

Illustrated key to the Western Palearctic genera of the subtribe
Craticheumonina (sensu Heinrich) and taxonomic notes on
European species of *Rugosculpta* Heinrich, 1967
(Hymenoptera: Ichneumonidae: Ichneumoninae: Ichneumonini)

Иллюстрированный ключ западнопалеарктических родов
подтрибы Craticheumonina (sensu Heinrich) и таксономические
замечки о европейских видах рода *Rugosculpta* Heinrich, 1967
(Hymenoptera: Ichneumonidae: Ichneumoninae: Ichneumonini)

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KEY WORDS: Hymenoptera, Ichneumonidae, Ichneumoninae, Ichneumonini, Craticheumonina, *Rugosculpta*, genera.

КЛЮЧЕВЫЕ СЛОВА: Hymenoptera, Ichneumonidae, Ichneumoninae, Ichneumonini, Craticheumonina, *Rugosculpta*, роды.

SUMMARY. Key to the 23 European genera of the subtribe Craticheumonina (sensu Heinrich, 1967) is presented. For all genera the tables of figures of the type or most characteristic species are given. Each table includes punctuated drawings of adults, head in two views, propodeum, 1st-2nd segments of abdomen as well as additional drawings of other body parts which are important to diagnostics. European species of the genus *Rugosculpta* Heinrich are studied in detail.

РЕЗЮМЕ. Приводится ключ для 23 европейских родов подтрибы Craticheumonina (sensu Heinrich, 1967). Для каждого рода приведены таблицы рисунков типовых или наиболее характерных видов. Каждая из них включает точечные рисунки имаго, головы в двух ракурсах, проподоума, 1-2-го сегментов брюшка, а также дополнительные рисунки частей тела, важных для диагностики. Рассмотрены особенности таксономии европейских видов рода *Rugosculpta* Heinrich.

Introduction

Subfamily Ichneumoninae is one of the largest and most difficult in regard to taxonomy. The evolution of the group resulted in producing many closely related and weakly differentiated species. Furthermore, discrimination of superspecific taxa is more difficult than separation of species [Rasnitsyn, 1978]. According to Heinrich [1967a]: "...in a young subfamily, as the Ich-

neumoninae probably are, intermediate characters can be expected to be still in existence more frequently than in most other groups. Hence the genera can not be so sharply separated as our taxonomic mind would like". A possible way to facilitate identification of superspecific taxa is to prepare illustrations of the type, or the most characteristic species of the genera belonging to the subfamily. One of the requirements of a successful solution of this problem, in our opinion, is to prepare standard tables made by the same specialist for the group. All those considerations led me to prepare this work.

According to Wahl [1999], 1455 valid genera are known in the Ichneumonidae from which 394 genera belong to the Ichneumoninae and 347 — to Ichneumoninae Stenopneusticae. The well-known catalogue of the World fauna of the genera of Ichneumonidae by Townes [1969-1971] includes tables of illustrations for the genera of all subfamilies, with the exception of Ichneumoninae. Thus, more than 20% of the genera of Ichneumonidae were not presented in the monograph. To fill in this gap (at least partially) is the aim of our work.

Generic and tribal structure of the Ichneumoninae has been changed lately. Despite this fact, we find it necessary to uphold the interpretation of the genera of Ichneumoninae proposed by Heinrich. He significantly contributed to the investigation of Ichneumoninae in the XX century. He described and established 218 genera, from which 180 genera and 3 subgenera are regarded as valid [Wahl, 1999].

According to Heinrich [1967a,1977], the genera of the subtribe Craticheumonina in the Holarctic are characterized only by having slightly impressed, inconspicuous, sometimes superficial gastrocoeli with nearly always recognizable, though usually small thyridia, and by the fine, punctured, coriaceous, alutaceous or irregularly rugose, sometimes smooth, exceptionally longitudinally striate (*Crytea*) sculpture of postpetiole. The abdomen of female is oxygyous, rarely — semiamblygyous (*Anisopygus*, *Rhadinodonta*).

Material used for preparation of the figures*

Anisopygus pseudonymus (Wesm.): ♀ — Byelorussia, Krupki, Osetchino (54°35'N-29°15'E), 07.1996, A. Tereshkin leg.

Aoplus hohlova Tereshk.: ♀ — Holotype, Russia, Altay region, lake Teletskoye, Kyrtsai, Chulyshman riv. (51°21'N-87°45'E), 07.08.1989, A. Tereshkin leg. (ZSM).

Aoplus personatus (Grav.): ♀ — Byelorussia, Polesie Radiological Nature Reserve (51°35'N-29°50'E), Orevichi (private plot), 21.07.1991, Malaise trap, A. Tereshkin leg.

Auritus elephas (Brauns): ♀ — Caucasia, Apsheronsk distr. (44°26'N-39°44'E), 12.06.1991, M. Maksimenkov leg.

Baranisobas ridibundus (Grav.): ♀ — Byelorussia, Beresina Biosphere Nature Reserve, Domzheritcy (54°43'N-28°19'E) (Alnetum urticosum), 24.06.1986, A. Tereshkin leg.

Barichneumon scopanator Tereshk.: Holotype, ? — Byelorussia, Beresina Biosphere Nature Reserve, Domzheritcy (54°43'N-28°19'E) (dry meadow), 29.06.89, Malaise trap, A. Tereshkin leg.

Craticheumon luteiventris (Grav.): ♀ — Russia, Altay, Barnaul, Troitskoye (52°59'N-84°39'E), 02.02.1987 (ex pup. *Leucodona bicoloria* Den. et Schiff), N. Kolomietz leg.

Craticheumon punctifrons (Holmgr.): ♀ — Russia, Altay, Volchikha (52°01'N-80°21'E), 07.06.1976 (ex pup. *Semiothisa liturata* Cl.), N. Kolomietz leg.

Craticheumon unificatus Tereshk.: Holotype ♀ — Byelorussia, Beresina Biosphere Nature Reserve, Postrejje (54°38'N-28°20'E) (Pinetum shagnosum), 30.05-15.06.1990, Malaise trap, A. Tereshkin leg.

Crypteffigies albilavatus (Grav.): ♀ — Byelorussia, Beresina Biosphere Nature Reserve, Postrejje (54°38'N-28°20'E) (Pinetum pleuroziosum), 26.06.1991, Malaise trap, A. Tereshkin leg.

Crytea sanguinator Rossi: ♀ — Krapina, Kroatlen [Croatia, Krapina] 07.10.1911. ? — Polen, Ostkarpatien, Zabie 06-11.07.1936 (G. Heinrich's collection in Warsaw)

Deuterolabops pulbellatus (Bridgman): ♀ — Admont Umg. [Austria], H.Franz leg. (G. Heinrich's collection in ZSM).

Dilleria erichi Tereshk.: Holotype, ♀ — Russia, Primorskij Kraj, Ussurijsk, 13.08.1992, A. Tereshkin leg. (ZSM).

Eristicus clericus (Grav.): ♀ — Byelorussia, Beresina Biosphere Nature Reserve, Domzheritcy (54°43'N-28°19'E) (Alnetum urticosum), 29.06.1989, A. Tereshkin leg.

Eupalamus lacteator (Grav.): ♂ — Byelorussia, Beresina Biosphere Nature Reserve, Postrejje (54°38'N-28°20'E) (Pinetum shagnosum), 20.05-15.06.1990, Malaise trap, A. Tereshkin leg.

Eupalamus lamentator (Thunb.): ♂ — Byelorussia, Minsk area, Stolbtsy, Kolosovo (53°31'N-26°57'E), 07.10.1985, A. Tereshkin leg.

Eupalamus oscillator Wesm.: ♀ — Byelorussia, Beresina Biosphere Nature Reserve, Domzheritcy (54°43'N-28°19'E) (Alnetum urticosum), 02.09.1987, A. Tereshkin leg.

Eupalamus oscillator Wesm.: ♂ — Byelorussia, Polesie Radiological Nature Reserve (51°44'N-29°57'E) (Alnetum urticosum), 09.07.1992, Malaise trap, A. Tereshkin leg.

Eupalamus wesmaeli Thoms.: ♂ — Byelorussia, Polesie Radiological Nature Reserve (51°35'N-29°50'E) (Querceetum), 23.08-10.10.89, Malaise trap, A. Tereshkin leg.

Homotherus locutor (Thunb.): ♀ — Russia, Altay, Volchikha (52°01'N-80°21'E), 04.06.1977 (ex pup. *Semiothisa liturata* Cl.), L. Litvinchuk leg.

Melanichneumon melanarius (Wesm.): ♀ — Byelorussia, Beresina Biosphere Nature Reserve, Postrejje (54°38'N-28°20'E) (Pinetum shagnosum), 07.07.1997, Malaise trap, A. Tereshkin leg.

Neischnus oxygyus Heinrich: ♀ — Byelorussia, Polesie Radiological Nature Reserve (Querceetum subalveto-fluvialis), 23.08—10.10.1989, Malaise trap, A. Tereshkin leg. C* — same locality, Alnetum urticosum, 19.06—27.7.1990, Malaise trap, A. Tereshkin leg. (Zoologische Staatssammlung Miinchen).

Platylabops virginalis (Wesm.): ♀ — Byelorussia, Beresina Biosphere Nature Reserve, Postrejje (54°38'N-28°20'E) (Pinetum shagnosum), 09—17.09.1986, Malaise trap, A. Tereshkin leg.

Rhadinodonta rufidens (Wesm.): ♀ — Byelorussia, Beresina Biosphere Nature Reserve, Postrejje (54°38'N-28°20'E) (Pinetum shagnosum), 26.05.1993, Malaise trap, A. Tereshkin leg.

Rhadinodonta flaviger (Wesm.): ♀ — Byelorussia, Beresina Biosphere Nature Reserve, Postrejje (54°38'N-28°20'E) (Piceetum oxalidosum), 04.11.1987, Malaise trap, A. Tereshkin leg.

Rictichneumon pachymerus (Htg.): ♀ — Byelorussia, Vileyka, Shvedy (54°25'N-26°36'E), 09.07.1979, A. Tereshkin leg.

Rugosculpta gemella (Grav.): ♀ — Caucasia, Sochi, Krasnaya Polyana (43°38'N-40°07'E) (private plot), 30.06-30.07.1987, Malaise trap; ♂ — same locality, 30.07-30.08.1987, Malaise trap, A. Tereshkin leg.

Stenaoplus pictus (Grav.): ♀ — Byelorussia, Beresina Biosphere Nature Reserve, (Pinetum myrtillosum), 02.07.76; cf — same locality (54°38'N-28°20'E) (Pinetum pleuroziosum), 26.06.1990, Malaise trap, A. Tereshkin leg.

Stenobarichneumon basighyptus (Kriechb): ♀ — Byelorussia, Beresina Biosphere Nature Reserve, Savskiy Bor (54°42'N-28°12'E) (Pinetum myrtillosum), 27.08.1977, A. Tereshkin leg.

Virgichneumon dumeticola (Grav.): ♀ — Byelorussia, Beresina Biosphere Nature Reserve, Postrejje (54°38'N-28°20'E) (Pinetum pleuroziosum), 19.09-02.10.1990, Malaise trap, A. Tereshkin leg.

Vulgichneumon bimaculatus (Schrank): ♀ — Caucasia, Lazorevskoye, Krasnoaleksandrovskiy, Ashe riv. (44°01'N-39°22'E), 07.09.1985, A. Tereshkin leg.

Vulgichneumon saturatorius (L.): ♀ — Byelorussia, Minsk, Smolevitchy, Goncharovka (54°25'N-26°36'E) (Piceetum oxalidosum), 11.06.1983, A. Tereshkin leg.; ♂ — Byelorussia, Polesie Radiological Nature Reserve, Orevichi (51°35'N-29°50'E) (private plot), 21.05.1991, Malaise trap, A. Tereshkin leg.

Taxonomic notes on the genus

Rugosculpta Heinrich, 1967

Rasnitsyn [1981a,b] placed two species of ichneumon flies—*Barichneumon gemella* (Gravenhorst, 1829) and *B. controversa* (Schmiedeknecht, 1928) to the genus *Rugosculpta* which was described by Heinrich from Africa. Hilpert [1992] did not agree with that transfer.

The specimens, which we collected in Eastern Europe (Byelorussia) and the Caucasus have the distinctive features of the genus according to Rasnitsyn's position [1981a,b]. Originally the genus was established by Heinrich for the two African species related to *Lissosculpta* Heinrich, 1934 and *Vulgichneumon* Heinrich, 1961. It was placed to the subtribe Ichneumonina. Basic distinctive characters of the genus are: moderately convex scutellum, laterally carinated almost to the apex, and the drawn-out and downward-curved apices of area dentiparae, strongly sclerotized and extremely coarsely and densely punctate anterior tergites of abdomen [Heinrich, 1967b]. European members of the genus are related to *Vulgichneumon saturatorius* (Linnaeus, 1758) with a very coarse structure of 2-3 tergites of abdomen but without a sharp longitudinal wrinkle, with an analogous structure of the middle field of postpetiole but without high elevated carinae in front, with a basal

* ZSM — Zoologische Staatssammlung Miinchen

area having a strong protuberance and with a sharp internal angle of the discocubital cell.

The genus includes two African and two European species [*Rugosculpta gemella* (Grav., 1829) and *R. controversa* (Schmied., 1928)]. They bear some characters that do not fit the original diagnosis of the genus.

Flagellum: in the female moderately short, stout, semibristle-shaped, attenuated to the apex, widened and flattened laterally beyond middle; that of male nodose toward apex, in African species without tyloids, in European ones with narrow oval tyloids on 5-15 segments.

Head: temples slightly curved and narrowed behind eyes (fig. 16); malar space 1.5 (European species) — 2 times shorter than the mandible width at the base, considerable shorter in the male; mandibles normal (fig. 18); clypeus of the female with thin frontal margin, and sparse punctures, in the male longitudinally-wrinkled at the middle (fig. 21).

Thorax: notauli in the females pronounced at the base, some what longer in the males; mesoscutum coarsely and fairly densely punctured, space between punctures from strongly shining, without microsculpture, to slightly shining with only scarcely visible microsculpture (*R. controversa*); scutellum in the female relatively flat, narrowed toward apex, in African species laterally carinate at the whole extent, in European ones carinate only at the base but with sharp-edge between its lateral and dorsal surface, in males European species convex, laterally carinate (fig. 22). Carination of propodeum complete with the exception of absent lateral carinae of basal area (fig. 19); area superomedia large, hexagonal, slightly narrowed in front, about as long as wide at the level of costulae, costulae behind middle; area dentipara drawn-out and downward-curved to hind coxae with high carinae at the apex. Area basalis of males and females of European species with blunt tubercle.

Legs stout. Hind coxae of African species without, dense white scopula present in European species. Outer surface of femora of middle legs of European species with strong distal cavity which is more evident in males (fig. 23).

Wings: nervulus strongly postfurcal; areolet pentagonal, strongly narrowed in front; radius almost straight; lower inner angle of discocubital cell oblique.

Abdomen. In the female fairly short, moderately wide, oxygyous, with very slightly projecting ovipositor; first tergite of abdomen with obvious transition from petiole to postpetiole (side view); all carinae of first tergite strongly developed, petiole sharply carinated laterally with strong transverse ribs; dorsal carinae at the border between petiole and postpetiole high; middle field of postpetiole carinate, its hind angles acute, surface of middle field from coarsely and fairly densely punctate (African species) to sinuously rugose-punctate (European species). Gastrocoeli deep, short, triangular with distinct thyridia, thyridia in European species 1.2-1.3 times wider than the interval between them. Tergites 2-3 divided by deep transverse impression, tergite 2 of European species sharply longitudinally rugose to the

apex medially with median wrinkle forming sharp longitudinal keel (fig. 20), tergite 3 with poorly developed rugosity to the middle. Sculpture of male abdomen analogous, with more developed rugosity of tergites 2-3 and some what more smooth dorsal carinae of first tergite at the border between petiole and postpetiole. Hypopygium in the male triangular, that of European species with round apex.

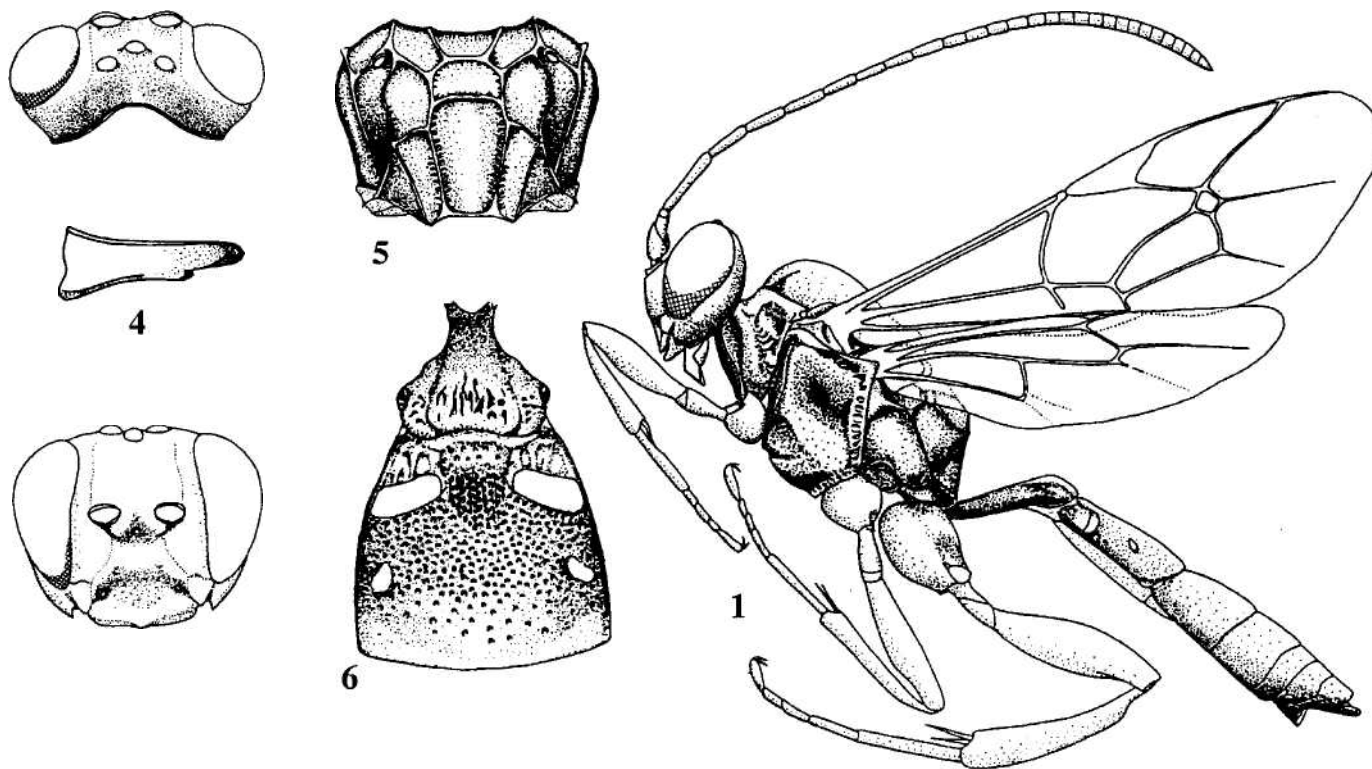
Chromatic characters: females of European species have color pattern analogous. Head black with weak white (light-coloured) spots at the angles of clypeus and white frontal orbits from its half to hind ocelli. Thorax black with the exception of white (light-coloured) stripe on pronotum collar. Abdomen mostly red — postpetiole and tergites 2-3 entirely, tergite 4 mostly red. Petiole darkened to a variable extent, tergites 6-7 dark or black with large white spots. Coxae of all legs black; all femora from mostly black to entirely red; tibiae from dark to light-red, front tibia on the inner side frequently with light (yellow) apical stripe. Hind tarsi dark.

Males (*R. gemella*) differ entirely in coloration from females. Flagellum black without white annulus. Head black, clypeus laterally, inner orbits entirely, outer orbits at the middle and stripe on scapus white or yellow. Propodeum black; collar and hind angles of pronotum, subalar prominence, spots on the apex of scutellum white or yellow (they are usually confluent; scutellum sometimes entirely black or with two small stripes at apex). Legs from black to red; all coxae black, fore ones with white ventral spot; hind tarsi always darkened. Abdomen entirely black, very rarely with small white spots at the angles of postpetiole.

It is difficult to prepare diagnoses for the two well-known European species. The examined females of *Rugosculpta gemella*, in contradist to *R. controversa*, have larger size (10-10.5 mm), thicker flagellum with higher numbers of segments (35-36). The first segment of flagellum 1.3-1.4 times longer than wide at the apex (side view), the ventral surface of the widest segment more than 1.5 times wider than long; hind femora from dark-red to entirely black. The females of *Rugosculpta controversa* smaller and more slender (8 mm), flagellum with 32-33 segments, first segment 1.6-1.7 times as long as wide, ventral surface of the widest segment less than 1.5 times as long as wide, hind femora red. However, additional features are not reliable enough.

In Hilpert's opinion [1922], *Rugosculpta controversa* (Schmied.) is a synonym of *Rugosculpta gemella* (Grav.). I think we ought to accept it.

Although Hilpert transferred some species from genus *Rugosculpta* to genus *Barichneumon*, this action contradicts the presence of an acute lower internal angle of discocubital cell of front wings. In the examined material, this angle in females and males varies from 75 to 82°. A main character of the species of *Barichneumon*, according to Heinrich [1977], is the right lower internal angle of discocubital cell (see fig. 155). In contra to the species of *Barichneumon*, side profile of propodeum is intermediate between the broken and continuous type of *Protichneumonini*, being closer to the last one.

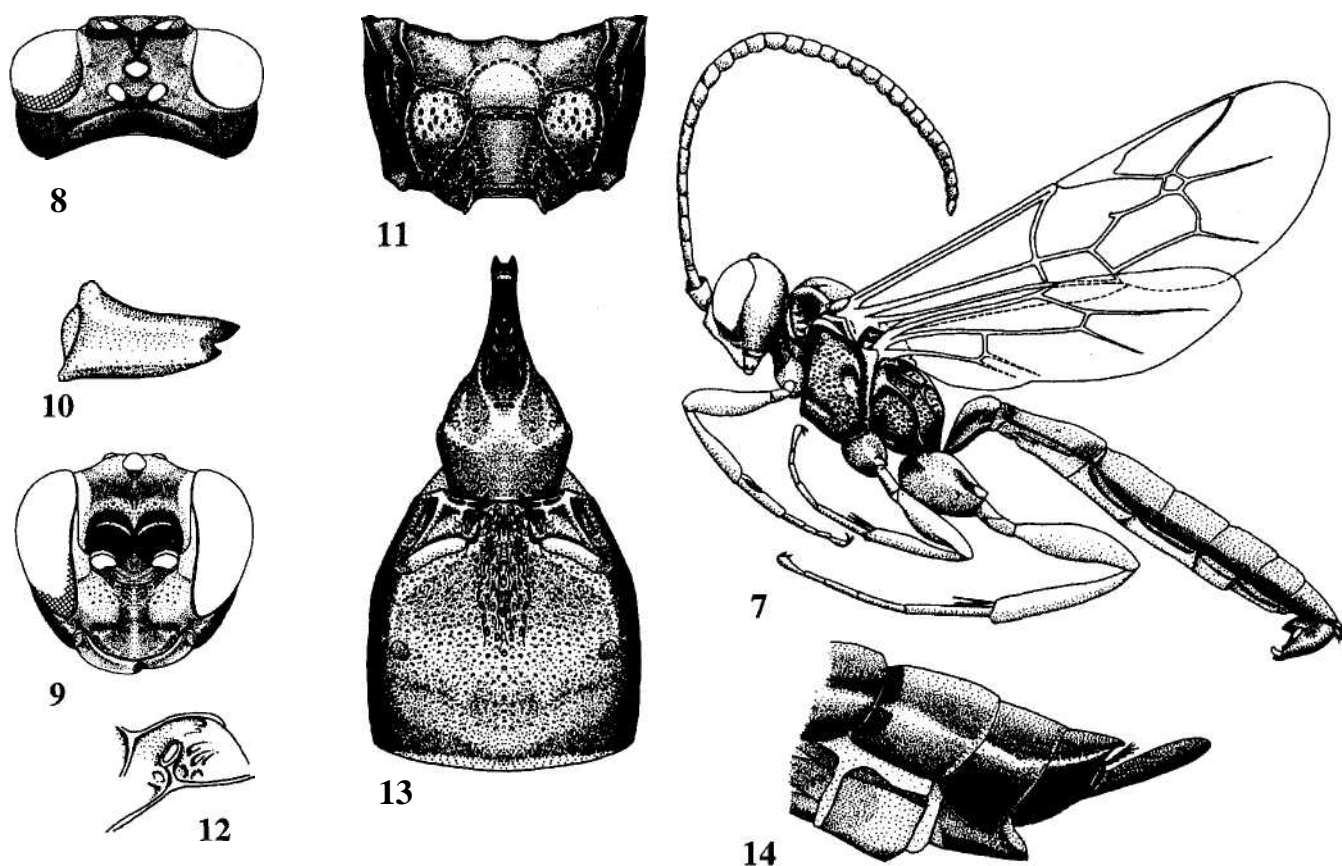


Figs. 1—6. *Dilleria erichi* Tereshk. (according to Tereshkin, 1994), ♀: 1 — general view; 2 — head, above view; 3 — head, front view; 4 — mandible; 5 — propodeum; 6 — segments 1—2 of abdomen.

Рис. 1—6. *Dilleria erichi* Tereshk. (по Tereshkin, 1994), ♀: 1 — габитус; 2 — голова, сверху; 3 — голова, спереди; 4 — мандибула; 5 — проподоум; 6 — 1—2 сегменты брюшка.

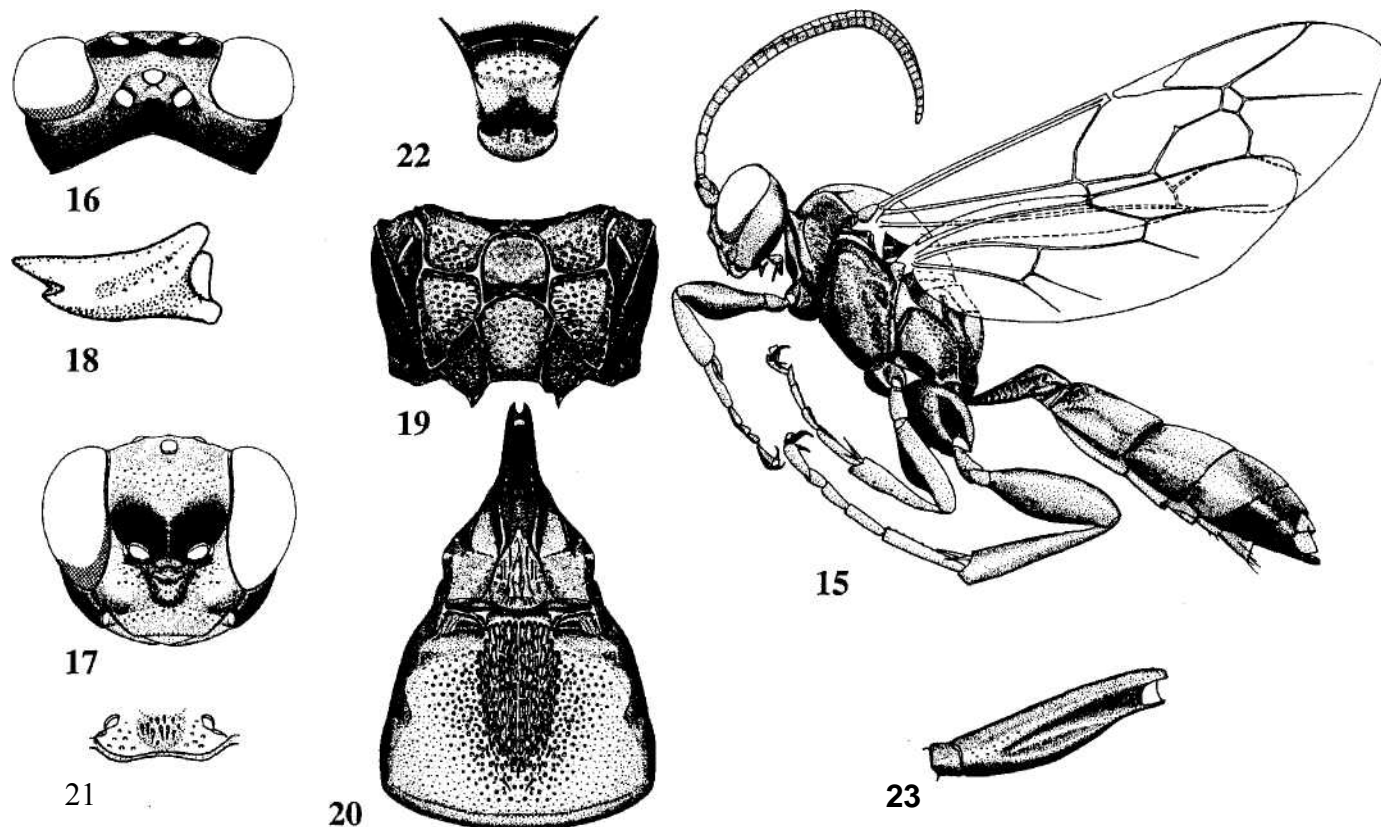
ILLUSTRATED KEY TO THE WESTERN PALEARCTIC GENERA OF THE SUBTRIBE CRATICHNEUMONINA (SENSU HEINRICH, 1967)

- 1 (2) Petiole flattened at the base, 1.6 times broader than wide. Mandibles long and narrow, their upper tooth broad, rounded, lower one small and sharp, far from the apex of mandible. Clypeus less convex than face, transverse; occiput concave, abrupt just after the ocelli. Scutellum highly elevated and carinated by sharp keels up to apex; propodeum with a complete set of keels; thyridia broad, equal to or wider than interval between them.....
..... *Dilleria* Tereshkin, 1994 (figs 1-6)
(1 species, *D. erichi* Tereshk. — East Palearctic).
- 2 (1) Petiole not flattened, approximately square at the base; mandibles of different shape.
- 3 (4) Spiracles of propodeum roundish, scarcely elongate, slightly longer than wide. Head stout; mandibles broad with shorter tooth lying strictly below the upper one. Area superomedia semioval. Abdomen narrow and elongate, pointed, ovipositor protrudes beyond the top; gastrocoeli deep and long, thyridia very clearly defined. Paramera of males large, hypopygium with rounded projection, pygostyles with long hairs.....
..... *Neischnus* Heinrich, 1952 (figs 7-14)
- 4 (3) Spiracles of propodeum elongate, two and more times longer than wide.
- 5 (6) First segments of abdomen coarse, divided by deep constrictions. Area dentipara of females elongated backward and strongly sloping down to the top of propodeum. Segment 2 of abdomen longitudinally wrinkled, median wrinkle forms sharp keel; hind coxae of females with dense scopae; abdomen oxypygous. Clypeus of males longitudinally wrinkled; scutellum carinate far beyond the middle; middle femur with strong cavity at its distal third (fig. 23).....
..... *Rugosculpta* Heinrich, 1967 (figs 15-23).
- 6 (5) First segments of abdomen not divided by deep constrictions; segment 2 of abdomen without longitudinal keel (wrinkle). Middle femur of male without strong cavity at its distal third.
- 7 (8) Median field of postpetiole almost regularly striate (like in *Ichneumon*), thyridia narrower than interval between them, gastrocoeli slightly developed. Scutellum in females flat, sharply carinated almost to the top, that in males — highly elevated. Face and thorax of females (above) and sometimes these of males with rich red pattern. Hind tarsi of males with white ring.....
..... *Crytea* Cameron, 1906 (figs 24-28).
- 8 (7) Median field of postpetiole without regular striation, smooth, punctate or irregularly sinuously-wrinkled.
- 9 (10) Ovipositor sheath polished, shiny, strongly protruding beyond apex of abdomen. Males are identified together with species of *Cratichneumon*.....
..... *Crypteffigies* Heinrich, 1961 (figs 29-33).
- 10 (9) Ovipositor sheath with hairs, slightly projecting beyond apex of abdomen.
- 11 (14) Abdomen semiamblypygous (figs 34,47). Mandibles of males sickle-shaped (*Rhadinodonta*), or, if normal then flagellum with white ring, face entirely white, vertex with red stripe, fore and middle legs broadly yellowish-red, front and hind tarsi often with white ring (*Anisopygus*).
- 12 (13) Mandibles sickle-shaped, without lower teeth or with its trace; clypeus extremely broad and flat. Flagellum of European species with tyloids (figs 41,45).....
..... *Rhadinodonta* Szepligeti, 1908 (figs 34-46).
- 13 (12). Mandibles normal, area coxalis not delimited by carina, body longer.. *Anisopygus* Kriechbaumer, 1888 (figs 47-51).
- 14 (11). Abdomen oxypygous. Mandibles of males not sickle-shaped; another characters differ.
- 15 (28). Thyridia two and more times broader than the interspace between them.



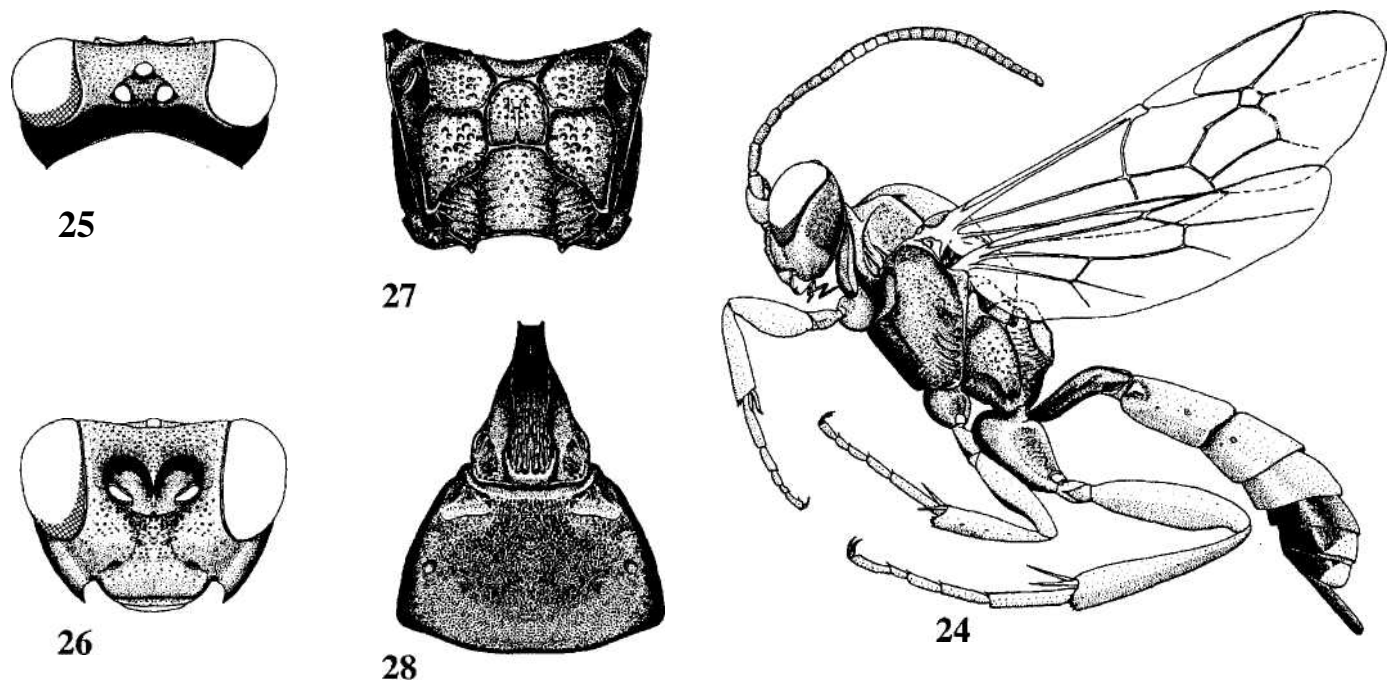
Figs. 7—14. *Neischmus oxypygus* Heinrich: 7 — general view ♂ (according to Tereshkin, 1993); 8 — head ♀, above view; 9 — head ♀, front view; 10 — mandible ♀; 11 — propodeum ♀; 12 — spiracle of propodeum ♀; 13 — segments 1—2 of abdomen ♀; 14 — top of abdomen ♀.

Рис. 7—14. *Neischmus oxypygus* Heinrich: 7 — габитус ♂ (по Tereshkin, 1993); 8 — голова ♀, сверху; 9 — голова ♀, спереди; 10 — мандибула ♀; 11 — пропозеум ♀; 12 — дыхальца пропозеума ♀; 13 — 1—2 сегменты брюшка самки ♀; 14 — вершина брюшка ♀.



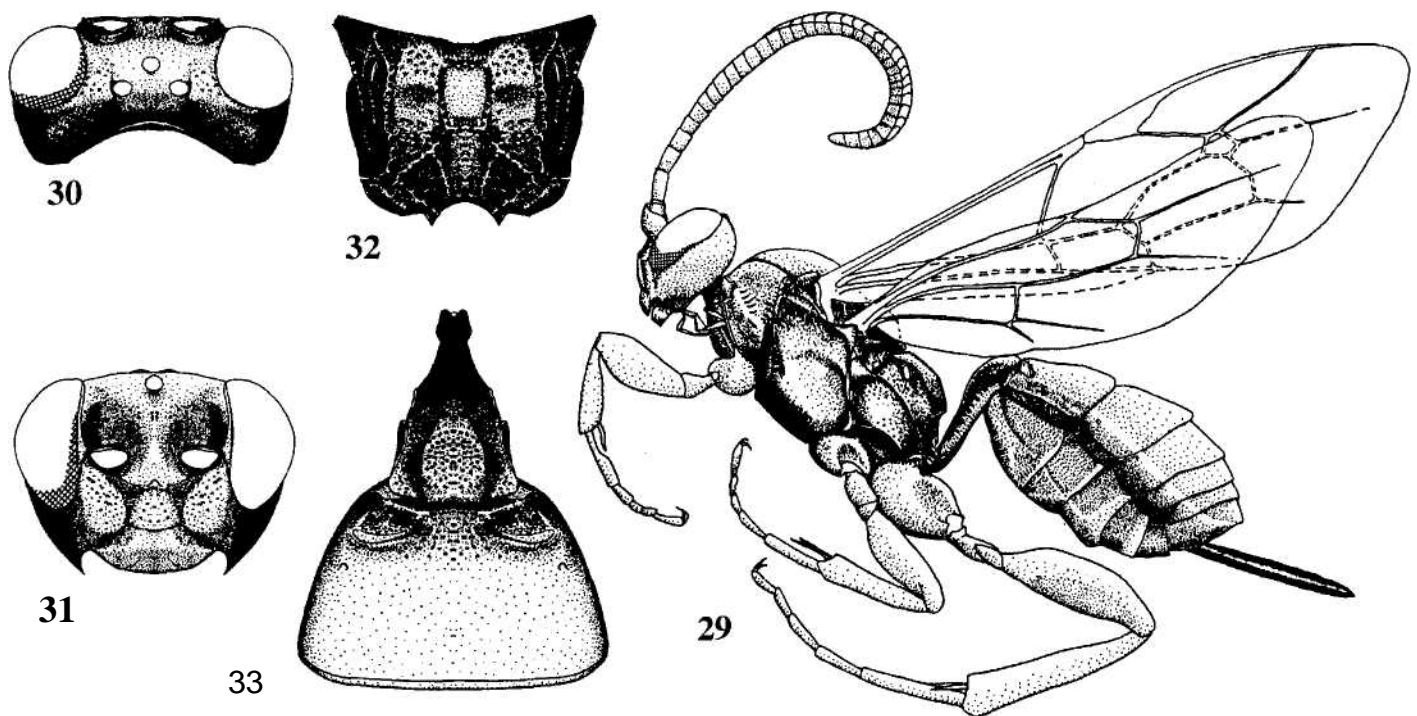
Figs. 15-23. *Rugosculpta gemella* (Grav.): 15 — general view ♀; 16 — head ♀, above view; 17 — head ♀, front view; 18 — mandible ♀; 19 — propodeum ♀; 20 — segments 1-2 of abdomen ♀; 21 — clypeus ♂; 22 — scutellum ♂; 23 — femur II ♂.

Рис. 15-23. *Rugosculpta gemella* (Grav.): 15 — габитус ♀; 16 — голова ♀, сверху; 17 — голова ♀, спереди; 18 — мандибула ♀; 19 — пропозеум ♀; 20 — 1—2 сегменты брюшка ♀; 21 — клипеус ♂; 22 — щитик ♂; 23 — среднее бедро ♂.



Figs. 24—28. *Cryteea sanguinator* Rossi, ♀: 24 — general view; 25 — head, above view; 26 — head, front view; 27 — propodeum; 28 — segments 1—2 of abdomen.

Рис. 24—28. *Cryteea sanguinator* Rossi, ♀: 24 — габитус; 25 — голова, сверху; 26 — голова, спереди; 27 — пропodeум; 28 — 1—2 сегменты брюшка.

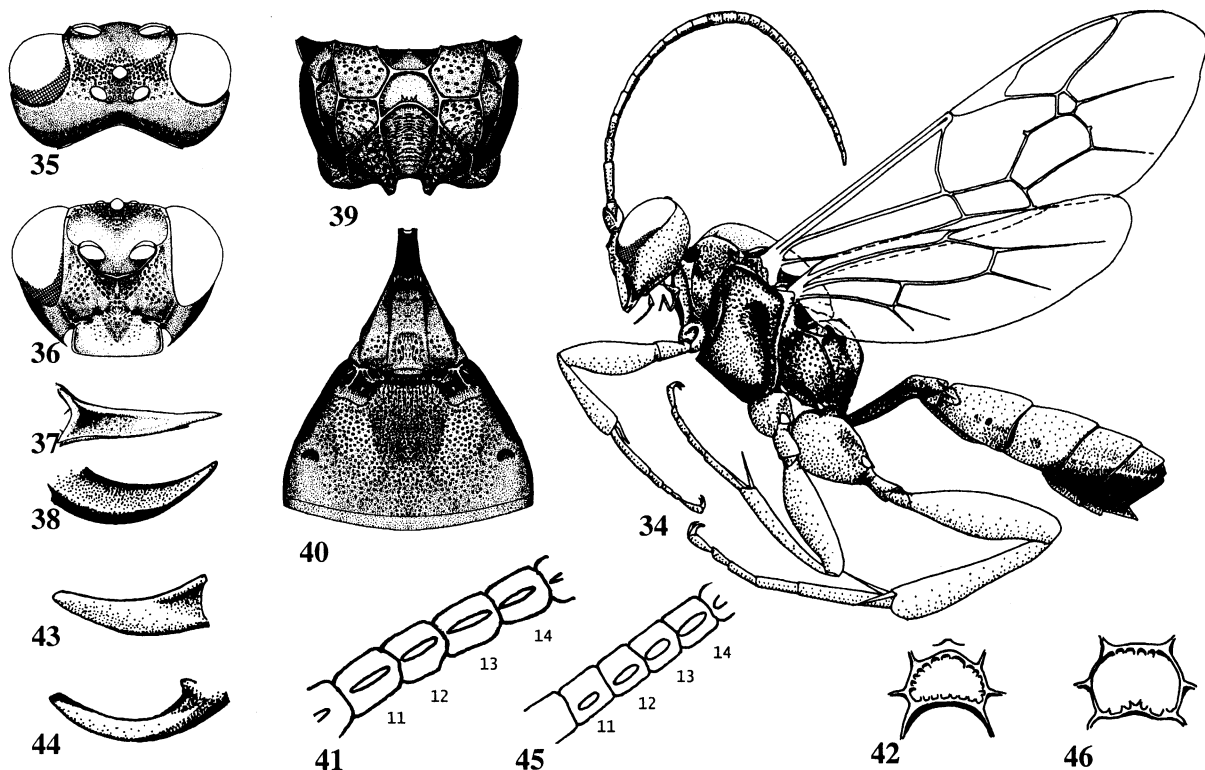


Figs. 29—33. *Crypteffigies albilarvatus* (Grav.), ♀: 29 — general view; 30 — head, above view; 31 — head, front view; 32 — propodeum; 33 — segments 1—2 of abdomen.

Рис. 29—33. *Crypteffigies albilarvatus* (Grav.), ♀: 29 — габитус; 30 — голова, сверху; 31 — голова, спереди; 32 — пропodeум; 33 — 1—2 сегменты брюшка.

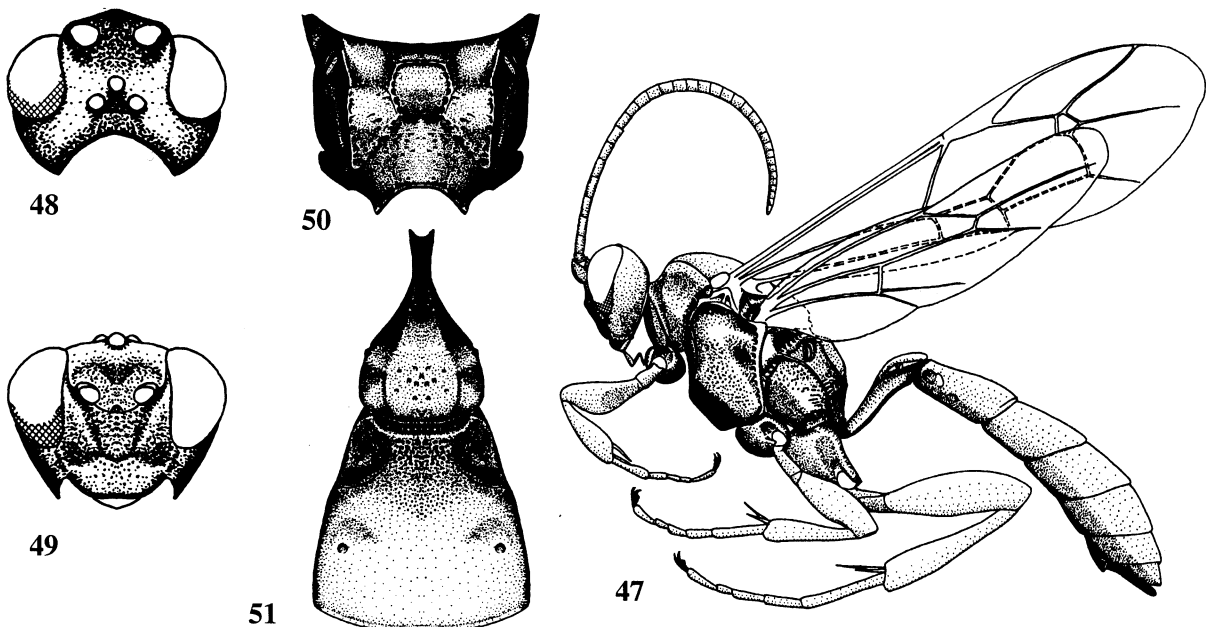
16 (17). Clypeus and face virtually forming a single continuous surface, middle part of face convex; subapical tooth of mandibles in female situated at its inner side, in male rudimentary or absent; transverse furrow of pronotum interrupted by keel. Flagellum of males with narrow tyloids *Baranisobas* Heinrich, 1972 (figs 52-63)
 17 (16). Clypeus clearly separated from face. Mandibles with two teeth situated one below the other.

18 (21). Clypeus convex in longitudinal and transverse directions, distinctly narrower than distance between eyes; vertex with white pattern.
 19 (20). Claws of all tarsi of females pectinate (fig. 68); propodeum strongly abbreviated (fig. 69) *Deuterolabops* Heinrich, 1975 (figs 64-70)
 20 (19). Claws of all tarsi of females without teeth; propodeum normal *Platylabops* Heinrich, 1950 (figs 71-75)



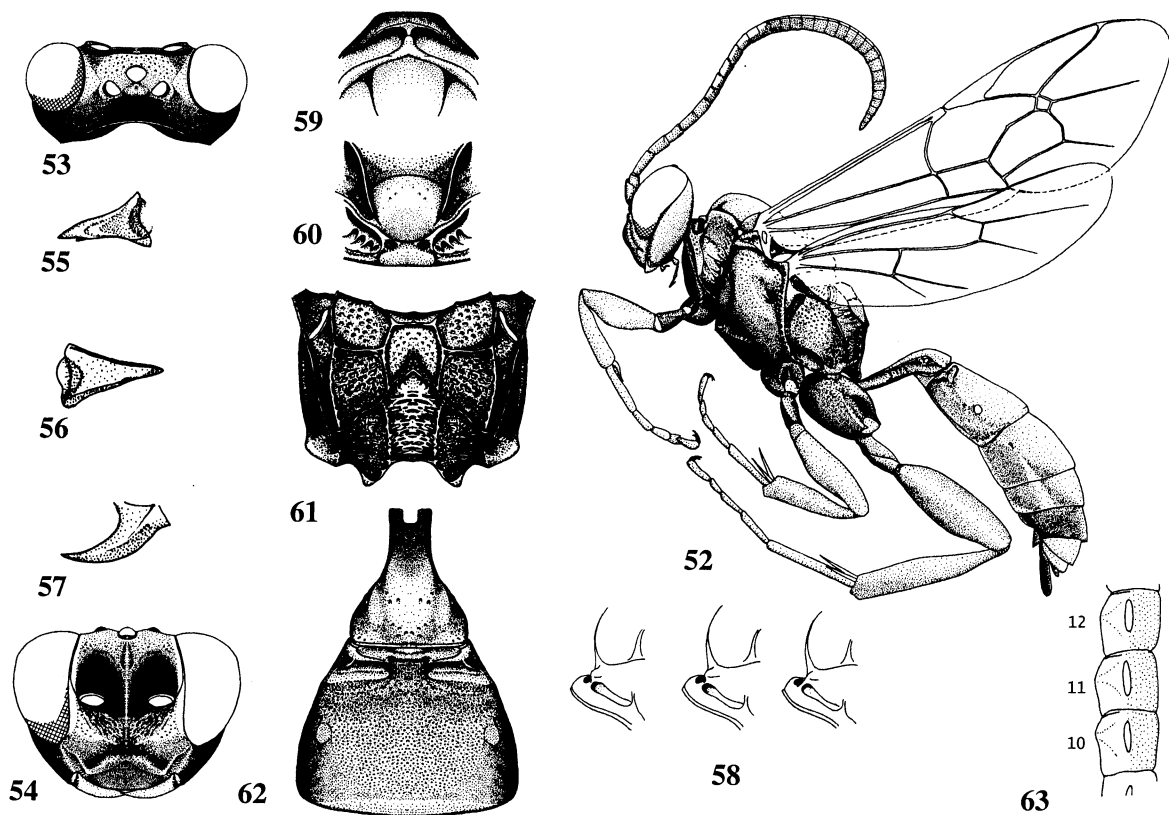
Figs. 34-46. *Rhadinodonta* species: 31-34 — *Rb. flaviger* (Wesm.) (according to Tereshkin, 2003a): 34 — general view ♀; 35 — head ♀, above view; 36 — head ♀, front view; 37 — mandible ♀, front view; 38 — mandible ♀, above view; 39 — propodeum ♀; 40 — segments 1-2 of abdomen ♀; 41 — 10-15 segments of flagellum ♂; 42 — areola of propodeum ♂. 43-46 — *Rb. rufidens* (Wesm.): 43 — mandible ♀, front view; 44 — mandible ♀, above view; 45 — 10-15 segments of flagellum ♂; 46 — areola of propodeum ♂.

Рис. 34-46. Виды рода *Rhadinodonta*: 31-34 — *Rb. flaviger* (Wesm.) (по Терешкин, 2003а): 34 — рабитуc ♀; 35 — голова ♀, сверху; 36 — голова ♀, спереди; 37 — мандибулы ♀, спереди; 38 — мандибулы ♀, сверху; 39 — проподоум ♀; 40 — 1-2 сегменты брюшка ♀, 41 — 10-15 членики флагеллума ♂; 42 — ареола проподиума ♂. 43-46 — *Rb. rufidens* (Wesm.): 43 — мандибулы ♀, спереди; 44 — мандибулы ♀, сверху; 45 — 10-15 членики флагеллума ♂; 46 — ареола проподоума ♂.



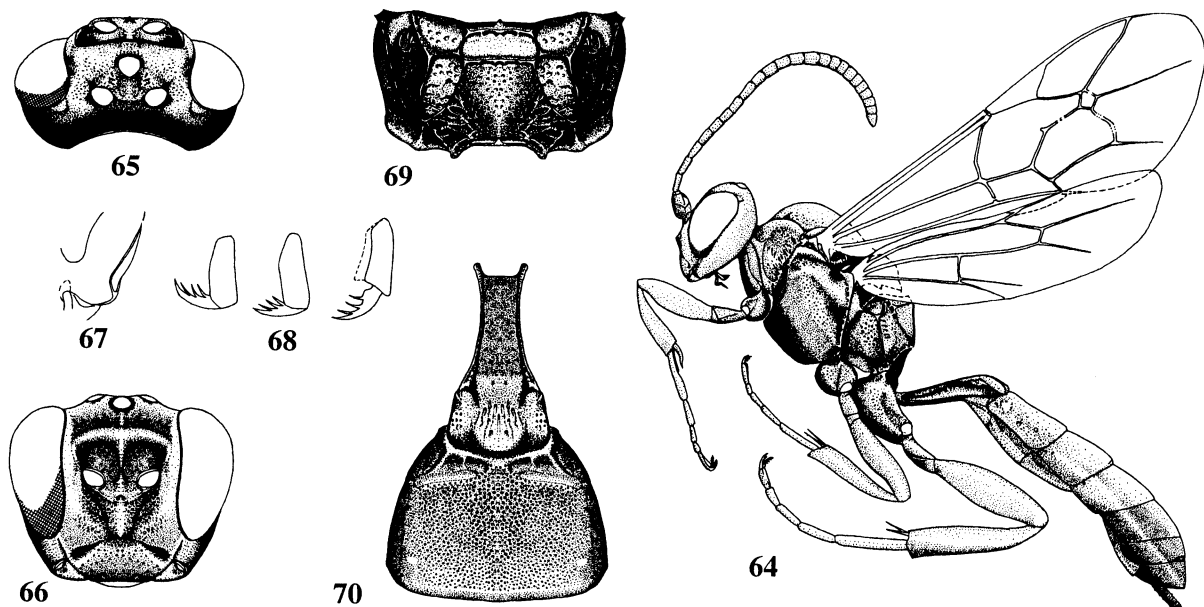
Figs. 47-51. *Anisopygus pseudonymus* (Wesm.), ♀: 47 — general view; 48 — head, above view; 49 — head, front view; 50 — propodeum; 51 — segments 1-2 of abdomen.

Рис. 47-51. *Anisopygus pseudonymus* (Wesm.), ♀: 47 — рабитуc; 48 — голова, сверху; 49 — голова, спереди; 50 — проподоум; 51 — 1-2 сегменты брюшка.



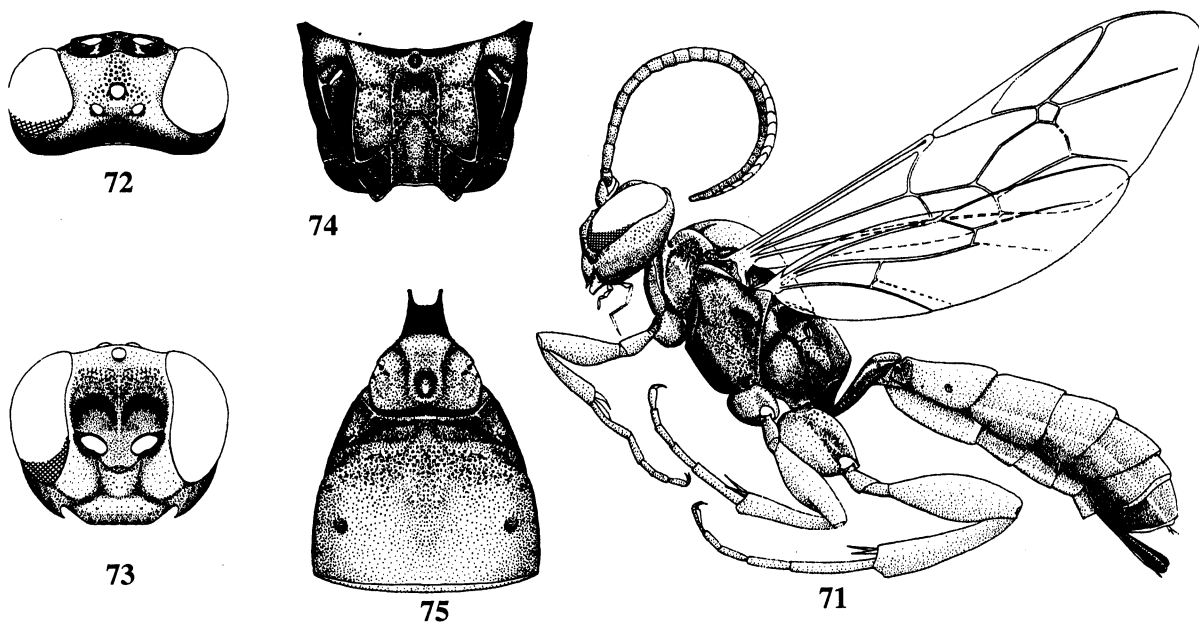
Figs. 52-63. *Baranisobas ridibundus* (Grav.) (according to Tereshkin, 2002): 52 — general view ♀; 53 — head ♀, above view; 54 — head ♀, front view; 55 — mandible ♀, front view; 56 — mandible ♂, front view; 57 — mandible ♂, below view; 58 — pronotum side-view ♀♀; 59 — pronotum ♀, above view; 60 — scutellum ♀; 61 — propodeum ♀; 62 — segments 1-2 of abdomen ♀; 63 — tyloids ♂.

Рис. 52-63. *Baranisobas ridibundus* (Grav.) (по Терешкин, 2002): 52 — габитус ♀; 53 — голова ♀, сверху; 54 — голова ♀, спереди; 55 — мандибулы ♀, спереди; 56 — мандибулы ♂, спереди; 57 — мандибулы ♂, снизу; 58 — пронотум ♀♀, сбоку; 59 — пронотум ♀, сверху; 60 — щиток ♀; 61 — проподеум ♀; 62 — 1-2 сегменты брюшка ♀; 63 — тилоид ♂.



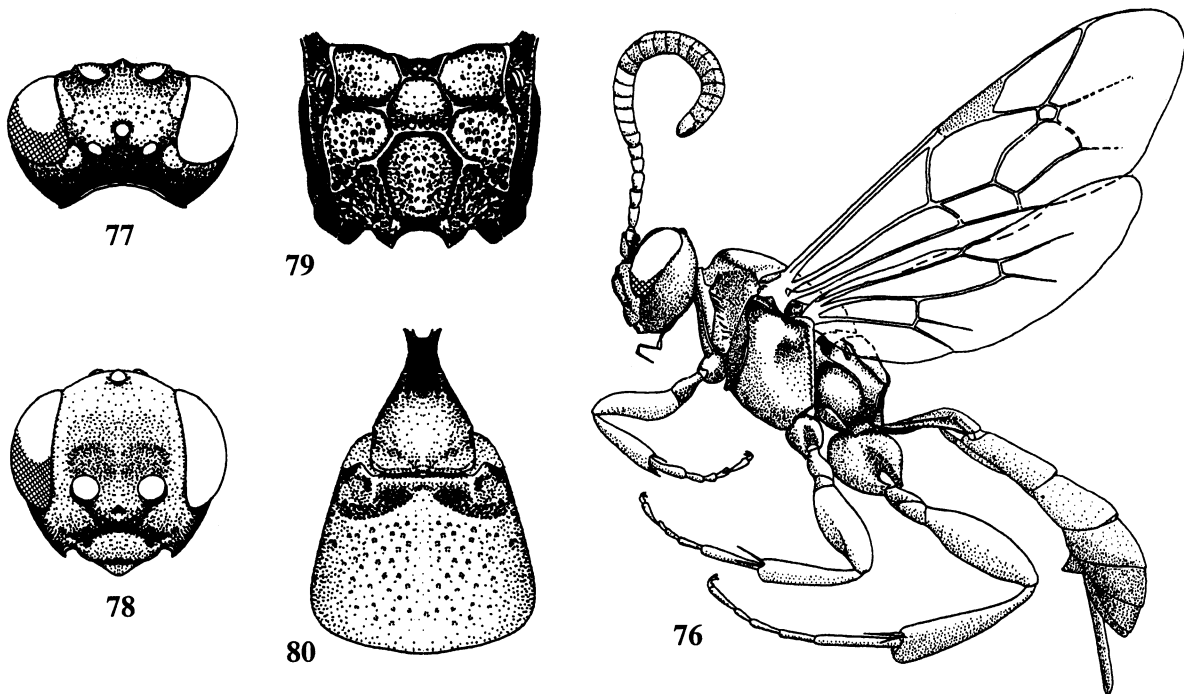
Figs. 64-70. *Deuterolabops pulchellatus* (Bridgman), ♀: 64 — general view; 65 — head, above view; 66 — head, front view; 67 — genae, side view; 68 — claws of the tarsi I-III; 69 — propodeum; 70 — segments 1-2 of abdomen.

Рис. 64-70. *Deuterolabops pulchellatus* (Bridgman), ♀: 64 — габитус; 65 — голова, сверху; 66 — голова, спереди; 67 — щеки, сбоку; 68 — коготки лапок I-III; 69 — проподеум; 70 — 1-2 сегменты брюшка.



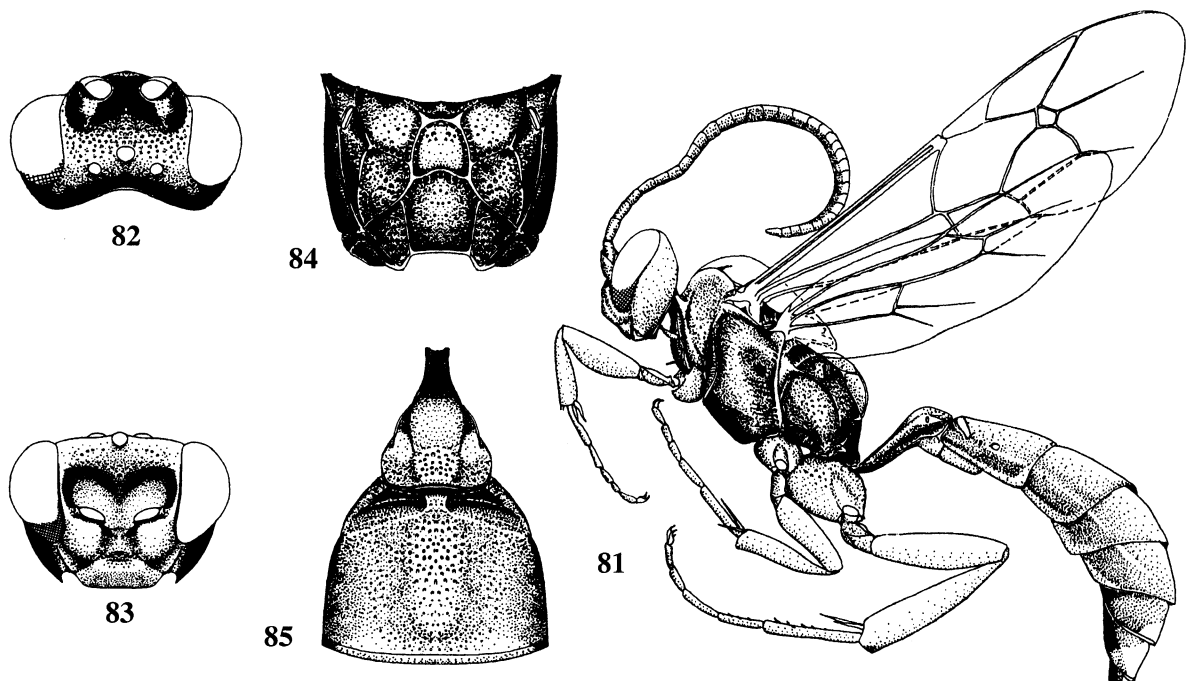
Figs. 71–75. *Platylabops virginalis* (Wesm.), ♀: 71 — general view; 72 — head, above view; 73 — head, front view; 74 — propodeum; 75 — segments 1–2 of abdomen.

Рис. 71–75. *Platylabops virginalis* (Wesm.), ♀: 71 — габитус; 72 — голова, сверху; 73 — голова, спереди; 74 — пропodeум; 75 — 1–2 сегменты брюшка.



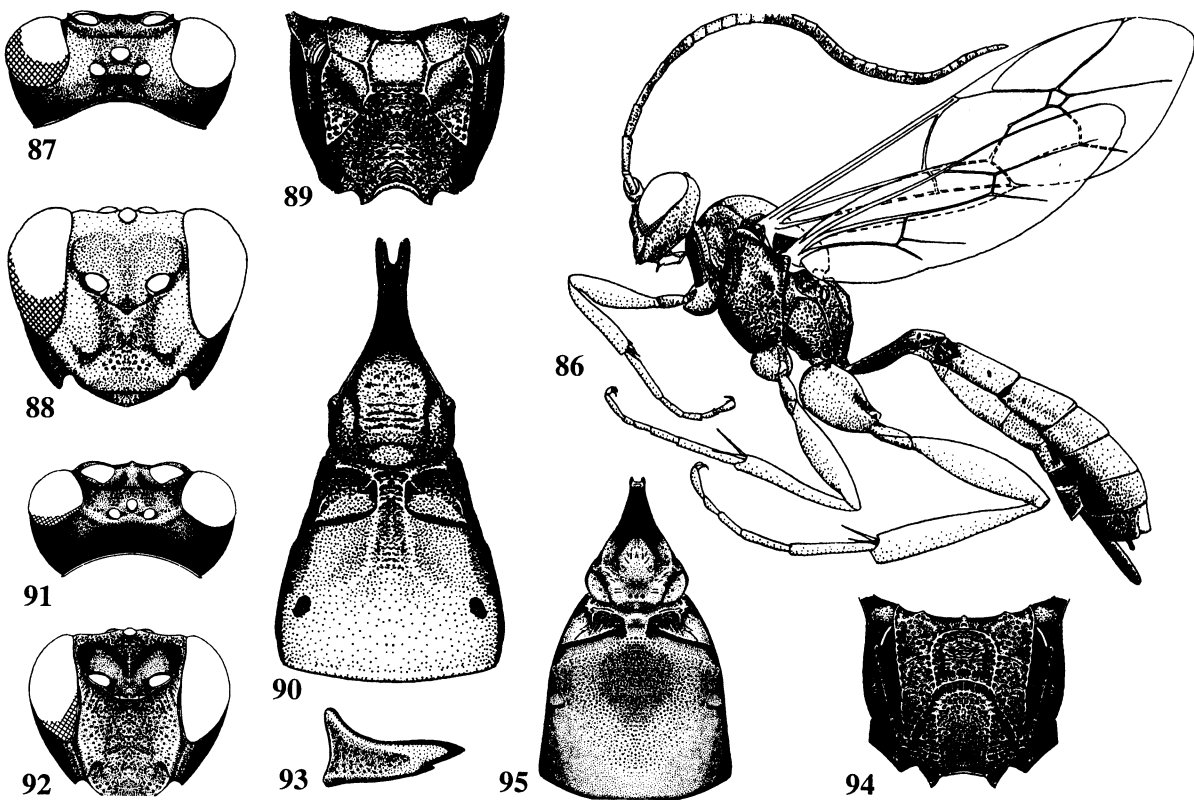
Figs. 76–80. *Homotherus locutor* (Thunb.), ♀: 76 — general view; 77 — head, above view; 78 — head, front view; 79 — propodeum; 80 — segments 1–2 of abdomen.

Рис. 76–80. *Homotherus locutor* (Thunb.), ♀: 76 — габитус; 77 — голова, сверху; 78 — голова, спереди; 79 — пропodeум; 80 — 1–2 сегменты брюшка.



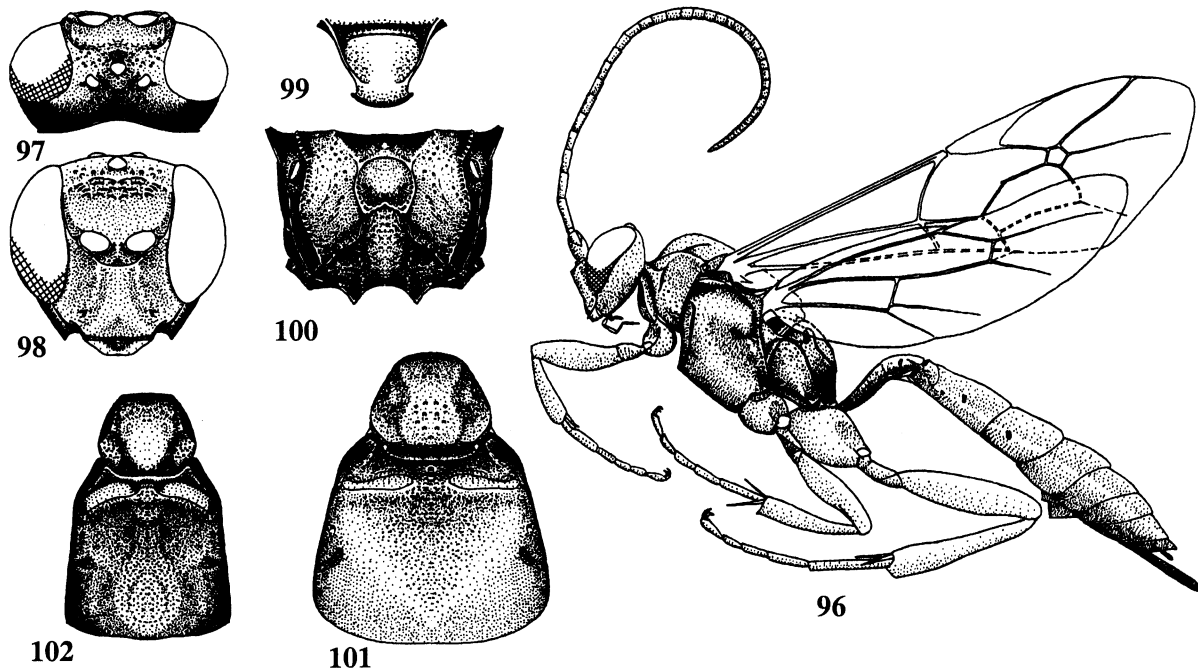
Figs. 81–85. *Stenobarichneumon basiglyptus* (Kriechb), ♀: 81 — general view; 82 — head, above view; 83 — head, front view; 84 — propodeum; 85 — segments 1–2 of abdomen.

Рис. 81–85. *Stenobarichneumon basiglyptus* (Kriechb), ♀: 81 — габитус; 82 — голова, сверху; 83 — голова, спереди; 84 — проподоум; 85 — 1–2 сегменты брюшка.



Figs. 86–95. *Aoplus* species: 86–90 — *A. personatus* (Grav.), ♀: 86 — general view; 87 — head, above view; 88 — head, front view; 89 — propodeum; 90 — segments 1–2 of abdomen. 91–95 — *A. hoblovae* Tereshk., ♀ (according to Tereshkin, 2001): 91 — head, above view; 92 — head, front view; 93 — mandible; 94 — propodeum; 95 — segments 1–2 of abdomen.

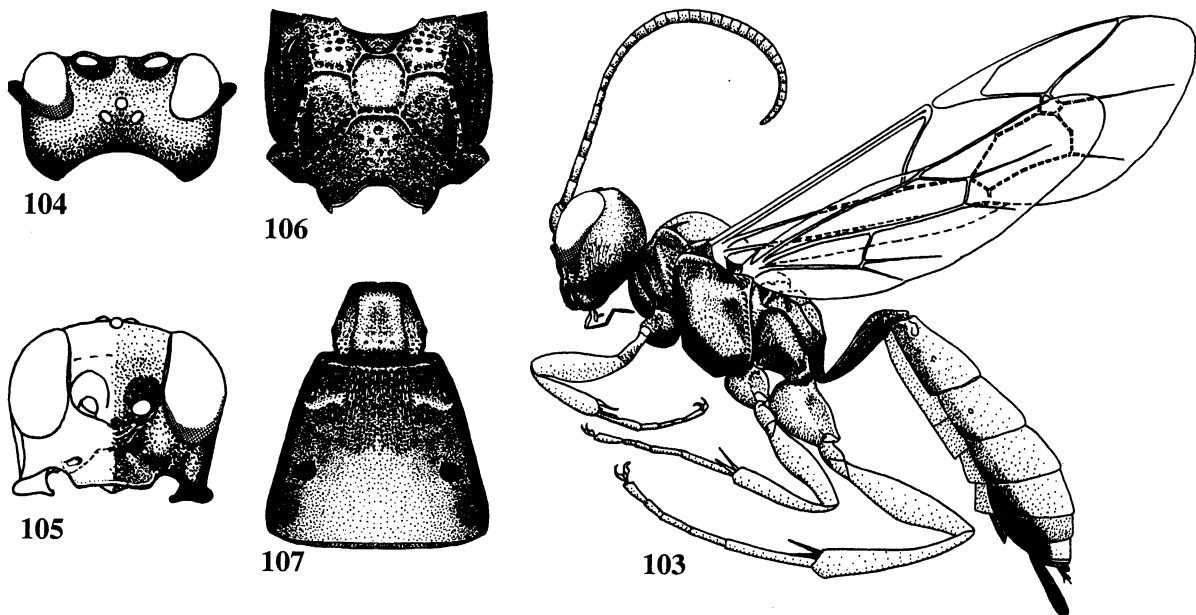
Рис. 86–95. Виды рода *Aoplus* 86–90 — *A. personatus* (Grav.), ♀: 86 — габитус; 87 — голова, сверху; 88 — голова, спереди; 89 — проподоум; 90 — 1–2 сегменты брюшка. 91–95 — *A. hoblovae* Tereshk., ♀ (по Tereshkin, 2001): 91 — голова, сверху; 92 — голова, спереди; 93 — мандибула; 94 — проподоум; 95 — 1–2 сегменты брюшка.



Figs. 96–102. *Stenaoplus pictus* (Grav.): 96 — general view ♀; 97 — head ♀, above view; 98 — head ♀, front view; 99 — scutellum ♀; 100 — propodeum ♀; 101 — segments 1–2 of abdomen ♀; 102 — segments 1–2 of abdomen ♂.

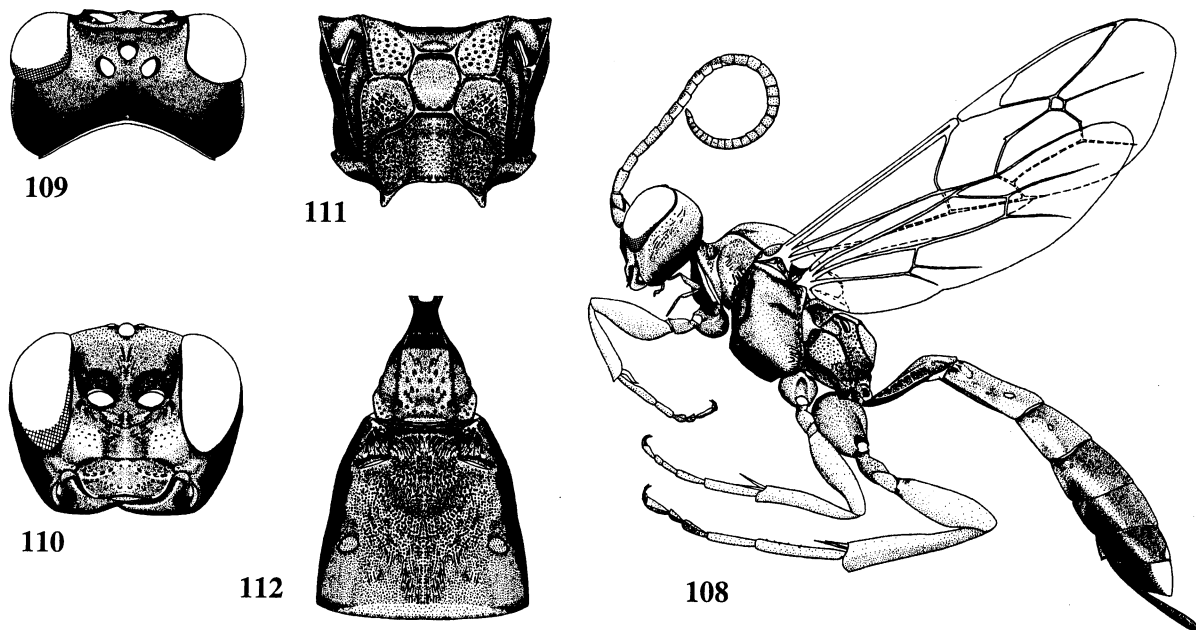
Рис. 96–102. *Stenaoplus pictus* (Grav.): 96 — рабитус ♀; 97 — голова ♀, сверху; 98 — голова ♀, спереди; 99 — щиток ♀; 100 — проподоум ♀; 101 — 1–2 сегменты брюшка ♀; 102 — 1–2 сегменты брюшка ♂.

- 21 (18). Clypeus comparatively flat, broad, wider than high.
- 22 (25). Costulae strong.
- 23 (24). Mesoscutum and abdomen without microsculpture, strongly shining between punctures
..... *Homotherus* Forster, 1869 (figs 76–80)
- 24 (23). Mesoscutum densely punctate, with microsculpture; middle field of postpetiole densely punctured; basal area of propodeum with protuberance
..... *Stenobarichneumon* Heinrich, 1961 (figs 81–85)
- 25 (22). Costulae absent (figs 94, 100) or scarcely marked (fig. 89).
- 26 (27). Scutellum in female and male highly elevated, with well-defined horizontal and vertical surfaces. Face of males white or middle field predominantly white
..... *Aoplus* Tischbein, 1874 (figs 86–95)
- 27 (26). Scutellum in females flat, carinate far from the middle (fig. 99). Scutellum in males elevated above postscutellum, middle field of face and clypeus medially black, inner orbits white
..... *Stenaoplus* Heinrich, 1938 (figs 86–102)
- 28 (15). Thyridia narrow or equal to interspace between them.
- 29 (32). Head much broader than thorax.
- 30 (31). Genae conically protruding to the sides
..... *Auritus* Constantineanu, 1969 (figs 103–107).
- 31 (30). Genae not conically protruding to the sides
..... *Eristicus* Wesmael, 1845 (figs 108–112).
- 32 (29). Head not broader than thorax.
- 33 (36). Basal area of propodeum without protuberance.
- 34 (35). Flagellum of females lanceolate. Tarsi strongly widened, area superomedial elongated and widened in front (fig. 116). Hind tibiae in males with white ring if flagellum with large broadly-oval tyloids (figs 119–121), if hind tibia with white strip, then tyloids narrow, beginning from 7-th segment of flagellum (figs 118); area superomedial mostly elongated
..... *Eupalamus* Wesmael, 1845 (figs 113–121).
- 35 (34). Flagellum of females not lanceolate. Area superomedial not elongated and widened in front, lateral carinae often poorly developed at the base. Tyloids of males narrow ..
..... *Craticheumon* Thomson, 1893 (figs 127–137).
- 36 (33). Basal area of propodeum with protuberance.
- 37 (38). Coloration of body dark blue, metallic — males ...
..... *Craticheumon patruelis* (Holmgren) (in part).
- 38 (37). Coloration of body different in females and males.
- 39 (40). Flagellum of females lanceolate. Postgenae reach mandibles at base. Thyridia of both sexes poorly developed or absent, gastrocoeli only marked
..... *Melanichneumon* Thomson, 1893 (figs 22–126).
- 40 (39). Flagellum of females filiform, semibristle-shaped or bristle-shaped, if postgenae in males reach mandibles at base, then body smaller and abdomen without white pattern.
- 41 (42). Clypeus strongly transverse, more than three times wider than long, impressed in comparison of face surface; femora in female thick and short
..... *Rictichneumon* Heinrich, 1961 (figs 138–142).
- 42 (41). Clypeus and femora normal.
- 43 (44). Gastrocoeli of medium size, clearly defined, fairly deeply impressed, approximately triangular, with distinct thyridia. Flagellum of females bristle-shaped, first segment two and more times longer than wide
..... *Virgichneumon* Heinrich, 1977 (figs 43–147).
- 44 (43). Gastrocoeli very small, slightly impressed, often obsolete with small, often indistinct thyridia. Flagellum in female filiform.
- 45 (46). Postpetiole with distinct median field, that is nearly smooth sometimes, rarely sinuously-wrinkled, very rarely punctate; gastrocoeli sometimes sexually dimorphic (figs 153–154); first segment flagellum in female more than two times longer than wide; lateral lobes of mesoscutum with dense microsculpture, mat; inner, lower angle of



Figs. 103–107. *Auritus elephas* (Brauns) (according to Tereshkin, 2003a), ♀: 103 — general view; 104 — head, above view; 105 — head, front view; 106 — propodeum; 107 — segments 1–2 of abdomen.

Рис. 103–107. *Auritus elephas* (Brauns) (по Терёшкин, 2003а), ♀: 103 — габитус; 104 — голова, сверху; 105 — голова, спереди; 106 — проподоум; 107 — 1–2 сегменты брюшка.

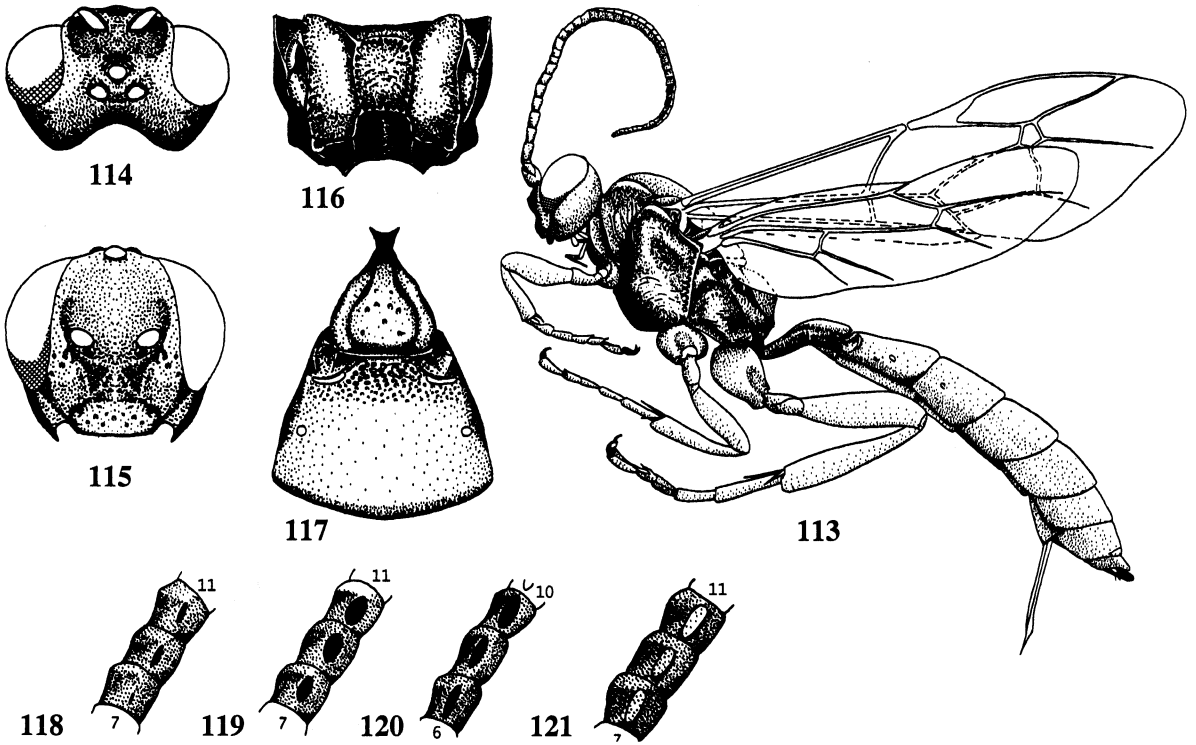


Figs. 107–112. *Eristicus clericus* (Grav.) (according to Tereshkin, 2003a), ♀: 108 — general view; 109 — head, above view; 110 — head, front view; 111 — propodeum; 112 — segments 1–2 of abdomen.

Рис. 107–112. *Eristicus clericus* (Grav.) (по Терёшкин, 2003а), ♀: 108 — габитус; 109 — голова, сверху; 110 — голова, спереди; 111 — проподоум; 112 — 1–2 сегменты брюшка.

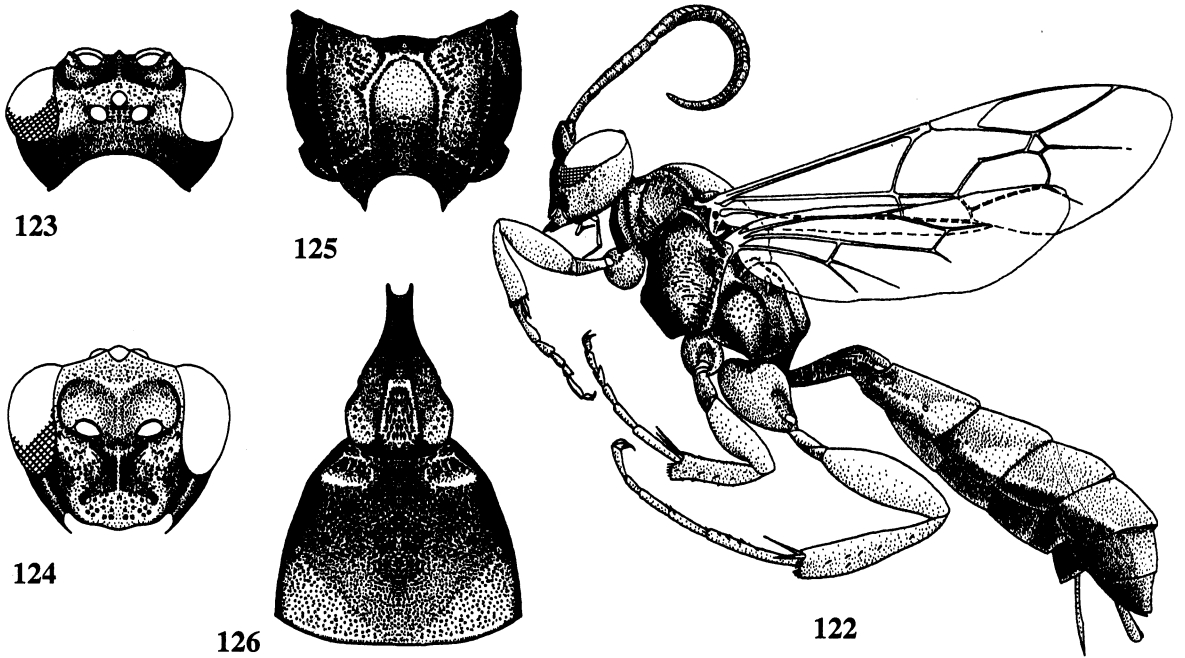
discocubital cell acute; spiracles of propodeum more elongate if compared to *Barichneumon*
 *Vulgichneumon* Heinrich, 1961 (figs 148–154).
 46 (45). Median field of postpetiole less distinct, although never smooth, sinuously-wrinkled, but always neatly punctate. Flagellum with fewer segments, first segment less

than twice as long as wide apically (usually less than 1.5 times). Lateral lobes of mesoscutum without microsculpture, shiny. Inner lower angle of discocubital cell is close to the right. Spiracles of propodeum usually only 3–4 times as long as wide
 *Barichneumon* Thomson, 1893 (figs 155–159).



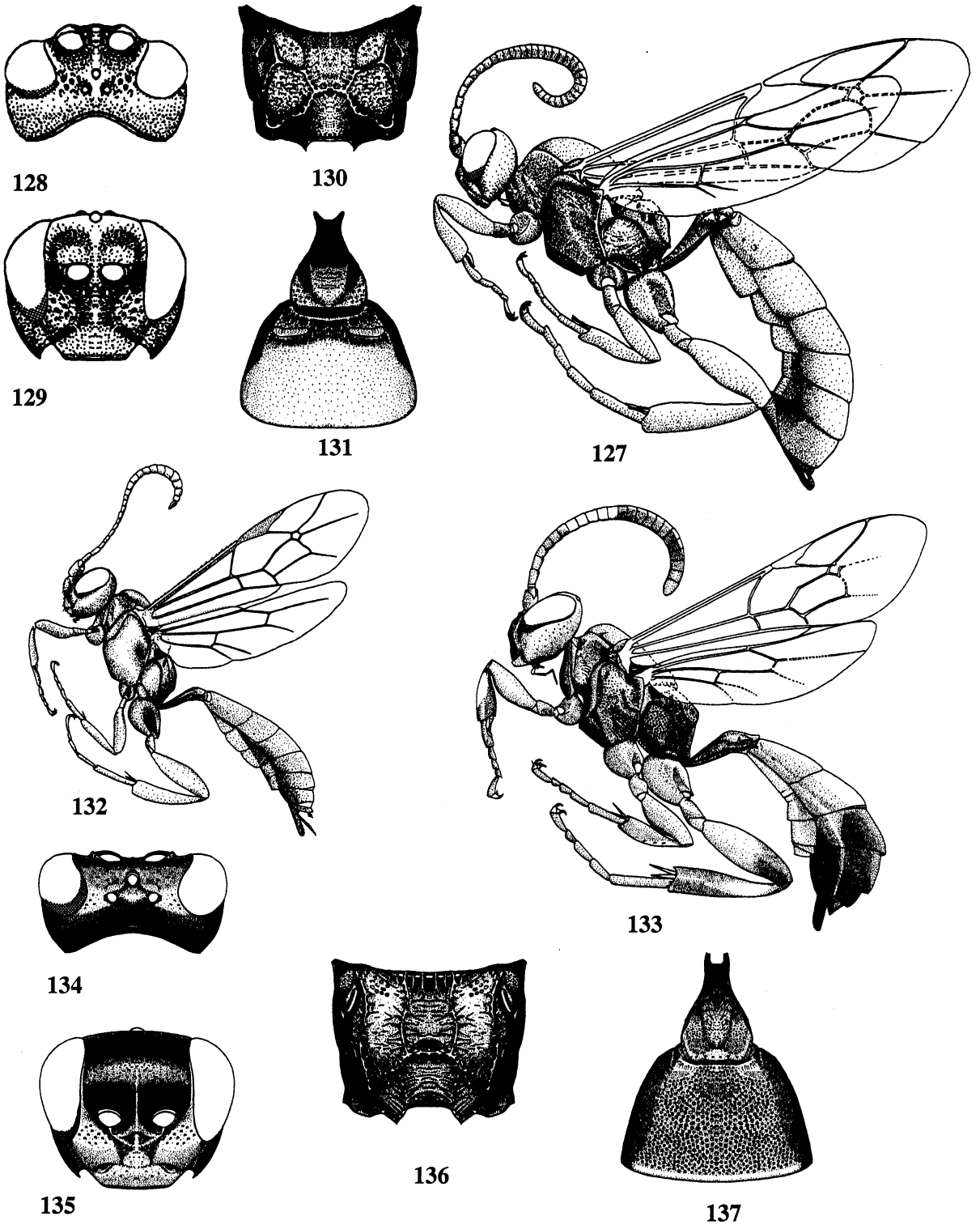
Figs. 113-121. *Eupalamus* species: 113-117 — *E. oscillator* Wesm., ♀: 113 — general view; 114 — head, above view; 115 — head, front view; 116 — propodeum; 117 — segments 1-2 of abdomen; 118-121 — tyloids ♂♂: 118 — *E. lacteator* (Grav.); 119 — *E. lamentator* (Thunb.); 120 — *E. wesmaeli* Thoms; 121 — *E. oscillator* Wesm.

Рис. 113-121. Виды рода *Eupalamus*: 113-117 — *E. oscillator* Wesm., ♀: 113 — габитус; 114 — голова, сверху; 115 — голова, спереди; 116 — проподоум; 117 — 1-2 сегменты брюшка; 118-121 — тилоиды ♂♂: 118 — *E. lacteator* (Грав.); 119 — *E. lamentator* (Тунб.); 120 — *E. wesmaeli* Томс; 121 — *E. oscillator* Весм.



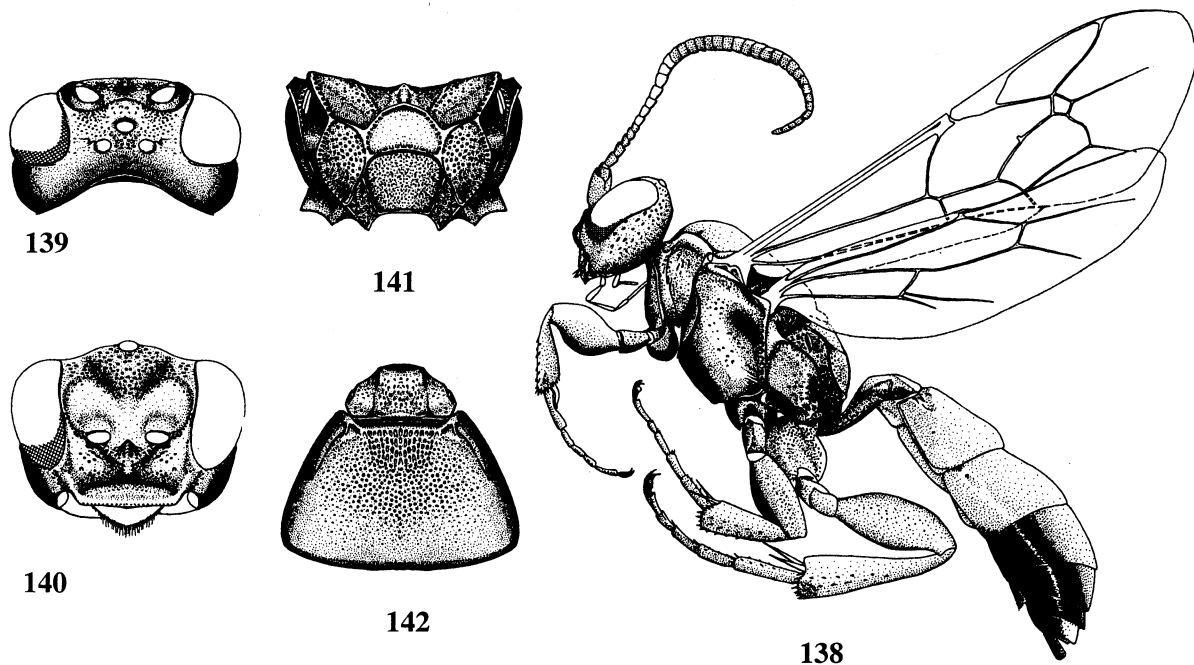
Figs. 122-126. *Melanichneumon melanarius* (Wesm.), ♀: 122 — general view; 123 — head, above view; 124 — head, front view; 125 — propodeum; 126 — segments 1-2 of abdomen.

Рис. 122-126. *Melanichneumon melanarius* (Весм.), ♀: 122 — габитус; 123 — голова, сверху; 124 — голова, спереди; 125 — проподоум; 126 — 1-2 сегменты брюшка.



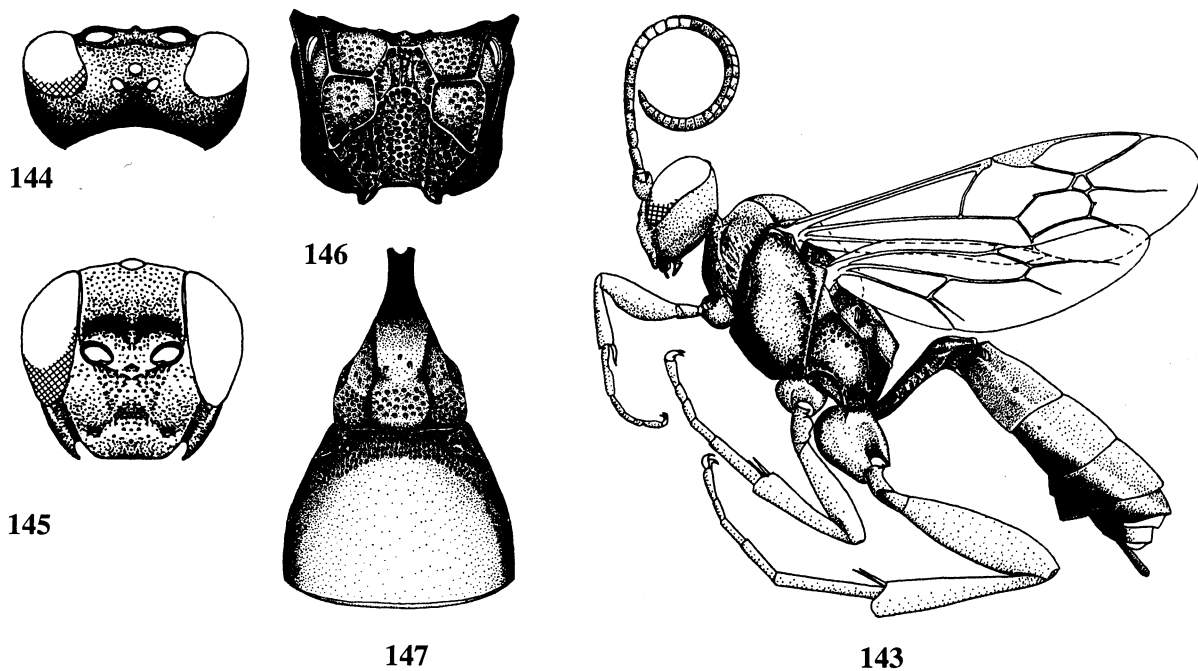
Figs. 127-137. *Cratichneumon* species: 127-131 — *C. luteiventris* (Grav.), ♀: 127 — general view; 128 — head, above view; 129 — head, front view; 130 — propodeum; 131 — segments 1-2 of abdomen; 132 — *C. punctifrons* (Holmgr.), general view, ♀; 133-137 — *C. unificatus* Tereshk. (according to Tereshkin, 2003b), ♀: 133 — general view; 134 — head, above view; 135 — head, front view; 136 — propodeum; 137 — segments 1-2 of abdomen.

Рис. 127-137. Виды рода *Cratichneumon*: 127-131 — *C. luteiventris* (Grav.), ♀: 127 — габитус; 128 — голова, сверху; 129 — голова, спереди; 130 — пропodeум; 131 — 1-2 сегменты брюшка; 132 — *C. punctifrons* (Holmgr.), габитус, ♀; 133-137 — *C. unificatus* Tereshk. (по Терешкин, 2003b), ♀: 133 — габитус; 134 — голова, сверху; 135 — голова, спереди; 136 — пропodeум; 137 — 1-2 сегменты брюшка.



Figs. 138–142. *Rictichneumon pachymerus* (Htg.) (according to Tereshkin, 2003a), ♀: 138 — general view; 139 — head, above view; 140 — head, front view; 141 — propodeum; 142 — segments 1–2 of abdomen.

Рис. 138–142. *Rictichneumon pachymerus* (Htg.) (по Терёшкин, 2003а), ♀: 138 — габитус; 139 — голова, сверху; 140 — голова, спереди; 141 — проподоум; 142 — 1–2 сегменты брюшка.



Figs. 143–147. *Virgichneumon dumeticola* (Grav.), ♀: 143 — general view; 144 — head, above view; 145 — head, front view; 146 — propodeum; 147 — segments 1–2 of abdomen.

Рис. 143–147. *Virgichneumon dumeticola* (Grav.), ♀: 143 — габитус; 144 — голова, сверху; 145 — голова, спереди; 146 — проподоум; 147 — 1–2 сегменты брюшка.

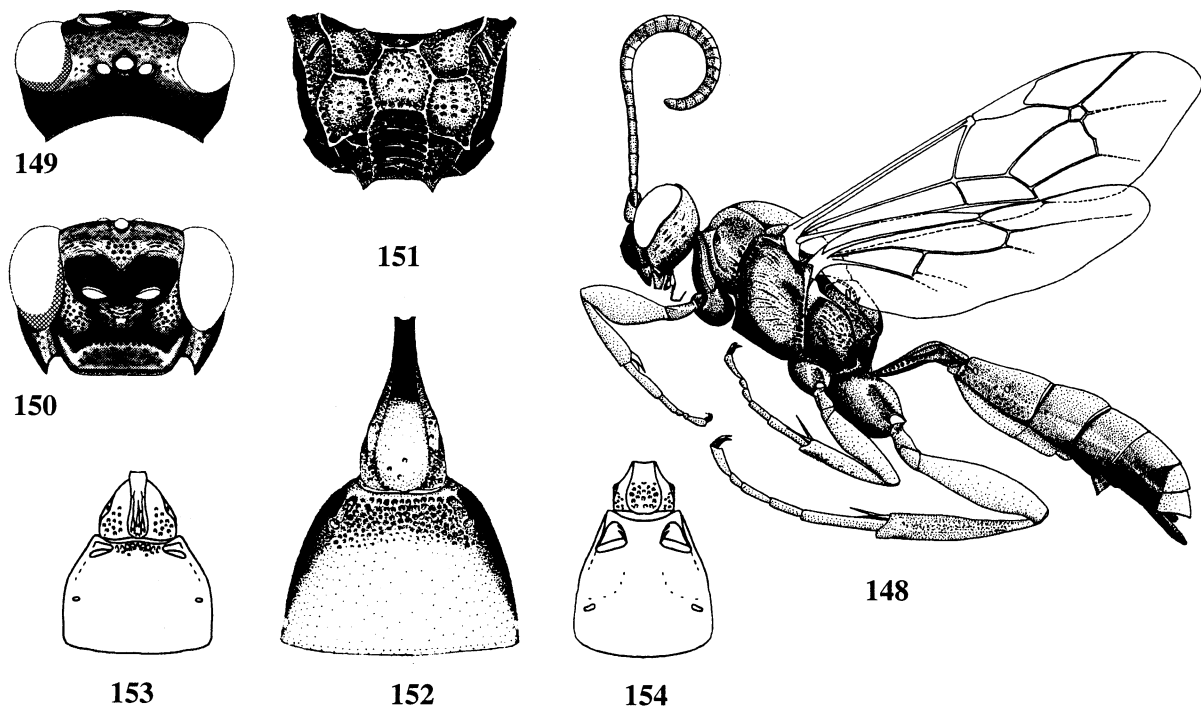
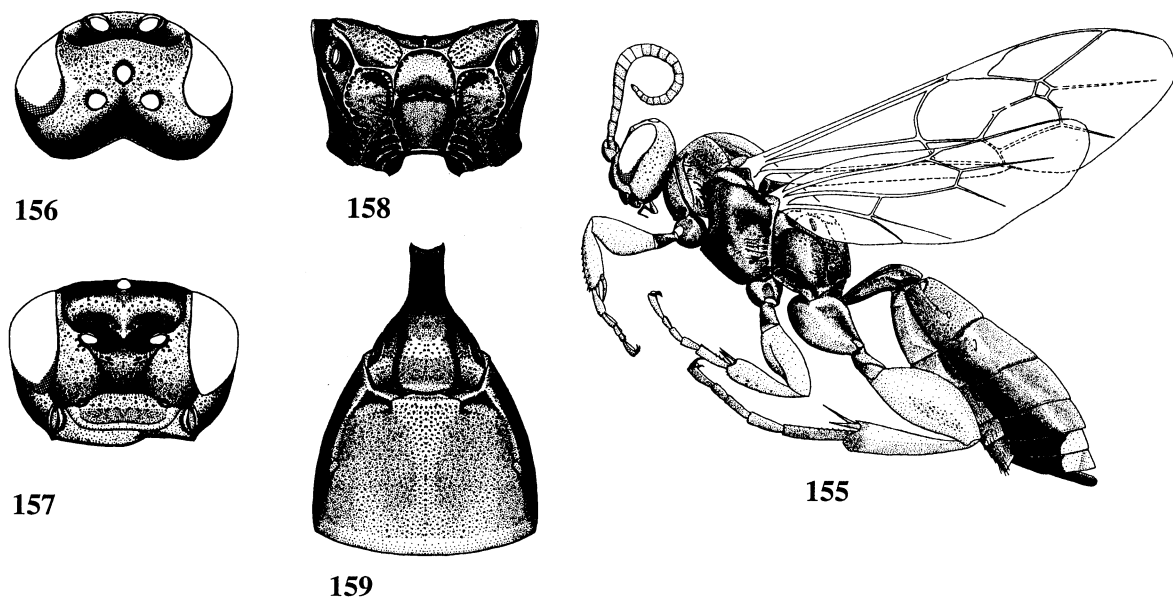


Fig. 148–154. *Vulgichneumon* species: 148–152 — *V. bimaculatus* (Schrank.) (according to Tereshkin, 2003c), ♀: 148 — general view; 149 — head, above view; 150 — head, front view; 151 — propodeum; 152 — segments 1–2 of abdomen; 153–154 — *V. saturatorius* (L.) (according to Tereshkin, 2003c), segments 1–2 of abdomen: 153 — ♀; 154 — ♂.

Рис. 148–154. Виды рода *Vulgichneumon*: 148–152 — *V. bimaculatus* (Schrank.) (По Терёшкин, 2003с), ♀: 148 — габитус; 149 — голова, сверху; 150 — голова, спереди; 151 — проподеум; 152 — 1–2 сегменты брюшка; 153–154 — *V. saturatorius* (L.) (по Терёшкин, 2003с), 1–2 сегменты брюшка: 153 — ♀; 154 — ♂.



Figs. 155–159. *Barichneumon scopanator* Tereshk. (according to Tereshkin, 2004), ♀: 155 — general view; 156 — head, above view; 157 — head, front view; 158 — propodeum; 159 — segments 1–2 of abdomen.

Рис. 155–159. *Barichneumon scopanator* Tereshk. (по Терёшкин, 2004), ♀: 155 — габитус; 156 — голова, сверху; 157 — голова, спереди; 158 — проподеум; 159 — 1–2 сегменты брюшка.

References

- Heinrich G.H. 1967a. Synopsis and reclassification of the Ichneumoninae stenopneusticae of Africa, South of Sahara (Hymenoptera). Introduction: Key to Tribes and Subtribes of Ichneumoninae Stenopneusticae; Synopsis of the Protichneumonini, Ceratojoppini, Ischnojoppini, Trogini // Monograph Farmington State College Press, Maine, U.S.A. Vol.1. 250 pp.
- Heinrich G.H. 1967b. Synopsis and reclassification of the Ichneumoninae stenopneusticae of Africa, South of Sahara (Hymenoptera). Synopsis of the Ichneumonini: Subtribes Ichneumonina and Amblytelina // Monograph Farmington State College Press, Maine, USA. Vol.3. P.481-692.
- Heinrich G.H. 1977. Ichneumoninae of Florida and neighboring States (Hymenoptera: Ichneumonidae, subfamily Ichneumoninae) // Florida Dept. of Agriculture & Consumer Services. Vol.9. 350 pp.
- Hilpert H. 1992. Zur Identität von *Stenobarichneumon constan-tineanu* Heinrich, 1972 und Bemerkungen zu den europais-chen Arten des Genus *Rugosculpta* Heinrich, 1967 (Hymenoptera, Ichneumonidae, Ichneumoninae) // Spixiana Bd.15. Hf.2. S.143-148.
- Rasnitsyn A. 1978. Introduction. / In: Heinrich G.H. 1978. Eastern Palearctic Ichneumonidae. Nauka P.1—81 [in Russian].
- Rasnitsyn A. 1981a. Gravenhorst's and Berthoumieu's types of *Ichneumoninae Stenopneusticae* presented in Wroclaw and Cracow, Poland (Hymenoptera, Ichneumonidae) // Polskie Pismo Entomol. T.51. S.101-145.
- Rasnitsyn A. 1981b. [A guide to the insects of the European part of the USSR. Hymenoptera, Ichneumonidae. Subfamily Ichneumoninae] // Opredeliteli po Faune SSSR. Vol.3. Pt.3. P.505-636 [in Russian].
- Tereshkin A. 1993. New and little known species of Ichneumoninae Stenopneusticae of the genera *Ulesta* Cameron, 1903, *Notoplatylabus* Heinrich, 1934, and *Neischnus* Heinrich, 1952 (Hymenoptera, Ichneumonidae) // Entomofauna Bd.14. Hf.29. S.477-488.
- Tereshkin A. 1994. A new genus and species of the Ichneumoninae Stenopneusticae from the Far East // Entomofauna. Bd.15. Hf.II. S.117-123.
- Tereshkin A. 2001. A new species of Ichneumoninae Stenopneusticae from the Altay region (Hymenoptera, Ichneumonidae) // Entomofauna Bd.22. Hf.5. S.49—52.
- Tereshkin A.M. 2002. [The species of the genus *Baranisobas* Heinrich, 1972 in Byelorussia *Baranisobas sinetuber* sp. n. description (Hymenoptera, Ichneumonidae, Ichneumoninae)] // Viesty Nat. Acad. sci. ser. biol. nav. No.1. P.93—98 [in Russian].
- Tereshkin A.M. 2003a. [Taxonomic and ecological notes about ichneumon flies of genera *Rictichneumon* Heinrich, 1961, *Rhadinodonta* Szepliget, 1908, *Eristicus* Wesm., 1844 and *Auritus* Constantineanu, 1969 (Hymenoptera, Ichneumonidae, Ichneumoninae)] // Euroasian Entomol. Journ. Vol.2. No.1. P.15-24 [in Russian].
- Tereshkin A.M. 2003b. [Ichneumon flies of the genus *Cratichneumon* (Hymenoptera, Ichneumonidae) in the forest zone. 1. Taxonomic notes. Description of *Cratichneumon unificatus* sp.n.] // Zool. Zhurn. Vol.82. No.5. P.594-602 [in Russian].
- Tereshkin A.M. 2003c. [Review of ichneumon flies of *Vulgichneumon* genus (Hymenoptera, Ichneumonidae, Ichneumoninae) in Belarus] // Viesty Nat. Acad. sci. ser. biol. nav. No.4. P.95—99 [in Russian].
- Tereshkin A.M. 2004. [Ichneumon flies of genus *Barichneumon* (Hymenoptera, Ichneumonidae) of forest zone. 1. Taxonomy. Description of the *Barichneumon scopanator* sp. n. and *B. scopulatus* sp. n.] // Euroasian Entomol. Journ. Vol.3. No.2 P.139-150 [in Russian].
- Townes H. 1969-1971. The genera of Ichneumonidae // Mem. Amer. Ent. Inst. Vol.11. P.1-300; Vol.12. 537 pp.; Vol.13. 307 pp.; Vol.17. 372pp.
- Wahl D. 1999. Classification and Systematics of the Ichneumonidae (Hymenoptera) // American Entomological Institute. Master List of Ichneumonid Names Bibliography, <http://iris.biosi.ohio-state.edu/catalogs/ichneumonids/>