sychevskaya (ZMMU, Ta-3427); Primore, Ussuriiskii reserve, 1♀, 5.VIII.1975, M. Shternbergs (BI, No 903).



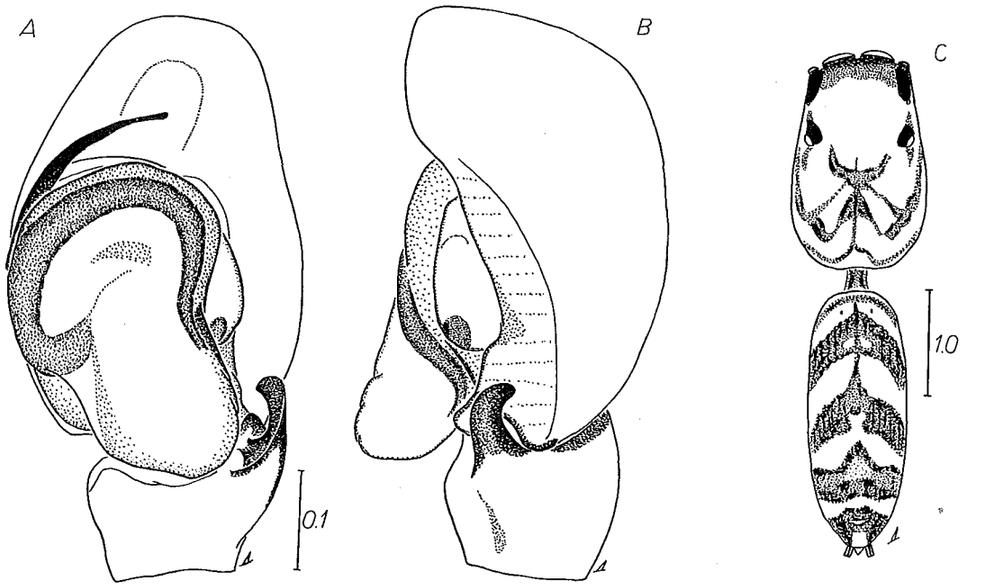



Fig. 18. *Marpissa zebra* sp. n., holotype, male. — A–B: palpal organ, ventral and lateral views. — C: general appearance.

*Diagnosis*. See under *Myrmarachne lugubris* and Table 2.

*Description*. Measurements (male/female). Cephalothorax: length 1.63/2.50, width 0.88/1.08, height 0.63/0.80. Abdomen: no measurements. Eye field: length 0.80/1.00, AL 0.83/1.05, PL 0.95/1.18. AM 0.23/0.36. Legs: I 0.98/1.18 + 0.45/0.63 + 0.80/0.95 + 0.50/0.55 + 0.33/0.35; II 0.75/0.80 + 0.38/0.50 + 0.48/0.68 + 0.38/0.50 + 0.30/0.30; III 0.75/0.80 + 0.35/0.45 + 0.68/0.50 + 0.30/0.53 + 0.30/0.30; IV 1.00/1.40 + 0.43/0.63 + 0.93/1.20 + 0.78/1.13 + 0.35/0.40. — Male. Dorsal aspect in Fig. 19A. Carapace reddish with darker punctured-reticulate eye field, eyes surrounded by black. Labium and maxillae dark brown, sternum lighter. Chelicerae very elongated, horizontal, dark brown, with numerous teeth (Fig. 19B). Cheliceral fang with small protuberance on ventro-lateral side (Fig. 19C). Abdomen elongated brown, posteriorly darker, with anterior and posterior scutum, whole covered by sparse adherent hairs. Few white hairs form two small transverse spots mid-length of posterior scutum, posterior part of this scutum almost black.

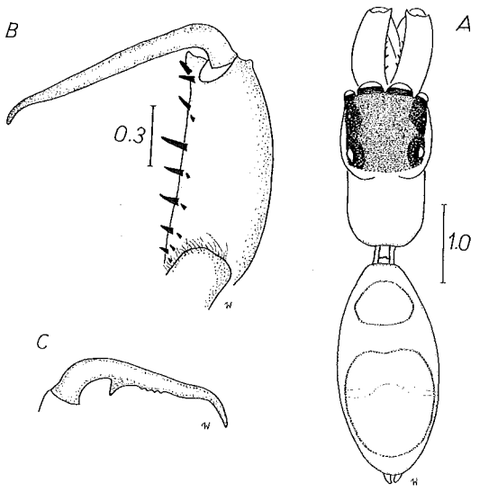



Fig. 19. *Myrmarachne formicaria* (De Geer), male. — A: general appearance. — B: cheliceral dentition. — C: fang of chelicerae, ventro-lateral view.

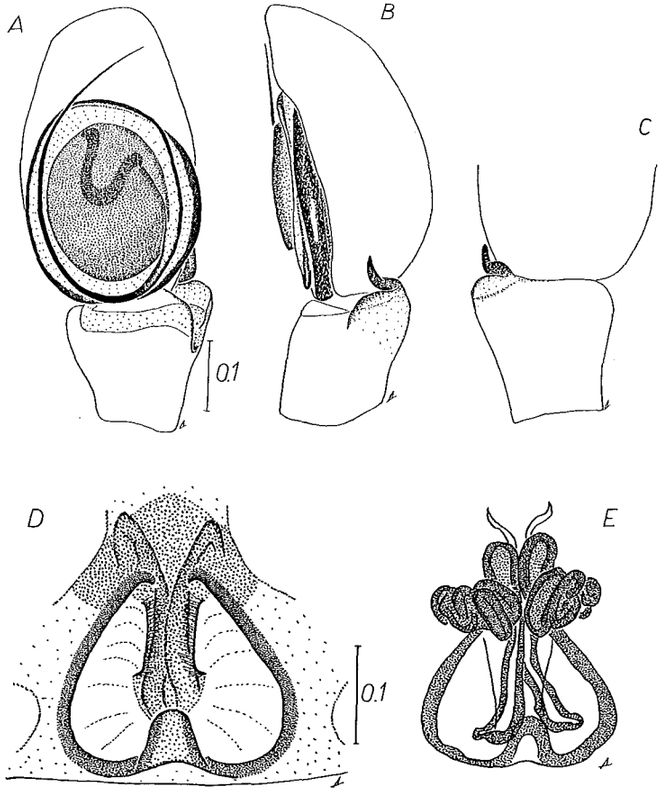



Fig. 20. *Myrmarachne formicaria* (De Geer), male and female. — A–C: palpal organ, ventral, lateral and dorsal views. D–E: epigyne and its internal structures.

Ventrally abdomen light with longitudinal broad grey streak medially and many dark lines laterally. Spinnerets brown. Legs I yellow with brown femora and metatarsi. Remaining legs yellowish. Pedipalp brown, small with distinctive tibial apophysis (Fig. 20A–C). — Female. Colouration as in male, but darker. Carapace reddish with black eye field. Sternum dark brown. Labium and maxillae brown with yellow margins, chelicerae brown. Abdomen grey with two pairs of white small transversal spots dorsally, on lateral surfaces of abdomen white stripes. Coxae yellow, all of them — except first — with broad dark stripes. Legs I shown in Fig. 21A. Legs III and IV with black longitudinal streaks on patellae and tibiae. Epigyne with large, more or less triangular depression, partially divided by median ridge (Fig. 20D). Internal structures of epigyne shown in Fig. 20E.

Table 2. Differences between *Myrmarachne lugubris* and *M. formicaria*.

| | | *M. lugubris* | *M. formicaria* |
|---|---|---|---|
| Male and female | Carapace | uniform — blackish | reddish, eye field black |
| | Tarsus I | brown (Fig. 21B) | yellow (Fig. 21A) |
| | Coxae III–IV | brownish | yellow |
| Male only | Cheliceral fang | without teeth | with additional tooth (Fig. 19C) |
| | Cymbium | with tuft of hairs (Fig. 22A) | hairs absent (Fig. 20A) |
| | Scutae | both brownish | first and frontal part of second reddish |
| Female only | Abdomen | uniform — dark grey | with pair of transversal light spots |
| | Epigyne | Fig. 23A–B | Fig. 20D |



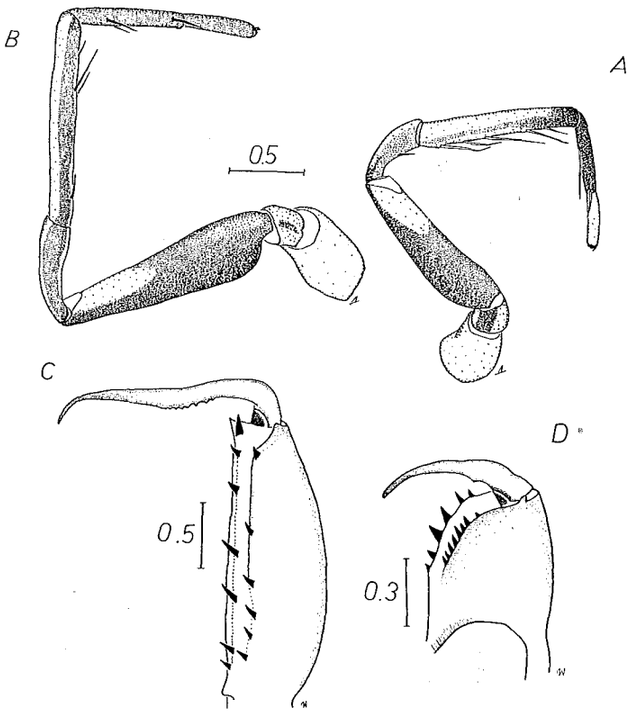



Fig. 21. *Myrmarachne formicaria* (De Geer) and *Myrmarachne lugubris* (Kulczyński). — A: first leg of female of *M. formicaria*. — B: first leg of female of *M. lugubris*. — C–D: *M. lugubris*, cheliceral dentition of male and female.

*Habitat*. Collected in wet woods (oak, birch, ferns) in litter.

*Distribution*. Palaearctic species displaying Euro-Far Eastern disjunction of the range. New for Khabarovskii Krai. Recorded from the Russian Far East by Prószynski (1976: map 197, 1979), Azheganova & Stenchenko (1977), Dunin (1984), Oliger (1984) and Nenilin (1985).

### *Myrmarachne lugubris* Kulczyński, 1895

Figs. 21–23

Material: Khabarovskii Krai, BR, 1♂, 1♀, 14.VI.1987, D. Logunov (MNH); BR, the Chirka river, 1♂, 1♀, 17–30.V.1988, S. Ivanov (BI, No 1136, 1137); Khabarovsk, cemetery, 25.VI.1931, 2♀, V. Sychevskaya (ZMMU); Nanaiskii distr., Slavyanka, 1♂, 23.V.1988, D. Kurenshchikov (BI, No 1135), 2♀ (ZMMU); Primore, Vladivostok, 1♂, 1♀, 1.VI.1979, B. Zakharov (ZI).

*Diagnosis*. Very similar to *Myrmarachne formicaria* (De Geer), therefore often mistaken with this species. Complete list of differences between those species is presented in Table 2. *M. formicaria* and *M. lugubris* occur in different microhabitats. In Bolshekhekhtsirsky reserve the former species was found in forest litter and the latter was recorded while sweeping from grasses in woodland glades.

*Description*. Measurements (male/female). Cephalothorax: length 2.75/2.95, width 1.33/1.43, height 0.95/1.08. Abdomen: no measurements. Eye field: length 1.13/1.18, AL 1.18/1.28, PL 1.28/1.35. AM 0.38/0.35. Legs: I 1.75/1.55 + 0.73/0.68 + 1.53/1.35 + 1.03/0.85 + 0.55/0.45; II 1.28/1.23 + 0.65/0.55 + 0.98/0.90 + 0.75/0.75 + 0.40/0.40; III 1.43/1.40 + 0.63/0.60 + 1.05/

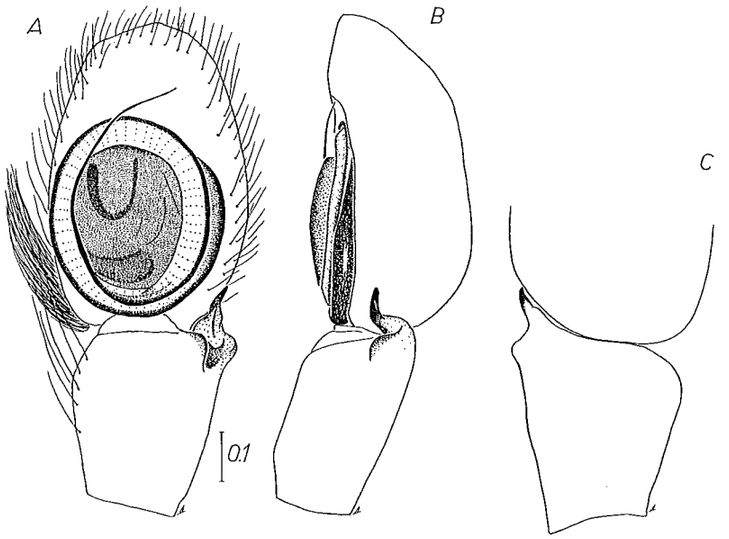



Fig. 22. *Myrmarachne lugubris* (Kulczyński), male, palpal organ. — A: ventral view. — B: lateral view. — C: dorsal view.

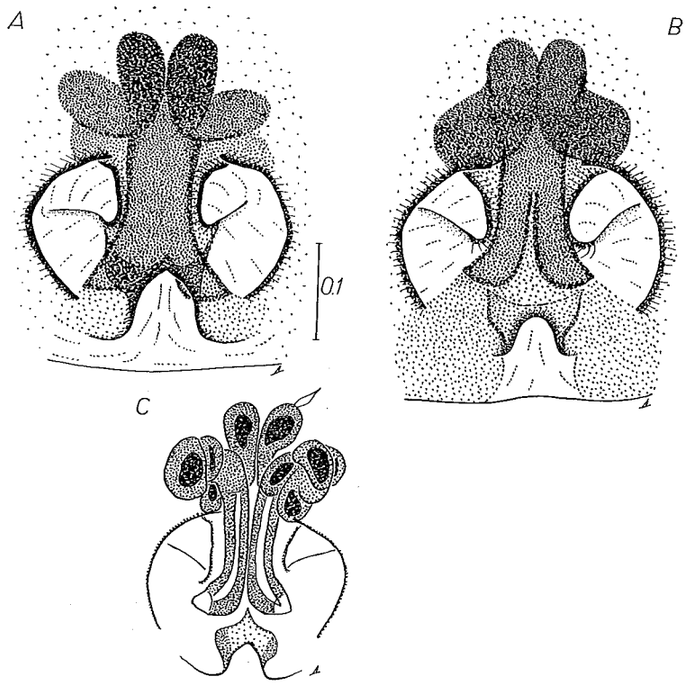



Fig. 23. *Myrmarachne lugubris* (Kulczyński), female. — A–B: epigyne. — C: internal structures of epigyne.

1.03 + 1.08/1.10 + 0.43/0.40; IV 2.15/2.15 + 0.68/0.80 + 1.60/1.73 + 1.50/1.63 + 0.50/0.48. — Male. Ant-like spider. Carapace brownish-black. Carapace with constriction behind eye field. Clypeus very low. Sternum dark brown, labium and maxillae brown with yellow margins.



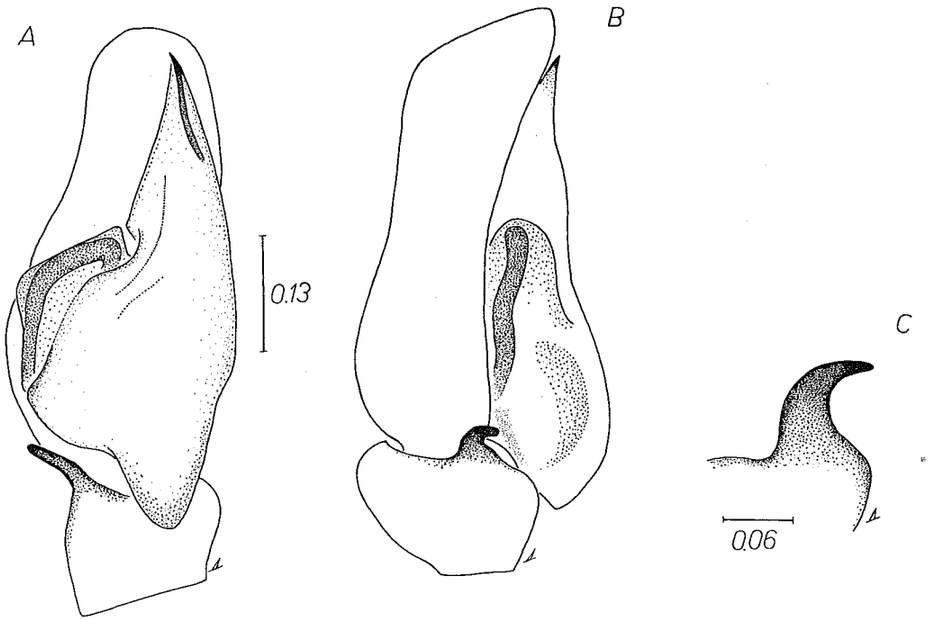



Fig. 24. *Phintella arenicolor* (Grube), lectotype, male. — A–B: palpal organ, ventral and lateral views. — C: tibial apophysis.

Chelicerae yellowish-brown, very long and slender, horizontal (Fig. 21C). Abdomen dark grey. Spinnerets dark. Pedipalp structure shown in Fig. 22. Characteristic tuft of hairs on basal part of cymbium (Fig. 22A). — Female. Colouration resembling male. Coxae I–II light yellow, III–IV dark brown. Legs I shown in Fig. 21B, legs II yellow with dark stripes on femora, tibiae and patellae, legs III brown with yellow metatarsi and tarsi, legs IV brown. Epigyne with great incision on posterior edge. Large depression partially divided by median ridge (Fig. 23A–B). Internal structures of epigyne as in Fig. 23C.

*Habitat*. Collected by sweeping in deciduous forest (aspen, birch, oak). Also recorded in stream submersion areas.

*Distribution*. Eastern Palaearctic species, new for Khabarovskii Krai. From the Russian Far East reported by Prószynski (1976: map 202, 1979), Dunin (1984), Oligier (1984) and Nenilin (1985).

### ***Phintella arenicolor* (Grube, 1861)**

Figs. 24–27

*Phintella mellotei* (Simon, 1888), syn. n.

Material: Khabarovskii Krai, BR, 2♂, 17.VI.1987, D. Logunov (BI, No 684); Nanaiskii distr., Slavyanka, 1♀, 26.V.1989, D. Kurenshchikov (BI, No 683); environs of Khabarovsk, the Amur river, Zelonyi island, 1♀, 22.VI.1931, V. Sychevskaya (ZMMU); the Amur river, 1♂ lectotype of *Attus arenicolor* (nomen museorum "*Salticus pallidus*"), 2 juv. ♀, [leg.] Dittmar, coll. Grube (MNH, No 429); Amurskaya Oblast, Khinganskii reserve, Antonovskoe forest-range, 2♀, 1.VIII.1983, Yu. Marusik (ZI); Primore, Khasanskii distr., Kedrovaya Pad reserve, 1♀, 29.VIII.1968, F. Popov (ZI); Primorskaya station, 1♂, VII.1979, B. Zakharov (BI, No 682); Chuguevskii distr., 1♀, 23.IX.1974, (ZMMU); Ussuriiskii reserve, 1♀, 3.X.1977, G. Kurcheva, E. Mikhaleva (ZMMU); middle stream of the Bikin river, 1♀, VIII.1978, Shibnev (BI, No 685); Prikhankaiskii distr., Khorol village, 2♀, 18.VII. 1968, F. Popov (ZI); Khazan lake, Kamen-Rybolov village, 1♂, 1♀, 19.VII.1968, F. Popov (ZI); Furugelm island, 1♂, 18.VIII.1975, M. Shternbergs (BI, No 686). — Additional material: Japan, Goto Islands, Nagasaki Pref., 2♂ (incorrectly determined as "*P. castriesiana*"), 14–20.V.1968, coll. Yaginuma (IBS).

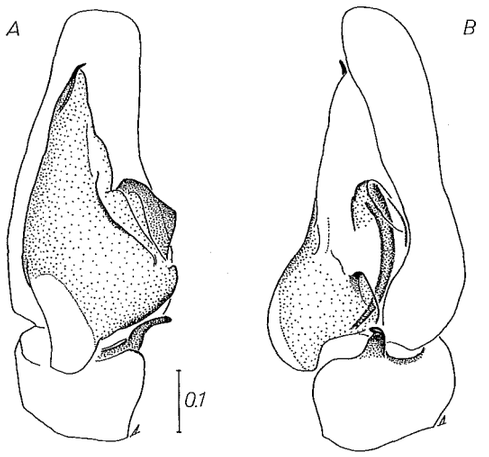



Fig. 25. *Phintella arenicolor* (Grube), male, palpal organ. — A: ventral view. — B: lateral view.

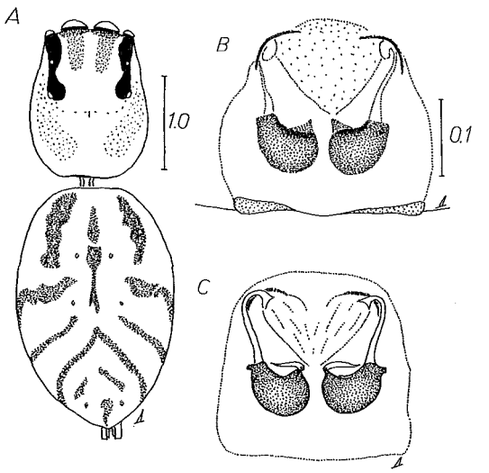



Fig. 26. *Phintella arenicolor* (Grube), female. — A: general appearance. — B–C: epigyne and its internal structures.

*Diagnosis*. In colouration similar to *Phintella parva* (Wesołowska), but differs in absence of dark longitudinal lines on femora III and IV, smaller size and shape of tibial apophysis. In structure of genitalia *P. arenicolor* is very similar to *Phintella castriesiana* (Grube). The male can be distinguished by structure of tibial apophysis (cf. Fig. 27C and 27D), thinner apical part of tegulum (cf. Fig. 27E and 27F) and body colouration (cf. Fig. 27A and 27B). Distinguishing the females of both species is especially difficult. The female may be recognized by shape and smaller size of spermathecae (cf. Figs. 26C and 29B–C).

*Description*. Measurements (male/female). Cephalothorax: length 1.50/1.68, width 1.15/1.28, height 0.75/0.75. Abdomen: length 1.63/2.50, width 0.93/1.73. Eye field: length 0.90/0.88, AL 0.98/1.03, PL 0.93/1.03. AM 0.30/0.30. Legs: I 1.10/1.90 + 0.63/0.53 + 0.88/0.58 + 0.73/0.78 + 0.43/0.35; II 0.98/0.88 + 0.48/0.45 + 0.65/0.53 + 0.70/0.55 + 0.38/0.30; III 0.98/1.00 + 0.43/0.45 + 0.75/0.63 + 0.90/0.78 + 0.40/0.38; IV 1.15/1.35 + 0.43/0.48 + 0.88/0.85 + 0.95/0.95 + 0.43/0.40. — Male. Carapace light yellow, eyes surrounded by black. Carapace covered with translucent scales, on its posterior part scales brown. Sternum, labium and maxillae yellow, chelicerae yellow with dark longitudinal stripes on front. Abdomen yellow with indistinct darker ornament (Fig. 27A). Spinnerets yellow. Legs yellow with dark longitudinal stripes on femora I–II and brown rings on apical ends of tibiae I–II. Pedipalp structure in Figs. 24 and 25. — Female. Dorsal aspect in Fig. 26A. Colouration similar to male, but chelicerae and legs uniform yellow. Epigyne weakly sclerotized (Fig. 26B), insemination ducts rather straight, spermathecae more or less spherical (Fig. 26C).

*Habitat*. Collected in swampy woods and on meadows in grass.

*Distribution*. Eastern Palaearctic species, new for Khabarovskii Krai. Previously recorded from the Russian Far East as *Phintella difficilis* (Bösenberg et Strand) by Prószynski (1976: map 103, 1979: figs. 143–144 only), Dunin (1984) and Shternbergs (1988).

*P. arenicolor* was described by Grube (1861), and was later synonymized with *P. castriesiana* (Grube) by Prószynski (1979). However, a renewed examination of the type material leads us to the conclusion that *P. arenicolor* constitutes a valid species, and that high variability of colouration and of reproductive structures recorded earlier in *P. castriesiana* (Prószynski 1979 and Matsumoto 1989) could be due to the fact that they were unaware that they were actually dealing with two species.



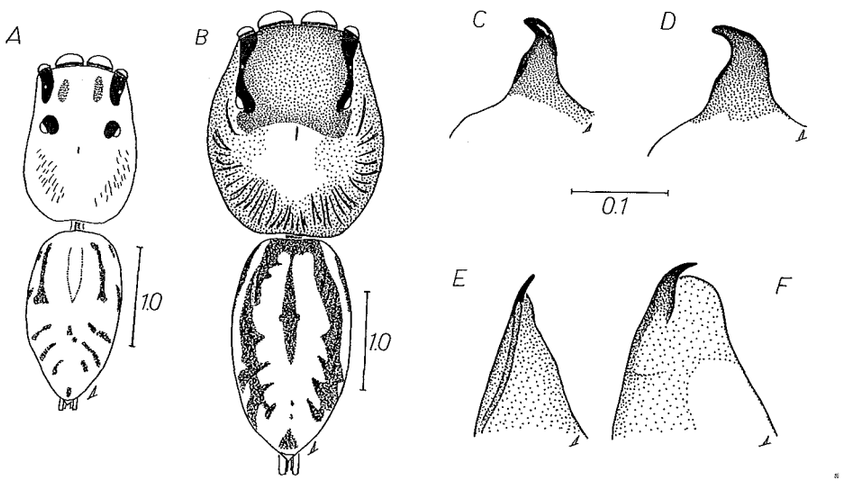



Fig. 27. *Phintella arenicolor* (Grube) (left) and *Phintella castriesiana* (Grube) (right), males. — A–B: general appearance. — C–D: lateral view of tibial apophysis. — E–F: embolus.

*P. arenicolor* is new for Japan; by Bohdanowicz & Prószynski (1987) erroneously reported as *Phintella castriesiana* (Grube).

### *Phintella castriesiana* (Grube, 1861)

Figs. 27–29

Material: Neotype: Khabarovskii Krai, BR, 1♂, 5–22.VI.1987, D. Logunov (MNH, No 625). Together with neotype, 33♂, 45♀ (BI, No 648, 650, 652, 654, 655, 656, 662, 663), 6♂, 9♀ (MNH); the Khor river, 17 km upper of Kutuzovka village, 1♂, 6–10.VI.1985, S. Pustoroi, A. Makoedov (ZMMU).

*Designation of the neotype*. *Phintella castriesiana* was described (Grube 1861) on the basis of a single female. The holotype (examined) kept in collection of Museum of Natural History in Wrocław consists now only of separated cephalothorax, devoided of legs and pedipalps (see also Prószynski 1971); it is thus devoid of diagnostic features. The designation of the neotype is necessary in this case, as there are serious problems with differentiating between *P. castriesiana* and the closely related *P. arenicolor* (a list of features differentiating these species is given under "diagnosis" in description of *P. arenicolor*). *P. castriesiana* is relatively well known. Hence, there is no doubt that the neotype is consistent with the holotype. The type locality was not given precisely by Grube (1861) but it is known that the holotype was collected in the Amur river valley, between the mouth of the Ussuri river and Nikolaevsk na Amure. The Bolshekhekhtsirskii reserve, from where the neotype originates is situated in the SW part of this area.

*Diagnosis*. The largest and the darkest species of the genus *Phintella* from the Russian Far East. In the genitalia structure very close related to *Phintella arenicolor* (Grube) (differentiation see under *P. arenicolor*).

*Description*. Measurements (male/female). Cephalothorax: length 1.95–2.30/2.08–2.33, width 1.45–1.65/1.53–1.70, height 0.88–1.03/0.85–0.95. Abdomen: length 2.00–2.35/2.95–3.38, width 1.15–1.38/2.00–2.08. Eye field: length 1.00–1.08/1.03–1.23, AL 1.23–1.28/1.23–1.44, PL 1.18–1.25/1.20–1.38. AM 0.40/0.38–0.45. Legs: I 1.38–1.60/1.10–1.33 + 0.68–0.78/0.60–0.75 + 1.03–1.23/0.80–0.88 + 0.95–1.0 3/0.68–0.80 + 0.50–0.55/0.43–0.48; II 1.25–1.38/1.08–1.23 + 0.60–0.65/0.53–0.60 + 0.88–0.93/0.70–0.80 + 0.90–0.9 5/0.68–0.73 + 0.43–0.45/0.38-0.45; III 1.33–1.40/1.23–1.33 + 0.58–0.63/0.55–0.58 + 0.88–1.03/0.75–0.93 + 1.15–1.2 5/0.98–1.10 + 0.45/0.48–0.50; IV 1.40–1.68/1.38–1.58 + 0.60–0.65/0.55–0.68 + 1.10–1.25/1.00–1.18 + 1.35–1.3 8/1.18–1.35 + 0.48–0.50/0.45–0.53. — Male.

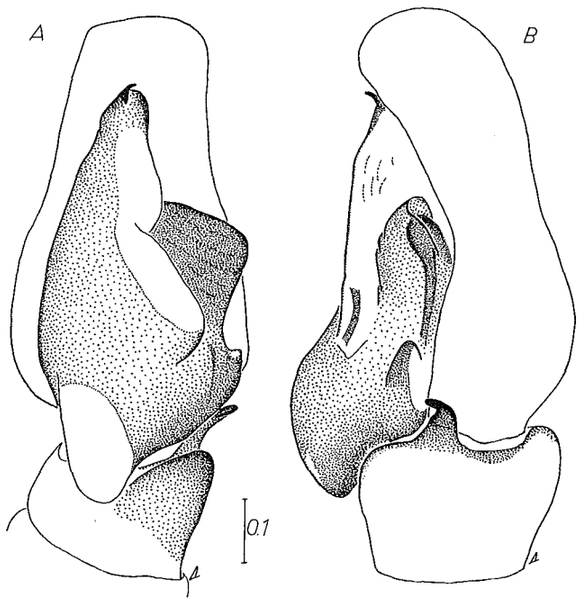



Fig. 28. *Phintella castriesiana* (Grube), male, palpal organ. — A: ventral view. — B: lateral view.

Carapace yellowish-brown with black veins, eyes surrounded by black. In vicinity of eyes white scales. Sternum, labium and maxillae yellow, chelicerae brownish. Abdomen yellow with dark grey pattern (Fig. 27B), ventrally light with dark longitudinal streak. Spinnerets yellowish-grey. Legs yellow with brown longitudinal stripes on femora I–III and brown dots on proximal and distal parts of tibiae I–II. Pedipalp structure shown in Fig. 28. — Female. Colouration resembling male but slightly paller. All legs yellow. Epigyne and its internal structures shown in Fig. 29.

*Habitat*. Collected on grass in mixed woods.

*Distribution*. Eastern Palaearctic species, recorded from the Russian Far East by Grube (1861), Kulczyński (1895), Prószynski (1971, 1976: map 95, 1979), Dunin (1984) and Nenilin (1985). Records from Western Palaearctic refer most probably to another, closely related species (this problem will be dealt with separately).

### *Phintella linea* (Karsch, 1879)

Figs. 30–31

Material: Khabarovskii Krai, BR, 1♂, 1♀, 17.VI.1987, D. Logunov (BI, No 558, 559), 1♀ (MNH).

*Diagnosis*. The male can be easily distinguished by shape of tibial apophysis, great sharp embolus (Fig. 30A–B) and contrasting colouration (Fig. 30C). The female may be separated by the spermathecae being larger than in other *Phintella* species (Fig. 31C).

*Description*. Measurements (male/female). Cephalothorax: length 1.53/1.70–1.80, width 1.18/1.30–1.38, height 0.78/0.83–0.85. Abdomen: length 1.25/2.05–3.25, width 1.88/1.43–2.38, Eye field: length 0.88/0.95–1.00, AL 1.05/1.15–1.18, PL 1.03/1.20. AM 0.33/0.35–0.38. Legs: I 0.93/0.95–1.00 + 0.45/0.50–0.53 + 0.65/0.65–0.68 + 0.55/0.53–0.58 + 0.35/0.35–0.38; II 0.83/0.95 + 0.38/0.45–0.48 + 0.55/0.55–0.58 + 0.53/0.53–0.55 + 0.33/0.30–0.33; III 0.95/1.00–1.03 + 0.42/0.43–0.53 + 0.55/0.60–0.63 + 0.68/0.75–0.78 + 0.40/0.38; IV 1.03/1.20–1.28 + 0.43/0.48–0.53 + 0.65/0.75–0.83 + 0.80/0.95–1.00 + 0.40/0.35–0.38. — Male. Dorsal aspect as in Fig. 30C. Carapace brownish-yellow with dark brown spots. On carapace translucent scales with green shine. Sternum yellow with brown margin. Clypeus, labium and chelicerae brown. Maxillae yellow. Abdomen yellow with brown pattern composed of longitudinal and diagonal stripes, ventrally yellow with single longitudinal brown band. Spinnerets greyish. Legs yellow with brown rings



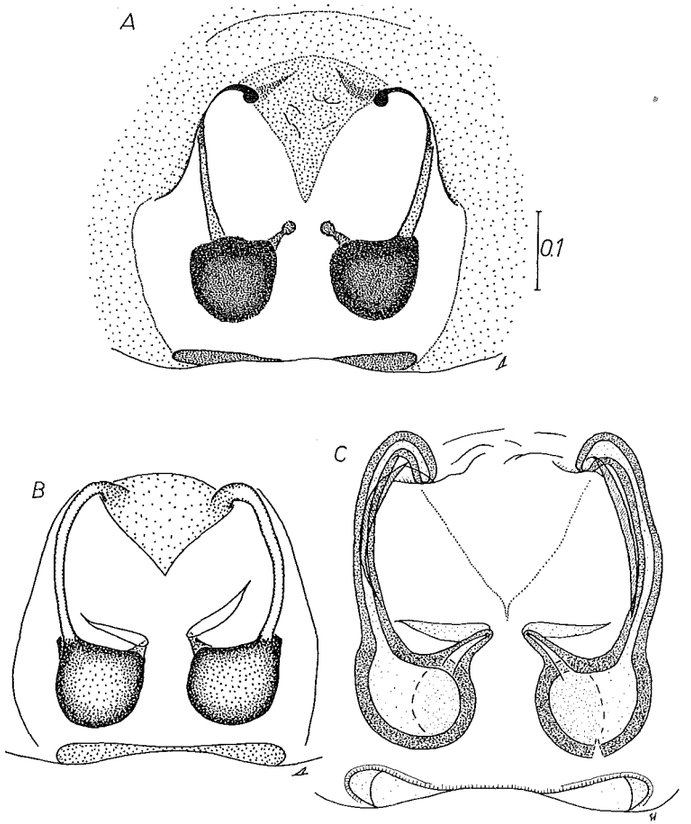



Fig. 29. *Phintella castriesiana* (Grube), female. — A: epigyne. — B–C: internal structures of epigyne.

on segment ends. Pedipalp yellow with brown femur and basal part of cymbium. Palpal structure shown in Fig. 30A–B. — Female. Dorsal aspect in Fig. 31A. Carapace yellow, eyes surrounded by black. Sternum yellow with brown margin. Labium, maxillae, chelicerae, pedipalps and legs yellow. Abdomen as in male. Epigyne as in Fig. 31B. Insemination ducts short, spermathecae large, oval (Fig. 31C).

*Habitat*. Collected by sweeping grass in wet woods.

*Distribution*. Eastern Palaearctic species, new for Russia. The earlier record (Nenilin 1985) was based on misidentification. Reanalysis of his material showed that these specimens actually belonged to *Phintella popovi* Prószynski. The record from Korea (Wesołowska 1981a) is also erroneous. The pictures in her paper actually refer to the female of *P. popovi* (figs. 37–38) and the male of *P. arenicolor* (figs. 42–44). Thus, so far, *P. linea* has been doubtless recorded only from Japan (Karsch 1879, Bösenberg & Strand 1906, Prószynski 1973, 1976: map 102 — part, 1978, Bohdanowicz & Prószynski 1987 and Matsumoto 1989).

### *Phintella parva* (Wesołowska, 1981)

Figs. 32–33

Material: Khabarovskii Krai, BR, 6♂, 2♀, 2–14.VI.1987, D. Logunov (BI, No 601, 603, 604, 605), 2♂, 4♀ (MNH); BR, the Chirka river, 1♀, 15.VI.1989, S. Ivanov (BI, No 602); Primore, Chuguevskii distr., 1♀, 9.IX.1974, G. Kurcheva

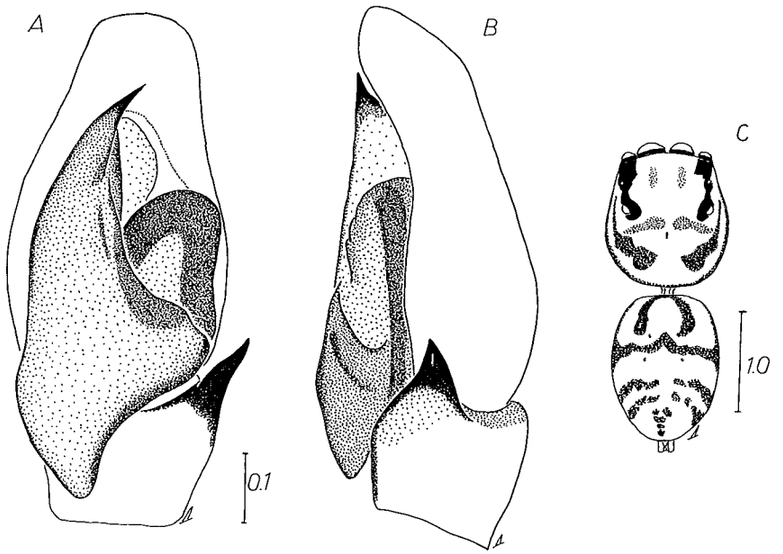



Fig. 30. *Phintella linea* (Karsch), male. — A–B: palpal organ, ventral and lateral views. — C: general appearance.

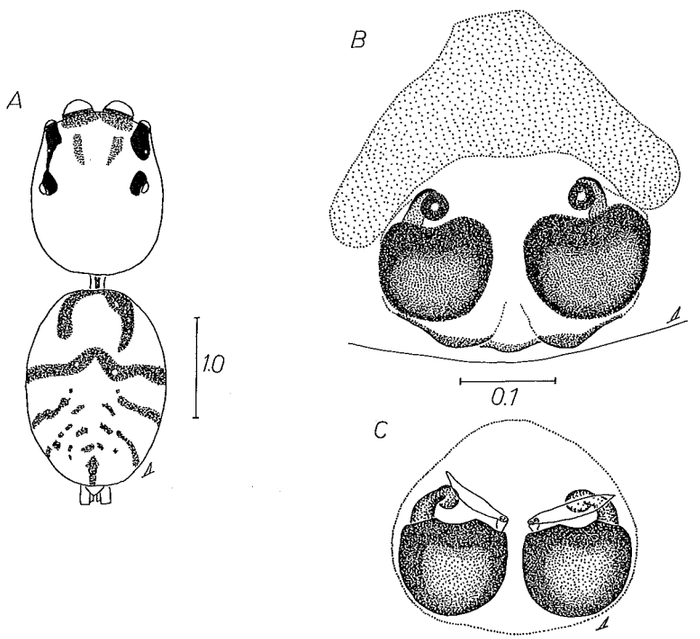



Fig. 31. *Phintella linea* (Karsch), female. — A: general appearance. — B–C: epigyne and its internal structures.



(ZMMU); Ussuriiskii reserve, 1♀, 5.VIII.1975, M. Shternbergs (BI, No 600). — Additional material: Japan, Mie Pref., 2♀ (incorrectly determined as "*P. mellotei*"), 28.V.1967, coll. Yaginuma (IBS).

*Diagnosis*. Resembles *Phintella popovi* (Prószynski); the male may be easily separated by straight tibial apophysis and curved embolus (cf. Figs. 32 and 34A–B), the female by longer insemination ducts (cf. Figs. 33C and 34D).

*Description*. Measurements (male/female). Cephalothorax: length 1.78–2.05/1.73–1.90, width 1.28–1.55/1.25–1.38, height 0.95/0.73–0.88. Abdomen: length 1.83–2.00/2.88–3.08, width 1.05–1.20/1.80–2.18. Eye field: length 0.83–1.05/0.88–1.05, AL 1.03–1.20/1.08–1.20, PL 0.98–1.15/1.08–1.20. AM 0.30–0.38/0.35–0.38. Legs: I 1.20–1.43/0.90–1.03 + 0.70–0.83/0.45–0.53 + 0.95–1.18/0.60–0.73 + 0.80–0.9 5/0.53–0.60 + 0.43–0.55/0.35–0.40; II 1.05–1.28/0.85–0.98 + 0.50–0.63/0.48–0.50 + 0.78–0.85/0.53–0.63 + 0.70–0.8 8/0.50–0.60 + 0.45/0.35–0.38; III 1.13–1.38/0.98–1.15 + 0.45–0.63/0.45–0.50 + 0.80–0.98/0.65–0.75 + 0.95–1.1 3/0.78–0.90 + 0.43–0.50/0.43–0.45; IV 1.25–1.55/1.03–1.25 + 0.48–0.55/0.35–0.53 + 0.95–1.15/0.65–1.00 + 1.10–1.3 3/0.73–1.10 + 0.35–0.43/0.35–0.55. — Male. Carapace yellow, eye surrounded by black. Translucent scales in vicinity of eyes. On sides of carapace wide band composed of brownish scales. Sternum yellow centrally, brown marginally. Labium yellow with brown basal part. Chelicerae yellow with brownish oblique lines on front sides. Abdomen yellow with two broad longitudinal stripes dorsally, the same stripes on sides, ventrally single line. Spinnerets yellow. Legs yellow, all femora with brown longitudinal stripes. Tibial apophysis of pedipalp straight, embolus short, curved (Fig. 32). — Female. Colouration as in male, but a little paler. Legs yellow. Epigyne with dichotomous pocket in vicinity of epigastric furrow (Fig. 33A–B). Insemination ducts straight, rather long, spermathecae spherical (Fig. 33C).

*Habitat*. Collected on grass in pine woods.

*Distribution*. Eastern Palaearctic species, new for Khabarovskii Krai. The species was described from Korea (Wesołowska 1981a) on the basis of the female. In the Russian Far East recorded from Primore (the females only) by Prószynski (1979: figs. 154–155 — as "*Icius sp.*"), Dunin (1984) and Nenilin (1985). The male has been mentioned as *Phintella difficilis* (Bösenberg et Strand) from Primore (Prószynski 1979: figs. 145–149, Dunin 1984, Nenilin 1985) and Furugelm island (Shternbergs 1988).

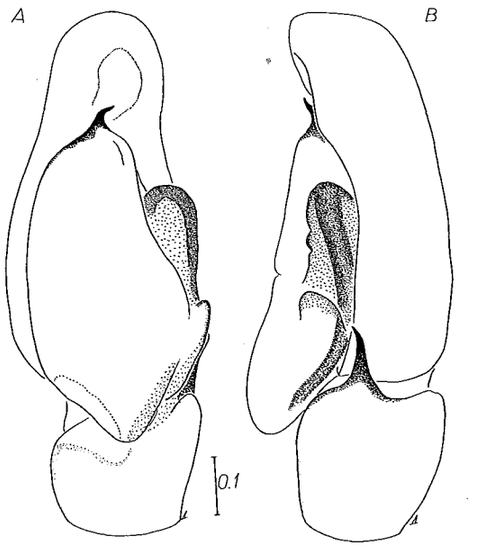



Fig. 32. *Phintella parva* (Wesołowska), male, palpal organ. — A: ventral view. — B: lateral view.

*P. parva* is new for Japan; by Bohdanowicz & Prószynski 1987 erroneously reported as *Phintella mellotei* (Simon).

### *Phintella popovi* (Prószynski, 1979)

Fig. 34

Material: Khabarovskii Krai, BR, 2♂, 3♀, 16–18.VI.1987, D. Logunov (MNH), 1♀ (BI, No 772); environs of Khabarovsk, 1♂, 19.VI.1931, V. Sychevskaya (ZMMU); Evreiskaya Autonomna Oblast, Pashkovo village, 3♀, 24.VI.1978, S. Toms (ZI); Nanaiskii distr., Slavyanka, 1♂, 1♀, 28.V.1989, D. Kurenshchikov (BI, No 775); the Amur river, Slavyanskii island, 1♂, 23.VI.1989, D. Kurenshchikov (BI, No 776); Amurskaya Oblast, Khinganskii reserve, Antonovskoe forest-range, 4♀, 2–3.VIII.1985, Yu. Marusik (ZI); Amurskii distr., Nizhnepokrovskoe village, 1♂ (palp only), 25.VI.1988, D. Kurenshchikov (BI, No 777); Primore, Prikhankaiskii distr.,

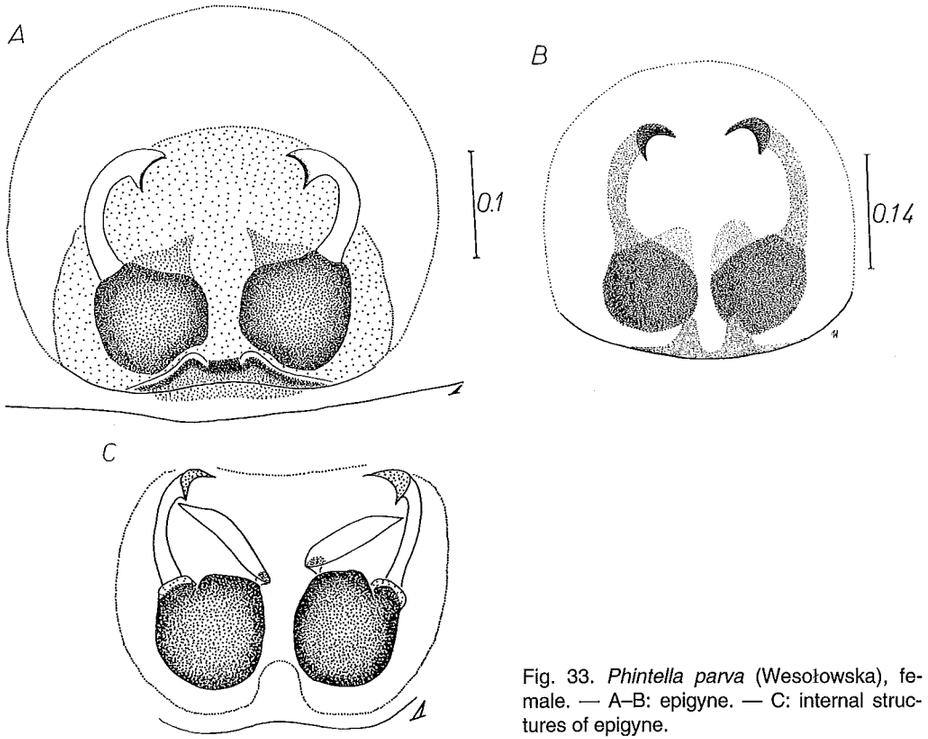



Fig. 33. *Phintella parva* (Wesołowska), female. — A–B: epigyne. — C: internal structures of epigyne.

Khorol village, 1♂, 18.VI.1981 (ZMMU); Pozharskii distr., middle flow of the Bikin river, 1♂, VIII.1977, Shibnev (BI, No 773); Khazanskii distr., Kedrovaya Pad reserve, 3♀, 16.V–20.VI. 1968, F. Popov (ZI); Vladivostok, Orlinoe Gnezdo, 1♀, IV–V.1903, N. Palchevskii (ZI); Partizanskii distr., Tigrovaya village, 1♀, 12.VI.1927, Martynov (ZI, n — 554-927); Spasskii distr., Yakovlevka village, 1♀, VI.1926, A. Dyakonov, N. Filipov (ZI, n — 539-926); Ussuri area, Kamenushka, 1♀, 7.VI.1981, G. Belova (ZI); Furugelm island, 1♀, 18.VII.1975, M. Shternbergs (BI, No 774); South of Krasnoyarskii Krai, Khakassya, Minnusinsk, 2♀, 1981, Roschier (ZMT).

*Diagnosis*. Similar to *Phintella parva* (Wesołowska), but may be distinguished by colouration: *P. popovi* has four and *P. parva* two stripes on abdomen. The male easily distinguished by shape of tibial apophysis and embolus (cf. Figs. 34A–B and 32), the female by shorter insemination ducts (cf. Figs. 34D and 33C). The male is easy to recognize, but the female is often confused with other *Phintella* species. Thus, females of *P. popovi* were recorded as *P. linea* from Korea (Wesołowska 1981a) and the Russian Far East (Nenilin 1985), and also as *Phintella abnormis* (Bösenberg et Strand) from the Russian Far East (Prószynski 1976: map 99, 1979, Dunin 1984: fig. 27).

*Description*. Measurements (male/female). Cephalothorax: length 1.70–1.88/1.70–2.03, width 1.20–1.30/1.28–1.43, height 0.78/0.75–0.83. Abdomen: length 1.85–1.93/3.13-3.55, width 0.95–1.05/2.10–2.25. Eye field: length 0.80–0.93/0.90–0.93, AL 1.03–1.10/1.08–1.18, PL 1.00–1.08/1.03–1.13. AM 0.33/0.38. Legs: I 1.18–1.53/1.00–1.10 + 0.55–0.68/0.48–0.55 + 1.00–1.13/0.73–0.78 + 0.73–0.8 5/0.60–0.70 + 0.48–0.50/0.38–0.45; II 1.03–1.13/0.98–1.05 + 0.50–0.55/0.48–0.58 + 0.73–0.83/0.63–0.70 + 0.83/0.55 0.68 + 0.40–0.45/0.35–0.38; III 1.10–1.18/1.03–1.25 + 0.48–0.50/0.40–0.50 + 0.80–0.88/0.70–0.73 + 0.95–1.0 5/0.85–1.05 + 0.48–0.50/0.43–0.45; IV 1.25–1.38/1.25–1.43 + 0.43–0.68/0.48–0.58 + 0.95–1.08/0.90–1.05 + 1.15–1.4 5/1.08–1.43 + 0.45–0.50/0.45–0.50. — Male. Carapace yellow with black margins, eyes surrounded by black. In vicinity of eyes translucent



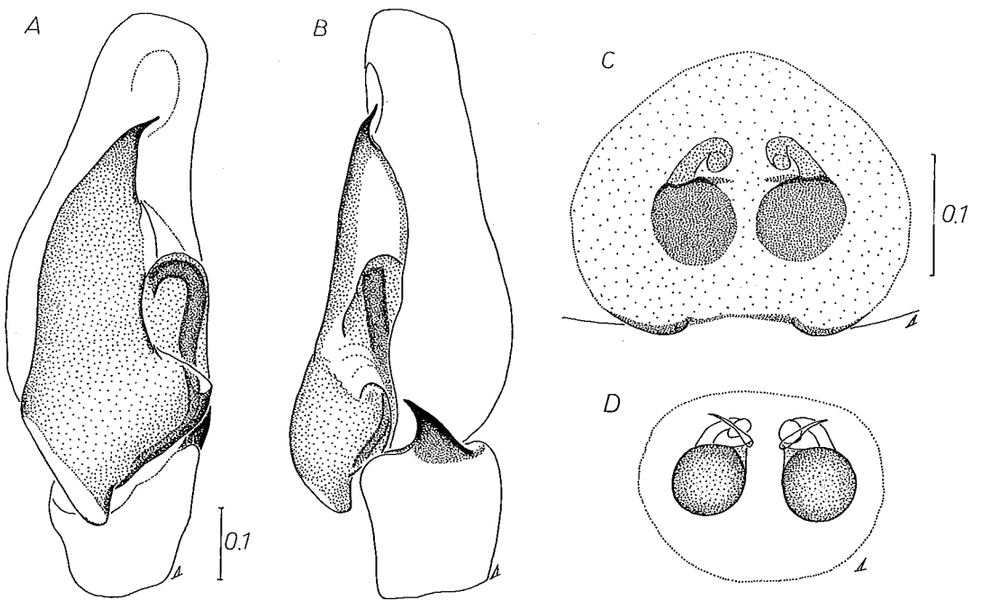



Fig. 34. *Phintella popovi* (Prószynski), male and female. — A–B: palpal organ, ventral and lateral views. — C–D: epigyne and its internal structures.

scales. Sternum, labium, maxillae and chelicerae yellow. Abdomen yellow with two pairs of longitudinal blackish stripes. Spinnerets yellow. Legs yellow, femora I–III with black spots (see also Prószynski 1979: fig. 150). Pedipalp yellow, its structure shown in Fig. 34A–B. — Female. Colouration resembles male, but a little lighter. Legs yellow. Epigyne and its internal structures given in Fig. 34C–D.

*Habitat*. Collected from shrubs and grass.

*Distribution*. Eastern Palaearctic species, new for Khabarovskii Krai, distributed westwards to the Jenisej river.

Most likely all the existing records of *P. abnormis* from the Russian Far East (perhaps with exception of males shown in Dunin 1984: figs. 25–26) refer in fact to *P. popovi*.

### *Pseudicius vulpes* (Grube, 1861)

Material: Khabarovskii Krai, BR, 2♀, 5.VI.1987, D. Logunov (BI); Nanaiskii distr., the Amur river, Slavyanskii island, 1♀, 20.VI.1989, D. Kurenshchikov (MNH).

*Habitat*. Collected in deciduous woods (aspen, birch, oak) and on meadows.

*Distribution*. Eastern Palaearctic species, previously recorded from the Russian Far East by Grube (1861), Prószynski (1971, 1976: map 111, 1979), Dunin (1984) and Nenilin (1985).

### *Salticus cingulatus* (Panzer, 1797)

Material: Khabarovskii Krai, Selemdzhinsk, 2♀, VI–VII.1985, A. Kudryavtsev (ZMMU); Amurskaya Oblast, Zeiskii reserve, 1♂, 23.VI.1978, K. Eskov (ZMMU).

*Distribution*. New for Khabarovskii Krai. Species known from Europe and Western Siberia; recorded from the Russian Far East by Nenilin (1985).

### *Sitticus cutleri* Prószynski, 1980

Material: Khabarovskii Krai, BR, 1♀, 19.VI.1987, D. Logunov (MNH); Okhotskii distr., the Tirbikan stream valley, basin of the Ulya river, 1♀, 20.VIII–14.IX.1986, I. Sukacheva (ZMMU); South of Krasnoyarskii Krai, Khakassya, Shirskii distr., 3–5 km E of Shira village, Itkul lake, 4♂, 21–22.VII.1990, D. Logunov (BI, No 412).

*Habitat*. Collected in moist glades.

*Distribution*. New for Khabarovskii Krai. Rare species. Described from Nearctic region (Prószynski 1980). In Russia hitherto recorded from Evenkiya (Western Siberia) (Nenilin 1984, 1985 and Eskov 1988) and Magadanskaya Oblast (Marusik 1988).

### *Sitticus fasciger* (Simon, 1880)

Material: Khabarovskii Krai, BR, Bychikha village, 1♂, 1♀, VII–VIII.1987, S. Ivanov (BI, No 899); 1♀, V.1989 (MNH); Lasovskii distr., shore of the Kiya river, 1♂, VII.1987, Dyachenko (IWP).

*Distribution*. New for Khabarovskii Krai. In the Russian Far East recorded from Primore (Prószynski 1976: map 172, 1979).

### *Sitticus floricola* (C. L. Koch, 1837)

Material: Khabarovskii Krai, BR, 7♀, 16–17.VI.1987, D. Logunov (BI, No 897), 2♀ (MNH).

*Habitat*. Collected by sweeping on meadows and in moist places with *Stratiotes sp*. and sparse trees.

*Distribution*. Widely distributed Holarctic species. Recorded from the Russian Far East by Prószynski (1976: map 190, 1979), Dunin (1984) and Nenilin (1985).

### *Synageles venator* (Lucas, 1836)

Material: Khabarovskii Krai, Nikolaevsk na Amure, 1♂ (incorrectly determined as "*Myrmarachne formicaria*"), [leg.] Schrenck, coll. Grube (MNH); Primore, Khasanskii distr., upper flow of the Kedrovka river, 1♂, 24.VIII.1968, F. Popov (ZI); Ussuriiskii distr., Suputinskii reserve, 1♀, 9.VII.1937, A. Rikhter (ZI, n — 292-1937).

*Distribution*. Widely distributed Palaearctic species, recorded from the Russian Far East by Prószynski (1976: map 204, 1979 — on basis of the same specimens).

### *Yaginumaella medvedevi* Prószynski, 1979

Material: Khabarovskii Krai, BR, 1♂, 20♀, 6–19.VI. 1987, D. Logunov (BI, No 709, 710, 717), 3♂, 5♀ (MNH); 1♀, 2.VI.1988, S. Ivanov (BI, No 716); Khabarovsk region, Khekhtsir ridge, 1♂, 1♀, VI.1990, D. Kurenshchikov (IWP); Primore, Ussuriiskii reserve, 1♂, 1♀, 25.VI.1977, G. Kurcheva (ZMMU); Kedrovaya Pad reserve, 2♂, 29.V–21.VIII.1976, B. Zakharov (BI, No 708, 742), 1♂, 1♀, 25.VII–16.IX.1978, B. Zakharov (BI, No 714, 718).

*Habitat*. Collected by sweeping in various woods: in deciduous forest (aspen, birch, oak), in deciduous woods with larch, as well as in pine woods. Also found on moister places with single alders.

*Distribution*. Eastern Palaearctic species, recorded from the Russian Far East from Khabarovskii Krai, Primore, Sakhalin and Kunashir islands (Prószynski 1979, Dunin 1984 and Nenilin 1985).

### *Yaginumaella striatipes* (Grube, 1861)

Fig. 35

*Yaginumaella ususudi* (Yaginuma, 1972) syn. n.

Material: Khabarovskii Krai, BR, 23♂, 42♀, 8–13.VI. 1987, D. Logunov (BI, No 670, 671, 673, 676, 677), 2♂, 15♀ (MNH); Nanaiskii distr., Slavyanka, 2♀, 29.VI.1990, D. Kurenshchikov (IWP); Primore, Chuguevskii distr., 1♀, 23.IX.1974, G. Kurcheva (ZMMU). — Additional material: Japan, Kanayama Yamanashi, 5♂, 3♀, 15.VII.1970, M. Ohno, coll. Yaginuma (IBS).

*Habitat*. Collected in litter and by sweeping in various woods: in coniferous woods (spruce and fir), in mixed woods (pine, birch, rich undergrowth), as well as in deciduous woods (elm). Also found on clearings. *Y. medvedevi* and *Y. striatipes* differ to some extent in their altitudinal distribution. The former occurs in low positions between 100 and 400 m a.s.l. while the latter is found from 250 to above 900 m a.s.l. (highest points of the Bolshekhekhtsirsky reserve).

*Distribution*. Eastern Palaearctic species, recorded from the Russian Far East by Grube (1861), Prószynski (1971, 1976: map 146, 1979), Dunin (1984) and Nenilin (1985).

In spite of having a series of *Y. ususudi* specimens, in neither sex could we find any consistent difference from *Y. striatipes*, except for minor difference in the structure of tibial apophysis (cf. Fig. 35C–D and 35A–B). Thus, we conclude that they are conspecific, and that *Y. ususudi* constitutes a junior synonym of *Y. striatipes*.



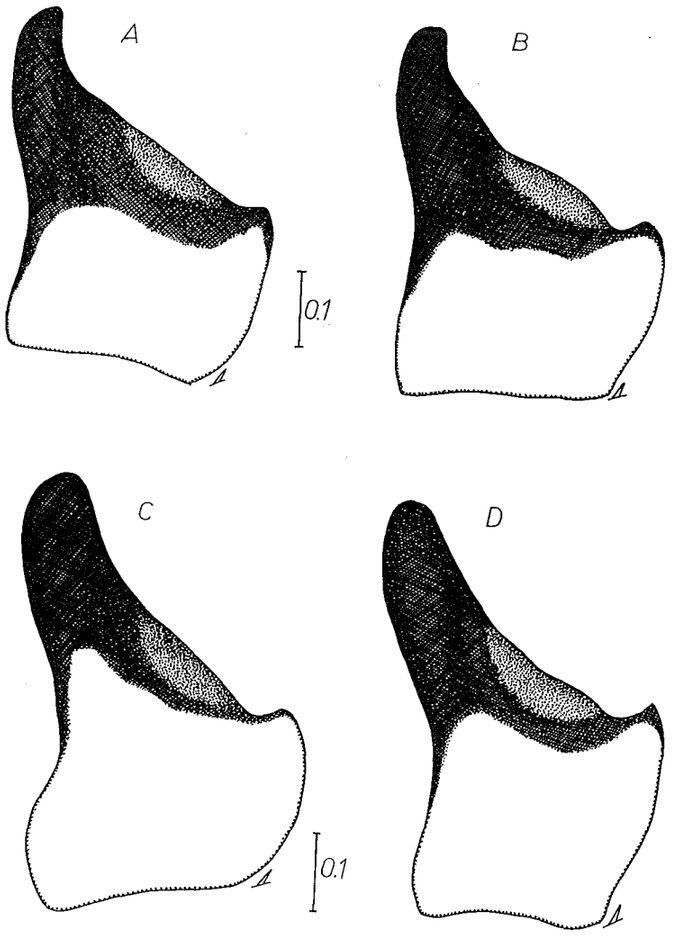



Fig. 35. *Yaginumaella striatipes* (Grube), male, tibial apophysis. — A–B: specimens from Khabarovskii Krai. — C–D: specimens from Japan.

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## References

Azheganova, N. S. & Stenchenko, T. I. (Ажеганова, Н. С. & Стенченко, Т. И.) 1977: [On the spider fauna of Amur Oblast.] (In Russian) — In: Azheganova, N. (Ажеганова, Н.) (ed.), [Problems of arachnology. Fauna and ecology of spiders.]: 106–111. Mezvuzovskii sbornik. Perm.

Bohdanowicz, A. & Prószynski, J. 1987: Systematic studies on East Palaearctic Salticidae (Araneae), IV. Salticidae of Japan. — Ann. Zool. 41:43–151.