D. V. LOGUNOV, Redefinition of the genera Marpissa C.L. Koch, 1846 and Mendoza Peckham & Peckham, 1894 in the scope of the Holarctic fauna (Araneae, Salticidae)
Redefinition of the genera
Marpissa C.L. Koch, 1846 and
Mendoza Peckham & Peckham, 1894
in the scope of the Holarctic fauna
(Araneae, Salticidae)

by Dmitri V. Logunov

Résumé

Summary
Based on both the detailed structure of the genitalia and somatic morphology, the genus Marpissa C.L. Koch, 1846, is redefined to include 16 holarctic species. Hydina Simon, 1878 (8 species included) is shown to only approve a subgeneric rank within Marpissa. Marpissa canestrini and related species are excluded from Marpissa (s. str.) and assigned to Mendoza Peckham & Peckham, 1894, with 7 new combinations involved: Mendoza canestrini (Ninni in Canestrini & Pavesi, 1868); Marpissa dybowskii Kalckerts, 1895, M. nigrifrons Saito, 1939 and P. magna Kastharta, 1910 with Marpissa milleri Peckham & Peckham, 1894; Marpissa hiroseae Nakatsui, 1942 with Mendoza elongata (Karsch, 1879); and Marpissa wallacei Barnes, 1958 with Marpissa grata (Gertsch, 1936). Mihillon hoingioki Schenkel, 1936 is considered as a junior synonym of Mendoza elongata (Karsch, 1879), rather than Mendoza nobilis (Grube, 1861), as it was supposed previously. Marpissa magister (Karsch, 1879) is considered as a nomen dubium. One species, Marpissa sulcosa Barnes, 1958, is reinstated.
Introduction

The genus *Maripissa* C.L. Koch, 1846, has consistently been considered in a wide sense, when *Maripissa* (s. str.) is included. The type species: *Araneus maurus* Clerck (1758), *Hyctia* (the type species: *Salticus nivoyi* Lucas, 1846) and *Ononogaga* (the type species: *Maevia lineata* C.L. Koch, 1848) are placed together in the same genus (Barnes, 1958; Harm, 1980; Bohdanowicz & Proszynski, 1987; Proszynski, 1990; Peng et al., 1993). At least, as pointed out by Barnes (1958, p. 2), such a combination has "the fortunate result of producing a much simpler classification". However, some of the above authors (e.g. Bohdanowicz & Proszynski, 1987; Peng et al., 1993) were also of opinion that *Maripissa* (s. lat.) clearly consists of two distinct species groups: the *nivoyi* (or *dybones- kii*) species group and the *elongata* species group, the latter including *Maripissa elongata*, *Hyctia*, *M. irakienensis* etc., and being sometimes wrongly called *Hyctia* (e.g. Ikerda, 1993). A re-examination of the taxonomic status of *Maripissa* (s. lat.) based on the detailed morphology of the genitalia and somatic characters allows me to came to somewhat different conclusions: (1) *Hyctia* shows the same genital pattern as *Maripissa* (s. str.), differs from it only in body shape and seems to approve no more than a subgeneric rank within *Maripissa*; and (2) the *elongata* species group, which must include also *Maripissa canestrini*, does not in reality belong to *Hyctia* and should be assigned to *Mendoza* Peckham & Peckham, 1894 (the type species: *Atta· membranifera* O. P.-Cambridge, 1876). The latter genus was earlier treated as a junior synonym of *Mithion* (Simon, 1901) and then was synonymised with *Maripissa* (Pröszynski, 1990). The interpretation of *Mendoza* as accepted herein is similar to that of Simon (1901: 597, 599, 610), who united the species *Mithion canestrini* and *Atta membranifera* in the same genus *Mithion* (both specific names are hereafter considered synonymously, see below). As the generic name *Mithion* is known to be preoccupied (Proszynski, 1990), *Mendoza* established originally by the Peckhams (1894) is actually the valid name for the genus hitherto diagnosed by Simon (1901) and then reported by some subsequent authors (e.g. Meineide, 1992; Shcherbina, 1995) under the name *Mithion*. The main aims of the present paper are refinements and redescriptions of the genera *Maripissa* (with two subgenera, *Maripissa* (s. str.) and *Hyctia* involved) and *Mendoza*, including a synopsis of all the known Holarctic species of both genera. In usage of the name *Mendoza*, I follow Bonnert’s (1955-1959, p. 2718) opinion regarding the validity of *Maripissa* over *Mendoza*, *Maripissa* and *Mendoza*.

The two Palearctic *Maripissa* species have been excluded from consideration: *Maripissa longissula* Simon, 1871, and *Maripissa zaitzevi* Meinel, 1992. The former was described and reported from Ukraine and Italy (Simon, 1871). However, according to Hanes (1985b, 1986), the identification of *Maripissa longissula* by Canestrini from Italy actually belongs to *Maripissa nivoyi*. As the original description of *Maripissa longissula* is inadequate for identification and I have been unable to revise the holotype, the taxonomic status of this species is in need of a further study. *Maripissa zaitzevi* was described from a single female from Georgia. However, the original description (made in Georgian) and figures (Meinel, 1992, figs 115, 116) allow to only assume that *Maripissa zaitzevi* is quite close to or the same as *Maripissa nivoyi*. The problem calls for a special attention in the future as well.

Material and methods

Specimens for this study were borrowed from of distributed among the following museums:

AMNH: American Museum of Natural History, New York, U.S.A. (Dr N. Platnick);

FSCA: Florida State Collection of Arthropoda FDACS, Division of Plant Industry, Gainesville, Florida, U.S.A. (Dr G.B. Edwards);

HEC: Hope Entomological Collection, Oxford University, England (Dr G.C. McGavin);

ISE: the Zoological Museum of the Institute for Systematics and Ecology of...
For the leg spination, the system adopted is that used by Ono (1988). The sequence of leg segments in measurement data is as follows: femur + patella + tibia + metatarsus + tarsus. All measurements are in millimetres. In order to provide an accurate phylogenetic catalogue (Platnick, 1997), all species under each species are cited in the most recent arachnological catalogue (Platnick, 1997). For a complete set of references see Ruzwicka (1954), Bonnet (1955–1959), Proszynski (1990) and Platnick (1993, 1997).

**Genus Marpissa**

C.L. Koch, 1846

Type species: *Araneus muscosus* Clerck, 1758.

**Definition.** Medium size or large (sometimes elongated and slender, e.g. Hycita, figs 10–13) undulate spiders ranging from about 3 to 10 mm in length. Sexual dimorphism poorly marked, males differ in having lateral hook-shaped outgrowths on maxillae (= endite teeth) (figs 115–118) and are usually smaller, darker and more colourful. Carapace rather high (especially in Hycita); eye field flat and transverse-rectangular, with its length 1.3–1.5 times smaller than width; quadrangle length 44.47% of carapace length; fovea present and well marked, it is situated in a rounded depression of the carapace; eyes in three rows. PME about half-way between ALE and PLE; carapace covered with elongated and granular (sensu Hill, 1970) scales as in fig. 1. Clypeus low and vertical; its height 7–13% of AME diameter. Chelicerae moderately small and subvertical (slightly protruded ahead in Hycita); promargin with two medium teeth, retromargin with one medium tooth (figs 18–23). Maxillae square, longer than wide; males always with endite teeth (figs 90–93). Labium rectangular, longer than wide. Sternum suboval, more or less sharpened anteriorly (figs 129, 130, 133, 134). Pedicel short, usually not visible in dorsal view. Abdomen elongate, often brightly coloured; 1.6–2.0 times longer than wide in Marpissa and 1.9–3.4 times in Hycita; abdominale scales as in fig. 2; sparse abdominal skin pores (probably pheromone-releasing organs) also occur on dorsum (fig. 47). Legs moderately short, normal; the first pair darker and two to three times as heavy as remaining legs (figs 30–31), in some species tibia I swollen (fig. 28); trichobothrial base as in figs 3, 35. Leg formula: Marpissa I, IV, II, III in males and IV, I, II, III in females. Hycita: I, IV, II, III in both sexes. Female palp: common shape; without apical claw; femora with 1–2 dorsal spines situated at 0–1 or 0–0–1. Male palp: cymbium flat and rounded (figs 48, 58, 61, 65), often with curved tip (arrowed in fig. 63); cymbial ledge well developed (figs 48, 59, 60, 63, 64); lateral cymbial process always present, often sharp (figs 58, 61, 62, 65, 76, 85); course of sperm duct rather complex (figs 109, 110, 112); distal tegular protuberance always present (figs 49, 58, 75), but sometimes poorly marked (figs 32, 65, 80, 84); a singular tibial apophysis always present (fig. 58, 61, 62, 65, 76), sometimes armed with an additional spur (fig. 62); embolus originating at the distal point of bulb (figs 58, 61, 62, 65); embolus thread-like and coiled, its revolution ca. 350 or more degrees (seldom less); basal and distal haematochae and subtegulum well developed (figs 32, 51–57). Female genitalia. Epigynal plate rather heavily sclerotized; the epigyne is simple and consists of either a single deep atrium bordered by longitudinal folds (figs 33, 34), or two separated copulatory orifices (figs 35, 66, 68, 70, 72); middle field (sensu Siegwald, 1989) well developed.
in some species (fig. 34); insemination ducts rather wide and short, ending by long tube-shaped and coiled receptacles (figs 41-43, 67, 69, 71, 73); glandular ducts sometimes well developed and clearly visible (arrowed in figs 88, 91);
seems to be homologous to the median septum of *Mendoza* species (figs 37, 38).

The term "distal tegular protubercule" (DTP) is adopted from *Griswold* (1995) and used for the elaborate structure of the prosapalinal margin of the tegulum in *Marpissa*, which may be elongated (figs 49, 52, 58) or convex (figs 50, 62, 75, 92). The distal tegular protuberance clearly corresponds in its position to the suprategulum in the Linyphiidae (*sensu Saejetto*, 1971); to the linyphid median apophysis, *sensu Merritt*, 1965; and the distal tegular projection in the Pisauridae and Dolomedidae (*Sierwald*, 1990; *Griswold*, 1993). Although *Sierwald* (1990, p. 43) advocated that the distal tegular protuberance in the linyphids and pisaurids are obviously homologous, I score that at least the distal tegular protuberance in *Marpissa* and the linyphid suprategulum seems to be homologous because they indeed represent enlargements of the distal tegular area and do not contain a loop of the sperm duct.

**Diagnosis:** *Marpissa* belongs to the subfamily Marpissinae (*sensu Prószyński*, 1976) and is closely related to *Menda*.

**Figures 35-40.** — Epigynes and carapaces of *Marpissa* spp. and *Mendoza* spp. 35, epigyne of *Marpissa* lineata, U.S.A.; Minnesota, ventral view. 36, epigyne of *Marpissa* nigrovi, Ukraine, ventral view. 37, epigyne of *Mendoza conestriini*, Hungary, ventral view. 38, epigyne of *Mendoza nobili*, Russia; Khabarovsk Province, ventral view. 39, female carapace of *Mendoza conestriini*, South Kazakhstan Area, dorsal view. 40, female carapace of *Marpissa* maculosa, Ukraine, dorsal view. — Scale bars: 35-38, 0.1 mm; 39, 40, 0.5 mm.

<table>
<thead>
<tr>
<th>Characters</th>
<th>Marpissa</th>
<th>Mendoza</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Cymbium</td>
<td>Flat and rounded (figs 58, 61, 62), often curved apically (fig. 63)</td>
<td>Absent (figs 105, 107, 124)</td>
</tr>
<tr>
<td>2. Distal tegular protuberance</td>
<td>Present (figs 49, 50, etc.)</td>
<td>Proximal (figs 105, 107)</td>
</tr>
<tr>
<td>3. Position of the embolic base</td>
<td>Apical (figs 58, 61, 62)</td>
<td></td>
</tr>
<tr>
<td>4. Embolic revolution</td>
<td>Ca. 360 or more degrees (figs 31-65)</td>
<td>Less than 180 degrees (figs 123-126)</td>
</tr>
<tr>
<td>5. Median septum of epigyne</td>
<td>Absent (fig. 13)</td>
<td>Present (fig. 11)</td>
</tr>
<tr>
<td>6. Tube receptacles</td>
<td>Five or more times longer than the insemination ducts (figs 41-43)</td>
<td>Equal or twice as long as the insemination ducts (figs 44-46)</td>
</tr>
<tr>
<td>7. Endite tooth</td>
<td>Present (figs 115-118)</td>
<td>Absent (figs 119-122)</td>
</tr>
<tr>
<td>8. Hair pencil beneath PME</td>
<td>Absent (fig. 40)</td>
<td>Present (fig. 39, arrowed)</td>
</tr>
</tbody>
</table>

**Table I.** — Distinguishing the genera *Marpissa* and *Mendoza*. 
doza, as it is defined hereafter. Both genera can be easily distinguished by the following characters: the endite tooth (hook-shaped) present (figs 115-118) (absent in Mendoza, figs 94-97); the epigyne lacks the median septum (figs 33-36) (present in Mendoza, figs 37, 38); tube-receptacles 5 or more times longer than the insemination ducts (figs 41-43) (equal or twice as long as the insemination ducts in Mendoza, figs 44-46); the cymbium flat and rounded, often curved apically (figs 58, 61, 62) (usual shape, never flat in Mendoza, figs 105-108); the distal tegular protuberance present (figs 49, 50, etc.) (absent in Mendoza, figs 105, 107, 124-126); apical position of the embolic base (figs 58, 61, 62) (proximal position in Mendoza, figs 105, 107); the embolic revolution ca. 360 or more degrees (less than 180 degrees in Mendoza); and the hair pencil absent (fig. 40) (present in Mendoza, fig. 39) (see also table 1).

Distribution. The Holarctic region. The Marpissa species reported outside the Holarctic, e.g. from the Oriental region (broadway, decorato, nutanatu etc.), are, to my mind, in need of a re-examination and confirmation of their generic status by pertinent material.

Behaviour. Only five species of Marpissa have so far been studied with the regard to their behaviour (Crane, 1949; Richmond, 1982), namely M. birna, M. muscosa, M. nivoyi, M. picki and M. saliosa. According to Crane’s (1949) classification, all the Marpissa species belong to the so-called “runners”, i.e. the salticids exhibiting the most primitive courtship being highly dependent on chemotactic stimuli. No differences in courtship behaviour has been described between congeners of the subgenera Marpissa and Hycitia.

Synopsis of species
Subgenus Marpissa (s. str.)
Type species: Araneus muscosus Clerck, 1758.
Diagnosis. Evident differences between the subgenera Marpissa and Hycitia can only be seen in the body shape (cf. figs 6-9 and 10-13): body is wide, flat and robust in Marpissa (carapace length/width ratio is 1.2-1.3; abdomen length/width ratio is 1.9-2.0) and narrow, elongated and slender in Hycitia (carapace length/width ratio is 1.8-1.9; abdomen length/width ratio is 3.0-5.0). Besides, the fovea area is visibly depressed in Marpissa and smooth in Hycitia and the chelicerae are slightly protruded ahead in Hycitia (clearly subvertical in Marpissa). The genitalia and leg spination in both subgenera show no differences.

Marpissa (Marpissa) dentoides
Barnes, 1958
(figs 66, 67, 82, 83)
Marpissa dentoides Barnes, 1958: American Museum Novitates, no. 1867, pp. 27-28, fig. 45 (description, male, female; male holotype from the AMNH examined).


**Diagnosis.** Males of this species are most similar to those of *M. obtusa*, *M. sulcosa* and *M. lineata*, but can be easily separated from both by the shape of the tibial apophysis and the lateral cymbial process (cf. figs 83 and 80 & 84). Females are most close to those of *M. sulcosa*, but differ in having a bigger epigynal plate, wider separated copulatory openings (cf. figs 61 and 62), and by the structure of spermathecae (cf. figs 67 and 69).

**Description.** See Barnes (1958).

**Distribution.** The species is distributed over the north and southeastern areas of the United States (Barnes, 1958; Richman & Cutler, 1978; Edwards, 1980).

Figures 58-65. — Male copulatory organs of *Marprisingly spp. 58, 59, Marpissa nivovi*, Ukraine, 60, 61, *Marpissa lineata*, U.S.A.: Minnesota, 62, 63, *Marpissa milleri*, Russia: Maritime Province, 64, 65, *Marpissa pulla*, Korea. 58, 61, 62, 65, male palp, ventral view; 59, 60, 63, 64, cymbium, lateral view. — Scale bars: 58-61, 0.1 mm; 62, 63, 0.5 mm; 64, 65, 0.25 mm.

*Marpissa (Marpissa) lineata* (C.L. Koch, 1848)

(Figs 8, 20, 28, 35, 42, 60, 61, 110, 118)


**Material.** — U.S.A.: 1 male, 1 female (ISEC), Minnesota, Hennepin Co., Minneapolis, federal land near Pt. Snelling; ST. Park, 30.05.1986, B. Cutler; 2 males, 2 females (ISEC), Florida, Alachua Co., ca. 0.6 mi SE of S-20, along S-234, 15.04.1976, D. Richman.

**Diagnosis and description.** See Barnes (1958).

**Distribution.** This seems to be the most common *Marpissa* species in U.S.A.; it has been recorded in many states eastward to the Rocky Mountains (Barnes, 1958; Richman & Cutler, 1978; Barnes, 1980).

*Marpissa (Marpissa) milleri* (Peckham & Peckham, 1894)

(Figs 62, 63)

Redefinition of Marpissa and Mendoza

Marpissa magna Kishida, 1910: Hukasbatuzakura-zaniko, Tokyo, vol. 118, pp. 3-5 (description male; male holotype was lost and not examined; see "notes" below). New synonymy.

Maevia nigrifrons: Saito, 1939: Saito Ho-me Kai Museum Research Bulletin, no. 18, Zoology no. 6, pp. 41-42, fig. 5, pl. 1, fig. 14 (description male, female; syntypes were lost, not examined). New synonymy.

Marpissa nigrifrons: Saito, 1959: The spider book illustrated in colours, p. 155, pl. 27, fig. 210, pl. 28, fig. 210 (male, female).

Material: Russia: 8 males, 3 females (ISE), 4 males, 1 female (ZMMU), Primorye, Lazov Reservation, 20.07.1977-18.06.1981, T.I. Olgier; 1 female (ISE), Kunashir Isl., from Krugly Cape (145° 30' E, 44° 00' N) to sulfur creek mount (145° 41' E, 44° 01' N), 09.1997, Y.M. Marusik; 1 male, 3 females (FSCA), Kunashir Isl. (NW shore), near Rudnoe, Sevencyanka River (146° 00' E, 44° 20' N), 25-27.08.1997, Y.M. Marusik.

Japan: 1 female (MCZ, 351, lectotype of Marpissa milleri, designated here), 1 male, 5 females (MCZ, 351, paralectotypes of Marpissa milleri, designated here), "Japan [Tokio], G.W. & E.G. Peckhams coll."

Diagnosis and description. See Bowdanowicz & Płoszyński (1987, sub Marpissa dybowskii).

Distribution. This is an eastern Palearctic (Manchurian) species recorded so far under different names (most often under Marpissa dybowskii) from the Russian Far East, Japan, Korea and NE China (Wisolowska, 1981b; Bowdanowicz & Płoszyński, 1987; Pego et al., 1993).

Notes. The original label of the synotypes of Marpissa milleri does not contain data on the precise type locality, but the Peckhams themselves (1894, p. 92) wrote that the studied specimens were taken from Tokio. Besides, they noted the type series only includes males, while in reality there are 1 male, 6 females and 16 immature specimens.

Kishida (1910) described Marpissa magna after a single male (not female as designated in the original description) from Japan (Nagaoka-shi, Niigata Pref.), this name turned out to be a junior homonym of Marpissa magna Peckham & Peckham 1894 described from Central America. However, on the one hand, reasons from the original description of Marpissa magna, it is safe to conclude that it is a junior synonym of Marpissa milleri [Dr H. Ikeda (personal communication) came to the same conclusion]. On the other hand, Marpissa magna of the Peckhams, as it is evident from the original figures (see Peckham & Peckham, 1894, pl. 8, fig. 3) does not belong to Marpissa. Thus, the name Marpissa magna (sensu Kishida, 1910) seems not to need replacing (as a junior homonym) and can be simply considered a junior synonym of Marpissa milleri.

Maevia nigrifrons was described from Japan by Saito (1939), but his later drawings (Saito, 1959, pl. 26 fig. 210 and pl. 28, fig. 210, e.g. the very strong and curved cymbial tip) are convincing enough that the author actually dealt with Marpissa milleri.

Marpissa (Marpissa) muscosa (Clerck, 1758) (figs 4, 7, 19, 33, 40, 43, 50)

Atramopus muscosa Clerck, 1758 (1757): Azarei Saeclii, p. 116, pl. 5 fig. 12 (description, male, female).


Material: Ukraine: 1 male, 2 females (FSCA), 2 males, 3 females (ISE), Dnepropetrovsk Area, Pyatikhasky


**Diagnosis and description.** See Harm (1981) and Žabka (1997).

**Distribution.** This is a typical European subboreal species (Prószyński, 1976; Harm, 1981). The only record of *Marippisa masciobi* from Japan (Satō, 1959, pl. 27 fig. 214, pl. 28 fig. 214) seems to belong in reality to *Marippisa pulla*.

**Marippisa (Marippisa) obtusa**

Barnes, 1958

(figs 80, 81)

*Marippisa obtusa* Barnes, 1958: American Museum Novitates, no. 1,687, p. 28, figs 44, 46 (description male, female, male holotype from the AMNH examined).

**Material.** – U.S.A.: 1 male, (AMNH, holotype of *M. obtusa*), Texas, Palacios, 4.06.1936, S. Mulak.

**Diagnosis.** The species is closely related to *M. denticoides, M. sulcosa*, and *M. lineata*, but can be easily separated by the shape of the tibial apophysis and the lateral cymbial process (cf. figs 80, 81 and 82-85).

**Description.** See Barnes (1958: male only).

**Distribution.** The species is so far known from the type locality (Texas, U.S.A.) only (Barnes, 1958: male only; Richman & Cutler, 1978).

**Notes.** All the females, including the allotype and para-type, determined and reported earlier by Barnes (1958) as *M. obtusa* were re-examined and turned out to actually belong to *M. denticoides* (see above “material” under *M. denticoides*). Thus, the species is now known from the only male.

Besides, it is very likely that the female of *M. sulcosa*, as we now know it (figs 68, 69), in reality may belong to *M. obtusa* (see also comments under “notes” of *M. sulcosa*).

**Marippisa (Marippisa) pomatia**

(Walkenhorst, 1802)

(figs 1-3, 6, 18, 34, 47, 51, 54, 55)


**Marippisa pomatia** Simon, 1876: Arach-nides de France, vol. 3, p. 26 (transferred to *Marippisa*).

**Marippisa pomatia** Žabka, 1997: Salticidae, Fauna Polski, p. 64-65, figs 201-208 (male, female).


For other studied material see Logunov & Wesołowska (1992) and Dani-lov & Logunov (1993).

**Diagnosis and description.** See Harm (1981) and Žabka (1997).

**Distribution.** This is a trans-European temperate species (Prószyński, 1976; Harm, 1981; Logunov & Wesołowska, 1992; Dani-lov & Logunov, 1993).
1992; Danilov & Logunov, 1993; Peh et al., 1993). The species was reported from the Caucasus Major by Ovtsharenko (1978, p. 683) as Marpissa sp. (Ovtsharenko’s specimen re-examined).

**Marpissa (Marpissa) pulla**
(Karsch, 1879) (figs 9, 32, 64, 65)


**Material** — **SOUTH KOREA**: 1 male (ISE), Go Je Peninsula, Chanyaphbo Ml., 6.06.1997, A.V. Egorov. — **JAPAN**: 1 female (ISE), Honshu, Tottori Pref., Tottori, Noyama, Campus of Tottori University, 12.10.1989, N. Tauruski.

For other material see Logunov & Wesołowska (1992).

**Diagnosis and description**. See Proszynski (1973), Wesołowska (1981a) and Bohdanowicz & Proszynski (1987). Distribution. This is an eastern Palaearctic (Manchurian) species recorded so far from the Russian Far East, Japan, Korea and NE China (Wesołowska, 1981a; Bohdanowicz & Prószynski, 1987; Logunov & Wesołowska, 1992; Peh et al., 1993). It is very likely that the Japanese record of *Marpissa maccoca* (Saito, 1959, pl. 27 fig. 214, pl. 28 fig. 214) belongs to reality to *Marpissa pulla* as well. Unfortunately, Saito’s specimens were lost during the Second World War and this assumption cannot be verified for sure.

*Marpissa (Marpissa) radiata* (Grube, 1859) (figs 5, 21, 30, 48, 49, 52, 53, 109, 115)


**Material** — **RUSSIA**: 1 female (ISE), Novosibirsk Area, Karasuk Dist., ca. 8 km W of Troitskoe, 06-07.1989, V.P. Pekin; 1 male, 1 female (ISE), same area, Severnyi Dist., ca. 1.5 km S of Biaza, 05-07.1989, V.P. Pekin; 1 male (ISE), same locality, 08.1990, V.P. Pekin. 1 female (ISE), same area, Zvinsk Dist., ca. 5 km NE of Shirokya Kurya, 05.08.1989, V.P. Pekin; 1 male, 1 female (ISE), same area, Chulym Dist., near Sherskobilovo, 09.08.1992, V.V. Dubatolov; 1 female (ISE), same area, Kolyvan’ Dist., near Pikhovka, 07.1993, B.P. Zakharov; 2 males (ISE), same area, Karagat Dist., ca. 15 km NE of Verkh-Kargat, 2.08.1987, D.V. Logunov; 3 males, 2 females (ISE), same locality, 22.07.1988, D.V. Logunov.

For other material studied see Logunov (1992) and Danilov & Logunov (1993).

**Diagnosis and description**. See Harb (1981) and Zabka (1997).

**Distribution**. This is an European-Siberian boreal species (Prószynski, 1976, Logunov, 1992).

*Marpissa (Marpissa) sulcosa* Barnes, 1958 (figs 68, 69, 84, 85)


**Material** — **U.S.A.**: 1 male (AMNH, holotype of *M. sulcosa*), Florida, Alachua Co., 1300 m a.s.l., 8.04.1929, H.K. Wallace;

1 female (AMNH), Florida, Fort Myers, 81°50’W, 26°38’N, 18.03.1954, W. Ivie; 1 female (AMNH, allootype of *M. sulcosa*, as we now know it (fig. 68, 69), in reality may belong to *M. obtusa* known from the only male (see

**Redefinition of Marpissa and Mendoza**

**Figures 80-85**. — Male palps of Marpissa spp. 80, 81; Marpissa obtusa (holotype). 82, 83; Marpissa dentodeis (holotype). 84, 85. Marpissa sulcosa (holotype). — 80, 82, 84. palp, ventral view. 81, 83, 85. tibial apophysis, retrolateral view. — Scale bars: 0.2 mm.


**Diagnosis**. Females of this species are most close to those of *M. dentodeis* but can be easily distinguished by the smaller epigynal plate, the wider separated copulatory openings (cf. figs 68 and 66) and the different structure of the spermathecae (cf. figs 69 and 67). The males of *M. sulcosa* (figs 84, 85) differ from those of all closely related species, i.e. *M. lineata*, *M. obtusa* and *M. dentodeis* in having the longest and hook-shaped lateral cymbial process and the strongest tibial apophysis (cf. figs 85 and figs 81, 83).

**Distribution**. U.S.A.: Florida.

**Description**. See Barnes (1958).

**Notes**. On the basis of distributional and habitat data, Edwards (1980) came to the conclusion that *M. sulcosa* is a junior synonym of *M. lineata*. Besides, he assumed that the females of *M. sulcosa*, as they were described by Barnes (1958), may be those of *M. dentodeis*. However, as it is evident from the above diagnosis, *M. sulcosa* is clearly separated from both *M. lineata* and *M. dentodeis* and is therefore to be considered a valid species.

Males and females of *M. sulcosa* were matched provisionally, as neither Barnes (1958; all his specimens re-examined), nor subsequent authors (e.g. Edwards, 1980) have collected males and females together. Thus, it is very likely that the female of *M. sulcosa*, as we now know it (fig. 68, 69), in reality may belong to *M. obtusa* known from the only male (see
above). The issue is in need of a further study.

Subgenus Hyctia Simon, 1876
stat. n.

Type species: Salticus nivoyi Lucas, 1846.

Diagnosis. See comments under "diagnosis" of the subgenus Marpissa.

Marpissa (Hyctia) bina
(Heeze, 1846)


Diagnosis and description. See Barnes (1958).

Distribution. According to Barnes (1958), the species range is restricted to Florida and North Carolina (U.S.A.).

Marpissa (Hyctia) bryantae
(Jones, 1945)

(figs 86-88)

Hyctia bryantae Jones, 1945: Field and Laboratory, vol. 13, p. 39, fig. 1 (description, female; holotype from the MCZ examined).


Material. — U.S.A.: 1 female (MCZ, holotype of Hyctia brentia), Texas, Denton Co., Clear Creek grassland, land herbs, 26.03.1942, coll.? (f). Diagnosis. M. bryantae is very close to (or the same as) M. picei. The only visible difference is seen in the spermathecae of which terminal parts are wider and slightly shorter than those in M. picei (cf. arrowed part in figs 87 and 90). Taking into account that no differences are found in body coloration and size of the genitalia of both species, it is very likely that the above difference reflects only a variation. The problem remains open until more females, as well as males, of M. bryantae are collected from the type locality.

Description. See Jones (1945).

Distribution. The type locality only: Texas (U.S.A.).

Marpissa (Hyctia) formosa
(Banks, 1892)

(figs 70, 71)


Marpissa formosa: Barnes, 1958: American Museum Novitates, no. 1867, pp. 4-8, figs 4-8, 9-11 (transferred to Marpissa).


Diagnosis and description. See Barnes (1958).

Distribution. The species is widely distributed over the entire eastern half of the United States (Barnes, 1958; Richman & Culler, 1978).

Marpissa (Hyctia) grata
(Gertsch, 1936)

(figs 92-97)

Hyctia grata Gertsch, 1936: American Museum Novitates, no. 852, p. 25, figs 25-26 (description, male, female; male holotype from the AMNH examined).


Diagnosis and description. See Barnes (1958).

Distribution. At present time, the species is known in the U.S.A. only from Michigan and Minnesota (Barnes, 1958; Richman & Culler, 1978) and Florida (Barnes, 1958, sub M. wallacei; Richman & Culler, 1978, sub M. wallacei).

Notes. As it is evident from figs 92-95, the male bulb of M. wallacei is almost identical with that of M. grata. Therefore, both species names are to be synonymized.

Marpissa (Hyctia) nivoyi
(Lucas, 1846)

(figs 12, 13, 23, 31, 41, 56-59, 112, 116, 133, 134)


**Material**. - GEORGIA: 1 male (ZISP), Krasnodar Province, Caucasus Reservation, Guzeripl’ Mt., 800 m a.s.l., 13.07.1974, V.I. Ovtsharenko. For other material studied, see Logunov & Rakov (1998).

**Diagnosis and description**. See Harm (1981).

**Distribution**. This is an European-Central Asian subboreal species (Pröszýński, 1976; Harm, 1981; Logunov & Rakov, 1998).

**Marpissa (Hycita) pikei** (Peckham & Peckham, 1888) (figs 10, 11, 89-91, 117)

*Hycita pikei* Peckham & Peckham, 1888. Trans. Wisconsin Acad. Sci., vol. 7, p. 79; pl. 1, fig. 59, pl. 5, fig. 59a (description male, female).


**Diagnosis and description**. See Barnes (1958). See also comments under "diagnosis" of Marpissa bryantaee.

**Distribution**. The species is widely distributed over the entire eastern half of the United States (Barnes, 1958; Richman & Cutler, 1978).

**Marpissa (Hycita) robusta** (Banks, 1905) (figs 72-77)


**Material**. - U.S.A.: 1 male, 2 females (AMNH), California, Monrovia Canyon (lower part), 117°58′W, 34°10′N, 26.07.1931, W. Irvine.

**Diagnosis and description**. See Barnes (1958).

**Distribution**. The species has so far been recorded from two states of the U.S.A.: Arizona and California (Barnes, 1958; Richman & Cutler, 1978).

Notes. *Marpissa robusta* is characterized by a bunch of hairs beneath the PME (arrowed in fig. 77), but both its structure and position are evident: it is not the true hair-pencil of Mendoza (cf. figs 39 and 77). Besides, presence of the endite tooth in male maxillae (fig. 74) and the distal tegular protuberance in the tegulum (fig. 75), as well as the structure of the female genitalia (figs 72, 73), allow to easily assign the species to the subgenus Hycita of the genus Marpissa.

**Genus Mendoza**

Peckham & Peckham, 1894

**Type species**: *Atrus memorabilis* O. P.-Cambridge, 1876.

**Definition**. Medium size (usually elongated and slender) undentate spiders ranging from about 5.4 to 9.0 mm in length. Sexual dimorphism is marked in coloration only: females usually have yellow body and legs with brown-striped dorsum, while males usually lack brown-black body and legs (except for *M. zebra*) with dorso-ventral marking consisting of paired white spots or stripes (see Logunov & Wesołowska, 1992, fig. 18C); besides, the hair pencil (arrowed in fig. 72-77) is often visible in dorsal view. *Atrus* elongated, 1.9-2.4 times longer than wide (figs 14-17), covered with elongated scales as in fig. 98. Legs moderately short, normal; the first pair always basi- and venter and darker (fig. 26). *Leg formula*: I, IV, II, III in males and I, IV, II, III or I, IV, III, II in females. Female palp: common shape; without apical claw; femora with 1-2 dorsal spines situated as O-1 or O-0-1. Male palp: cymbium of usual shape, never flat (figs 79, 105-108); cymbial ledge well developed (figs 104, 106, 108); lateral cymbial process always present, hook-shaped (figs 78, 105-108); course of sperm duct rather complex (figs 111, 113, 114); a singular tubial apophysis always present, embolus originating at the proximal point of bulb (figs 79, 105, 107); embolus relatively (in comparison...
Redefinition of Marpissa and Mendoza

Synopsis of species

Mendoza canestrinii (Ninni in Canestrini & Pavesi, 1868) comb. n.


New synonymy


Diagnosis. Mendoza belongs to the subfamily Marpissinae (sensu Pocztowski, 1976) and is closely related to Marpissa. Both genera can be easily distinguished by the following characteristics: the endite tooth absent (figs. 119-122) (present in Marpissa, figs 33-36); tube-receptacles equal or twice as long as the insemination ducts (figs 44-46) (5 or more times longer in Marpissa, figs 41-43); the cymbium of common (normal) shape, never flat (figs 105-108) (flat and rounded, often curved apically in Marpissa, figs 58, 61, 62); the distal tegular protuberance absent (figs 105, 107, 124-126) (present in Marpissa, figs 49, 50 etc.); proximal position of the embolic base (figs 105, 107) (apical position in Marpissa, figs 58, 61, 62); the embolic revolution less than 180 degrees (ca. 360 or more degrees in Marpissa); and the hair pencil present (fig. 39) (absent in Marpissa, fig. 40) (See also table I).

Distribution. The Palearctic region, with the bulk of species (6 of 7 known) so far recorded in Manchuria and Japan.

Behaviour. No species of Mendoza have so far been studied with the regard to their epigastic display.

Figures 98-100. — Female copulatory organ and somatic characters of Mendoza canestrinii. Ukraine, 98, abdominal scales, 99, carapace scales. 100, epigyne.

Mition canestrini: Pain & Gierasim, 1995: Familia Scolididae, Fauna Moldaviae, pp. 175-177, figs 81, 82-3 (male, female).

**Material.** - **EGYPT:** 2 males, 5 juveniles (HEC B.1732, male lectotype and paralectotype of Attus memorabilis, designated here), "Alexandria"; - **GREECE:** 1 female (ZMMU), NE of Poti, Chaladi, 13.04.1983, I.G. Golvevich; 1 male (ZHSP), same locality, 19.05 (year and collector unknown); 2 males, 1 female (PSU), same locality, 19.05.1940, T.S. Mckeidze. - **AZERBAIJAN:** 1 male (ISE), Mingechaur, 17.04.1982, Sitroovsky. - **UKRAINE:** 1 male (ISE), Kherson Area, Chernomorsky Reservation, 16.07.1996, K.V. Evteshchenko; 1 female (ISE), same locality, 16.07.1992, K.V. Evteshenko; 1 male, 1 female (ZMMU), “Kiliya” (7), bank of Donai River, 14.05.1911, V. Churnin" (label illegible); 8 males, 6 females (ZISP), near Berdyansk, 30.05.1930, coll.? - **RUSSIA:** 5 females (ZISP), Krasnodar Province, near Slavyanka, 18-27.05.1926, S. Spasky; 3 females (ISE), Azov Area, Blagoveschensk Dist., Sadove, Peshanoe Lake, 28.08.1994, E.I. Malikova; 2 males (ISE), Primors, Lazo Reservation, 21.06.1979-15.08.1981, T.I. Olgier; 2 females (ISE), same area, Khanka Lake, 44°39'N, 132°34'E, 15-16.07.1998, Yu.M. Muravsk; 2 females (ISE), same locality, 20.06.1997, T. Vahvickova. - **CHINA:** 1 female (SMF), Beijing, 100 m a.s.l., 6.06.1997, J. Martens & P. Jäger; 1 male (IZW), Kuangtung, Com-hua, ca. 96 km NE of Kanton, 29.09.1965, R. Bie-lawski. - **JAPAN:** 1 female (MCZ), 384, holotype of Pseudicus cognatus, “Japan, E.G. Pockham coll.”

For other material studied see Logunov & Wesołowska (1992: sub Marrissa magister) and Logunov & Rakov (1998: sub Marrissa canestrini).

**Diagnosis and description.** See Bohdanowicz & Prószynski (1987: sub Marrissa magister) and Logunov & Wesołowska (1992: sub Marrissa magister).

**Distribution.** This a trans-Eurasian subboreal species, which has been commonly known as Mition canestrini from Europe and as Marrissa magister from the Far East (see below). Besides, Wesołowska (1981a) first reported one occurrence of this species in China under the name of Marrissa salophila (Wesołowska’s specimen re-examined).

**Notes.** Pseudicus cognatus is the same species as being repeatedly reported so far from the Far East under the name of Marrissa magister. The holotype of Marrissa magister was shown to be an immature specimen (see Prószynski, 1973; Bohdanowicz & Prószynski, 1987), and hence this specific name is to be considered as nomen dubium. So, all the former Far Eastern records of Marrissa magister (e.g. Yaginuma, 1970; Chikuni & Yaginuma, 1976; Logunov & Wesołowska, 1992, etc.) should actually be referred to Hygna cognata.

Moreover, the re-examination of the holotype of Pseudicus cognatus, as well as numerous specimens determined as Marrissa magister, show no consistent differences from Mendoza canestrini, as it was diagnosed by Logunov & Rakov (1998: sub Marrissa canestrini). Small differences in the structure of the tibial apophysis shown by Bohdanowicz & Prószynski (1987: cf. figs 118 and 122) seem to be an artefact and in reality reflects a variability only. Thus, I agree with Hansen’s opinion (Hansen, 1985a: sub Marrissa canestrini) that the shape of the tibial apophysis in Mendoza canestrini is of poor taxonomic importance and cannot be taken into consideration. Therefore, the species name Pseudicus cognatus is here considered as a junior synonym of Mendoza canestrini.

Figures 101-104. — Male palps of Mendoza canestrini, Ukraine. 101, male bulbus, ventro-median view. 102, embolus, ventro-apical view. 103, male bulbus, dorso-median view. 104, cymbium and palpal tibia, retro-lateral view.
Mendoza elongata (Karsch, 1879) comb. n.  
(Figs 45, 122)


Material. — Russia: 1 female (ISE), Primorje, Chernigovka Dist., near Dmiryevka, 26.08.1986, A.A. Borok.

For other material studied, see Logunov & Wesołowska (1992: sub Marpissa elongata).

Distribution. This is an eastern Paleartic (Manchurian) species recorded so far only from Russia: the Late Eoarchian, Korea and NE China (Bohdanowicz & Przybylski, 1987; Logunov & Wesołowska, 1992; Peng et al., 1993).

Notes. Hyctia hiroseae was described from a single female from Japan (Tadanacima Island) by Nakatsuki (1942). The holotype was lost and cannot be re-examined. Dr. H. Ikeda (personal communication) collected topotypes of this species (2 females) and found them to belong to Mendoza elongata, reasoning from the original description (Nakatsuki, 1942: figs 1-3). I came to the same conclusion.

Besides, the female of Marpissa nolitis, as illustrated and redescribed by Logunov & Wesołowska (1992: fig. 15), in reality belongs to Mendoza elongata. See also comments under "notes" of Mendoza pulchra and Mendoza nolitis.

Mendoza ibarakiensis (Bohdanowicz & Przybylski, 1987) comb. n.


Material. — Japan: 3 males, 2 females (ISE), Miyagi Pref., Izunuma Lake, 1.06.1986, A. Tanikawa.


Distribution. At the present time, the species is known only from Japan (Bohdanowicz & Przybylski, 1987; Ikeda, 1993).

Mendoza nolitis (Grube, 1861) comb. n.  
(Figs 16, 17, 26, 27, 38, 46, 113, 120)


**Marpissa pulchra** (misidentification): Logunov & Wesołowska, 1992 (in part, female only); Ann. Zool. Fennici, vol. 128-129, fig. 17 (female from the ISE, re-examined); Peng et al., 1993: Salticids in China, pp. 125-122, fig. 403-409 (male and female, not examined).

**Material.** — **RUSSIA:** 1 male (ISE), Khabarovsk Province, Obuchie Dist., 13th km of the road Obuchie-Khingansk, 14.08.1994, E.I. Malikova; 1 male (ISE), Anur Area, S坞hodenski Dist., Malaya Szanka, 20.07.1994, E.I. Malikova; 2 males, 4 females (ISE), same area, Kur- dur, 06-07,1997, A. Kuz'min; 1 male (ISE), Primorie, Lazo Reservation, 43°16'N, 132°01'E, 17.08.1980, T.I. Oliger; 4 males, 2 females (ISE), same locality, 6-9-08,1998, Yu.M. Marasik & S. Koponen; 7 males, 1 female (ISE), same area, SW part of Khasan Dist., near Andreevka, 42°35-36'N, 131°13'E, 11-15.07.1998, Yu.M. Marasik. — **NORTH KOREA:** 3 males (IZW, paratypes of *Marpissa pulchra*), "Diya di Chongjin", 24.04.1959, B. Pisarski & J. Prószyński; 2 males and 1 female (IZW, paratypes of *Marpissa pulchra*), "Onpcho di Chongjin", 20.08.1959, J. Prószyński; 3 males, 2 females (IZW), Pyongyang, Teosansan Park, 17.08.1997, H. Garbarczyk; 1 male, 1 female (IZW), Haeson, Kuseong-City, 14.08.1987, H. Garbarczyk; 1 male, 1 female (IZW), same locality, 29-30.06.1990, Ekipa; 1 female (ISE), North Pyongan Prov., Myohyang Mts, Chjosan, 12.06.1990, Ekipa; 3 males (IZW), same mountains, Hyangsan River Valley, 2.08,1987, E. Kierych; 2 males (IZW), same mountains, near Kunggan cave, 10.06.1990, Ekipa; 1 male (IZW), Hanggyang-namdo Province, Kyongsong Co., Sang-onpo-ri, 17.06.1990, Ekipa; 1 male, 2 females (IZW), same province, Orang Co., Changgyon Lake, 17.06.1990, Ekipa; 2 males, 1 female (IZW), Thebian, Teosansan Park, 31.08.1987, H. Garbarczyk; 1 male, 1 female (ISE), Kangwon-do Province, Kunggango Mts, Okryu Valley, 26.08.1987, E. Kierych; 1 female (IZW), same city, near Tomb of King Tongmen, 27.06.1990, Ekipa; 1 female (IZW), Kunggango Mts, near Onjon, 28.08.1987, H. Garbarczyk; 1 female (IZW), same locality, 23.06.1990, Ekipa; 2 females (IZW), same mountains, Hyangsan, 22.08.1987, H. Garbarczyk. — **SOUTH KOREA:** 1 male (ISE), Go Je Peninsula, Chansynyhko Mt., 6.06.1997, A.B. Egorov; 1 female (ISE), north part of Kangwha Peninsula, 27-28.05.1997, E.B. Egorov.

For other material studied, see Logunov & Wesołowska (1992: sub Marpissa nobilis and females sub Marpissa pulchra).

**Diagnosis and description.** See Logunov & Wesołowska (1992: male sub Marpissa nobilis and female sub Marpissa pulchra).

**Distribution.** This is an eastern Palearctic (Manchurian) species recorded so far from the Russian Far East, Korea and NE China (Logunov & Wesołowska 1992; Peng et al., 1993: sub Marpissa pulchra; current data).

**Notes.** Following a wrong earlier assumption (Wesołowska 1981b: figs 35-36) that *Mitthion hatinghei* is a junior synonym of *Marpissa nobilis*, Logunov & Wesołowska (1992) wrongly redescribed the female of *Mendoza elongata* under the name of *Mendoza nobilis*, as Prószyński (1979: figs 176-177) earlier did as well. See also comments under “notes” of *Mendoza pulchra* and *Mendoza elongata*.

**Mendoza pulchra** (Prószyński in Wesołowska, 1981) comb. n. (figs 127, 128)


Material. — NORTH KOREA: 1 female (IZW), Hamgyong-si Prov., Hamdzu Dist., Hynggong-ri, ca. 15 km W of Hamhuyng, 12.06.1963, M. Morokowski & A. Riedel.

Diagnosis and description. See Wesołowska (1981a).

Distribution. Up to now, this species has been recorded undoubtly from Japan and Korea only (Prószyński, 1976; Bodanówicz & Prószyński, 1987; current data).

Notes. The taxonomic status of *Mendoza pulchra* is here recognized to be rather obscure. I found the only female (figs 127, 128) clearly corresponding to Prószyński's figures of the holotype of *Mendoza pulchra* (Prószyński, 1976; figs 412-414; Bodanówicz & Prószyński, 1987; figs 132-134). This female was earlier identified by Wesołowska (1981a) as *Marpiissa elongata*.

The name *Marpiissa pulchra* was first introduced by Prószyński (1976: figs 412-414), who illustrated the female holotype from Japan, but didn’t describe it. Later, Wesołowska (1981a) carefully described both sexes of *Marpiissa pulchra* from the Korean specimens, with all them being treated as the paratypes. The validity of *Marpiissa pulchra* was then accepted by Yagunuma (1986) and Logunov & Wesołowska (1992). However, as I now know it from the study of numerous newly collected material (see above “Material” under *Mendoza nobilis*), the latter authors wrongly matched males and females of *Marpiissa nobilis*, its females being considered those of *Marpiissa pulchra*. The female of *Marpiissa nobilis* redescribed and illustrated by Logunov & Wesołowska (1992: fig. 15), as well as by some other authors (e.g. Prószyński, 1979: figs 176, 177; Wesołowska, 1981a: figs 35, 36), turned out to actually belong to *Mendoza elongata*, while the male of *Marpiissa pulchra* by the same authors (Logunov & Wesołowska, 1992: fig. 16) belongs elsewhere.

Besides, a direct comparison of *Mendoza nobilis* specimens (both males and females) with the paratypes of *Marpiissa pulchra* described by Wesołowska (1981a) from Korea has shown no differences in the genitalia. Thus, it is safe to assume that *Mendoza pulchra* may be a junior synonym of *Mendoza nobilis*. Although a final solution is delayed until the holotype of the former species is re-examined, it is clear that most of the records of *Marpiissa pulchra* in the Russian Far East, Korea and China (Wesołowska, 1981a; Logunov & Wesołowska, 1992; Peng et al., 1993) seem to belong to *Mendoza nobilis*. This issue needs to be considered separately when more specimens of some *Mendoza* species, primarily *Mendoza elongata* and *Mendoza pulchra*, are collected. See also comments under “Notes” of *Mendoza nobilis* and *Mendoza elongata*.

*Mendoza zebra* (Logunov & Wesołowska, 1992) comb. n.


Diagnosis and description. See Logunov & Wesołowska (1992: sub *Marpiissa zebra*).

Distribution. At the present time, the species is known from the type locality only: SE environs of Khabarovsk (Russia).

Acknowledgements

I wish to express my thanks to the following curators who supplied comparative specimens for this study: Drs S.I. Eysymon and V.E. Efimok (both of the PSU), Prof. H. Levi (of the MCZ), Dr Ya.M. Marusik (Magadan, Russia), Dr K.G. Mikhailov (of the ZMU), Dr V.I. Ovishareno (of the ZISP), Dr N. Platnick (of the AMNH), Prof. J. Prószyński (of the IZW), Dr W. Wesołowska (of the ZMU), and Drs M. Saaristo and S. Koponen (both of the ZMTU). I am very obliged to Drs T. Kronesstedt (Stockholm, Sweden), B. Cutter (Kansas, U.S.A.), and H. Ikeda (Kanagawa, Japan) for help in getting rare arachnological literature. I am additionally obliged to Dr H. Ikeda, who kindly translated original descriptions of two *Marpiissa* species from Japanese to English and commented on their taxonomic positions. I am also grateful to Dr P. Lehtinen (of the ZMTU), who provided me with a possibility to work on the scanning electron microscope in his lab. My warmest thanks are due to Dr S. Koponen (of the ZMTU) for the hospitality during my staying at Turku in March-April 1995 and September-October 1998. The work was partially supported by the New Year grant (Nr. 25) of the Siberian Department of the Russian Academy of Sciences and the grant 42680 from the Academy of Finland, withings the frames of the joint project “Biodiversity and zoo-geography of arachnids and insects in North Eurasia”.
References


SAITO, S., 1939. — On the spiders from Tōhoku (northernmost part of the Main Island), Japan. — *Saito Ho-On Kai Museum Research Bulletin (Zoology no. 6)*, 18: 1-91.


