

BRACONIDAE (HYMENOPTERA) FROM MONGOLIA XV.  
SUBFAMILY ALYSIINAE: DACNUSINI

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Hundred sixty-four dacusine specimens have been elaborated, the taxonomic results are detailed as follows: 11 genera are registered to which 41 known and 8 new species belong. Almost every known species is new to the fauna of Mongolia. The eight new species coming from Mongolia (*Amyras* 1, *Dacnusa* 5 and *Protodacnusa* 2 species) are described and related to their nearest allies. With 97 original figures.

Key words: Mongolia, Braconidae, Alysiinae, Dacnusiini, genera, new species, faunistics

INTRODUCTION

This is the first report of the braconid dacusine wasps of Mongolia collected by the late Dr. Z. KASZAB (1915–1986) during his six zoological collecting trips to Mongolia 1963–1968. A total of 164 specimens served for the present elaboration. The dacusine wasps proved to represent 11 genera as well as 41 known and 8 new species. The genera registered in the Mongolian fauna are as follows (with an indication of the respective species numbers in brackets): *Amyras* NIXON (1), *Antrusa* NIXON (1), *Chaenusa* HALIDAY (1), *Dacnusa* HALIDAY (22), *Exotela* FÖRSTER (6), *Lepton* ZETTERSTEDT (7), *Protochorebus* PEREPECHAYENKO (1), *Protodacnusa* GRIFFITHS (5), *Sarops* NIXON (1), *Synelix* FÖRSTER (1) and *Trachionus* HALIDAY (= *Symphya* FÖRSTER) (3). Eight species are new to science: *Amyras arcanus* sp. n., *Dacnusa* (*Dacnusa*) *danzas* sp. n., *D. (Pachysema) gumbus* sp. n., *D. (Aphanta) kaszabi* sp. n., *D. (Pachysema) patuna* sp. n., *D. (Dacnusa) reducta* sp. n., *Protodacnusa meriva* sp. n. and *P. subparallela* sp. n. Forty-nine (41 + 8) dacusine species were discovered in the Mongolian fauna, the majority of the known species are new to her fauna.

The elaborated dacusine material herewith discussed and published is deposited in the Department of Zoology of the Hungarian Natural History Museum (Budapest, Hungary).

\* Results of the zoological explorations by Z. Kaszab in Mongolia No. 512.

## LIST OF THE COLLECTING DATA

Every collecting site in Mongolia was numbered by KASZAB, see his six reports in *Folia entomologica hungarica* 1963–1968 vols 16–21; the reports were written in German language. In the previous papers of my series (PAPP 1991, 1992, 1999, 2000) on the braconids of Mongolia I have published a long list of KASZAB's locality numbers completed with the detailed collecting sites, collecting time and with short characterization of the vegetation of the collecting sites as well as with the collecting device etc. Below those locality numbers with their detailed data are listed which were not included in my previous four papers mentioned:

- Nr. 90. Central aimak: Borulcin tala, cca 100 km SO von Ulan-Baator, 1400 m, gekötschert, 4.VII.1963.
- Nr. 131. Central aimak: Onžulin chundi, 100 km SW von Ulan-Baator, 1400 m, von der niedrigen Vegetation (in starkem Wind) gekötschert, 15.VI.1964.
- Nr. 176. Uburchangaj aimak: Baga Bogd ul, zwischen Somon Bogd und Somon Baruun Bajan-ulaan, 1900 m, von der Vegetation gekötschert, 22.VI.1964.
- Nr. 220. Uburchangaj aimak: Changaj Gebirge, Ongijn gol, 10 km ONO von Arbajcher, 1800 m, am Flussufer an sandiger, schlammiger, kieseliger Stelle geeinzelt und mit Wasser ausgeschwämmt, 29.VI.1964.
- Nr. 230. Uburchangaj aimak: Changaj Gebirge, 2 km S von Somon Schanch, 1690 m, von der Pflanzen gekötschert, 30.VI.1964.
- Nr. 238. Archangaj aimak: 24 km N von Somon Lun, 1520 m, von der Pflanzen gekötschert, 1.VII.1964.
- Nr. 250. Archangaj aimak: NO Ecke des Sees Ogij nur, 1350 m, von der dichten, üppigen Vegetation des Ufers gekötschert, 2.VII.1964.
- Nr. 284. Central aimak: Zuun-Chara, Duusch ul, 1100 m, von der Pflanzen gekötschert, 8.VII.1964.
- Nr. 311. Chentej aimak: zwischen Somon Zenchermandal und Somon Žargaltchaan, 10 km O von Zenchermandal, 1400 m, gekötschert, 27.VII.1965.
- Nr. 353. Suchebaator aimak: 44 km SSW von Baruun urt, 1050 m, mit synanthropher Fliegenfalle gesammelt, 3.VIII.1965.
- Nr. 476. Chentej aimak: 10 km W von Somon Delgerchaan, 1250 m, gekötschert, 24.VIII.1965.
- Nr. 481. Central aimak: Uubulan am Fluss Tola, 60 km O von Ulan-Baator, 1370 m, Überschwemmungsgebiet des Flusses Tola, am Auwald gesiebelt, 25.VIII.1965.
- Nr. 489. Central aimak: Ulan-Baator, Nucht im Bogdo-ul, 12 km SO vom Zentrum, 1600–1800 m, von den Pflanzen geeinzelt, 18.VIII.1965.
- Nr. 522. Central aimak: cca 30 km O von Somon Nalajch, 1530 m, in der Nähe des Flusses Tola, am Wege nach Terelž, in einem breiten, mit üppiger Vegetation bewachsenen Tal (Weidendickicht, an den nassen Stellen mit *Trollius*, *Ranunculus*, *Caltha*, etc.), mit Hilfe der Malaise-Falle gefangen, 14.VI.1966.
- Nr. 542. Archangaj aimak: Changaj Gebirge, Zezerleg, 1650 m, an der Umgebung der Tankstelle, von der öden, jedoch blühenden Steppe gekötschert, 19.VI.1966.
- Nr. 762. Central aimak: Nucht im Bogdo ul, 12 km SO vom Zentrum, 1650 m, am Talgrund neben dem Bach gekötschert, 3.VII.1967.

- Nr. 766. Central aimak: Tosgoni ovoo, 5–10 km N von Ulan-Baator, in der Umgebung des Friedhofes, 1500–1600 m, von *Urtica* und von blühender *Iris* gekötschert, 4.VI.1967.
- Nr. 901. Südgobi aimak: Tachilga ul Gebirge, zwischen Somon Zogt-Ovoo und Dalanzadgad, 68 km S von Zogt-Ovoo, cca 1550 m, mit Hilfe der Malaise-Falle gefangen, 8–9.VII.1967.
- Nr. 902. Same as Nr. 901, 1550 m, sammeln nachts bei Lampenlicht (sammeln bis 1 Uhr in der Nacht), 8.VII.1967.
- Nr. 939. Central aimak: Bogdo ul, Bugijn až achuj, im Gebirge Bogdo ul, 36 km SW von Ulan-Baator, am Rand des Nadelholzwaldes und Birkenwaldes, sowie in den Gebirgssteppen gekötschert, 10.VI.1968.
- Nr. 942. Central aimak: Ulan-Baator, Zaisan im Bogdo ul Gebirge, 5 km S vom Zentrum, 1600 m, vom blühenden Gebüsch und aus Unterholz am Waldrand und in Waldlichtungen gekötschert, 11.VI.1968.
- Nr. 948. Central aimak: 11 km OSO von Somon Bajanzogt, 1600 m, mit Hilfe von Malaise-Falle gesammelt, 13.VI.1968.
- Nr. 957. Bulgan aimak: 11 km W von Somon Bajannuur, am Südrand des Sees Bajan nuur, 1000 m, sammeln nachts bei Lampenlicht bis 1.30 in der Nacht, 14.VI.1968.
- Nr. 1072. Uvs aimak: 4 km OSO vom Pass Ulaan davaa, zwischen dem See Örög nuur und der Stadt Ulaangom, 1700 m, steile Berghänge in einem engen Tal, am Nordhang mit Nadelholzwald, sowie Hochgebirgssteppe und Felsgrat; gekötschert in einem kleinen, nach Norden laufenden Nebental, 6.VII.1968.
- Nr. 1120. Chövsgöl aimak: 8 km N von Somon Alag-erdene, am Fluss Egijn gol, 1600 m, breit ausgedehntes Tal mit Terrasse, kurzrasige Steppe, am Talgrund viele Pfützen; am Flussufer geschwemmt, 17.VII.1968.
- Nr. 1144. Bulgan aimak: 11 km W von Somon Bajannuur, am Südrand des Sees Bajan nuur, 1000 m, sammeln nachts bei Lampenlicht bis 2 Uhr in der Nacht, 24.VII.1968.

## FAUNISTIC LIST

In the subsequent list the genera and species names are ranged alphabetically; distributional and taxonomic remarks are added where necessary. The locality data are presented for every species, they are given in abbreviated form citing only the collecting numbers, the resolution of the respective numbers see in the previous chapter entitled “List of the collecting data”.

**Antrusa flavicoxa** (THOMSON, 1895) – 1 ♂: No. 931. – A frequent to common species in the Palaearctic Region. New to the fauna of Mongolia.

**Chaenusa nereidum** HALIDAY, 1839 – 1 ♂: No. 1120. – Up to now known in six countries of Europe (Ireland, England, Sweden, The Netherland, Belgium, Hungary, European part of Russia: Leningrad district). New to the fauna of Mongolia.

**Dacnusa (Pachysema) abdita** HALIDAY, 1839 – 1 ♀: No. 762. – Distributed in several countries in the western Palaearctic Region, eastwards to Ural Mts. New to the fauna of Mongolia.

**Dacnusa (Pachysema) angelicina** GRIFFITHS, 1967 – 1 ♂: No. 926. 1 ♀: No. 926a. 1 ♀: No. 942. – Its few localities were reported in a fairly long distance from each other: Germany (locus typicus), Hungary, European part of Russia (Leningrad district) and Sakhalin Island. New to the fauna of Mongolia.

**Dacnusa (Pachysema) aquilegiae** MARSHALL, 1896 – 1 ♂: No. 486. 1 ♂: No. 514. 1 ♀: No. 724. – In Europe known in five countries (SHENEFELT 1974: 1084), reported from Asiatic Russia (Buryatia, Maritime Territory) (TOBIAS 1998: 333). New to the fauna of Mongolia.

**Dacnusa (Pachysema) aterrima** THOMSON, 1895 – 1 ♀: No. 523. 1 ♀: 934. 1 ♂: No. 1054. – Hitherto reported from a few countries in the Palaearctic Region (England, Sweden, Hungary, Azerbaidzhan, Russia: Kamchatka and Sakhalin). New to the fauna of Mongolia.

**Dacnusa (Pachysema) atra** TOBIAS, 1998 – 1 ♀: No. 1072. – Described from the Far East Maritime Territory of Asiatic Russia. New to the fauna of Mongolia.

**Dacnusa (Dacnusa) danzas** sp. n.: for its description see the chapter “Descriptions of the new species”.

**Dacnusa (Dacnusa) dryas** NIXON, 1948 – 1 ♂: No. 176. 1 ♀: No. 331. 1 ♂: No. 771. 1 ♀: No. 926a. 1 ♀: No. 939. – Up to now reported from four countries in Europe (Sweden, England, Latvia, European Russia). New to the fauna of Mongolia.

**Dacnusa (Pachysema) fuscipes** GRIFFITHS, 1967 – 1 ♂: No. 504. – Since its description known only in France and Poland. New to the fauna of Mongolia.

**Dacnusa (Pachysema) gumbus** sp. n.: for its description see the chapter “Descriptions of the new species”.

**Dacnusa (Aphanta) kaszabi** sp. n.: for its description see the chapter “Descriptions of the new species”.

**Dacnusa (Pachysema) laeta** NIXON, 1954 – 1 ♀: No. 926a. – First tergite 1.75 times (that of the European forms 1.45–1.6 times) as long as broad behind. Hitherto known in Ireland, Germany, Poland and Hungary. New to the fauna of Mongolia.

**Dacnusa (Dacnusa) lugens** HALIDAY, 1839 – 1 ♀: No. 918. 1 ♂: No. 1107. – Reported from several countries of Europe (SHENEFELT 1974: 1092); not listed in the fauna of the former USSR (TOBIAS 1986: 221). New to the fauna of Mongolia.

**Dacnusa (Pachysema) macrospila** HALIDAY, 1839 – 1 ♀: No. 926a. – In Europe known from six countries (SHENEFELT 1974: 1092), reported from the Baikal Region (TOBIAS 1998: 336). New to the fauna of Mongolia.

**Dacnusa (Dacnusa) maculipes** THOMSON, 1895 – 1 ♀: No. 481. 1 ♂: No., 693. 2 ♂: No. 762. 1 ♂: No. 926a. 1 ♂: No. 938. 1 ♂: No. 939. 1 ♀: No. 991. – Frequent to common in the Palaearctic Region. New to the fauna of Mongolia.

**Dacnusa (Pachysema) melicerta** NIXON, 1954 – 1 ♀: No. 514. 1 ♀: No. 1069. – Widely distributed in the Palaearctic Region. (TOBIAS 1998: 341). New to the fauna of Mongolia.

**Dacnusa (Pachysema) metula** NIXON, 1954 – 1 ♂: No. 298. – Known in England, Scotland, Sweden, European part of Russia (Leningrad district), Azerbaidzhan. New to the fauna of Mongolia.

**Dacnusa (Pachysema) monticola** (FÖRSTER, 1862) – 1 ♂: No. 349. – Known in five countries of Europe (Ireland, Sweden, Denmark, Switzerland, Romania). New to the fauna of Mongolia.

**Dacnusa (Pachysema) nigropygmaea** STELFOX, 1954 – 1 ♀: No. 486. – Distributed in Ireland (locus typicus), Azerbaidzhan, Russia (Leningrad district, Ural Mts, Magadan). New to the fauna of Mongolia.

**Dacnusa (Pachysema) patuna** sp. n.: for its description see the chapter “Descriptions of the new species”.

**Dacnusa (Dacnusa) reducta** sp. n.: for its description see the chapter “Descriptions of the new species”.

**Dacnusa (Liposcia) sibirica** TELENGA, 1934 – 1 ♂: No. 1069. – Widely distributed in the Palaearctic Region (Shenefelt 1974: 1097); nearest to Mongolia reported from the Baikal Region (Irkutsk) (TOBIAS 1998: 336). New to the fauna of Mongolia.

**Dacnusa (Pachysema) tricolor** TOBIAS, 1998 – 1 ♀: No. 523. 1 ♀: No. 961. 1 ♂: No. 1002. – Antenna with 24 (1 ♀ + 1 ♂) and 25 (1 ♀) antennomeres. Precoxal suture less distinct: narrow and hardly sculptured. Mesosoma dark brown. Described from the Far East Maritime Territory of Asiatic Russia. New to the fauna of Mongolia.

**Exotela arunci** GRIFFITHS, 1967 – 1 ♀: No. 926a. – Described from Austria, Germany and Poland; since its description this is the first report of its distribution. New to the fauna of Mongolia.

**Exotela hera** (NIXON, 1937) – 1 ♀: No. 926a. – In Europe frequent; reported from the Far East Maritime Territory of Asiatic Russia (TOBIAS 1998: 323). New to the fauna of Mongolia.

**Exotela lonicerae** GRIFFITHS, 1967 – 1 ♂: No. 926a. – Distributed in England, Asiatic Russia (Far East) and Korea. New to the fauna of Mongolia.

**Exotela obscura** GRIFFITHS, 1967 – 1 ♀: No. 926a. – Distributed in five countries of Europe (Sweden, Germany, Switzerland, Poland, Hungary) and Russia (European part, Baikal Region, Far East Maritime Territory). New to the fauna of Mongolia.

**Exotela sonchina** GRIFFITHS, 1967 – 1 ♂: No. 926. – Known in four countries of Europe as well as in Asiatic Russia (Buryatia, Far East) and Korea. New to the fauna of Mongolia.

**Exotela sulcata** (TOBIAS, 1962) – 1 ♀: No. 926a. – Known in European part of Russia, Denmark, England and Ireland. New to the fauna of Mongolia.

**Lepton albimanus** (VOLLENHOFEN, 1873) – 1 ♀: No. 327. 1 ♂: No. 476. 1 ♀: No. 1069. – A common species in the Palaearctic Region.

**Lepton elegans** (CURTIS, 1829) – 1 ♀: No. 433. 1 ♂: No. 444. 1 ♀: No. 489. – Widely distributed in the Palaearctic Region. New to the fauna of Mongolia.

**Lepton gracile** (CURTIS, 1829) – 1 ♀: No. 90. 1 ♀: No. 131. 1 ♂: No. 230. 1 ♂: No. 238. 1 ♂: No. 250. 1 ♂: No. 433. 1 ♂: No. 476. 2 ♀ + 1 ♂: No. 542. 1 ♂: No. 552. 1 ♀ + 1 ♂: No. 614. 1 ♀: No. 628. 1 ♂: No. 746. 1 ♂: No. 766. 2 ♀ + 2 ♂: No. 990. 1 ♀ + 1 ♂: No. 1002. 1 ♂: 1054. 2 ♀ + 2 ♂: No. 1069. 1 ♂: No. 1126. – Frequent to common in the Palaearctic Region; first reported from Mongolia by TOBIAS (1998: 307).

**Lepton nigrum** (NEES, 1812) – 1 ♀: No. 311. – A very frequent species in the Palaearctic Region.

**Lepton ruficollis** (HERRICH-SCHAEFFER, 1838) – 2 ♀: No. 614. 1 ♀: No. 646. – Distributed in the Palaearctic Region albeit not a frequent species. First reported from Mongolia by TOBIAS (1998: 307).

**Lepton semirufum** (FISCHER, 1957) (?= *Coelinus rufus* ASTAFUROVA, 1998) – 1 ♀: No. 1100. – Described from Austria, I have specimens from Hungary (1 ♀) and Russia (1 ♂). New to the fauna of Mongolia.

**Lepton viduum** (CURTIS, 1829) – 3 ♀ + 3 ♂: No. 614. 1 ♂: No. 628. 1 ♂: No. 632. 1 ♀: No. 1002. 1 ♂: No. 1082. – Widely distributed in the Palaearctic Region, known from Mongolia (SHENEFELT 1974: 1079).

**Protochorebus kasparyani** PEREPECHAYENKO, 1997 – 1 ♀: No. 522. – Described from Ukraine and Asiatic Russia (Chita Region). New to the fauna of Mongolia.

**Protodacnusa amurensis** (TELENGA, 1934) male new – 1 ♀: No. 220. 1 ♂: No. 416. 1 ♂: No. 900. 1 ♂: No. 901. 1 ♂: No. 902. 1 ♂: No. 948. 1 ♂: No. 957. 7 ♂: No. 1144. – The male is similar to the female: body 2.5–3 mm long, antenna with 28–30 antennomeres (28: 3 ♂, 29: 2 ♂, 30: 1 ♂, flagelli of two males deficient). The species was described by TELENGA (1934: 121) from the Amur Region (Asiatic Russia), however, it is not included in the key for the *Protodacnusa* species of Far East of Asiatic Russia (cf. TOBIAS 1998: 315–316); albeit its new combination was indicated earlier by TOBIAS (1986: 212) himself. New to the fauna of Mongolia.

**Protodacnusa aridula** (THOMSON, 1895) – 1 ♂: No. 519. – Distributed in Europe. New to the fauna of Mongolia.

**Protodacnusa meriva** sp. n.: for its description see the chapter “Descriptions of the new species”.

**Protodacnusa ruthei** GRIFFITHS, 1964 – 1 ♂: No. 353. 1 ♀: No. 918. 1 ♀: No. 959. 1 ♀: No. 1146. – Reported from Germany, Moldavia and European part of Russia. New to the fauna of Mongolia.

**Protodacnusa subparallela** sp. n.: for its description see the chapter “Descriptions of the new species”.

**Sarops popovi** TOBIAS, 1962 – 1 ♀: No. 693. 1 ♂: No. 746. – Known from several regions of Russia, reported from Azerbaïdzhan (TOBIAS 1998: 311). New to the fauna of Mongolia.

**Synelix semirugosa** (HALIDAY, 1839) – 1 ♀: No. 762. 1 ♀: No. 961. – A Palearctic and fairly frequent species; nearest to Mongolia reported from Kazakhstan and Kamchatka. New to the fauna of Mongolia. According to TOBIAS (1998: 308) the genus *Synelix* is but a subgenus of *Coelinus*.

**Trachionus hians** (NEES, 1816) – 1 ♀ + 2 ♂: No. 967. – A fairly frequent species in the Palearctic Region. New to the fauna of Mongolia.

**Trachionus mandibularis** (NEES, 1814) – 1 ♂: No. 284. – A fairly frequent species in the Palearctic Region. New to the fauna of Mongolia.

**Trachionus ringens** HALIDAY, 1839 – 1 ♀: No. 113. – Frequent to sporadic in the Palearctic Region. In the Maritime Territory of Asiatic Russia reported by TOBIAS (1998: 311).

## DESCRIPTIONS OF THE NEW SPECIES

Abbreviations applied in the descriptions (after VAN ACHTERBERG 1979: 248–249, 1993: 5): Fore wing – *m-cu* = recurrent or transverse medio-cubital vein, *r* = first section of the radial or transverse radial vein, *1-R1* = first section of the metacarpal vein, *1-SR-M* = first section of the cubital vein, *3-CU1* = third section of the discal vein, *3-SR* = second section of the radial vein, *CU1b* = second section of the subdiscoidal vein, *SRI* = third section of the radial vein. Ocelli – *OOL* = ocellar-ocular line (i.e. shortest distance between hind ocellus and compound eye, *POL* = postocellar line (i.e. shortest distance between two hind ocelli).

### **Amyras arcanus** sp. n. ♀ (Figs 1–6)

Material examined (3 ♀). – Female holotype and one female paratype: Mongolia, Bajan-Ölgij aimak, im Tal des Flusses Chavcalyn gol, 25 km O von Somon Cagannuur, 1850 m, 3 VII 1968, leg. Z. KASZAB (loc. nr. 1056). One female paratypes: Mongolia, Central aimak, Ulaan chodag, 16 km S von Somon Öndörschireet, 1500 m, 24 VII 1966, leg. Z. KASZAB (loc. nr. 739). – Holotype and two paratypes are deposited in the Hungarian Natural History Museum (Department of Zoology), Budapest, Hym. Typ. Nos 10661 (holotype) 10662–10663 (paratypes).

Holotype is in good condition. Paratype (No. 10662) is in less good condition: left antenna damaged (flagellum with 6 flagellomeres), right fore and left hind wing longitudinally creased. Paratype (No. 10663) is in fairly bad condition: right antenna damaged (flagellum with 16 flagellomeres), right fore wing distally torn, left fore wing missing.

Etymology – The species name “arcanus” means mysterious and refers to the subtle specific features.

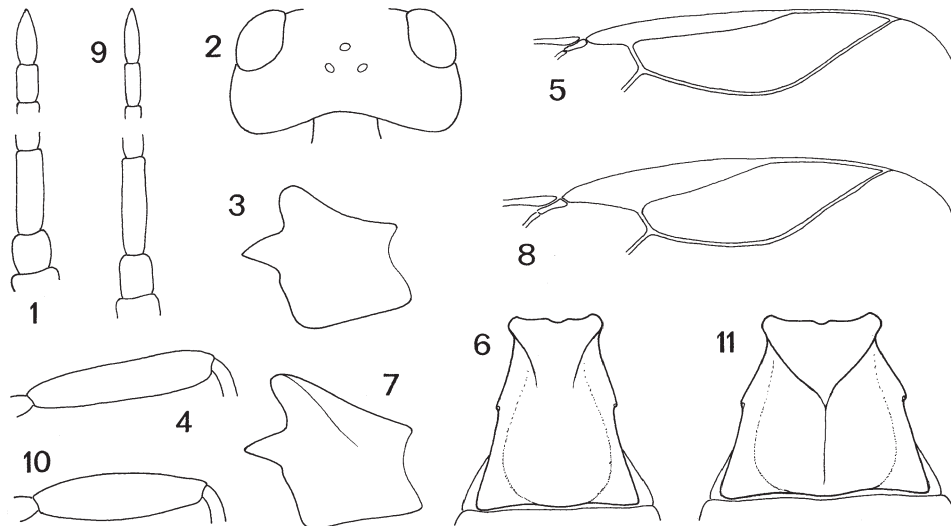
Description of the female holotype. – Body 3 mm long. Antenna as long as body and with 35 antennomeres. First flagellomere distinctly three times and penultimate flagellomere 1.6 times as long as broad apically (Fig. 1). – Head in dorsal view (Fig. 2) transverse, 1.8 times as broad between temples as long; temple somewhat swollen, i.e. head between temples somewhat broader than between eyes; temple slightly longer than eye, occiput moderately excavated. OOL three times as long as POL. Mandible clearly broadening distally, upper tooth hardly longer than middle tooth (Fig. 3). Head smooth and shiny.

Mesosoma in lateral view 1.2 times as long as high. Notaulix anteriorly hardly distinct; mesoscutum, scutellum and mesopleuron polished, anterior declivous part of mesoscutum uneven. Posterior fovea of mesoscutum linear, deep. Propodeum densely rugulose. – Hind femur five times as long as broad distally (Fig. 4). Hind basitarsus as long as tarsomeres 2–3 combined.

Fore wing a bit longer than body. Pterostigma (Fig. 5) parallel-sided, ten times as long as wide and issuing *r* clearly proximally from its middle; *r* 1.5 times as long as width of pterostigma; *1-R1* half as long as pterostigma; *3-SR + SR1* ending before tip of wing. Vein *CU1b* of first subdiscal cell present, i.e. cell distally closed.

First tergite (Fig. 6) clearly broadening posteriorly, somewhat longer than broad behind, pair of spiracles at middle of tergite; pair of keels short and not meeting each other; hind half of tergite rugose. Further tergites polished. Ovipositor sheath long, straight, in lateral view as long as hind tarsus.

Scape and pedicel yellow with brownish tint; flagellum brownish black, basal flagellomeres anteriorly faintly yellowish. Head and mesosoma black. Mandible, clypeus, labrum and palpi yellow. Tegula dark yellow. Legs yellow, hind coxa basally blackish, hind tibia apically and hind tarsus entirely weakly fumous. First tergite black, metasoma blackish. Tergites 2–3 with somewhat stronger, further tergites with very weak rusty suffusion. Wings hyaline, pterostigma and veins brownish yellow.



**Figs 1–11.** 1–6. *Amyras arcanus* sp. n.: 1 = second + third and penultimate + ultimate antennomeres, 2 = head in dorsal view, 3 = mandible, 4 = hind femur, 5 = distal part of right fore wing, 6 = first tergite. – 7–11. *Amyras clandestina* (HALIDAY): 7 = mandible, 8 = distal part of right fore wing, 9 = second + third and penultimate + ultimate antennomeres, 10 = hind femur, 11 = first tergite

Description of the two female paratypes. – Similar to the female holotype. Ovipositor sheath in lateral view upcurved.

Male and host unknown.

Distribution: Mongolia.

The new species, *Amyras arcanus*, is nearest to *A. clandestina* (HALIDAY, 1839) (Palearctic Region), the two species are distinguished by subtle though well recognizable features:

1 (2) Upper tooth of mandible clearly longer than middle tooth (Fig. 3). Pterostigma not parallel-sided and issuing *r* just proximally from its middle; *r* shorter than width of pterostigma (Fig. 8). Flagellomeres long, first flagellomere distinctly four times and penultimate flagellomere 2.7 times as long as broad apically (Fig. 9). Hind femur 3.7 times as long as broad just distally (Fig. 10). First tergite somewhat broader behind than long and fully carinated (Fig. 11). Hind half of metasoma reddish yellow. ♀: 2.5–3 mm

*A. clandestina* (HALIDAY)

2 (1) Upper tooth of mandible hardly longer than middle tooth (Fig. 3). Pterostigma parallel-sided and issuing *r* clearly proximally from its middle; *r* longer than width of pterostigma (Fig. 5). Flagellomeres less long, first flagellomere 3.3 times and penultimate flagellomere 1.6 times as long as broad apically (Fig. 1). Hind femur five times as long as broad medially (Fig. 4). First tergite somewhat longer than broad behind and with a pair of short keels (Fig. 6). Hind half of metasoma black with weak rusty suffusion. ♀: 3 mm

***A. arcanus* sp. n.**

***Dacnusa (Dacnusa) danzas* sp. n. ♀**  
(Figs 12–19)

Material examined (1 ♀). – Female holotype: Mongolia, Central aimak, Ulan-Baator, Nucht in Bogdo ul, 1880–2000 m, 9 VI 1966, leg. Z. KASZAB (loc. no. 508). – Holotype is deposited in the Hungarian Natural History Museum (Department of Zoology), Budapest, Hym. Typ. No. 10664.

Holotype is in good condition: glued on a pointed card by its mesosternum and first sternites, right antenna damaged (flagellum with 19 flagellomeres), right fore and middle legs less visible owing to their mounting.

Etymology. – The species name “danzas” is a phantasy name.

Description of the female holotype. – Body 3 mm long. Antenna somewhat longer than body and with 35 antennomeres. Flagellum thick albeit distally attenuating; first flagellomere a bit longer

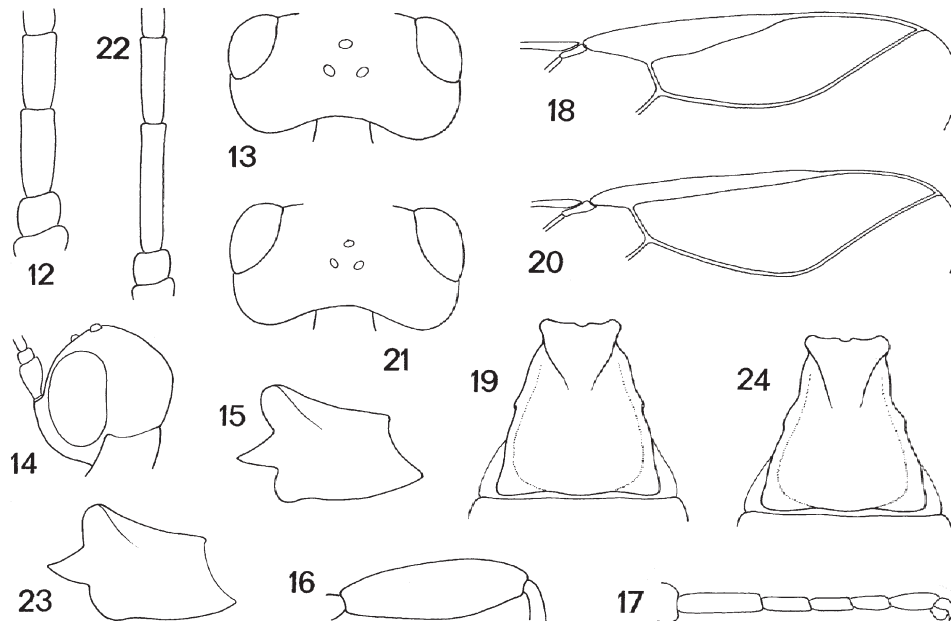


than second flagellomere and 2.9 times as long as broad apically; penultimate flagellomere 2.4 times as long as broad (Fig. 12). – Head in dorsal view (Fig. 13) transverse, 1.9 times as broad as long, eye just longer than temple, temple rounded. OOL twice as long as POL, ocelli middle sized. Eye in lateral view 1.7 times as high as wide, temple 1.3 times as wide as eye (Fig. 14). Mandible 1.6 times as long as broad between teeth 1 and 3, upper tooth great, middle tooth wide basally, lower tooth relatively small (Fig. 15). Head polished.

Mesosoma in lateral view 1.2 times as long as high. Mesoscutum and scutellum evenly hairy; notaulix restricted to anterior declivous part of mesoscutum; hind fovea of mesoscutum long linear. Precoxal suture missing, mesopleuron polished. Propodeum densely rugulose. – Hind femur 3.1 times as long as broad distally (Fig. 16). Hind tibia one-fifth length of hind tarsus. Second tarsomere of hind tarsus as long as fifth tarsomere (Fig. 17).

Fore wing just longer than body. Pterostigma (Fig. 18) wide cuneiform, 5.7 times as long as wide and issuing *r* proximal from its middle, *r* shorter than width of pterostigma; *l-Rl* 0.6 times as long as length of pterostigma; 3-*SR* + *SRl* approaching tip of wing; *m-cu* interstitial.

First tergite (Fig. 19) evenly broadening posteriorly, just broader behind than long, pair of spiracles at middle of tergite, pair of keels merging medially into rugo-rugulosity of tergite. Second and third tergites fused and equal in length, suture between tergites 2–3 almost indistinct and medially somewhat concave; combined length of tergites 2–3 just shorter than length of first tergite. Tergites beyond first one polished. Ovipositor sheath in lateral view as long as hind tarsomeres 1–3 combined.



**Figs 12–24.** 12–19. *Dacnusa (Dacnusa) danzas* sp. n.: antennomeres 2–4, 13 = head in dorsal view, 14 = head in lateral view, 15 = mandible, 16 = hind femur, 17 = hind tarsus, 18 = distal part of right fore wing, 19 = first tergite. – 20–24. *Dacnusa (Dacnusa) astarte* NIXON: 20 = distal part of right fore wing, 21 = head in dorsal view, 22 = antennomeres 2–4, 23 = mandible, 24 = first tergite

Scape and pedicel dark rusty with blackish pattern, flagellum black. Head and mesosoma black. First tergite brownish black, rest of tergites brownish yellow. Mandible, palpi, tegulae and legs light brownish yellow. Hind tibia apically and tarsus entirely blackish. Wings hyaline, pterostigma and veins light brown.

The new species, *Dacnusa danzas*, runs to *D. astarte* NIXON, 1948 (England, Russia: Far East) with the help of TOBIAS's key (1998: 324–325), the distinction of the two species is presented as follows:

- 1 (2) Pterostigma narrow cuneiform, 15–16 times as long as wide, *3SR + SRI* reaching tip of wing (Fig. 20), *m-cu* antefurcal. Eye in dorsal view 1.4 times as long as temple (Fig. 21). Antenna with 28 antennomeres; first flagellomere long and less thick, 1.4 times as long as second flagellomere (Fig. 22). Upper and lower teeth of mandible less great (Fig. 23). Mesoscutum anteriorly hairy, posteriorly along notaulix hairy. First tergite less evenly broadening (Fig. 24). Metasoma blackish to black, hind tibia and tarsus yellow. ♀: 2.8–2.9 mm *D. (D.) astarte* NIXON
- 2 (1) Pterostigma wide cuneiform, 5.7 times as long as wide, *3SR + SRI* approaching tip of wing (Fig. 18), *m-cu* interstitial. Eye in dorsal view just longer than temple (Fig. 13). Antenna with 35 antennomeres; first flagellomere short and thick, a bit longer than second flagellomere (Fig. 12). Upper and lower teeth of mandible great (Fig. 15). Mesoscutum evenly hairy. First tergite evenly broadening (Fig. 19). Tergites 4–8 and sternites brownish yellow, hind tibia apically and hind tarsus entirely blackish. ♀: 3 mm

**D. (D.) danzas** sp. n.

***Dacnusa (Pachysema) gumbus* sp. n. ♂**  
(Figs 25–29)

Material examined (1 ♂). – Male holotype: Mongolia, Uvs aimak, 4 km OSO vom Pass Ulaan davaa, zwischen See Örög nuur und Ulaangom, 1700 m, 6 VII 1968, leg. Z. KASZAB (loc. nr. 1072). – Holotype is deposited in the Hungarian Natural History Museum (Department of Zoology), Budapest, Hym. Typ. No. 10665.

Holotype is in good condition: glued on a pointed card by its mesosternum, right flagellum damaged (with 19 flagellomeres), left hind wing somewhat creased.

Etymology. – The species name “gumbus” is a phantasy name.

Description of the male holotype. – Body 2.3 mm long. Antenna somewhat longer than body and with 30 antennomeres; first flagellomere three times as long as broad apically and slightly longer than second flagellomere, penultimate flagellomere 1.3 times as long as broad. – Head in dorsal view

(Fig. 25) transverse, 1.8 times as broad as long, temple beyond eye just swollen, i.e. head between temples slightly broader than between eyes; eye as long as temple, occiput excavated. OOL twice as long as POL. Mandible 1.4 times longer than broad between teeth 1 and 3, upper and lower teeth great, middle tooth basally less wide (Fig. 26). Head polished, face hair-punctured and shiny.

Mesosoma in lateral view 1.2 times as long as high. Mesoscutum hairy, medially around fovea bare, fovea linear and fairly deep; notaulix distinct on declivous anterior part of mesoscutum. Precoxal suture long linear, smooth, extending to middle of mesopleuron. Propodeum rugose, medially with a small, almost smooth and shiny field, laterally with hairs. – Hind femur 4.1 times as long as broad distally (Fig. 27). Hind tibia and tarsus equal in length.

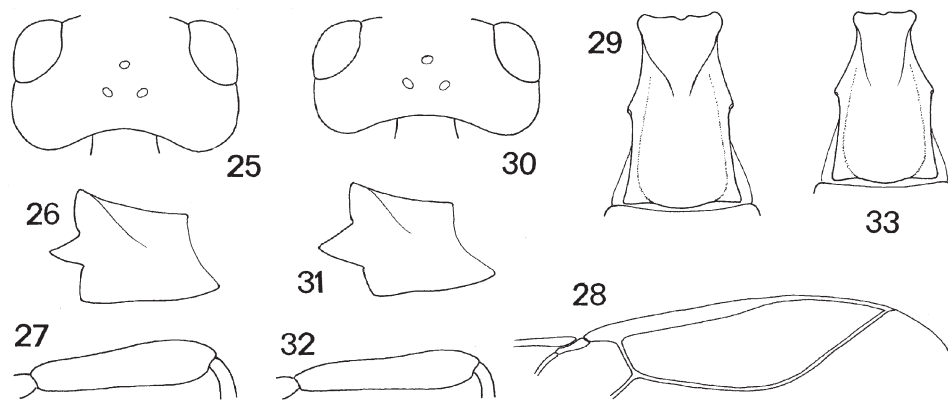
Fore wing just longer than body. Pterostigma (Fig. 28) long and narrow, parallel-sided, 13 times as long as wide, *r* twice longer than width of pterostigma, *l*–*R*1 0.6 times length of pterostigma; *3*–*SR* + *SR*1 ending before tip of wing; *m*–*cu* postfurcal.

First tergite (Fig. 29) 1.6 times as long as broad behind, pair of spiracles at middle of tergite, up to spiracles tergite weakly broadening, beyond spiracles parallel-sided; hind half of tergite with longitudinal and dense striation, laterally with long hairs. Combined length of tergites 2–3 slightly longer than first tergite, border between them indistinct. Metasoma from second tergite polished. Hairs restricted along hind margin of tergites.

Antenna and body black. Mandible, palpi and legs yellowish brown, coxae dark brown to blackish, hind tarsus dark fumous. Tegula brown, parategula light brown. Second tergite with weak brownish tint. Wings subhyaline, pterostigma and venation brown pigmented.

The new species, *Dacnusa gumbus*, runs to *D. tricolor* TOBIAS, 1998 (Russia: Far East Maritime Territory) with the help of TOBIAS's key (1998: 324–354), the two species are distinguished by a few features not easy to recognize:

1 (2) Head in dorsal view twice as broad as long, temple beyond eye not swollen (Fig. 30). Antenna with 24–25 antennomeres. Teeth 1 and 3 of mandible less great, tooth 2 basally wide (Fig. 31). Precoxal suture short and weakly crenu-



**Figs 25–33.** 25–29. *Dacnusa (Pachysema) gumbus* sp. n.: 25 = head in dorsal view, 26 = mandible, 27 = hind femur, 28 = distal part of right fore wing, 29 = first tergite. – 30–33. *Dacnusa (Pachysema) tricolor* TOBIAS: 30 = head in dorsal view, 31 = mandible, 32 = hind femur, 33 = first tergite

late. Hind femur five times as long as broad apically (Fig. 32). First tergite up to spiracles more broadening (Fig. 33). Tergite(s) 2(–3) yellow to brown. ♂: 1.4–1.6 mm  
*D. (P.) tricolor* TOBIAS

2 (1) Head in dorsal view 1.8 times as broad as long, temple beyond eye just swollen (Fig. 25). Antenna with 30 antennomeres. Teeth 1 and 3 of mandible great, tooth 2 small (Fig. 26). Precoxal suture long linear, smooth. Hind femur 4.1 times as long as broad distally (Fig. 27). First tergite up to spiracles less broadening Fig. 29). Tergite 2 black with weak brownish tint. ♂: 2.3 mm

**D. (P.) gumbus** sp. n.

***Dacnusa (Aphanta) kaszabi* sp. n.** ♀♂  
 (Figs 34–40, 44)

Material examined (2♀ + 1♂). – Female holotype and one female + one male paratypes: Mongolia, Uvs aimak, S Rand des Sees Örög nuur, 1500 m, 28 VI – 5 VII 1968, leg. Z. KASZAB (loc. no. 1036). – Holotype and two paratypes (1♀ + 1♂) are deposited in the Hungarian Natural History Museum (Department of Zoology), Budapest, Hym. Typ. Nos 10666 (holotype) and 10667–10668 (paratypes).

Holotype is in good condition: specimen glued on a pointed card by its left mesosomal side, left legs more or less immersed in glue. Two paratypes are mounted similar to the holotype.

Etymology. – The new species is dedicated to Dr. ZOLTÁN KASZAB (1915–1986), collector of the new species and world-wide known explorer of the insect etc. fauna of Mongolia.

Description of the female holotype. – Body 2.1 mm long. Antenna somewhat longer than body and with 23 antennomeres. Flagellum filiform, first flagellomere 1.4 times as long as second flagellomere, further flagellomeres gradually shortening so that penultimate flagellomere twice as long as broad. – Head in dorsal view (Fig. 34) twice as broad as long, eye hardly longer than temple, temple rounded. OOL 2.3 times as long as POL. Eye in lateral view 1.5 times as high as wide, temple beyond eye 0.8 times as wide as eye. Mandible with three teeth, middle tooth spiky (Fig. 35). Head polished, face laterally uneven.

Mesosoma in lateral view 1.2 times as long as high. Notaulix shallow and reaching middle of mesoscutum, hind middle fovea short linear and deep. Precoxal suture narrow, finely crenulate. Propodeum rugose, pubescent. Metapleuron densely hair-punctured, less pubescent. – Hind femur (Fig. 36) five times as long as broad distally. Hind tarsus one-fifth shorter than hind tibia.

Fore wing somewhat longer than body. Pterostigma (Fig. 37) cuneiform, five times as long as wide, issuing *r* from its proximal fourth. Vein *1-SR-M* missing (subgeneric feature), *r* as long as width of pterostigma, *3-SR + SRI* bent and ending fairly far before tip of wing, *1-RI* as long as length of pterostigma. First subdiscal cell quadrate, *3-CUI + CUIb* relatively thick (Fig. 37).

First tergite (Fig. 38) a bit longer than broad behind, evenly broadening posteriorly, pair of spiracles just before middle of tergite, pair of keels reaching middle of tergite; hind half of tergite rather longitudinally rugose, further tergites polished. Third tergite almost one-third longer than second tergite (Fig. 38). Ovipositor sheath short, in lateral view half as long as hind basitarsus (Fig. 39).

Scape and pedicel light brown, flagellum brown. Head dark brown, clypeus brown, mandible yellow, palpi pale yellow. Mesosoma brownish black, tegula dark brown, parategula light brown. Metasoma brown, tergite dark brown. Legs yellow with faint brownish suffusion. Wings hyaline, pterostigma and veins yellowish brown.

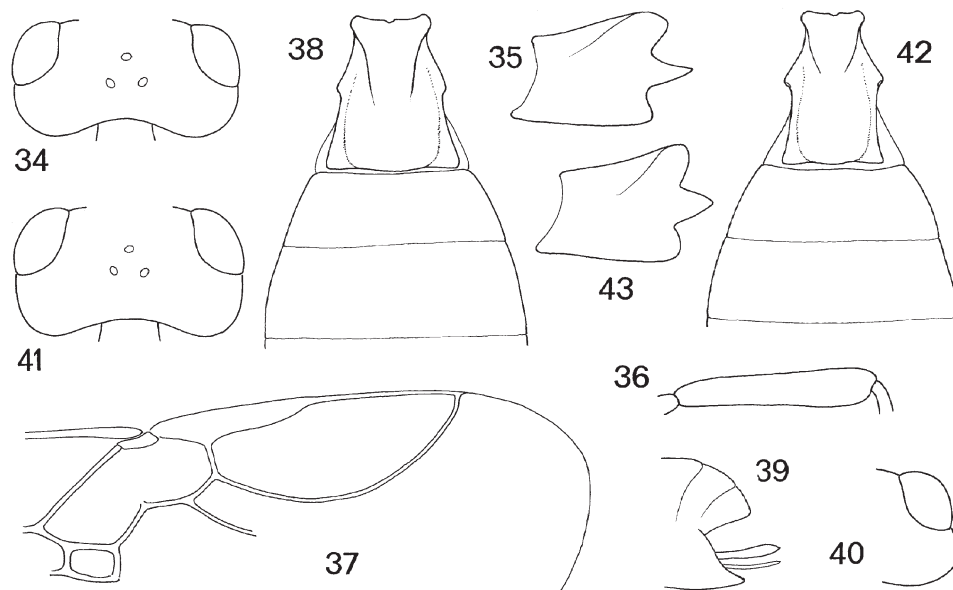
Description of the two paratypes (1 ♀ + 1 ♂). – Similar to the female holotype. Body 2 mm long. Antenna with 22 antennomeres. Temple of male slightly swollen beyond eye (Fig. 40). Male: first tergite less broadening posteriorly; pterostigma wide, 2.8 times as long as wide proximally, *1-R1* just shorter than pterostigma (Fig. 44), pterostigma dark brown; head and mesosoma also dark brown.

Host unknown.

Distribution: Mongolia.

The new species, *Dacnusa (Aphanta) kaszabi*, is nearest to *D. (A.) sasakawai* TAKADA, 1977 (Japan, Russia: Far East Maritime Territory and European part, Hungary), the series (2 ♀ + 1 ♂) of the new species is compared to the pair of the paratypes (1 ♀ + 1 ♂) housed in the Hungarian Natural History Museum purchased by exchange (and redescribed by FISCHER 1994: 260):

1 (2) Head in dorsal view (Fig. 41) 1.8 times as broad as long, temple somewhat less rounded. First tergite beyond pair of spiracles parallel-sided (Fig. 42).



**Figs 34–43.** 34–40. *Dacnusa (Aphanta) kaszabi* sp. n.: 34 = female head in dorsal view, 35 = mandible, 36 = hind femur, 37 = distal part of female right fore wing, 38 = tergites 1–3, 39 = posterior end of metasoma, 40 = right part of male head in dorsal view. – 41–43. *Dacnusa (Aphanta) sasakawai* TAKADA: 41 = female head in dorsal view, 42 = tergites 1–3, 43 = mandible

Middle tooth of mandible less spiky (Fig. 43). Female: pterostigma eight times as long as wide and parallel-sided (Fig. 45). Male: pterostigma less narrowing distally (Fig. 46). Female + male: *SR1* concave, *1-R1* shorter than length of pterostigma. Legs yellow. ♀: 1.5–1.7 mm, ♂: 1.3–1.5 mm

*D. (A.) sasakawai* TAKADA

2 (1) Head in dorsal view (Fig. 34) twice as broad as long, temple somewhat more rounded. First tergite evenly broadening posteriorly (Fig. 38). Middle tooth of mandible spiky (Fig. 35). Female: pterostigma 5–5.5 times as long as wide and narrowing distally (Fig. 37). Male: pterostigma narrowing distally (Fig. 44). Female + male: *SR1* convex, *1-R1* almost as long as length of pterostigma. Legs yellow with faint brownish suffusion. ♀♂: 2–2.1 mm

***D. (A.) kaszabi* sp. n.**

The new species is related to *D. (A.) hospita* (FÖRSTER, 1862) (Europe) considering the evenly broadening first tergite of the two species, however, they are distinct by the features keyed:

1 (2) First tergite less broadening posteriorly, 1.3 times as long as broad behind (Fig. 47). Temple of female in dorsal view rounded (Fig. 48). Pterostigma of female subparallel-sided, six times as long as wide, *3-SR + SR1* curved at its middle (Fig. 49). Mandible with pointed teeth 1 and 3 (Fig. 50). Metasoma black, tergites 2–3 brownish. ♀♂: 1.8–1.9 mm *D. (A.) hospita* (FÖRSTER)

2 (1) First tergite more broadening posteriorly, a bit longer than broad behind (Fig. 38). Temple of female in dorsal view more rounded (Fig. 34), that of male somewhat swollen (Fig. 40). Pterostigma of female narrowing distally, five times as long as wide (Fig. 37). Mandible with rounded teeth 1 and 3 (Fig. 35). Metasoma brown, first tergite dark brown. ♀♂: 2–2.1 mm

***D. (A.) kaszabi* sp. n.**

***Dacnusa (Pachysema) patuna* sp. n. ♂**

(Figs 51–58)

Material examined (1 ♂). – Male holotype: Mongolia, Central aimak, Bugujn až achuj im Gebirge Bogdo ul, 36 km SW von Ulan Baator, 1650 m, 10 VI 1968, leg. Z. KASZAB (loc. no. 941). – Holotype is deposited in the Hungarian Natural History Museum (Department of Zoology), Budapest, Hym. Typ. No. 10669.

Holotype is in good condition: glued on a pointed card by its left side, left antenna damaged (i.e. with 20 antennomeres), right fore wing partly (subdiscal cells!) creased.

Etymology. – The species name “patuna” is a phantasy name.

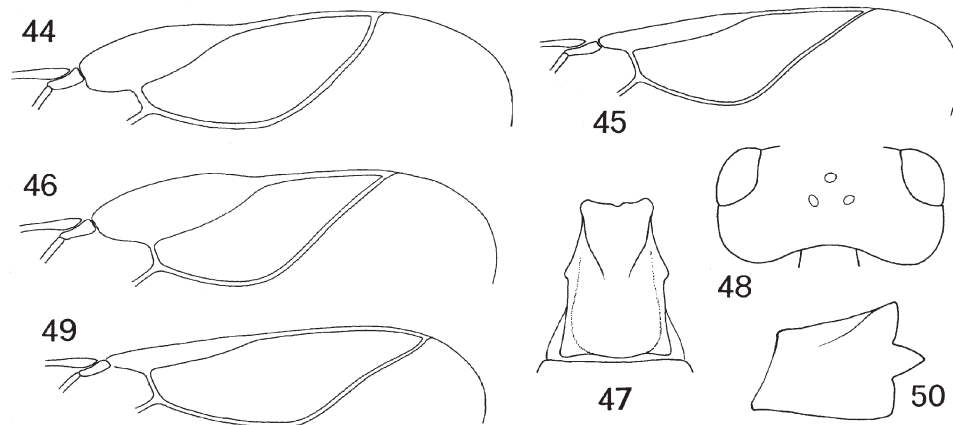
Description of the male holotype. – Body 1.6 mm long. Antenna somewhat longer than body and with 22 antennomeres. First flagellomere three times as long as broad apically and 1.3 times longer than second flagellomere, flagellomeres gradually shortening so that penultimate flagellomere 1.8 times as long as broad. – Head in dorsal view (Fig. 51) transverse, twice as broad as long, eye twice length of temple, temple strongly rounded. OOL 1.6 times as long as POL, ocelli middle sized. Eye in lateral view 1.7 times as high as wide and 1.2 times wider than temple. Mandible 1.8 times as long as broad between teeth 1 and 3, second tooth relatively less spiky (Fig. 52). Head polished, face with disperse and fine hair-punctures.

Mesosoma in lateral view 1.2 times as long as high. Notaulix restricted to fore declivous part of mesoscutum, middle lobe of mesoscutum with rather disperse hairs, polished, hind fovea linear and deep. Propodeum with a median areola, anteriorly from areola rugulo-subrugulose, otherwise propodeum uneven and shiny (Fig. 53) with disperse hairs. – Hind femur 4.5 times as long as broad distally (Fig. 54). Hind tibia one-sixth longer than hind tarsus.

Fore wing somewhat longer than body. Pterostigma (Fig. 55) long, narrow and parallel-sided, 13 times as long as broad, *r* almost twice as long as width of pterostigma, 3-*SR* + *SR* ending before tip of wing; 1-*R*1 half as long as pterostigma; *m-cu* postfurcal (left fore wing) and just postfurcal or almost interstitial (right fore wing) (Figs 56–57, see arrows).

First tergite (Fig. 58) 1.5 times as long as broad behind, pair of spiracles just beyond middle of tergite, tergite up to spiracles moderately broadening, beyond spiracles parallel-sided, scutum (or hind half of tergite) rather longitudinally rugo-rugulose. Further tergites polished, tergites 2–3 fused.

Body brown, first tergite dark brown. Scape, pedicel and first flagellomere yellow, latter with faint brownish tint; flagellum brown. Face light brown, clypeus yellowish brown, mandible yellow, labrum and palpi straw yellow. Tegula light brown, parategula yellowish brown. Legs yellow, telotarsi darkening. Wings subhyaline, pterostigma and veins yellowish.



**Figs 44–50.** 44. *Dacnusa (Aphanta) kaszabi* sp. n.: distal part of male right fore wing. – 45–46. *Dacnusa (Aphanta) sasakawai* TAKADA: 45 = distal part of female right fore wing, 46 = distal part of male right fore wing. – 47–50. *Dacnusa (Aphanta) hospita* (FÖRSTER): 47 = first tergite, 48 = head in dorsal view, 49 = distal part of female right fore wing, 50 = mandible

The new species, *Dacnusa (Pachysema) patuna*, is nearest to *D. (P.) evadne* NIXON, 1937 (Palearctic Region) considering their interstitial *m-cu* and short *I-R1*, however, they are separated by the features keyed:

1 (2) First tergite twice as long as broad behind (Fig. 59). Propodeum rugose with a weak longitudinal carina anteriorly (Fig. 60). Head in dorsal view 1.8 times as broad as long, eye 1.2–1.3 times as long as temple (Fig. 61). Middle tooth of mandible somewhat more spiky (Fig. 62). Tegula yellow. ♂: 2–2.3 mm

*D. (P.) evadne* NIXON

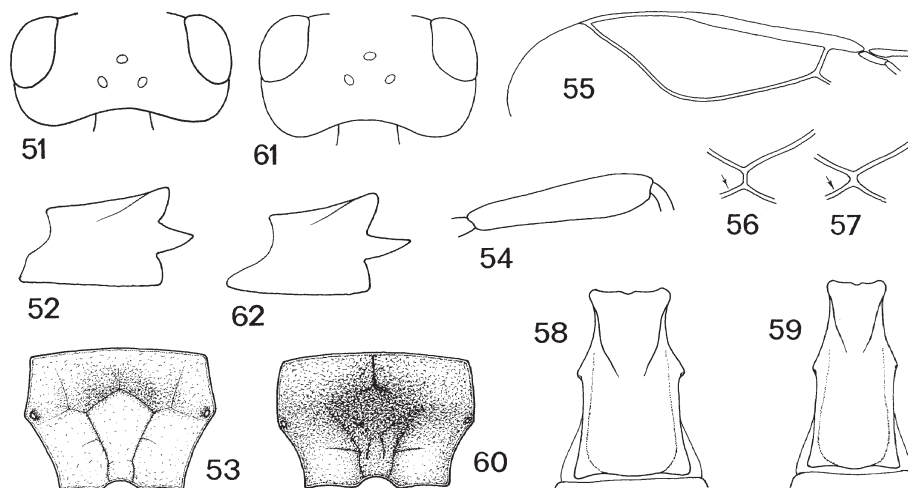
2 (1) First tergite 1.5 times as long as broad behind (Fig. 58). Propodeum medially with an areola, anteriorly rugulose otherwise uneven (Fig. 53). Head in dorsal view twice as broad as long, eye twice as long as temple (Fig. 51). Middle tooth of mandible somewhat less spiky (Fig. 52). Tegula brown. ♂: 1.9 mm

***D. (P.) patuna* sp. n.**

***Dacnusa (Dacnusa) reducta* sp. n. ♀♂**

(Figs 63–74)

Material examined (18 ♀ + 9 ♂). – Female holotype (No. 10670) + two female paratypes (Nos 10671–10672): Mongolia, Uvs aimak, Sandgebiet Altan els, 35 km WNW von Somon Tes, 1400 m,



**Figs 51–62.** 51–58. *Dacnusa (Pachysema) patuna* sp. n.: 51 = head in dorsal view, 52 = mandible, 53 = propodeum, 54 = hind femur, 55 = distal part of left fore wing, 56 = postfurcal *m-cu* (↓), 57 = just postfurcal or almost interstitial *m-cu* (↓), 58 = first tergite. – 59–62. *Dacnusa (Pachysema) evadne* NIXON: 59 = first tergite, 60 = propodeum, 61 = head in dorsal view, 62 = mandible



23 Juni 1968, leg. KASZAB (loc. no. 1007). – One male paratype (No. 10688): Mongolia, Ostgobi aimak, 25 km SO von Čojren, 1200 m, 30 Juni 1963, leg. KASZAB (loc. no. 68). – One male paratype (No. 10689): Mongolia, Südgobi aimak, Gurban Sajchan ul, 30 km S von Somon Bulgan, 1700 m, 19 Juni 1964, leg. KASZAB (loc. no. 154). – One male paratype (No. 10690): Mongolia, Chentej aimak, Čandagan tal, 40 km O von Somon Žargaltchan, 1300 m, 28 Juli 1965, leg. KASZAB (loc. no. 316). – One female (No. 10673) + one male paratype (No. 10691): Mongolia, Chentej aimak, 150 km ONO von Öndörchaan, 10 km S vom Kerulen, 30 Juli 1965, leg. KASZAB (loc. no. 331). – One male paratype (No. 10692): Mongolia, Suchebaator aimak, 44 km SSW von Baruun urt, 1050 m, 2–3 August 1965, leg. KASZAB (loc. no. 349). – Two female paratypes (Nos 10674–10675): Mongolia, Suchebaator aimak, 15 km (1 ♀) and 45 km (1 ♀) N von Somon Erdenzagan, 950 m (1 ♀) and 900 m (1 ♀), 9 August 1965, leg. KASZAB (loc. no. 380 and 381). – One female paratype (No. 10676): Mongolia, Čojbalsan aimak, 50 km SO von Čojbalsan, 700 m, 16 August 1965, leg. KASZAB (loc. no. 421). – One male paratype (No. 10693): Mongolia, Central aimak, cca 30 km O von Somon Nalajch, 1530 m, 14 Juni 1966, leg. KASZAB (loc. no. 523). – One male paratype (No. 10694): Mongolia, Central aimak, 13 km W von Somon Bajanzogt, 1450 m, 17 Juni 1966, leg. KASZAB (loc. no. 527). – One female paratype (No. 10677): Mongolia, Bulgan aimak, cca 20 km W von Somon Bajanuur, 1100 m, 18 Juni 1966, leg. KASZAB (loc. no. 531). – One female paratype (No. 10678): Mongolia, Central aimak, Ulan Baator, Nucht im Bogdo ul, 1650 m, 3 Juni 1967, leg. KASZAB (loc. no. 762). – Four female paratypes (Nos 10679–10682): Mongolia, Mittelgobi aimak, Choot bulag, zwischen Chuld und Delgerchangaj, 1480 m, 10 Juni (3 ♀) and 13 Juni (1 ♀) 1967, leg. KASZAB (loc. nos 782: 3 ♀, 913: 1 ♀). – Two female (Nos 10683–10684) and two male (Nos 10695–10696) paratypes: Mongolia, Central aimak, 12 km S von Somon Bajanbaraat, 1380 m, 13 Juni 1967, leg. KASZAB (loc. no. 918). – One female paratype (No. 10685): Mongolia, Bulgan aimak, 30 km NNW von Somon Daschinčilen, 1200 m, 15 Juni 1968, leg. KASZAB (loc. no. 959). – One female paratype (No. 10686): Mongolia, Bulgan aimak, Namnan ul Gebirge, 23 km NW von Somon Chutag, 1150 m, 17 Juni 1968, leg. KASZAB (loc. no. 973). – One female paratype (No. 10687): Mongolia, Chövsgöl aimak, 3 km SW von Somon Burenchaan, 1650 m, 21 Juni – 16 Juli 1968, leg. KASZAB (loc. no. 993).

Female holotype and 27 paratypes (18 ♀ + 9 ♂) are deposited in the Hungarian Natural History Museum (Department of Zoology), Budapest, Hym. Typ. Nos 10670 (holotype), 10671–10687 (female paratypes) and 10688–10696 (male paratypes).

Holotype is in good condition: glued on a pointed card by the right side of the meso- and metasoma. Paratypes are also in good condition: glued on pointed cards either by their sides or by mesosternum, three specimens with damaged flagelli, two specimens with creased wings.

Etymology. – The name of the new species “*reducta*” refers to the conspicuously shortened marginal cell of the fore wing.

Description of the female holotype. – Body 1.5 mm long. Antenna shorter than body and with 14 antennomeres. First three flagellomeres equal in length (four times longer than broad apically), further flagellomeres gradually shortening and thickening so that penultimate flagellomere 1.6 times as long as broad. – Head in dorsal view (Fig. 63) less transverse, 1.7 times as broad as long, temple beyond eye swollen, i.e. head between temples broader than between eyes; temple 1.3 times as long as eye. Ocelli small, OOL one-fourth longer than POL. Eye in lateral view almost twice as high as wide, temple almost twice as wide as eye. Mandible moderately broadening distally, third tooth reduced (Fig. 64). Head polished.

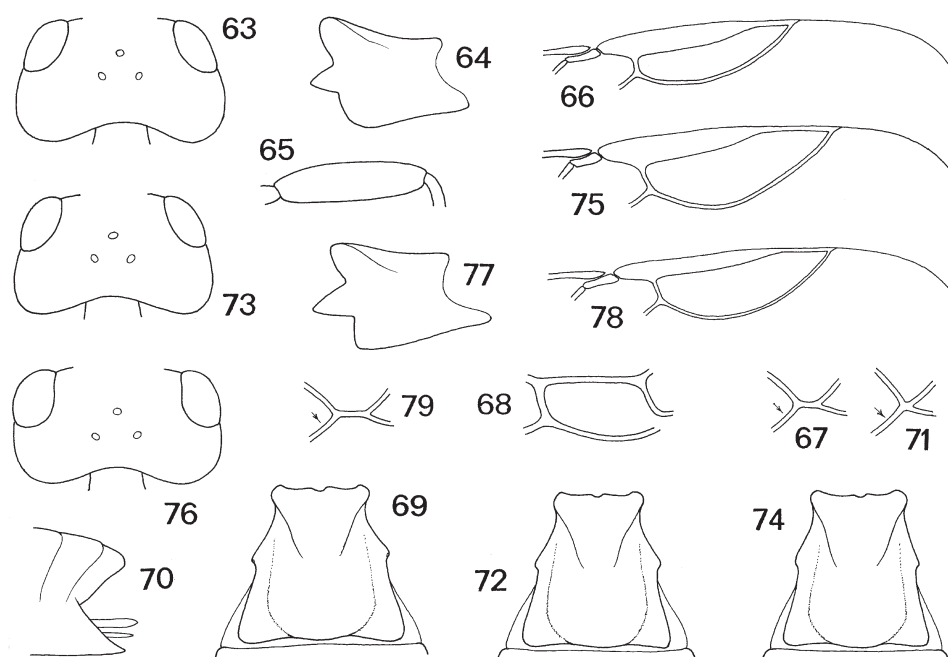
Mesosoma in lateral view 1.25 times as long as high. Notaulix entirely indistinct. Mesoscutum bare and polished, its anterior declivous part punctured and haired. Precoxal furrow distinct as short

and very shallow impression. Propodeum smooth, shiny, laterally punctured and hairy. – Hind femur four times as long as broad medially (Fig. 65). Hind tibia and tarsus equal in length.

Fore wing about as long as body. Pterostigma (Fig. 66) 6.6 times as long as wide, almost parallel-sided, issuing *r* from its proximal fourth, *r* half as long as width of pterostigma; marginal cell narrow and short, i.e.  $3-SR + SR1$  bent and ending far before tip of wing;  $1-R1$  very short, 0.25 times as long as length of pterostigma; *m-cu* antefurcal (Fig. 67, see arrow); first subdiscal cell as in Fig. 68, *CU1b* depigmented.

First tergite short and distinctly broadening posteriorly, somewhat wider behind than long, pair of spiracles just before middle of tergite, scutum smooth and shiny, tergite laterally from scutum uneven (Fig. 69). Second and third tergites fused, i.e. border between them absent, together with further tergites polished. Ovipositor sheath short, in lateral view as long as third tarsomere of hind tarsus (Fig. 70).

Scape brown, pedicel light brown, flagellum dark brown. Head and mesosoma dark brown, metasoma brown. Mandible and palpi yellowish brown. Tegula dark brown, parategula light brown. Legs brown, fore femur apically and fore tibia basally yellowish. Wings hyaline, pterostigma and veins brownish yellow.



**Figs 63–79.** 63–74. *Dacnusa (Dacnusa) reducta* sp. n.: 63 = head in dorsal view (♀♂), 64 = mandible, 65 = hind femur, 66 = distal part of right fore wing, 67 = antefurcal *m-cu* (↓), 68 = first subdiscal cell, 69 = first tergite, 70 = posterior end of female metasoma, 71 = interstitial *m-cu* (↓), 72 = first tergite of female paratype, 73 = head of male paratype in dorsal view, 74 = first tergite of male paratype. – 75–77. *Dacnusa (Dacnusa) lugens* (HALIDAY): 75 = distal part of right fore wing, 76 = head in dorsal view, 77 = mandible. – 78. *Dacnusa (Pachysema) aterrima* THOMSON: distal part of right fore wing. – 79. *Dacnusa (Dacnusa) pseudolugens* TOBIAS: antefurcal *m-cu* (↓)

Description of the 17 female paratypes. – Similar to the female holotype. Body 1.2–1.5 mm long (1.2: 3 ♀, 1.3: 11 ♀, 1.4: 2 ♀, 1.5: 1 ♀). Antenna with 13–15(–18) antennomeres (13: 6 ♀, 14: 4 ♀, 15: 6 ♀, 18: 1 ♀). Head in dorsal view 1.65–1.7(–1.75) times as broad as long. Vein *m-cu* either (just) antefurcal (Fig. 67) or interstitial (Fig. 71). Hind femur 3.8–4 times as long as broad somewhat distally. First tergite usually somewhat broader behind than long (Fig. 69) or, less usually, as long as broad behind (3 ♀, Fig. 72). Ground colour of body blackish with faint brownish tint.

Description of the nine male paratypes. – Similar to the female types. Body 1.2–1.5 mm long (1.2: 4 ♂, 1.3: 3 ♂, 1.4: 1 ♂, 1.5: 1 ♂). Antenna with 14–17 antennomeres (14: 3 ♂, 15: 3 ♂, 16: 1 ♂, 17: 2 ♂). Head in dorsal view either similar to the that of female (Fig. 63) or temple somewhat less swollen (Fig. 73). First tergite less broadening posteriorly, as long as broad behind (Fig. 74). Ground colour of body blackish.

Distribution: Mongolia. – Host unknown.

The new species, *Dacnusa (Dacnusa) reducta*, is nearest to *D. (D.) lugens* (HALIDAY, 1839) considering their tiny body and reduced length of marginal cell; the two species are distinguished by the features keyed:

- 1 (2) Marginal cell short, *1-R1* half (0.5) as long as pterostigma (Fig. 75); *m-cu* always antefurcal (cf. Figs 67 and 79, see arrows). Temple in dorsal view not swollen, i.e. head between temples as broad as between eyes, eye and temple of equal length (Fig. 76). Antenna with 17–23 antennomeres (♀♂). Mandible with distinct third tooth and less broadening distally (Fig. 77). ♀: 1.5–1.7 mm, ♂: 1.5–1.6 mm *D. (D.) lugens* (HALIDAY)
- 2 (1) Marginal cell very short, *1-R1* 0.3 times as long as pterostigma (Fig. 66); *m-cu* either (just) antefurcal (Fig. 67, see arrow) or interstitial (Fig. 71, see arrow). Temple in dorsal view swollen, i.e. head between temples broader than between eyes, temple clearly longer than eye (Figs 63, 73). Antenna with 13–15 (♀) and 17 (♂) antennomeres. Mandible with reduced third tooth and more broadening distally (Fig. 64). ♀: 1.3–1.5 mm, ♂: 1.5 mm

**D. (D.) reducta** sp. n.

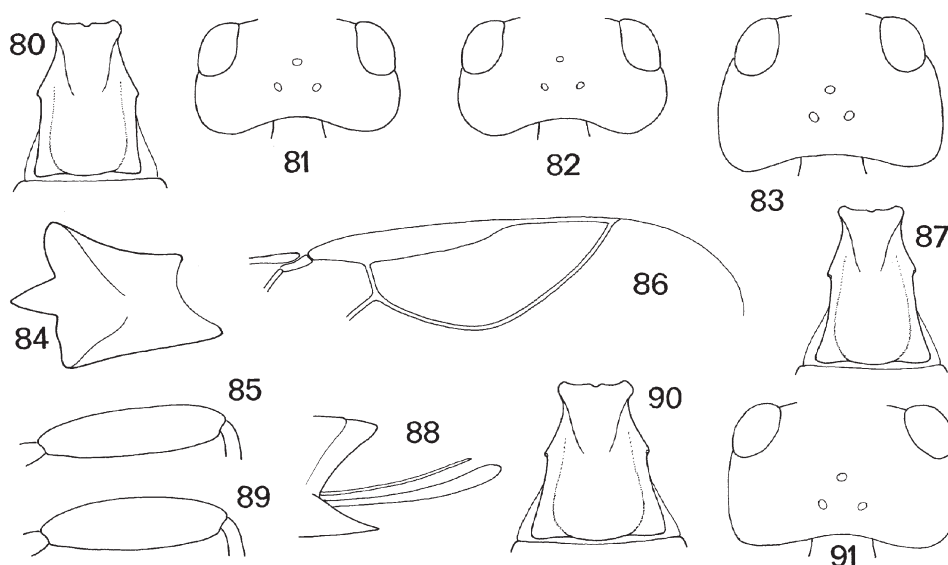
*Dacnusa (Pachysema) aterrima* THOMSON, 1895 is similar to *D. (D.) reducta* sp. n. considering their dark coloured body (legs too) and shortened marginal cell, their distinction is presented as follows:

- 1 (2) First tergite long (Fig. 80), (1.2–)1.3–1.4 times as long as broad behind (subgeneric feature). Marginal cell of fore wing less narrow (Fig. 78). Antenna with 16–19 antennomeres (♀♂). Hind tibia somewhat longer than hind tarsus. ♀♂: 1.5–2 mm *D. (P.) aterrima* THOMSON
- 2 (1) First tergite short (subgeneric feature), usually broader behind than long (Fig. 69) or, in male and less usually in female, as long as broad behind (Figs 72, 74). Marginal cell of fore wing narrow (Fig. 66). Antenna with 13–15 (♀) and

17 (♂) antennomeres. Hind tibia and tarsus equal in length. ♀: 1.3–1.5 mm,  
♂: 1.5 mm **D. (D.) reducta** sp. n.

With the help of TOBIAS's key (1998: 324–330) to the *Dacnusa* species of Russian Far East the new species, *Dacnusa (D.) reducta*, runs to *D. pseudolugens* TOBIAS, 1998 (Asiatic Russia: Magadan Region, Maritime Territory, Yakutia), the two species are separated by a few features as follows:

- 1 (2) Antenna with 21 antennomeres. Fovea of mesoscutum present. Pterostigma 2–2.5 times as long as *l-Rl*, *m-cu* clearly antefurcal (Fig. 79). Temple in dorsal view either as long as (♂, Fig. 81) or slightly longer than eye (♀, Fig. 82), weakly swollen beyond eye. Third tooth of mandible less reduced (cf. Fig. 77). ♀: 77). ♀: 1.5–1.7 mm *D. (D.) pseudolugens* TOBIAS
- 2 (1) Antenna with 13–15(–18) antennomeres. Fovea of mesoscutum absent. Pterostigma four times as long as *l-Rl*, *m-cu* either antefurcal (Fig. 67, see arrow) or interstitial (Fig. 71, see arrow). Temple in dorsal view 1.3–1.4 times as long as eye, clearly swollen beyond eye (Fig. 63, 73). Third tooth of mandible reduced (Fig. 64). ♀♂: 1.3–1.5 mm **D. (D.) reducta** sp. n.



**Figs 80–91.** 80. *Dacnusa (Pachysema) aterrima* THOMSON: first tergite. – 81–82. *Dacnusa (D.) pseudolugens* TOBIAS: 81 = head of male and 82 = head of female in dorsal view. – 83–90. *Protodacnusa meriva* sp. n.: 83 = head in dorsal view, 84 = mandible, 85 = hind femur of female holotype, 86 = distal part of right fore wing, 87 = first tergite of female holotype, 88 = posterior end of female metasoma, 89 = hind femur of female paratype, 90 = first tergite of female paratype. – 91. *Protodacnusa aridula* (THOMSON): head in dorsal view

**Protodacnusa meriva** sp. n. ♀  
(Figs 83–90)

Material examined (3 ♀). – Female holotype: Mongolia, Central aimak, Tosgoni ovoo, 10 km N von Ulan–Baator, 1700–1900 m, 23–24 Juli 1967, leg. KASZAB (loc. no. 926a). – One female paratype: Mongolia, Zavchan aimak, 24 km O von Somon Songino, 2000 m, 12 Juli 1968, leg. KASZAB (loc. no. 1095). – One female paratype: Mongolia, Zavchan aimak, Choit chunch, 26 km ONO vom See Telmen nuur, 2150 m, 13 Juli 1968, leg. KASZAB (loc. no. 1104).

Holotype and two paratypes are deposited in the Hungarian Natural History Museum (Department of Zoology), Budapest, Hym. Typ. Nos 10697 (holotype) and 10698–10699 (paratypes).

Holotype is in good condition: glued on a pointed card by its right mesopleuron. Two paratypes are in fairly good condition: one paratype (No. 10698) glued on a pointed card by its mesosternum, left middle and hind legs missing; one paratype (No. 10699) glued on a pointed card by its right side, right fore and middle legs almost invisible owing to the mounting.

Etymology. – The species name “meriva” is a phantasy name.

Description of the female holotype. – Body 1.8 mm long. Antenna about as long as head and mesosoma combined and with 19 antennomeres. First flagellomere three times and penultimate flagellomere 1.3 times as long as broad, flagellum distally thickening. – Head in dorsal view (Fig. 83) subcubic, 1.5 times as broad between temples as long, i.e. head behind eyes swollen; temple 1.6 times longer than eye, occiput weakly excavated. OOL clearly three times as long as POL. Mandible as in Fig. 84, second tooth spiky. Head polished.

Mesosoma in lateral view 1.7 times as long as high. Notaulix less distinct and restricted to declivous part of mesoscutum. Mesoscutum hairy except hind lateral two sides, its hind fovea linear and faintly distinct. Precoxal suture absent. Propodeum smooth, along hind margin rugulo-uneven. – Hind femur 4.1 times as long as broad medially (Fig. 85). Hind basitarsus as long as tarsomeres 2–3 combined.

Fore wing somewhat longer than body. Pterostigma (Fig. 86) elongate and parallel-sided, 6.5 times as long as wide and issuing *r* from its proximal third; *r* as long as width of pterostigma, 3–*SR* + *SR*1 ending far before tip of wing, 1–*R*1 half as long as pterostigma. Vein *m-cu* antefurcal, *CUIb* of subdiscal cell present, i.e. cell distally closed.

First tergite (Fig. 87) 1.3 times as long as broad behind, evenly broadening posteriorly, pair of spiracles before middle of tergite, pair of carinae extending up to spiracles, tergite longitudinally rugulose. Further tergites polished. Ovipositor sheath in lateral view as long as hind tarsus, and upcurved. (Fig. 88).

Body black with faint brownish tint. Scape dark brown, flagellum black. Mandible yellow, teeth brown. Palpi light brown. Legs brownish black with light coloured pattern. Wings hyaline, pterostigma and veins brown.

Description of the two female paratypes. – Similar to the female holotype. Body 2–2.1 mm long. Antenna with 19 and 21 antennomeres. Hind femur 3.6 times as long as broad medially (Fig. 89). First tergite (Fig. 90) more broadening behind, 1.1 times as long as broad behind. Ovipositor sheath in lateral view as long as hind basitarsus (1 ♀).

Male and host unknown.

Distribution: Mongolia.

The new species, *Protodacnusa meriva*, is nearest to *P. orientalis* TOBIAS, 1998 (Russia: Far East Maritime Territory) and to *P. aridula* (THOMSON, 1895) (Europe). The distinction between *P. meriva* and *P. orientalis* is presented subsequently (the distinction of the latter species is restricted to its short description, cf. TOBIAS 1998: 315–316, i.e. I do not know *P. orientalis* in nature):

- 1 (2) Male: Pterostigma four times as long as wide, *r* clearly shorter than width of pterostigma (Fig. 119: 9 in TOBIAS 1998: 313). Second tooth of mandible less spiky (Fig. 119: 8 l.c.). Second tergite with two rows of piles. Scape, palpi and legs brownish yellow. ♂: 3.5 mm *P. orientalis* TOBIAS
- 2 (1) Female: Pterostigma 6–7 times as long as wide, *r* as long as width of pterostigma (Fig. 86). Second tooth of mandible spiky (Fig. 84). Second tergite bare. Scape dark brown, palpi light brown and legs brownish black. ♀: 1.8–2.1 mm **P. meriva** sp. n.

The specific separation of *P. meriva* and *P. aridula* is given as follows:

- 1 (2) Width of head in dorsal view equal across eyes and temples, i.e. head beyond eye not swollen (Fig. 91). Precoxal suture present, rugose. Antenna with 24–28 antennomeres, penultimate flagellomere twice as long as broad. Second tergite covered with hairs over its entire surface. Ovipositor sheath short, not projecting beyond metasoma. Legs, except coxae, yellow to brownish yellow or testaceous. ♀: 1.6–2.8 mm *P. aridula* (THOMSON)
- 2 (1) Width of head in dorsal view greater across temples than across eyes, i.e. head beyond eye swollen (Fig. 83). Precoxal suture absent. Antenna with 19–21 antennomeres, penultimate flagellomere cubic. Second tergite bare. Ovipositor sheath long, projecting beyond metasoma, upcurved (Fig. 88). Legs brownish black with light coloured pattern. ♀: 1.8–2.1 mm **P. meriva** sp. n.

**Protodacnusa subparalella** sp. n. ♂  
(Figs 92–97)

Material examined (1 ♂). – Male holotype: Mongolia, 180 km NW of Baruun Urt, taken with soil trap, 11–18 August 1972, leg. F. MÉSZÁROS. – Holotype is deposited in the Hungarian Natural History Museum (Department of Zoology), Budapest, Hym. Typ. No. 10700.

Holotype is in good condition: glued on a pointed card by its right side, left hind wing somewhat longitudinally creased.

Etymology. – The species name “subparalella” refers to the less broadening first tergite.

Description of the male holotype. – Body 1.7 mm long. Antenna about as long as body and with 20 antennomeres. First flagellomere 2.6 times and penultimate flagellomere twice as long as broad. – Head in dorsal view (Fig. 92) transverse, 1.9 times as broad between temples as long, head beyond eyes swollen, temple 1.3 times as long as eye, occiput weakly excavated. OOL twice as long as POL. Eye in lateral view 1.8 times as high as wide, temple beyond eye 1.4 times as wide as eye and ventrally narrowing (Fig. 93). Mandible as in Fig. 94. Head polished, face laterally uneven.

Mesosoma in lateral view 1.4 times as long as high. Notaulix restricted to declivous part of mesoscutum, relatively wide and subrugulose. Mesoscutum bare, shiny, its declivous part hairy, mesoscutal fovea distinct. Precoxal suture absent. Propodeum smooth and shiny, laterally hair-punctured. – Hind femur four times as long as broad distally (Fig. 95). Hind basitarsus slightly longer than tarsomeres 2–3 combined.

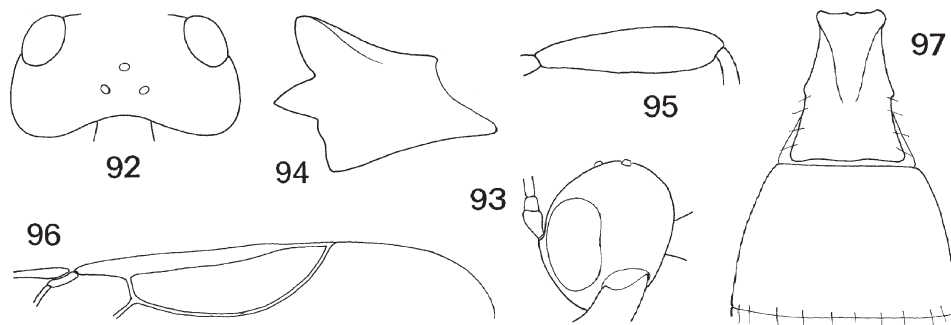
Fore wing about one-fourth longer than body. Pterostigma (Fig. 96) long, ten times as long as wide, parallel-sided, issuing *r* from its proximal fourth; *r* as long as width of pterostigma, marginal cell short, i.e. *1-R1* one-fifth length of pterostigma. Vein *m-cu* antefurcal; *Cu1b* of first subdiscal cell present, i.e. cell distally closed.

First tergite (Fig. 97) 1.3 times as long broad behind, less broadening posteriorly, pair of spiracles beyond middle of tergite, pair of keels reaching middle of tergite, tergite smooth and shiny, basally uneven. Further tergites polished. Tergites 2–5 with a row of few hairs along hind margin of tergites, tergites 2–3 fused, border between them absent (Fig. 97).

Head and mesosoma brownish black; tergites brown, first tergite dark brown. Antenna dark brown. Mandible yellowish, palpi pale. Tegula light brown. Fore legs light brown, middle and hind legs brown. Wings hyaline, pterostigma brown, veins brownish, basally depigmented.

The new species, *Protodacnusa subparalella*, runs to *P. litoralis* GRIFFITHS, 1964 with the help of the key to the *Protodacnusa* species compiled by GRIFFITHS (1964: 892):

1 (2) Male: Antenna with 30–32 antennomeres. Precoxal suture present, rugose. Propodeum rugose. First tergite with shallow sculpture, second tergite with four or five rows of fine hairs distributed evenly over its surface. Legs largely testaceous, hind coxa black. ♂: 2 mm *P. litoralis* GRIFFITHS



**Figs 92–97.** *Protodacnusa subparalella* sp. n.: 92 = head in dorsal view, 93 = head in lateral view, 94 = mandible, 95 = hind femur, 96 = distal part of right fore wing, 97 = tergites 1–3

- 2 (1) Male: Antenna with 20 antennomeres. Precoxal suture absent. Propodeum smooth, laterally hair-punctured. First tergite smooth, second tergite with one row of few hairs along its hind margin (Fig. 97). Legs light brown to brown. ♂: 1.7 mm **P. subparalella** sp. n.  
*Protodacnusa subparalella* sp. n. runs to *P. orientalis* TOBIAS, 1998 with the help of the key to *Protodacnusa* species of Russian Far East by TOBIAS (1998: 315–316):
- 1 (2) Male: Pterostigma four times as long as wide, *r* clearly shorter than width of pterostigma; marginal cell long, *l*–*RI* more than half as long as pterostigma (Fig. 119: 9 in TOBIAS 1998: 313). First tergite irregularly rugose, pair of spiracles somewhat protruding. Precoxal suture present, rugose. Scape brownish yellow. ♂: 3.5 mm *P. orientalis* TOBIAS
- 2 (1) Male: Pterostigma ten times as long as wide, *r* as long as width of pterostigma; marginal cell short, *l*–*RI* less than half as long as pterostigma (Fig. 96). First tergite smooth, pair of spiracles not protruding (Fig. 97). Precoxal suture absent. Scape dark brown. ♂: 1.7 mm **P. subparalella** sp. n.

\*

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