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Illustrated key to the tribes of subfamilia Ichneumoninae and genera of the tribe Platylabini of world fauna (Hymenoptera, Ichneumonidae)

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A b s t r a c t : Detailed descriptions of 60 Ichneumoninae species, 37 Platylabini genera, and 27 tribes and subtribes of Ichneumoninae subfamily of the world fauna are presented in this article. *Cratolaboides* nov.gen. is described. Schematic illustrations of separate parts of Ichneumoninae body and terminology used in taxonomic works by different authors are provided. An attempt was made to unify terminological means used in Ichneumoninae terminology. Maximally standardized scheme of the description of ichneumon flies is supposed to ease the realization of comparative investigations and fulfillment of new descriptions. All considered taxa are illustrated by standard color tables including a total drawing of species and most meaningful in the taxonomy of the group parts of body (head in two foreshortenings, propodeum and 1-2 segments of abdomen), executed in accordance with a unified scheme. In case of need, drawings of other structures characterizing taxon of certain rank are presented in addition. Thus, a graphic representation corresponds to a verbal description of each taxonomic character. Platylabini taxonomic characters used for definition of generic structure of the group are specified. Basing on this, conclusion on the possibility of usage of certain taxonomic characters and their combination to identify tribal belonging (to characterize tribe as a whole as an example to develop Ichneumoninae tribal structure) were made.

The article is illustrated by 482 drawings including 146 black and white drawings, illustrating morphology peculiarities of different systematic groups, and 336 colored drawings tabulated in 60 tables, illustrating morphological peculiarities of taxa under consideration.

K e y w o r d s : Ichneumonidae, Ichneumoninae, Platylabini, genera, description, picture.

Introduction

One of the main merits of any taxonomic work is a possibility of using it in a comparative aspect to carry out subsequent investigations. The gateway to the solution of the given problem, to our opinion, is the maximal unification and standardization both of the taxa' descriptions and their graphical presentation.

The necessity of a scientific drawings preparation in entomology is dictated by two circumstances. On the one hand, there are a lot of groups of insects requiring rather labour-consuming verbal description; key couplets for such groups occupy considerable volume.

Thus, identification of different rank taxa becomes extremely complicated. A good example of such group are ichneumon flies of subfamily Ichneumoninae (Ichneumonidae). Their morphological diversification is generated not by diversity of constant trait combinations, but by free, almost occasional combination of the same traits. This phenomenon is connected with a mode of evolution in the treated group that led to a plenty of closely related and hardly differentiated species. Furthermore, the establishment of superspecific taxa is more difficult than distinguishing of species (RASNITSYN 1978). According to G. Heinrich (HEINRICH 1967a), "...in a young subfamily, such as the Ichneumoninae 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." One of the ways to make superspecific taxa identification easier is preparation of tables of illustrations of a type or the most characteristic species of taxa of different rank belonging to the subfamily. One of the conditions of a successful solution of this problem, to our opinion, is a standard preparation of tables fulfilled by a single specialist in the treated group (TERESHKIN 2004).

On the other hand, while preparing descriptions of new taxa, particularly higher, taxonomist must have a type or comparative material from different, often hardly accessible collections. The solution of this problem is also seen in a preparation of maximally standard illustrations and descriptions of taxa. The availability of illustrations of taxon representatives correctly prepared by taxonomist makes it possible to avoid necessity of using of type material and representatives of related taxa.

In higher taxa of the subfamily, the above mentioned obtains special significance because of the mode of group evolution and, as a result, morphological definiteness of higher taxa, based on a combination or conjunction of comparatively small number of taxonomic characters.

The foundation of taxa description standardization was laid by Gerd HEINRICH (1962-1977), and standardization of illustrative material was founded by Henry TOWNES (1969-1971). We made an attempt to go further in those directions and strengthen and unite each of them. We consider maximal standardization and unification to be a basic principle of successful taxonomic works that will promote the group investigation and allow to accomplish description of new taxa of various rank without necessary visual examination of all its representatives. Methodology of preparation of the standard taxa illustration charts for taxonomists, both possessing and lacking artistic skills, is considered in details in "The methodology of a scientific drawings preparation in entomology on example of ichneumon flies (Hymenoptera, Ichneumonidae)" (TERESHKIN 2008).

Modern digital technologies allow to describe and represent taxa without saving space. It is necessary to keep a strict order of consistency in the description of characters, with indicating of their presence or absence, since a trait is typical for at least one representative of a taxon not being afraid of iterations. To retain the order of presentation of the body parts, it is advised to divide separate segments description with full stop. Such scheme is more preferable for further comparative analysis or for preparation of new descriptions. For example, only in *Notoplatylabus* "pronotal base with angular projection above front coxae". In this case, it is necessary to indicate morphology of the pronotal base describing other genera of the tribe, e.g. "pronotal base gradually rounded", thus preserving an order of characters description.

Thus, performing this work it was necessary to carry out unification of terms and to

describe taxa, maximally standardizing not the sequence of body parts description only, but the sequence of description of their structures (characters).

Besides mentioned above, one of the goals of the current work was to provide maximally complete illustrations of the entire range of morphological traits variability used in taxonomy of the group. In particular, detailed description of each character of a taxon and simultaneous presence of scientific illustration of its morphological features serve the goal.

The foundation of modern concept of the structure and volume of higher taxa of Ichneumoninae subfamily is made by viewpoints of Gerd Heinrich a significant hymenopterologist of the 20th century. His scientific work itself may become a subject of investigation, and his life can be an example for any researcher. Gerd Heinrich's contribution into subfamily study, to which he has dedicated his entire life, is unprecedented and does not have any analogs and it is so great that A.P. RASNITSYN characterized his activity as a "scientific feat" (1972). Study of Ichneumoninae in scope of Palearctic, Nearctic, Ethiopian, and Oriental regions allowed him to compose an objective and reasonable understanding of the structure of higher taxa of this group. Therefore, in this work, we followed this researcher concept.

Morphology of imago and used terminology

As it was mentioned above, one of the goals of the current work is unification and standardization of taxa descriptions, which is a necessary condition to conduct comparative analysis in future and prepare new descriptions as well. As it turned out, terms used to describe ichneumon flies characters differ from author to author. It depends upon frequency of Latin names of characters usage and upon various degree of Latinization of terms in national languages, and creates certain difficulties. Pictures 1-4 and notations to them present parts of ichneumon body and indications of characters used by us in further descriptions. Terms mostly used by various authors are given in brackets. Wing morphology is less used when describing Ichneumoninae. At the same time it is rather bulky. That is why we tried to simplify it as more as possible. The terms used for wings' characters definition, especially areolet morphology, are reviewed in a section concerning morphology of Platylabini. When marking the terms, names of characters used in the current paper are given, while terms most widely used in literature on taxonomy of ichneumon flies (PFANKUCH 1920; HEINRICH 1934-1977; TOWNES 1969; GOULET & HUBER 1993; KASPARYAN 1981; YU & HORSTMANN 1997) are in brackets.

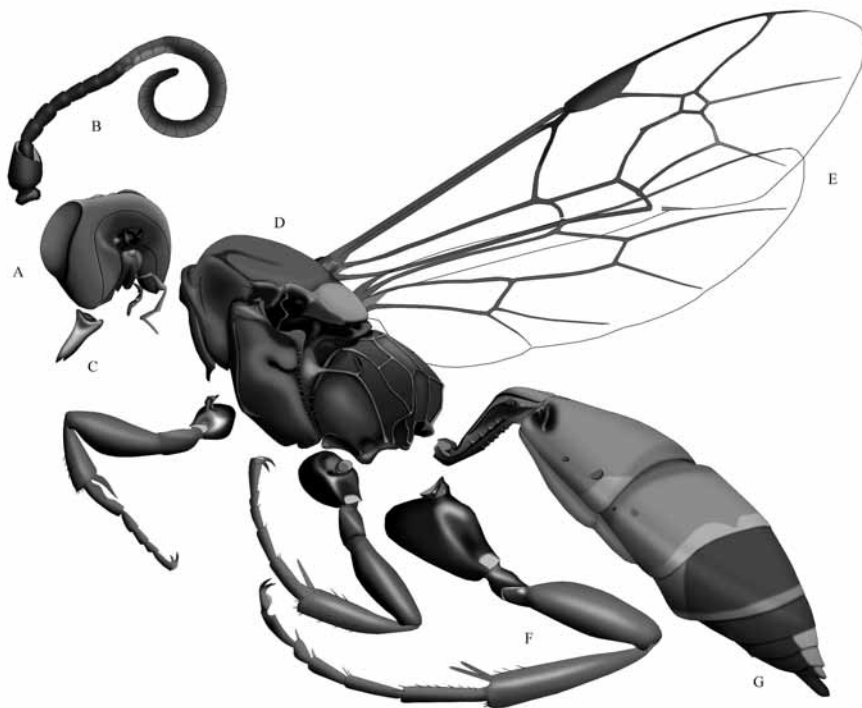


Fig. 1: Imago of *Ichneumoninae* spp. (female).

Tribal structure of *Ichneumoninae* subfamily

As discussed in the Introduction, in the definition of tribal and subtribal structure we followed the works of Gerd HEINRICH (1962-1977) who dedicated his whole life to the study of this group, and developed the most objective system reflecting natural relationships between higher taxa of the subfamily.

It is hard to agree with synonymization of *Alomyini* and *Phaeogenini*. Therefore, we are treating these taxa as independent tribes, in concordance with D. PERKINS (1959-1960), a leading palaeoentomologist A.P. RASNITSYN (1981) and E. Diller (SELFA & DILLER 1994).

We also consider *Heresiarchini* to be a separate tribe. A main argument to unite this tribe with *Protichneumonini* is presence of sickle-shaped mandibles in a number of *Ichneumonini* genera and similar structure of propodeum with *Protichneumonini*. G. HEINRICH soundly considers propodeum morphology to be a major trait to delimit higher taxa. At the same time, similar mandible morphology is a sufficient reason to separate *Ctenocalini* that share a lot of characters with *Listrodromini* and *Compsophorini*. A similar situation is in *Joppocryptini* possessing sickle-shaped structure of mandibles. Furthermore, lowering of *Heresiarchini* to subtribal rank in the tribe of *Protichneumonini*, though fully founded by G. HEINRICH (1934, 1974), leads to consequences that would sharply decrease prognostic value of classification of higher taxa within the subfamily. Basing on the reasons listed above, we retain *Heresiarchini* as an independent tribe.

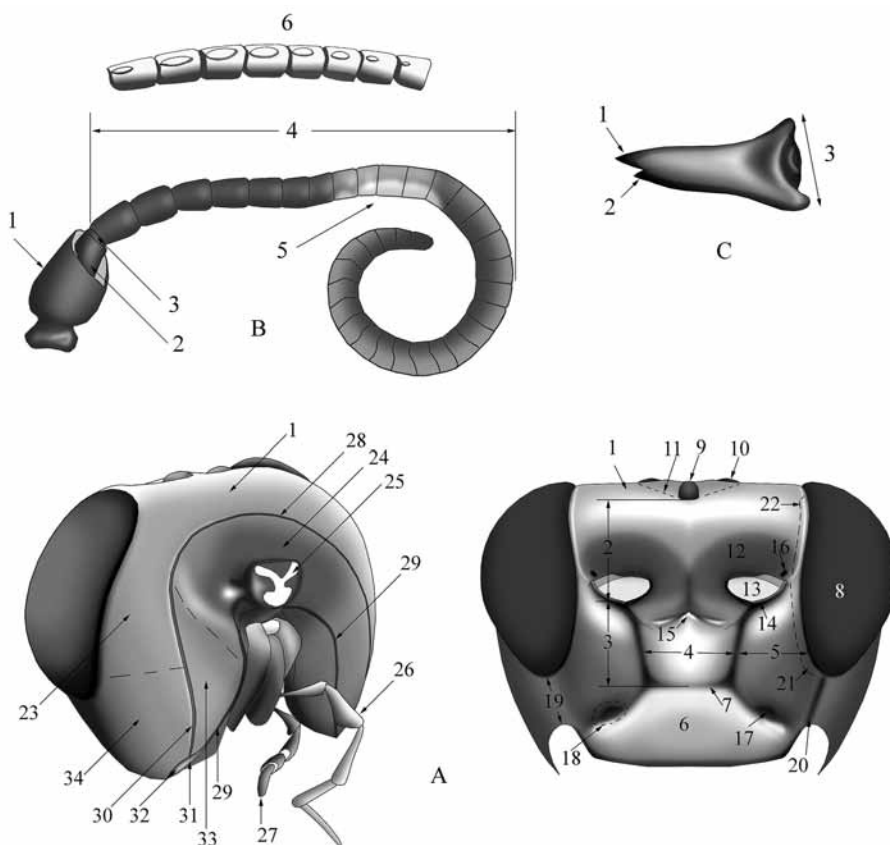


Fig. 2: Morphology of head and its processes: (A) head capsule; (B) antenna; (C) mandible.

Head capsule (A):

(1) vertex; (2) frons; (3) face; (4) median field (epistoma); (5) lateral field; (6) clypeus; (7) epistomal suture (epistomal groove); (8) compound eye(s) (oculi compositi); (9) front ocellus; (10) lateral ocellus; (11) ocellar triangle; (12) antennal cavity; (13) antennal fossa (antennal socket); (14) border of antennal socket (fossa); (15) interantennal tubercle; (16) lateral tubercle; (17) clypeal fovea (anterior tentorial pit); (18) area of clypeal fovea; (19) malar space; (20) sulcus genalis (subocular groove, subocular sulcus); (21) facial orbit (orbita faciales); (22) frontal orbit (orbita frontalis); (23) temple; (24) occiput; (25) foramen magnum; (26) maxillary palp (palpi maxillare); (27) labial palp (palpae labiales, palpus); (28) occipital carina; (29) hypostomal carina (oral carina, carina oralis); (30) carina genalis (lower part of occipital carina by border of genae); (31) carinal unktion; (32) abscissula; (33) postgena; (34) gena (cheek).

Antenna (B):

(1) scapus; (2) pedicellus; (3) annellus; (4) flagellum; (5) flagellar annulus; (6) tyloides.

Mandibula (mandible) (C):

(1) upper tooth; (2) lower tooth; (3) mandible base.

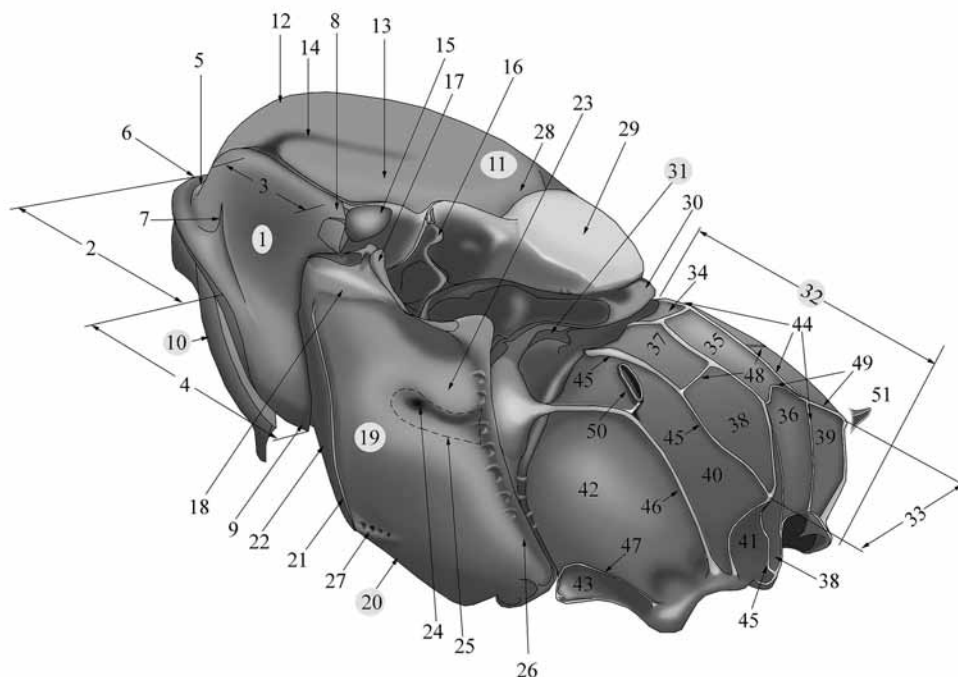


Fig. 3: Morphology of thorax (D).

Thorax (D):

(1) pronotum; (2) collar; (3) pronotal ridge; (4) pronotal base; (5) transverse furrow of pronotum; (6) front margin of pronotum; (7) epomia; (8) hind corner of pronotum; (9) lower corner of pronotum; (10) propleura (propleurum, prosternum, propleuron); (11) mesonotum; (12) median lobe; (13) lateral lobe; (14) notauli (parapsidae); (15) tegula; (16) axillary tongue (projection); (17) subalar tubercle; (18) subalarum; (19) mesopleura (mesopleurum, mesopleuron); (20) mesosternum; (21) prepectal carina (epicnemial carina); (22) prepectus (epicnemium); (23) speculum; (24) mesopleural fovea; (25) area of mesopleural fovea; (26) mesopleural suture; (27) sternaulus (-i); (28) scuto-scutellar groove; (29) scutellum; (30) postscutellum; (31) projection of hind margin of metanotum; (32) propodeum; (33) horizontal part of propodeum; (34) area basalis (basal area); (35) area superomedia (areola); (36) area posteromedia (petiolar area); (37) area supereoexterna (first lateral area, area externa); (38) area dentipara (second lateral area); (39) area posteroexterna (third lateral area); (40) area spiraculifera (first pleural area + second pleural area); (41) third pleural area (apical pleural area); (42) area metapleuralis; (43) area coxalis (juxtacoxal area); (44) median longitudinal carina (lateromedian longitudinal carina); (45) lateral longitudinal carina (carina dentipara exteriores); (46) carina metapleuralis (pleural carina); (47) coxal carina (juxtacoxal carina); (48) costula; (49) apical transverse carina (carina dentipara interiores, posterior transverse carina); (50) spiracle; (51) apophysis (crest).

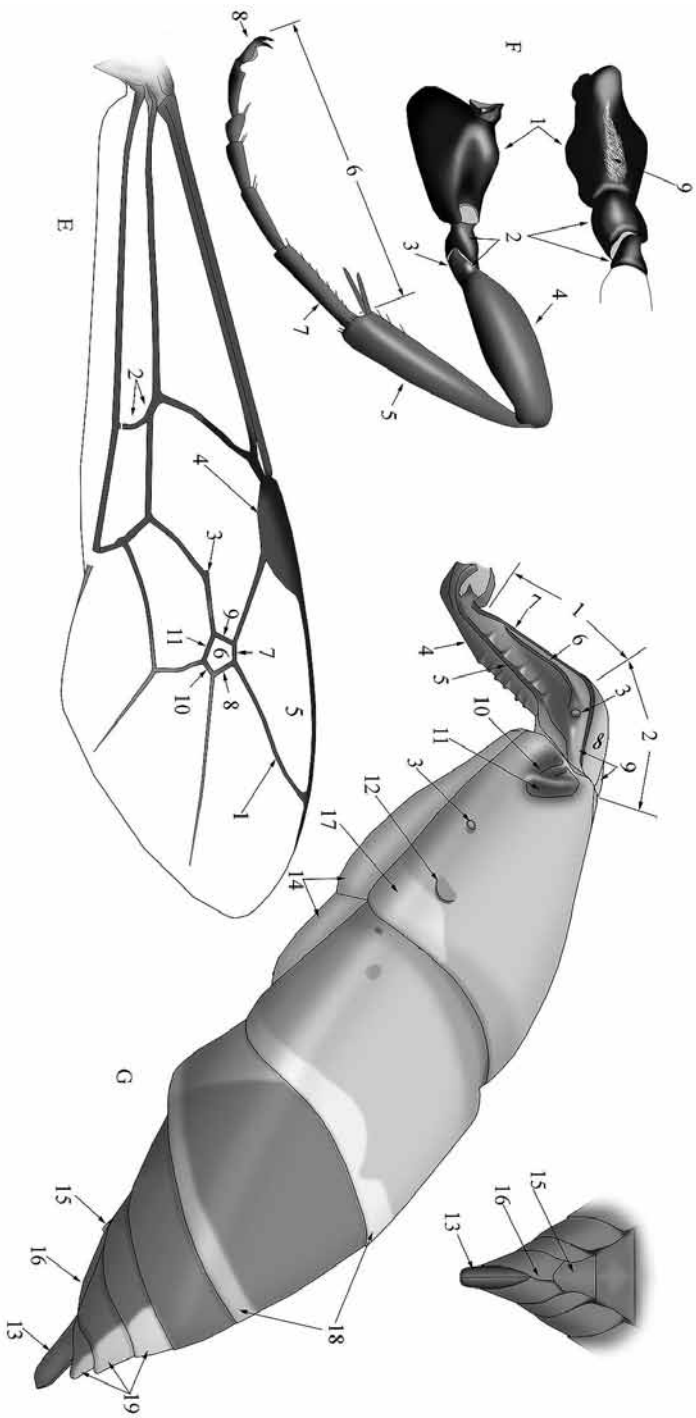


Fig. 4: Morphology of abdomen and processes of thorax: (E) front wing; (F) leg III; (G) abdomen of female.

Labeling to figure 4:**Front wing (E)**

(1) radius; (2) nervulus; (3) ramulus (ramellus); (4) stigma; (5) radial cell; (6) areolet; (7) base of areolet (mediella); (8) external vein of a base (second intercubitus); (9) internal vein of a base (first intercubitus); (10) external vein of a apex; (11) internal vein of a apex.

Hind leg (F)

(1) coxa; (2) trochanter 1+2; (3) trochantellus; (4) femur; (5) tibia; (6) tarsus; (7) metatarsus; (8) claws; (9) scopa.

Abdomen of female (G)

(1) petiolus (petiole); (2) postpetiolus (postpetiole); (3) spiracle; (4) sternite 1; (5) ventrolateral carina; (6) dorsolateral carina; (7) dorsomedian carina; (8) median field; (9) lateral fields; (10) gastrocoelus (-i); (11) thyridia (thyridium); (12) lunula (variola); (13) ovipositor sheath; (14) sternites; (15) hypopygium; (16) slit of the ovipositor; (17) latero-apical marks; (18) apical band; (19) anal marks.

Key to the tribes of Ichneumoninae

- 1 Postgenae and genae of female closed above mouthpart thus, that foramen magnum closed, at males not closed, but with similar morphology and with tendency to this direction; spiracles of first tergite of abdomen removed from apex of tergite on distance equal to distance between them or considerably more; postscutellum often without basal foveae (spiracles of propodeum roundish; front legs with one or two trochanters). Species of middle and big size Alomyini (FOERSTER)
(Palearctic)
- Genae and hypostomae not closed under foramen magnum; spiracles of first tergite removed from apex of tergite on distance usually lesser than distance between spiracles; postscutellum always with basal foveae 2
- 2 Spiracles of propodeum small and circular (Small and very small species)..... 3
- Spiracles of propodeum roundish, elongated or slit-shaped, usually large..... 4
- 3 Scutellum laterally not carinated or carinated not completely, flat; petiolus rarely distinctly wider than height, at the same time upper section of nervellus inclinal and not curved, or only some longer of lower section; abdomen usually oxygygous, rarely amblypygous. Flagellum of females shorter than front wing (Tergites black or red, abdomen without white spots at apex, at most narrowly white along hind border)..... Phaeogenini (FOERSTER)
(World-wide)
- Scutellum laterally carinated up to apex, convex, elevated above postscutellum; first tergite more often flattened at base; abdomen always amblypygous. Flagellum of females long, bristle-shaped or semi bristle-shaped, usually approximately equal by length to front wing or slightly shorter..... Platylabini BERTHOUMIEU
(World-wide)
- 4 Petiolus of first tergite of abdomen flattened, at base distinctly wider than height, if not flattened (*Hypomecus* GRAVENHORST) scutellum strongly elevated above postscutellum, with shagreen vertical surface and thin mandibles, narrowed behind base; abdomen of females amblypygous..... 5
- Petiolus of first tergite not flattened, at base approximately square in cross-section; abdomen of females amblypygous or oxygygous 7
- 5 Clypeus convex; scutellum high elevated above postscutellum and usually carinated laterally. Mandibles thin, more often narrowed behind base, with small teeth. Flagellum long, bristle-shaped, usually approximately equal by length to front wing or slightly shorter. Usually small species Platylabini BERTHOUMIEU

- Clypeus not strongly convex; mandibles strong with one or two teeth situated in same plane. Species of large and middle size.....6
- 6 Clypeus strongly deflected forward comparatively of face surface, with sharp protrude forward front margin, small, only just wider than length, slightly convex; mandibles strong, without teeth, gradually and rather sharply narrowed from base to apex, from above gradually curved; vertex between lateral ocellus and eye with strong impression; scutellum laterally carinated; gastrocoeli and thyridia developed..... Zimmeriini HEINRICH
(Palaeartic)
- Clypeus not deflected forward comparatively of face surface, with straight pointed front margin; mandibles normal, rather strong, with two teeth; vertex between lateral ocellus and eye without impression; scutellum not carinated laterally; gastrocoeli small but rather distinct, thyridia atrophied; ovipositor unusually thin, usually curved downwardsEurylabini HEINRICH
(Palaeartic, Oriental and Ethiopian Regions)
- 7 Clypeus convex, transverse with leaf-like broadened and elevated above malar surface lateral margins; mandibles almost not narrowed behind base to apex (parallel sided), with two teeth, situated in the same plane; scutellum roundly-convex, not carinated laterally; claws of tarsi of females pectinate. Small species..... Clypeodromini TERESHKIN
(Palaeartic)
- Clypeus of different morphology, flattened, or claws of tarsi of females not pectinate or mandibles of another form8
- 8 Face and clypeus slightly differentiated, or forming single slightly convex surface.....9
- Face and clypeus distinctly differentiated; clypeus distinctly separated from face by suture or impression, lateral fields of face separated from middle field.....13
- 9 Clypeus and fields of face slightly but distinctly differentiated10
- Face, clypeus and malar surface forming single slightly convex surface, without sutures, elevations or depressions; mandibles short and broad, with almost equal deeply and broadly separated teeth11
- 10 Frons with two or four longitudinal carinae; lateral lobes of mesonotum strongly lowered, separated from middle lobe along full length by irregularly and roughly transversally-wrinkled notauli; mandibles short and broad, the teeth deeply and broadly separated (Thyridia very large, moved from base of second tergite, with narrow interval between them; propodeum without distinct fields, its dorsal surface only with one transversal carina, separating the smooth front part from roughly-wrinkled hind one; areolet irregularly quadrangular, sometimes petiolate)Ceratojoppini HEINRICH
(South of Sahara and Madagascar)
- Frons without longitudinal carinae; lateral lobes of mesonotum not impressed; notauli, with very rare exceptions, shortened and less expressed; apex of mandibles curved, sometimes thus, that lower tooth moved inside to make the mandibles appear sickle-shaped form..... Ctenocalini HEINRICH
(Africa south of Sahara and Madagascar)
- 11 Areolet regularly pentagonal, with broad base; propodeum of broken type, horizontal part at least partially, often considerably shorter than area posteromedia in middle; flagellum of females comparatively short, never broadened beyond middle, and only from slightly to moderately pointed at apex; claws I and II or all claws of females often pectinate (Quite small forms, usually with reach white pattern. Exclusively parasites of Lycenidae)..... Listrodromini HEINRICH
(Holarctic, Oriental and Ethiopian Regions)
- Areolet quadrangular or at least, strongly narrowed in front; propodeum from lateral or gradually sloping from base to apex, or of broken type, area posteromedia in middle considerably shorter than horizontal part; flagellum of females or very long and thin, bristle-shaped and not widened beyond middle, or short, lanceolate, and strongly widened beyond middle; claws always not pectinate12
- 12 Abdomen as a rule cylindrical and elongated, 2nd and 3rd tergites considerably longer

than width; propodeum of broken type, with long horizontal surface; mesonotum without unusually rough rugosity; flagellum of females short, lanceolate; areolet usually pentagonal, strongly narrowed in front (All known species of light yellow or rusty-yellow basic coloration, often with white anal spot).....Ischnojoppini HEINRICH

(Ethiopian Region, including Madagascar; 1 species in Oriental Region)

- Abdomen of majority of species broadly oval, nothing strongly elongated, second tergite not longer or only just longer than width at apex; profile of propodeum gradually curved from base to apex; mesonotum with different type of unusually rough rugosity; flagellum of females bristle-shaped, long and thin, beyond middle not widened, strongly pointed to apex; areolet usually quadrangular (Species from small to very large, some rust-colored, most part metallic blue or metallic green of basic coloration, abdomen apically often with white spots).....Compsophorini HEINRICH

(Ethiopian (mainly) and Oriental Regions)

13. Head very thick, almost cubical with convex vertex between hind ocelli and occipital carina (i.e. without distinct slope) and with broad genae from lateral (Mandibles strong with two almost equal teeth, situated in the same plane and divided by broad gape; clypeus almost flat, structurally slightly separated from face and bent forward. Thorax convex, with mesonotum steeply sloped at front; scutellum from slightly to very strongly elevated above postscutellum with thorn-shaped projection, often carinated up to apex by very high carinae. Propodeum from lateral roundly slanted and shortened with set of carinae, reduced in different degree and with spiracles of different shape. Abdomen of different shape, more often flattened, of females oxygygous with projecting sheath of ovipositor; gastrocoeli large and deep, transverse with narrow interval).....Oedicephalini HEINRICH

(Neotropical, Oriental and Ethiopian Regions)

- Head not sharply thick, usually not cubical, vertex usually abrupt or sloping to occipital carina just behind hind ocelli or close to them14
- 14 Propodeum distinctly of broken type, distinctly divided on horizontal and declivous parts (with horizontal and abrupt slant); apices of areae dentiparae often with denticles, teeth or apophyses.....15
- Propodeum of sloping type, without distinct division on horizontal and declivous parts, from lateral or gradually roundly slanted from base to apex or triangle, slanted from apical point forward to basal furrow and from it backwards to base of first tergite of abdomen; apices of areae dentiparae always without projections.....17

- 15 Scutellum with knoll on horizontal part (Flagellum long, bristle-shaped, head with broad and convex temples, broad and flat clypeus, sufficiently distinct fields of face and large broad mandibles with almost equal teeth; propodeum from lateral rectangular with indistinct fields and roughly-wrinkled sculpture, separated from metanotum by sharp basal furrow and with large slit-shaped spiracles. Abdomen long, parallel sided, amblypygous of females and with long narrow petiolus of first tergite).....Goedartiini TOWNES

(Palearctic and Oriental Region)

- Scutellum without knoll on horizontal surface.....16
- 16 Mandibles sickle-shaped, clypeus almost always with thinned, leaf-shaped, or broadly curved, or projected medially (rarely almost straight) apex, usually slightly convex basally and more or less distinctly concave to apex. Abdomen of females oxygygous with projecting sheath of ovipositor and with slight long gastrocoeli and distinct thyridiaJoppocryptini (VIERECK)

(Oriental, Ethiopian, Neotropical Regions and 1 genus in Holarctic)

- Mandibles normal, if sickle-shaped (*Rhadinodonta* SZEPLIGETI, *Plagiotrypes* ASHMEAD), then abdomen amblypygous, or semiamblypygous, and if clypeus flattened with elevated margins, propodeum without teeth (*Rhadinodonta*) (Gastrocoeli from very deep with distinct thyridia, to only just marked; postpetiolus striated or punctured, irregularly wrinkled or smooth). Rarely very large, usually of middle size, often small species.....Ichneumonini ASHMEAD

(World-wide)

- 17 Propodeum almost straightly slanted from apical point to base of first tergite of abdomen, shortened, triangle from lateral, with smoothed arcuate prominence at upper point at place of area superomedia, abruptly slanted from apical point forward to basal furrow and from it backwards to apex of propodeum; scutellum extremely high elevated, to pyramidal (Ichneumon flies of middle size to very large) Trogini (FOERSTER)
(World-wide)
- Propodeum from lateral gradually roundly slanted from base to apex 18
- 18 Mandibles sickle-shaped with long upper tooth and atrophied lower, moved on internal margin of mandibles, fields of propodeum reduced on considerable part (Propodeum from lateral uniformly slanted from base to apex thus, that third pleural area (area posteroexterna) extremely sharply shortened, as a result of this, apices of areae dentiparae especially close approach to hind coxae; fields reduced: area dentipara and area posteroexterna completely merged; fields of horizontal part – area superomedia, area basalis and area suproexterna – merged, forming single polished surface); abdomen of females oxyptygous Heresiarchini ASHMEAD
(Palearctic (1 species) and Oriental Region)
- Mandibles normal with two teeth, most part of areas of propodeum distinct; abdomen of females oxyptygous or rarely amblyptygous Protichneumonini HEINRICH
(Holarctic, Oriental and Ethiopian Regions)

Tribe Alomyini (FOERSTER)

Alomyoidae FOERSTER 1869 - Verh. Preuss. Rhein. West. **25**: 135-221.

Type genus: *Alomya* PANZER.

Alomyinae: PERKINS 1959 - Roy. Ent. Soc. London **7**, 2 (aii): 8, 208.

Alomyini: RASNITSYN 1981 - Opr. Faun. SSSR **3** (3): 507, 512.

D i s t r i b u t i o n : Palearctic.

I n t r o d u c t i o n : The tribe is connected by intermediary form *Pseudalomya* TELENGA with Phaeogenini. Basic key character of tribe, distinguishing it from Phaeogenini, is morphology of head. Female's postgenae and genae are closed above mouthparts so that the foramen occipitalis is closed. Males' postgenae and genae are not closed, but have similar morphology and tendency in this direction. Pneusticae of propodeum, in contrast to Phaeogenini are roundish, but not circular.

M o r p h o l o g y :

F l a g e l l u m : Of females short, filiform, not widened and flattened beyond middle, all segments except last segment transversal (*Alomya*), or several middle segments slightly elongated (*Pseudalomya*). Flagellum of males bristle-shaped with elongate segments and without tyloides.

H e a d : Head contour from the front and from above scarcely transversal with very long slightly narrowed temples. Of female postgenae and genae connected above mouthparts, so, that foramen magnum closed up, not so at males (in contrast of males). Mandibles flat, spade-shape, with two tooth, and lower large size than upper (*Alomya*) or without teeth (*Pseudalomya*); front surface of head with differentiated fields and clypeus; antennal cavities divided by keel (*Alomya*) or tooth and with high flat horn at the middle (*Pseudalomya*).

T h o r a x : Pronotum long with sharp fovea or slight impression on border of mesonotum. Mesonotum longer than wide, or equal to width in middle, with or without notauli; axillary tongue developed, slightly or sharply expressed; sternaui absent or slightly

impressed at base; scutellum flat, gradually sloping to postscutellum, not carinated laterally; postscutellum with basal foveae (*Pseudalomya*) or without them (*Alomya*). Hind margin of metanotum with large projections. Propodeum long with reduced areas; only apical transverse carina expressed or marked more or less distinctly; spiracles of propodeum oval.

L e g s : Strong, with strongly thickened front femora; trochanter II of front legs developed (*Pseudalomya*) or absent (*Alomya*). Legs of males more thin and slender.

W i n g s : Areolet pentagonal with very wide base.

A b d o m e n : From above longish-oval from blunted to pointed at apex, amblypygous. First tergite from above uniformly broadening from base to apex; only ventrolateral carina of petiolus slightly expressed; spiracles moved from hind margin of tergite or on distance equal interval between spiracles (*Pseudalomya*), or situated almost in middle of tergite (*Alomya*). Gastrocoeli and thyridia not developed. Front sternites with fold; hypopygium from absolutely flat (*Alomya*) to slightly compressed from sides (*Pseudalomya*), without fold.

S i z e : Species of middle length.

C o l o r a t i o n : Combination of black and red or light-red.

***Pseudalomya praevara* TELENGA (Plate 1)**

Pseudalomya praevara TELENGA 1930 - Russ. Entom. Obozr. **24**: 107.

Pseudalomya praevara: TOWNES et al. 1965 - Mem. Amer. Ent. Inst. **5**: 422.

Pseudalomya praevara: RASNITSYN 1984 - Entom. Obozr. **63** (4): 799-800, description.

Genus *Pseudalomya* TELENGA occupies an intermediate position between tribes Alomyini and Phaeogenini, but more close to the representatives of the last. As of Phaeogenini pronotum is without distinct hollow at border with mesonotum, only with slight impression, postscutellum with distinct lateral foveae, front legs with two trochanters. As of Alomyini occipital carina of females closes above mouthparts at the bottom, frons above antennal cavities of males and of females with high horn compressed from sides, spiracles oval, not a circular.

F e m a l e

F l a g e l l u m : Filiform, 30-segments, thick, first segment short, almost square, only 1,1 times longer than the width at the top, with white annulus on segments 8-15, beyond white annulus not widened and not flattened ventrally. Scape cylindrical, practically without dorsal cavity. Flagellum of female 1,8 times shorter than the front wing and 2,5 times shorter than body length.

H e a d : Head contour from the front only just narrowed downwards to mandibles, slightly transversal, 1,1 times wider than height; genae from front 3,1 times shorter than height of eye; eyes not great, temples from the front visible almost to middle of eye; head contour from above strongly stout, transversal, 1,4 times wider than length, weakly roundly narrowed behind eyes. Vertex from lateral practically not slanting down, on the contrary rather climbing from hind margin of lateral ocelli; temples long 1,6 times longer longitudinal diameter of an eye at the middle, from above slightly roundly narrowed behind eyes; occipital carina sharp all round, from above strongly roundly impressed, not reach level of eyes and hind ocelli, at the bottom connected above mouthparts; hyposto-

mal carina visible from lateral also connected above mouthparts (as at *Alomya*); malar space 1,5 times longer than the mandible base; mandibles broad, flat, curved with rounded apex, at bottom margin with only just expressed notch, marking apex of reduced lower tooth; clypeus transverse, slightly convex, 2,3 times wider than height, with rounded front margin, separated from face by suture, medially subapically with tooth, front margin thick, slightly elevated medially; clypeal foveae narrow, deep; labrum not protrude from under clypeus; middle field of face slightly elevated above lateral fields, in middle narrower than lateral fields; antennal cavities deeply impressed reach ocelli and not reach borders of eyes, with sharp teeth between antennal fossae and strong transversal wrinkles; margins of antennal fossae slightly elevated above face surface; frons above antennal fossae with high horn compressed from lateral, with transversal wrinkles converging to its base; ocelli small, flat, diameter of lateral ocellus 2,1 times less than distance from ocellus to eye; ocellar triangle not expressed; surface of clypeus and face slightly superficially wrinkled, middle field with big, sparse, smoothed punctures without microsculpture, other part of head smoothly-wrinkled without microsculpture.

T h o r a x : Collar of pronotum very long, flat, with straight front margin (from above); transverse furrow of pronotum shallow, medially interrupted by fan-shaped disperse ribs; epomiae sharp; pronotal base gradually curved; pronotum without fovea at border with mesonotum. Mesonotum only just convex, 1,2 times longer than width; notauli long, reach middle of mesonotum; surface of mesonotum wrinkled, without microsculpture; mesonotum laterally bordered by strong impression; axillary tongue slightly expressed; subalarum high, thick; speculum slightly wrinkled, shining; area of mesopleural fovea in form of narrow longitudinal impression; mesopleural suture straight, deep, interrupted by very delicate short ribs; mesopleurae at bottom without sharp bend; sternauli distinct to middle of mesopleurae; lower part of mesopleurae longitudinally wrinkly-punctured, shining, without microsculpture, upper third slightly wrinkly-punctured; scutellum flat, laterally not carinated, smoothly punctured by big punctures; postscutellum with longitudinal ribs and distinct lateral foveae. Hind margin of metanotum with blunt triangular projections opposite base of lateral longitudinal carinae. Propodeum long, broken from lateral, length of horizontal part 1,5 times longer area posteromedia in middle; most carinae of propodeum reduced, with exception of metapleural carina and apical transverse carina, lamellate widened at place of apophysises; lateral longitudinal carinae marked only at base; spiracles small, oval, by external contour 1,5 times longer than width. Surface of propodeum irregularly-wrinkled, without microsculpture.

L e g s : Strong, short. Hind coxae without scopa. Claws thin, long, uniformly gradually curved. All legs with two trochanters.

W i n g s : Narrow and long; areolet pentagonal, symmetrical with wide base; stigma normal, light, radial cell narrow, blunted at apex, radius straight, bent at apex; nervulus interstitial; ramulus absent; all veins of front wing dark, except slightly developed apical branch of median vein; membrane of wing hyaline; external branch of radial vein of hind wing slightly expressed. Length of front wing almost two times more than length of flagellum and 1,4 times of body length.

A b d o m e n : Amblypygous, from above fusiform, apical tergites not hidden; length of second tergite approximately equal to width at apex; sheath of ovipositor only just visible protrude. First tergite from lateral with gradual bend between petiolus and postpetiolus; petiolus not flattened at base, from lateral carinated only by ventrolateral carina and

sculpturated by smoothed ribs; from above petiolus gradually broadened to triangle post-petiolus; distance between spiracles equal to distance from spiracles to hind margin of tergite; middle field of postpetiolus not expressed, its surface irregularly-wrinkled, without microsculpture. Gastrocoeli and thyridia not developed, on theirs place short carina between lateral and dorsal surfaces of tergite; lunulae absent, spiracles situated in middle of lateral surface of tergite; surface of second tergite to apex slightly superficially-wrinkled, without microsculpture, shining; other tergites smooth. Hypopygium, without longitudinal fold, but not flattened, reach apex of abdomen; sternites 4-5 with fold.

C o l o r a t i o n : Body black; head, legs, except hind coxae, partially pronotum, mesonotum and scutellum brown-red.

Body of female with moderately dense long white pubescence.

S i z e : Body length: 12,5; front wing: 9,0; flagellum: 5,0 mm.

The species is characterized by sharply expressed sexual dimorphism.

M a l e

Body more thin and slender. Flagellum of male slender, bristle-shaped, 39-segments and with slightly differentiated elongated segments, uniformly light colored without white annulus and tyloides; hypostomal and occipital carinae not closed above mouthparts; vertex from lateral slanted from middle to occipital carina; mandibles with two distinct teeth; notauli very sharp; mesopleurae polished with large smoothed punctures without rugosity; legs slender and long; all tergites of abdomen smooth, polished; in coloration light-red and yellow color dominate.

Tribe Phaeogenini (FOERSTER)

Phaeogenoidae FOERSTER 1869 - Verh. Preuss. Rhein. West. **25**: 144.

Phaeogenini ASHMEAD 1900 - Proc. U.S. Nat. Mus. **23** (1206): 1-220.

Phaeogenini: PERKINS 1959 - Roy. Ent. Soc. London **7** 2 (aii): 68-71.

Phaeogenini: HEINRICH 1977 - Ichn. Florida and Neighb. States **9**: 10, 298.

Phaeogenini: DILLER 1994 - Entomofauna **15** (20): 238.

Type genus: *Phaeogenes* WESMAEL.

D i s t r i b u t i o n : World-wide.

I n t r o d u c t i o n :

Tribe Phaeogenini includes only very small representatives of subfamily, parasitizing on Microlepidoptera. They distinct from closely related tribe Alomyini and other tribes of subfamily by completely circular small spiracles in combination with morphology of head of females. Genae and hypostomae not closed under foramen occipitalis. Besides that, basic characters of the tribe are convex in longitudinal and cross directions clypeus, pentagonal areolet of front wings with broadly divided veins of base (with wide base) and tendency to shortening radial cell and stigma. The set of carinae of propodeum with usually hexagonal area superomedia, narrowed from costulae in front to area basalis, almost parallel sided behind costulae and often longer than width are also character to majority of forms.

In contrast to Ichneumonini, Phaeogenini in most cases are monotonous in coloration and demonstrate only slightly expressed sexual dimorphism. The species are usually red (of different tints), or black, or both color in combination, usually without white pattern, or with very limited white pattern.

The figures of *Pseudalomya*, presented on color plate illustrate pari passu both characters of Alomyini and Phaeogenini.

Tribe Platylabini BERTHOUMIEU

Platylabini BERTHOUMIEU 1904 - Genera Insectorum. **18**: 4.

Platylabini: HEINRICH 1934 - Mitt. Zool. Mus. Berlin. **20**: 64, 67, 130.

Platylabini: HEINRICH 1962 - Syn. Nearct. Ichn. Stenop. **27**: 697.

Platylabini: HEINRICH 1967 - Ichn. Stenop. of Africa **2**: 393, 395.

Platylabini: HEINRICH 1977 - Ichn. Florida and Neighb. States **9**: 272.

Type genus: *Platylabus* WESMAEL.

Distribution: World-wide.

Introduction:

It is most distinctly separated tribe of subfamily as by structure, and by biology too. Borders between it and other tribes is distinctly limited and not complicated by intermediate forms. *Heinrichiellus* TERESHKIN is only one genus, position of which is enough difficult to determine.

Combination of three typical sign as rule is determined Platylabini: convex clypeus, to some degree widened and dorsally flattened petiolus and amblypygous abdomen. From combination of first two characters is exceptions which compensated by elongated hypopygium and some additional characters, described below.

Flagellum, with very rare exceptions (*Apaeleticus*, *Ectopoides*) is long, slender, bristle-shaped, not broadened or slightly broadened behind middle, approximately equal by length to front wing, more often with white annulus or semiannulus. Tyloides on flagellum of males are present or absent.

Basic tribal characters of Platylabini head are peculiarities of clypeus and mandibles morphology. As was already said, clypeus of Platylabini is strongly convex and slightly transversal, usually 1,5-2,5 times wider than height with more or less straightened front margin and usually distinctly separated from face. Exceptions are representatives of *Clypeolabus*, *Poecilostictus* and *Platybirmania* with practically flat uniformly arcuate rounded in front clypeus, *Pyramidophorus* with broad slightly convex clypeus with distinct lateral corners, and *Neurylabia* with clypeus moderately convex at base and impressed apical part. And only for *Clypeolabus* absence of typical morphology of clypeus is compensated by mandibles typical to tribe. Other four genera have considerable divergences in morphology of mandibles from common for all of genera characters. Theirs tribal belonging is compensated by the characters peculiar to other parts of a body. Mandibles of Platylabini are one of the main tribal characters, usually slender, narrowed to apex in different degree, with delicate teeth, lower of them moved inside. Exception is broad and massive mandibles of *Poecilostictus* and *Pyramidophorus*, sharply, almost at right angle curved in middle, massive mandibles of *Platybirmania* and mandibles of *Neurylabia* with large flat teeth, situated in the same plane and peculiar rather to Ichneumonini.

For thoracal part of Platylabini body, convex in different degree mesothorax, convex, and as a rule carinated scutellum and propodeum with convex, not flattened horizontal part, elevated at region of area supermedia are characteristic. The combination of these characters can be considered as tribal.

Such characters as thin, slender (long) legs, absence of scopa on hind coxae of females and smooth claws (with only exception of *Pyramidophorus flavoguttatus* TISCHBEIN) can be considered as tribal.

Wings of Platylabini are often more long and broad relative to body in comparison with representatives of other tribes. Only this character can be marked out as tribal.

Abdomen of Platylabini is amblypygous, as rule without strong sclerotization (with exception of *Abzaria*). Sternites of abdomen are slightly sclerotized. Petiolus of first tergite is, with rare exceptions, flattened, wider than height at base. Dorsal carinae, if developed, are merged with dorsolateral carinae near bend, or (rare) near middle of petiolus (only one exception *Lyncus*, of which dorsomedian and dorsolateral carinae are merged not far from base of tergite). Hypopygium is compressed from sides, more often with longitudinal fold, rarely flattened. Like tribal characters of other parts of a body, all of them have those or another exceptions.

M o r p h o l o g y :

F l a g e l l u m : Of females with very rare exceptions (*Apaeleticus*, *Ectopoides*), long, slender, bristle-shaped, not or slightly widened and slightly flattened ventrally beyond middle, more often with white annulus or semi-annulus; flagellum approximately equal by length to front wing or longer. Flagellum of males with or without tyloides; tyloides of representatives of most genera developed in a varying degree.

H e a d : Head contour from the front always transversal, rarely, at *Ectopius* and *Heinrichiellus* width and height of head approximately equal; face always transversal in a varying degree; eyes large. Horizontal part of occipital carina always distinct, except *Notoplatylabus* where occipital carina reduced above and occiput impressed almost to level of hind ocelli; mandibles usually delicate, narrowed in different degree to apex, with delicate teeth and with lower tooth removed inside (with exceptions of *Neeurylabia*); clypeus of Platylabini strongly convex and slightly transverse, usually 1,5-2,5 times wider than height, usually distinctly separated from face (with exceptions of representatives of *Clypeolabus*, *Poecilostictus* and *Platybirmania* with practically flat, gradually curved in form of arch front margin, *Pyramidophorus* with broad slightly convex with distinct lateral corners and *Neeurylabia* with impressed apex and thin front margin; antennal cavities more often deeply impressed with more or less developed tooth or tubercle between antennal fossae (with the exception of genus *Heinrichiellus*, antennal cavities of which practically not impressed); ocelli more often large on expressed ocellar triangle.

T h o r a x : Pronotum normal, only of *Notoplatylabus* pronotal base with angulate fracture above front coxae and of *Spanophatnus* and *Platybirmania* with thickened pronotal ridge. Mesonotum always convex; notauli more frequently not developed, or only just marked at base or expressed at first third, only of *Carlsonia*, *Lamprojoppa*, *Apaeleticus*, *Lyncus*, *Afrectopius*, *Notoplatylabus*, *Heinrichiellus* notauli sharply expressed to middle and far than to middle of mesonotum; prepectus without any structures, only of *Platybirmania* strongly impressed behind front coxae, and of *Pyramidodophorus* in considerably extent protrude to lateral surface, thus, that considerable part of prepectus visible from lateral; subalarum varies in form from narrow to thickened in considerably extent; speculum of most genera distinct and differ by sculpture from other part of mesopleurae; mesopleural fovea often deep, rarely slightly expressed; sternauli from sharply developed to middle coxae of *Heinrichiellus* and to two third of mesopleura length, of

Apaeleticus with sharply expressed transversal rugosity, to full lacking; scutellum convex and in varying degree elevated above postscutellum and commonly carinated; horizontal part from flat to conical (*Lamprojoppa*) or with knoll on horizontal part (*Pachyjoppa*); postscutellum usually smooth with normally developed lateral foveae with exception of *Notoplatylabus* and *Acantholabus* with sharp longitudinal wrinkles and *Platybirmania* with merged lateral foveae. Hind margin of metanotum usually with prominences opposite lateral longitudinal carinae, rarely smooth (*Abzaria*, *Spanophatnus*, *Pyramidophorus*, *Levansa*). Propodeum from lateral varies from broken type, also not so obvious as of Ichneumonini, to slanting and almost triangle; horizontal part overwhelming majority of genera shorter than vertical, its middle area elevated (convex); complete set of propodeum carinae varies from complete to almost entirely their reduction; apices of areae dentiparae more often with tooth-like structures, developed in varying degree, rarely without them, or with lamellar widening at apex; spiracles of propodeum vary in shape and size from small and round to large and slit-shaped. Surface of propodeum with various sculpture to smooth and polished (*Abzaria*), usually without microsculpture, with exception of *Pachyjoppa*.

L e g s : Thin, slender, stumpy of *Neeurylabia* and *Neolevansa*; scopa on hind coxae of female always absent; claws smooth with only exception of genus *Pyramidophorus*.

W i n g s : Wings in form comparatively broad. Shape of areolet practically of all species, with predominance of most of genera irregularly quadrangular shape, petiolate only of genera *Platybirmania* and *Ambloplisus*; radius from straight to slightly sinuous; nervulus of front wing more often interstitial, rarely slightly postfurcal and as exception (*Spanophatnus*), slightly antefurcal; ramulus as rule expressed; stigma of representatives of most of genera dark; membrane of wing mostly hyaline, rarely of yellow coloring, or with darkened apices (*Pachyjoppa*, *Neeurylabia*); veins of most genera dark colored. Wings long; length of front wing more often almost equal to body length, rarely maximum 1,3-1,4 times shorter.

A b d o m e n : Of females amblypygous, as rule without strong sclerotization (with exception of *Abzaria*). Sternites of abdomen slightly sclerotized. Petiolus of first tergite, with rare exceptions (*Ectopoides*, *Apaeleticus*, *Hypomecus*, *Heinrichiellus*) flattened, wider than height at base. Dorsal carinae, if developed, merged with spiracle carinae near bend, or (rare) near middle of petiolus (only one exception *Linytus* of which dorsomedian and dorsolateral carinae merged not far from base of tergite). Gastrocoeli and thyridia more often developed, of genera *Asthenolabus*, *Ectopius* atrophied and of *Abzaria* absent completely. Lunulae with exception of genera *Abzaria*, *Pachyjoppa* and *Lissolaboides* distinct in varying degree. Hypopygium compressed from sides, more often with longitudinal fold, rarely (*Lamprojoppa*, *Neeurylabia*, *Neolevansa*) flattened.

S i z e : Mainly small species 5-10 mm with some exceptions of *Pachyjoppa* and *Lamprojoppa* (12,5) *Abzaria* (13,5), and *Pyramidophorus* (19,5 mm).

B i o l o g y :

Parasites of Geometridae and Drepanidae (some species), female deposits the egg into the larva.

Tribe Clypeodromini TERESHKIN

Clypeodromini TERESHKIN 1992 - Entomofauna **13** (10): 194-195.

Type genus: *Clypeodromus* TERESHKIN.

D i s t r i b u t i o n : Palaearctic.

I n t r o d u c t i o n :

A representative of this monobasic tribe possesses combination of the characters which are peculiar to species of different, systematically dissimilar from each other, genera of Ichneumoninae. Habitually it resembles Platylabini, however such characters as petiolus flattened at base, morphology of clypeus, topography of carinae of first tergite, and also proportions of body (relation of front wing and body length) do not indicate to such tribal belonging. At the same time, all key characters, with exception of morphology of clypeus, are met in a form of the exceptions of tribal ones in different genera of Platylabini. Angle-shaped lower margin of pronotum above front coxae, but only expressed in more sharp form, reduced behind ocelli occipital carina and impressed occiput, postscutellum with cellular sculpture is one of the main characters of two representatives of genus *Notoplatylabus* HEINRICH distributed in Palaearctic and Oriental Regions (HEINRICH 1936, 1974; TERESHKIN 1993). *Notoplatylabus* HEINRICH and *Apaeleticus* WESMAEL are marked by interrupted by keel transverse furrow of pronotum. Not flattened petiolus is character for *Ectopoides* HEINRICH *Apaeleticus* WESMAEL *Hypomecus* WESMAEL and *Heinrichiellus* TERESHKIN. Moreover, such unique character, as pectinate claws of females tarsi is presented by *Pyramidophorus* Tischbein, also as an exception in the tribe Platylabini. At the same time, convex, although and peculiar clypeus, convex scutellum, delicate body and size, amblypygous abdomen are characteristic for all of Platylabini.

Coloration of body is similar to coloration of *Listrodromus nyctemerus* GRAVENHORST (Listrodromini), which common in the same ecosystems (raised bogs). Pectinate claws and interrupted by keel transverse furrow of pronotum, are also characteristic signs of number of genera of this tribe. At the same time, morphology of head is completely not correspond to key character – flat, not differentiated surface of face. More over, such, also slightly expressed character as median pit at border of pronotum and mesonotum is character for genus *Alomya* PANZER, and ribbed postscutellum and short-oval pneusticae, for *Pseudalomya* TELENGA (Alomyini, Ichneumoninae Cyclopneusticae).

Morphology of the second tergite of *Clypeodromus thyridialis* is also peculiar. Similar combination of characters is possible more often to found at representatives of tribe Ichneumonini (Cratichneumonina), at the same time with tooth on basal area of propodeum.

Thus, the such peculiar combination of characters of different systematic categories of Ichneumoninae is good cause, in our opinion, for giving of the tribal status to taxon describing below.

M o r p h o l o g y :

F l a g e l l u m : Slender, bristle-shaped or semi bristle-shaped.

H e a d : Clypeus convex, transverse with leaf-like broadened and elevated above malar space lateral margins. Mandibles almost parallel sided with two teeth situated in the same plane.

T h o r a x : Pronotum with interrupted by keel transverse furrow of pronotum, sharply

thickened pronotal ridge and angularly broken above front coxae pronotal base; sternauli long and deep in front third; scutellum roundly convex, not carinated laterally; metanotum with triangle projections opposite lateral longitudinal carinae; propodeum of broken type with complete carination and small roundish spiracles.

Legs: Moderately strong. Claws of females tarsi pectinate.

Wings: Wings broad; front wing shorter than body length; areolet pentagonal with wide base.

Abdomen: Of female amblypygous with slightly sclerotized sternites. Petiolus not flattened at base, dorsomedian and dorsolateral carinae independently reach base of tergite; gastrocoeli and thyridia sharp, large, many wider than interval between them.

***Clypeodromus thyridialis* TERESHKIN (Plate 2)**

Clypeodromus thyridialis TERESHKIN 1992 - Entomofauna (13) 10: 193-204, ♀, ♂.

Clypeodromus thyridialis TERESHKIN 2000 - Entomofauna (21) 18: 232, distribution.

Distribution: Byelorussia, South Ural, Altai Region, Maritime Territory of Russia.

Small ichneumon flies with strongly polished, shining body, with absolutely absence of microsculpture.

Female

Flagellum: Of females semi bristle-shaped, with 29 segments, first segment 2,7 times longer than width at apex, black, with white annulus on segments 7-11, ventrally beyond white annulus slightly flattened, but not widened, segment 12 square laterally, last but one segment almost square. Flagellum equal by length to front wing and 1,4 times shorter than body length.

Head: Head contour from the front roundly narrowed downwards, transversal, 1,3 times wider than height; genae from front 3,5 times shorter than height of an eye; head from above strongly transversal, 2 times wider than length. Vertex from lateral abrupt just after the ocelli, behind ocelli with median impression; temples short, two times shorter than longitudinal diameter of an eye at the middle, from above sharply roundly narrowed behind eyes, from side strongly broadened toward mandible base; occipital carina from above absent, occiput roundly angularly impressed to level of eyes, occipital carina sharp from upper third of eye, high elevated, meeting with hypostomal carina far before base of mandible; abscissula 1,6 times less than the mandible base width; genae on the borders with mandible base and clypeus with strong matt impression; malar space equal to mandible base width; mandibles almost parallel sided with two teeth situated in the same plane, lower tooth 1,5 times shorter than upper; clypeus transverse, almost 4 times wider than length, strongly convex at the base with thinned front margin and leaf-like broadened and elevated above malar space lateral margins, distinctly separated from face by sharp impression; clypeal fovea sharp, deep; labrum not protrude from under clypeus; middle field of face narrow, distinctly limited, strongly elevated above lateral fields, in middle equal by width to lateral fields; antennal cavities only just impressed, without lateral tubercles, but with distinct tubercle between antennal fossae; front margins of antennal fossae high elevated above face surface; ocelli normal, diameter of lateral ocellus 1,6 times less than distance from ocellus to eye; ocellar triangle elevated, but slightly. Surface of head polished, shining, without microsculpture, with sparse superficial punctures on border of face, clypeus and on malar space.

T h o r a x : Collar of pronotum rather short with rounded front margin, transverse furrow of pronotum rather deep and broad, interrupted in middle by distinct keel; epomiae strong, lower branch sharp, reach to pronotal base, forming slight angular fracture above front coxae, like fracture of pronotum of genus *Notoplatylabus* (Platylabini); pronotal ridge very strongly thickened and separated from spiracles by impression; on border of pronotum and mesonotum with weak, but distinct hollow (see *Alomya* [Alomyini]). Mesonotum strongly convex, equal length and breadth; notauli deep in front third; laterally mesonotum bordered by deep furrow, scuto-scutellar groove very deep and broad; axillary tongue not expressed; surface of mesonotum not sculptured, polished; subalarum thick, not sharpened; surface of speculum not sculptured, polished; area of mesopleural fovea broadly and deeply impressed; lower part of mesopleurae not separated angularly; sternauli developed to middle of mesopleurae, in front third deeply impressed; prepectal carina sharp, high elevated, furrow behind carina interrupted by sharp ribs; mesopleural suture deeply impressed, interrupted by sharp ribs; upper part of mesopleurae under subalarum with sparse superficial punctures, lower, longitudinally wrinkly-punctured; surface of mesopleurae polished; scutellum high elevated above postscutellum, convex, not carinated laterally, vertical surface of scutellum with wrinkled impression; postscutellum between lateral foveae with sharp longitudinal wrinkles and impressions (with cellular sculpture). Hind margin of metanotum with triangle projections opposite lateral longitudinal carinae. Propodeum from lateral angular, horizontal part 1,8 times shorter than area posteromedia in middle; all carinae of propodeum sharp, with exception of lateral carinae, limited basal area; basal area short and deep with distinct tooth; area superomedia hexagonal, from costulae narrowed in front and backwards and sometimes rounded in front, approximately equal by length to breadth between costulae, costulae before middle; apex of area dentipara with denticle; spiracles small, roundish, approximately 1,5 times longer than width. Surface of propodeum from smooth to wrinkled, polished, without microsculpture, metapleurae with sparse superficial punctures.

L e g s : Strong; all legs with two trochanters; hind coxae of female without traces of scopa, ventrally, on its place often with distinct impression; hind tibiae at apex with flattened area; claws of all females tarsi pectinate.

W i n g s : Radius short, practically straight, radial cell broad; stigma broad; areolet pentagonal with wide base, slightly asymmetrical, external vein of base shorter than internal, and of apex longer than internal; ramulus only just marked; nervulus interstitial, strongly inclinal. Cubital vein of hind wing not expressed. Veins of both wings brown; membrane of wings hyaline. Front wing 1,5 shorter than body length.

A b d o m e n : Of female amblypygous, from above from longish-oval to conically narrowed backwards from apex of second tergite, sheath of ovipositor from above only just visible, second tergite from above transversal, in middle 1,3 times shorter than breadth at apex. First tergite from lateral with distinct bend at place of transition of petiolus to postpetiolus; petiolus at base not flattened; dorsomedian and dorsolateral carinae independently reach base of tergite; surface of petiolus between lateral carinae not sculptured, shining; petiolus rather broad, from above gradually, but distinctly transform to short and broad postpetiolus; middle field of postpetiolus slightly elevated, not carinated; distance between spiracles 2,9 times more than distance from spiracles to hind margin of tergite; postpetiolus with indistinct wrinkles and punctures, smooth, shining. Gastrocoeli large, long; thyridia very distinct, long, perpendicular to longitudinal axis of

a body, three times wider than interval, interspace between them with five sharp longitudinal wrinkles, reaching to apical third of second tergite; second tergite wrinkled in most part, laterally and at apical third with big punctures; lunulae distinct; third tergite with sharp longitudinal wrinkles to middle, with delicate superficial punctures at apical part, other tergites smooth, polished with sparse shallow punctures; all abdomen polished, shining without microsculpture. Sternites 2-3 unsclerotized in most part; hypopygium compressed from side, from lateral, triangle with acute apex and membranous hind margin.

C o l o r a t i o n : Main color of head black; white or yellow: spots on vertex, frontal orbits, sometimes partially external orbits, spots at lateral corners of clypeus, mandibles, excepting darkened teeth. Flagellum black with white annulus. Thorax black; white: subalarum, scutellum, with exception of black middle, sometimes white spots at lower hind corners of mesopleurae and metapleurae. Abdomen black; white: spots at corners of tergites 3-5, apical margin of tergite 5, most part of tergite 6 and 7. Unsclerotized parts of sternites brightly-white. Front and middle coxae mainly white, hind coxae black with white spot dorsally. Trochanters of front and middle legs completely white; trochanters of hind legs with white spots. Femora, tibiae and tarsi of front and middle legs rusty-red with darkened apices; hind tarsi darkened.

S i z e : Body length: 6,6-6,7; front wing: 4,5-4,8; flagellum: 4,7 mm.

M a l e

Males similar in appearance with females. Flagellum of male bristle-shaped, with 28 segments, without white annulus with elongate black tyloides on segments 9-15. Clypeus more convex. Claws of tarsi not pectinate. Impression on hind coxae ventrally situated closer to middle. Hypopygium of male short with cut apex and medial fold. White coloration more expanded: internal orbits distributed on face, middle field of face, clypeus in middle, with exception of apex, front margin of pronotum, small spot on metapleurae and spots on paramerae.

Tribe Eurylabini HEINRICH

Eurylabini HEINRICH 1934 - Mitt. Zool. Mus. Berlin: 64, 66, 132.

Type genus: *Eurylabus* WESMAEL.

Eurylabini: HEINRICH 1968 - Ichn. Stenop. of Africa 2: 201.

D i s t r i b u t i o n : Palearctic, Oriental and Ethiopian Regions.

I n t r o d u c t i o n :

The representatives of tribe are characterized by flat pointed clypeus simultaneously with flattened petiolus of first tergite of abdomen. Flagellum is bristle-shaped, thin, at males with or without tyloides. Scutellum is convex of one or another degree. Abdomen of females is partially elongated and narrow. Gastrocoeli are small, slightly developed but rather distinct. Thyridia are atrophied. Abdomen of females is amblypygous with character, unusually thin, usually curved downwards ovipositor.

M o r p h o l o g y :

F l a g e l l u m : Of females bristle-shaped, very slender, flattened ventrally, but not widened beyond middle, strongly attenuated toward apex. Flagellum of males not nodose, with or without tyloides.

H e a d : In general of normal structure; genae and temples with tendency to swollen, but narrowed at only one African species; clypeus not convex like majority of *Platylabini*, with more or less slanting lateral sides and straight sharpen front margin (at *Eurylabus* WESMAEL angular in profile), sharply separated from face; mandibles normal, rather strong, upper tooth slightly longer than lower; middle field of face narrow, strongly elevated above lateral fields; antennal cavities very deeply impressed. Front surface with rough sculpture.

T h o r a x : Mesonotum (in contrast of *Platylabini*) more often from distinctly to considerably more longer than width (equal length and breadth of type species), moderately convex; notauli from only just indicated or not developed, to rather distinct; subalarum high, not sharpened; upper front part of mesopleurae distinctly swollen, lower part separated angularly; sternauli superficial or not developed; scutellum convex in different degree, laterally not carinated. Hind margin of metanotum with broad triangle projections. Propodeum in profile more or less angular, convex in central part; horizontal part of propodeum usually shorter than vertical; structure of propodeum normal in general; area basalis always strongly impressed; areae dentiparae with tendency to form projections or short blunt teeth; carination of propodeum complete, or atrophied in part and changed by coarse rugosity; spiracles large elongated to slit-shape.

L e g s : Moderately long and slender. Hind coxae of females without scopae.

W i n g s : Areolet pentagonal or quadrangular; nervulus interstitial or postfurcal; radius more or less distinctly sinuous; membrane of wing hyaline.

A b d o m e n : Of females amblypygous, usually some elongated and rather narrowed, sometimes apex compressed from side. Petiolus of first tergite dorsally flat, wider than height, from above gradually broadened to postpetiolus, from lateral with sharp bend; postpetiolus flat, without distinct median field, spiracles of *Eurylabus* genus nearer one another than to apex of postpetiolus; gastrocoeli of *Eurylabus* small but rather distinct, thyridia atrophied; ovipositor unusually thin, usually curved downwards.

C o l o r a t i o n : Most of known species dark colored, with orange or red legs and black or red abdomen without white pattern, sometimes with limited white pattern on head and thorax.

***Eurylabus torvus* WESMAEL (Plate 3)**

Eurylabus torvus WESMAEL 1844 - Nouv. Mem. Acad. Sc. Bruxelles **18** (1944): 141, ♀, ♂.

F e m a l e

F l a g e l l u m : Of female slender, bristle-shaped, with 38 segments, with white annulus on segments 8-11(12), beyond white annulus slightly flattened ventrally and practically not widened beyond middle; basal segments long, first segment 3,8 times longer than width at apex, all segments longer than wide. Flagellum almost equal by length to front wing and 1,4 times shorter than body length.

H e a d : Head contour from front slightly transversal, 1,3 times wider than height, roundly narrowed downwards, with strongly projecting genae; genae from front long, 2,8 times shorter than height of an eye; from above head contour transversal, 1,8 times wider than length. Vertex from lateral gradually slanting down to occipital carina; temples profile behind eyes from above convex, roundish, from side long, 1,7 times longer than longitudinal diameter of an eye at the middle, from middle parallel to hind margin of eye;

occipital carina sharp, moderately high, from above gradually impressed to hind ocelli, far not reach level of eyes and hind ocelli, at the bottom before mandible base atrophied and not meeting with hypostomal carina; malar space equal to mandible base width; mandibles large, narrowed to middle, from middle parallel sided with large teeth, which situated in the same plane, upper tooth only slightly longer than lower; clypeus transverse, sharply separated from face, of peculiar form (angular in profile), with sharpened front margin, at the apex with rounded projection with two tubercles and with sharpened lateral corners; clypeal foveae large, deep; labrum rounded, very short with long pubescence on front margin; middle field of face narrow, narrower than lateral fields, strongly elevated, well-defined; antennal cavities deeply impressed, reach level of front ocellus and almost borders of eyes, margins of antennal cavities high elevated above margins of eyes, antennal cavities without lateral tubercles and with weak tubercle between antennal fossae; margins of antennal fossae slightly elevated above face; ocelli moderately convex, of normal size, diameter of lateral ocellus two times less than distance from ocellus to eye; ocellar triangle slightly elevated. Front surface of head, with the exception of apex of clypeus with dense coarse punctures; temples finely punctured; head surface smooth, shining, without microsculpture.

T h o r a x : Collar of pronotum moderately long; transverse furrow deep; pronotal ridge not thickened; pronotal base uniformly curved. Mesonotum moderately convex, of equal length and breadth; notauli only just marked at base; axillary tongue distinctly expressed, but small; surface of mesonotum with delicate superficial punctures, shining, without microsculpture; subalarum thin, high, but not sharpened; speculum smooth, shining; area of mesopleural fovea deeply and broadly impressed; mesopleural suture very deep; lower part of mesopleurae angularly separated; sternauli shallow, reach hind third of mesopleurae; upper half of mesopleurae with delicate dense punctures, shining, without microsculpture, lower half wrinkly-punctured, shining; scutellum moderately convex gradually slanting to postscutellum, laterally not carinated, its surface with delicate superficial punctures, shining without microsculpture. Hind margin of metanotum with broad triangle projections opposite lateral longitudinal carinae. Propodeum from lateral short, slanting backwards, with only just visible break; horizontal part 1,5 times longer than area posteromedial in middle; carinae of propodeum developed, with exception of only just indicated lateral carinae of basal area (basal area merged with first lateral area) and indicated as slight rugosity coxal carina; area basalis deep; area superomedial slightly transversal, rounded in front and narrowed backwards, costulae before middle; area dentipara at apex with tooth; spiracles large, long and wide. Horizontal part of propodeum irregularly longitudinally-wrinkled, shining, without microsculpture; metapleurae densely punctured without microsculpture.

L e g s : Quite slender, but strong; segments of tarsi of all legs distinctly thickened to apex; hind coxae without scopa; claws long, large, gradually curved, smooth.

W i n g s : Areolet big, quadrangular (or pentagonal with very narrow base), asymmetrical, external vein of apex longer than internal; stigma moderately dark and broad; radius long, sinuous; radial cell long; nervulus interstitial; ramulus expressed; all veins of hind wing developed; membrane of wing hyaline, slightly yellowish, veins dark. Front wing 1,3 times shorter than body length.

A b d o m e n : Of females amblypygous, from above broadened from base to middle and from its to apex, fusiform; second tergite transversal, shorter than breadth at apex;

apex of abdomen compressed from sides. Petiolus dorsally flat, wider than height, dorsolateral and ventrolateral carinae of petiolus sharp, dorsomedian carina slightly expressed only on postpetiolus; lateral surface of petiolus with sharp ribs, wrinkled; petiolus from lateral with angular transition to postpetiolus, from above gradually, but distinctly broadened to postpetiolus; middle field only just marked; spiracles elongated, distance between them only just more than distance from spiracles to apex; surface of middle field with sparse smoothed superficial punctures and only just visible rugosity, practically smooth, shining. Gastrocoeli slightly impressed, slightly oblique and short, narrower than interval; interval with slight impression; thyridia absent; lunulae large, distinct; surface of second tergite very densely punctured to wrinkled in front third, shining, without microsculpture; third tergite with more delicate punctures, other tergites smooth, shining, polished; second and third sternites strongly membranous. Ovipositor very thin, curved downwards; hypopygium strongly compressed from sides, but without longitudinal fold and with cut apex.

C o l o r a t i o n : Body of female black, without traces of white pattern; legs with exception of coxae and trochanters rusty-red, apices of hind tibiae and tarsi darkened.

S i z e : Body length: 12,0; front wing: 9,0, flagellum: 8,7 mm.

M a l e

Males with similar coloration, only with white stripes on facial orbits. Flagellum of male, more long with narrow light tyloides on segments (8)9-18(19), without white annulus; flagellum pale yellow ventrally. Sculpture, especially of propodeum more sharp, area superomedia of propodeum very sharply elevated.

Tribe Zimmeriini HEINRICH

Zimmerini HEINRICH 1934 - Mitt. Zool. Mus. Berlin: 67 (key).

Type genus: *Zimmeria* HEINRICH (= *Coticheresiarches* TELENGA)

Zimmerini: PERKINS 1959 - Roy. Ent. Soc. London 7 (2) (aii): 24, 47.

Zimmeriini: RASNITSYN 1981 - Opr. Faun. SSSR 3 (3): 510.

D i s t r i b u t i o n : Palaearctic.

I n t r o d u c t i o n :

The representatives of tribe are rather large ichneumon flies with very rough sculpture of head and thorax with the whole set of specific characters. The species of tribe have long, slender flagellum, a head with narrow, long and flat clypeus sharply bent forward from surface of face, unidentate pointed mandibles and two sharp impressions on vertex between lateral ocelli and eyes. Thorax is with extremely rough sculpture with exception of mesonotum, without sternauli, with high elevated and carinated scutellum, propodeum with angular break (of broken type) with sharp, high and rough carinae, large elongated spiracles and strong flattened laterally teeth or apophyses. Abdomen is broad, oval, amblypygous of females. First tergite is with flattened petiolus and long postpetiolus, reminding first tergite of *Eurylabus*. Gastrocoeli and thyridia are from slightly developed to sharply expressed. Sternites of abdomen are sclerotized, but with longitudinal fold. Ovipositor is straight in contrast to Eurylabini.

M o r p h o l o g y :

F l a g e l l u m : Of females long, slender, bristle-shaped, with weakly separated segments, not widened beyond middle and slightly flattened ventrally. (Of females

Coticheresiarches meyeri TELENGA segments dorsally up to middle with flattened area). Flagellum of males not flattened ventrally without tyloides. Flagellum approximately equal by length to front wing.

H e a d : Head contour from front rounded, strongly narrowed downwards. Vertex from lateral slightly slanting down to occipital carina; between hind ocelli, eyes and occipital carina with sharp broad impressions; mandibles strong, without teeth, smoothly and quite sharply narrowed from base to apex, from above gradually curved; clypeus small, only just wider than length, slightly convex, strongly unbend forward relatively face, with sharp protrude ahead front margin, sharply separated from middle field of face; middle field of face narrow, very high elevated; antennal cavities moderately impressed.

T h o r a x : Epomiae very strong, sharp; pronotal base practically straight. Mesonotum moderately convex, slightly longer than width; notauli absent; surface of mesonotum densely punctured, shining, without microsculpture; mesopleurae at bottom with sharp bend; sternauli absent; scutellum high elevated above postscutellum, with convex horizontal part, laterally carinated. Hind margin of metanotum with broad triangular projections. Propodeum from lateral shortened, with angular break (of broken type); carinae of propodeum sharp, with exception of costulae and coxal carina, wrinkled at horizontal part; basal area short and deep; areae dentiparae at apices with flat apophyses; spiracles large, long. Surface of propodeum, including metapleurae very roughly-wrinkled, slightly shining.

L e g s : Strong. Hind tarsi thickened and compressed from sides, tibiae also compressed with tooth at apex. Claws long, thin, slightly curved, smooth.

W i n g s : Areolet quadrangular, symmetrical; nervulus interstitial or slightly postfurcal; membrane of wing darkened.

A b d o m e n : From above broad or slightly longish-oval, amblypygous with blunted apex. First tergite from lateral with distinct bend between petiolus and postpetiolus; petiolus flattened at base, from lateral sharply bordered by carinae, dorsal carinae join with dorsolateral not far from spiracles; postpetiolus broad, long, with expressed wide middle field. Gastrocoeli short, from small to broad, of males deep; thyridia of females slightly expressed, of males sharp, near base of second tergite, from very narrow to equal by breadth to interval between them; lunulae very distinct; surface of abdomen of females without strong rugosity, second tergite of males roughly punctured to wrinkled, apical tergites with superficial punctures. Ovipositor straight, not curved downwards as of *Eurylabus*; sternites of abdomen sclerotized, but with longitudinal fold, except hypopygium.

C o l o r a t i o n : Black, or black with red (abdomen); legs red; without white pattern.

S i z e : 11-15 mm.

B i o l o g y : Parasites of Lymantriidae.

***Coticheresiarches dirus* (WESMAEL) (Plate 4)**

Eurylabus dirus WESMAEL 1853 - Bull. Acad. Sci. Belgique **20**: 307.

Coticheresiarches dirus: TOWNES et al. 1965 - Mem. Amer. Ent. Inst. **5**: 315, syn.

Coticheresiarches dirus: GUPTA 1983 - Contr. Amer. Ent. Inst. **19** (7): 104.

M a l e

F l a g e l l u m : Bristle-shaped, with 38 segments, with densely coalescent segments, moderately stout, first segment fairly short, only two times longer than width at apex, without white annulus, not widened and not flattened beyond middle. Distinct tyloides on male flagellum practically absent, only in the form of weak convexity on segments 13-21. Flagellum 1,1 times shorter than the front wing and 1,4 times shorter than body length.

H e a d : Head contour from front rounded, strongly narrowed downwards, 1,3 times wider than height, temples from the front visible up to top; genae from front short, 5,8 times shorter than height of eye; head contour from above strongly transversal, 1,8 times wider than length. Vertex from lateral slightly slanting down to occipital carina, between hind ocelli, eyes and occipital carina with sharp, broad impressions; temples long, 1,2 times longer than longitudinal diameter of an eye at the middle, from side parallel to hind margin of eye, from above strongly swollen; occipital carina sharp all round, from above angularly impressed, but far not reach level of eyes and hind ocelli; hypostomal carina not visible from lateral, meeting with occipital carina on the level of lower margin of eye far not reaching base of mandible; length of abscissula equal 0,6 breadth of mandible base width; malar space 1,9 times shorter than the mandible base width; mandibles strong, without teeth, smoothly and quite sharply narrowed from base to apex, from above gradually curved; clypeus small, only just wider than length, slightly convex, strongly unbent forward relatively face, with sharp protrude ahead front margin, sharply separated from middle field of face; clypeal foveae small, deep; labrum equal by breadth to clypeus, roundish, strongly protrude from under clypeus; middle field of face sharply differentiated, narrow, in middle almost two times narrower than lateral fields; antennal cavities quite slightly (moderately) impressed, reach borders of eyes and far not reach level of front ocellus, without tubercles laterally and with strong tooth between antennal fossae; margins of antennal fossae quite high elevated above face surface; ocelli of normal size, diameter of lateral ocellus 1,5 times less than distance from ocellus to eye; ocellar triangle distinctly elevated, especially laterally. Surface of clypeus with big punctures, without microsculpture, face very densely punctured, slightly shining and with visible microsculpture, apical part of frons wrinkled, temples densely punctured, without microsculpture.

T h o r a x : Collar of pronotum short with straight front margin (from above); transverse furrow deep, not interrupted by keel; pronotal ridge not thickened; epomiae very strong, sharp; pronotal base practically straight. Mesonotum moderately convex, 1,2 times longer than width; notauli absent; axillary tongue slightly developed; surface of mesonotum densely punctured, shining, without microsculpture; subalarum high, thin, not sharpened; speculum densely punctured by big punctures (interspaces narrower than the punctures); area of mesopleural fovea sharply impressed; mesopleural suture straight, interrupted by sharp ribs; mesopleurae at bottom with sharp bend; sternauli absent; upper half of mesopleurae very densely punctured to wrinkle-punctured on separate parts, shining, lower wrinkly-punctured with developed microsculpture, slightly shining; scutellum high elevated above postscutellum, with convex horizontal part, laterally carinated. Hind margin of metanotum with broad triangle projections opposite lateral longitudinal carinae. Propodeum from lateral with angular break (of broken type), length of horizontal part 2,1 shorter than length of area posteromedia in middle; carinae of propodeum expressed, with ex-

ception of costulae and coxal carina, but not distinct because of general roughly-wrinkled sculpture of surface; basal area short and deep; area superomedia square, rounded in front; area dentipara at apex with flat tooth; spiracles long, along external contour 2 times longer than width. Surface of propodeum, including metapleurae roughly-wrinkled, slightly shining.

Legs: Strong. Hind tarsi thickened and compressed from side. Claws long, thin, slightly curved, at apex without sharp bend, smooth.

Wings: Areolet quadrangular, symmetrical, front veins longer than hind; stigma narrow and dark, radial cell narrow and long, radius sinuous at base and especially at apex; nervulus interstitial; ramulus not developed; all veins dark; membrane of wing darkened. Wings long, length of front wing some longer than length of flagellum and 1,3 times shorter than body length.

Abdomen: From above longish-oval, apical tergites not hidden. First tergite from lateral with distinct bend between petiolus and postpetiolus; petiolus flattened at base, approximately 1,5 times wider than height, from lateral sharply bordered by carinae and with strong transversal ribs between them; dorsomedian and dorsolateral carinae independently reach base of tergite; middle field of postpetiolus sharply expressed, slightly wider than lateral fields, its surface irregularly wrinkly-punctured with distinct microsculpture. Gastrocoeli deep, slightly oblique, almost perpendicular to longitudinal axis of a body and almost reach to borders of tergite; thyridia distinct, approached to base of second tergite, approximately equal to interval between them; lunulae very distinct, elongated; interval and middle part of tergite to apex very roughly punctured to wrinkled, other part of second tergite with dense punctures and distinct microsculpture, slightly shining; second and third tergites sharply separated; tergites 3-4 densely punctured, apical tergites with superficial punctures. 2-7th sternites completely sclerotized, but with sharp longitudinal fold.

Coloration: Body completely black, only legs partially red: femora of all legs, tibiae of front and middle and tarsi of front legs, middle and hind tarsi darkened.

Size: Body length: 12,0; flagellum: 8,7; front wing: 9,5 mm.

Female

Abdomen of female amblypygous, blunted at apex. Body length 14-16 mm.

Biology:

In literature, it was recorded as parasite *Lymantria monacha* L. and *L. dispar* L. (GUPTA 1983), but many years investigations of parasites of these phytophages by the author in Byelorussia did not confirm this connection.

Tribe Ceratojoppini HEINRICH

Ceratojoppini HEINRICH 1938 - Mem. de l'Acad. Malgache **25**: 121.

Type genus: *Ceratojoppa* CAMERON.

Ceratojoppini: HEINRICH 1968 - Ichn. Stenop. of Africa **2**: 201.

Distribution: South of Africa and Madagascar.

Introduction:

Tribe Ceratojoppini is one of the most distinctly detached tribe of the subfamily. The peculiarities of morphology of different parts of the body have characters which characteristic

to others subfamilies of Ichneumonidae (for example, morphology of propodeum and first tergites of abdomen are similar to Ophioninae).

Very long and slender flagellum, head with very broad genae and slightly differentiated (but distinct) fields of face and clypeus, short and broad mandibles, with teeth divided by deep broad gape and frons, with longitudinal carinae are character to the tribe. The lateral lobes of mesonotum along the full length are separated from elevated middle lobe by irregular and roughly transversally-wrinkled notauli. Propodeum is long, convex from lateral, without distinct fields, its dorsal surface is only with single transverse carina, separating smooth front part from roughly-wrinkled hind one. Legs are slender, long. Wings are with quadrangular, sometimes petiolate areolet. Abdomen of females from above is slender, long, with long second tergite, oxygyous. Thyridia of second tergite are very large, moved from base of tergite, with narrow interval between them.

M o r p h o l o g y :

F l a g e l l u m : Very long and slender; of females, bristle-shaped, ventrally flattened beyond middle and sometimes slightly widened, with very strongly elongated basal segments, sharply attenuated toward apex. Flagellum of males, not nodose with the exception of apex, with row extremely narrow, slightly expressed bacilliform tyloides. Flagellum almost equal by length to front wing or longer.

H e a d : Head contour from front roundly narrowed downwards; genae from lateral broad, temples from above roundly narrowed behind eyes (head from above not stout). Occipital carina high; mandibles short, broad, sharply curved and carinated with large teeth separated by wide gape between teeth which situated in the same plane; clypeus, with oblique lateral sides, rounded corners and straight front margin; labrum slightly project from under clypeus; clypeal foveae large, deep; fields of face slightly differentiated, but distinct, middle field only just convex; antennal cavities deeply impressed, of moderate size; frons with five longitudinal carinae of specific morphology; ocellar triangle elevated and surrounded by deep groove; sculpture of head mainly coriaceous or polished.

T h o r a x : Pronotum with distinct epomia; lower angle of pronotum with very sharp angle (African species). Mesonotum slightly convex, middle lobe elevated, with flattened front surface, lateral lobes of mesonotum strongly lowered, theirs external margins form elevated ribs directed mainly to apex; notauli sharp all round, forming all round broad shallow furrows, roughly and irregularly transversally-wrinkled; prepectus above front coxae with two longitudinal ribs (at least of *Ceratojoppa cornuta* CAMERON); subalarum thin, sharp; area of mesopleural fovea only just impressed; scutellum high elevated above postscutellum, with high lateral and sometimes apical carinae, dorsally flat or convex. Hind margin of metanotum with triangular projections. Propodeum long, from lateral gradually slanting to apex; basal furrow distinct; area basalis and areae superoexternae merged to one, usually smoothed transversal basal area, limited basally and apically by distinct carinae; carina metapleuralis distinct, other carinae atrophied; spiracles long; propodeum from apical margin of smoothed basal area roughly reticulate-wrinkled; apices of areae dentiparae sometimes slightly indicated.

L e g s : Quite long, thin; femora extremely thin, coxae comparatively small; hind coxae of females sometimes with distinct scopa.

W i n g s : Areolet quadrangular, to petiolate; nervulus interstitial or slightly postfurcal;

radius basally sinuous; membrane of wing hyaline, sometimes wings apically darkened. Wings distinctly shorter than body length.

A b d o m e n : Abdomen of females from above slender, long; second tergite long; abdomen oxypygous with sometimes considerably projecting sheath of ovipositor. First tergite long and thin, postpetiolus only slightly wider than petiolus, without middle field, more or less densely punctured, gastrocoeli in form of elongated longitudinal impressions, interrupted by very large, broadened thyridia; second tergite always considerably longer than width at apex; lunulae absent; at two species from Madagascar base of third tergite with very strong lateral impressions; sculpture of front tergites varies from very densely punctured and almost matt to almost coriaceous.

C o l o r a t i o n : Considerably vary from mainly yellow, ferruginous to red and black with white spots.

***Ceratojoppa cornuta* CAMERON (Plate 5)**

Ceratojoppa cornuta CAMERON 1905 - Ztschr. System. Hym. Dipt. 5: 346, ♂.

Ceratojoppa cornuta cornuta HEINRICH 1967 - Ich. Stenop. of Africa 1: 203-204, ♀, ♂.

F e m a l e

F l a g e l l u m : Slender, bristle-shaped, with 40 segments and white annulus on 9-15 segments, slightly widened and flattened ventrally beyond white annulus, first segment long and slender, 6 times longer than the width at apex, segments beyond white annulus transversal, segment 35 square from lateral, apical segments elongated. Female flagellum almost equal by length to front wing and 1,6 times shorter than body length.

H e a d : Head contour from front roundly narrowed downwards, only just transverse, only 1,2 times wider than height; genae from front moderately long, 0,3 height of eye; head contour from above stout, transversal, 1,6 times wider than length. Vertex from lateral vertically abrupt to occipital carina just after the ocelli; temples long, in most broad part 1,4 times longer than longitudinal diameter of an eye at the middle, from above roundly narrowed behind eyes, temples from side strongly broadened toward mandible base; occipital carina from above angularly impressed but far not reach level of eyes and hind ocelli, very high, broadened almost lamelliform in top half, not reaching base of mandible and not meeting with hypostomal carina (reduced in lower fourth); malar space approximately equal to mandible base width; mandibles very broad, sharply curved at the middle almost at right angle, practically not narrowed toward apex, with wide gape between large teeth situated in the same plane, upper tooth longer and narrower than lower; mandibles strongly bordered; clypeus transverse, two times wider than height, with oblique lateral sides and rounded corners, not separated from face (practically confluent with middle field of face), with straight front margin; clypeal foveae deep; labrum equal by breadth to front border of clypeus, but very short, only just protrude from under clypeus; middle field of face very slightly elevated above lateral fields only at upper part; antennal cavities deeply impressed, reach front ocellus level and borders of eyes, laterally above antennal fossae with only just visible tubercles and with distinct tubercle between antennal fossae; frons with five longitudinal carinae, short middle carina under front ocellus only just visible, two more long from projecting corners of internal part of antennal fossae and two vertical carinae on lateral sides from level of front ocellus toward middle of antennal fossae; lower part of converging frontal carinae with strong horn-

shaped projections triangular from side; ocelli of moderate size, diameter of lateral ocellus 1,5 times less than distance from ocellus to eye; ocellar triangle high elevated and well-defined; head surface not sculptured, smooth, polished.

T h o r a x : Collar of pronotum moderately long, from above with straight front margin; transverse furrow shallow; pronotal ridge not swollen; epomia distinct; lower angle of pronotum very sharp. Mesonotum dorsally flattened; middle lobe elevated, with flattened front surface, lateral lobes of mesonotum strongly lowered, their external margins form elevated ribs, directed mainly to apex; notauli sharp, forming all round broad shallow furrows, roughly and irregularly transversally-wrinkled, converging towards scuto-scutellar groove; mesonotum at apical corners between tegula and scuto-scutellar groove with roundish blade form projections above axillary tongues; surface of middle lobe punctured, without microsculpture, lateral lobes smooth, polished; prepectus above front coxae with two longitudinal ribs; subalarum thin, sharp; area of mesopleural fovea only just impressed; mesopleural suture without bend toward mesopleural fovea; sternauli absent; surface of mesopleurae not sculptured, polished; scutellum high elevated above postscutellum, laterally and apically carinated by very high carina, its dorsal surface flat with sparse punctures, shining. Hind margin of metanotum with sharp triangle projections opposite lateral longitudinal carinae. Propodeum from lateral gradually and roundly slanted backwards, horizontal part of propodeum 1,4 times longer than area posteromedia in middle; carinae of horizontal part of propodeum atrophied in considerably extent; area basalis merged with first lateral field and limited from behind only by cellular sculpture; from carinae of horizontal part developed only slightly expressed apical transverse carina and front branches of lateral longitudinal carinae, limiting areae dentiparae and external parts of costulae; coxal carina marked only at base; spiracles of propodeum long, slit-shaped; front half of horizontal part up to costulae not sculptured, polished, posterior half presented by cellular sculpture (Morphology of propodeum somewhat remind of ichneumon flies of ophonoid complex).

L e g s : Long, thin, femora very thin with long and sparse pubescence, coxae small, hind coxae without scopa; claws smooth.

W i n g s : Areolet quadrangular, slightly petiolate, slightly asymmetrical (intercubital veins of equal length, but internal vein of apex shorter than external); stigma narrow, light; radius strongly sinuous; nervulus slightly postfurcal; ramulus distinct, but weak; membrane of wing hyaline; all veins of hind wing distinct; veins of both wings moderately darkened. Length of front wing more than 1,5 shorter than body length.

A b d o m e n : Of females from above slender, long; second tergite almost 1,5 times longer than width at apex; abdomen oxygyous with projecting almost on length of seventh tergite sheath of ovipositor. First tergite from lateral without sharp bend, gradually convex, almost straight, without dorsal and lateral carinae; petiolus of first tergite from above gradually and slightly broadened to postpetiolus; postpetiolus without expressed middle field; distance between spiracles equal to distance from spiracles to apex; postpetiolus wrinkly-punctured. Gastrocoeli form long longitudinal lateral impression, with large transverse thyridia, that 1,4 times more than interval between them; lunulae absent, surface of second and third tergites densely punctured, semimatt, other tergites densely punctured, slightly shining, apical stripes of all tergites shining, without microsculpture. Hypopygium compressed from side.

C o l o r a t i o n : Main color of a body light-ferruginous, face, margins of frons

(broadly), most part of temples, coxae, mesopleurae, lateral parts of propodeum and apex of tergite 7 of abdomen (slightly) yellowish-white.

S i z e : Body length: 15,5; front wing: 9,5; flagellum: 10 mm.

Tribe Ctenocalini HEINRICH

Ctenocalini HEINRICH 1938 - Mem. Acad. Malg. **25**: 40-41.

Ctenocalini HEINRICH 1968 - Ichn. Stenop. of Africa **2**: 372, 377.

Type genus: *Ctenocalus* SZÉPLIGETI.

D i s t r i b u t i o n : Africa south of Sahara and Madagascar.

I n t r o d u c t i o n :

For representatives of tribe the specific structure of rather stout head with broad temples and genae with only just expressed structural differentiation of face and clypeus, in addition to sickle-shape mandibles is characteristically. Face, clypeus and genae are similar to Listrodromini and Compsochorini, but do not to such degree completely without of sculptural formations. First of all malar impression is usually recognizable. Clypeus is flat, not convex at base. Mesonotum is usually with short notauli or with notauli that marked only at base (except *Ctenocalops* HEINRICH of which notauli is unusually developed and very long). Front wings are more often with quadrangular, rarely slightly pentagonal areolet. Propodeum from lateral is short, convex, without teeth and tooth-like projections, with set of carinae, developed in different degree and elongated spiracles. Claws of the tarsi of females are sometimes strongly pectinate. Abdomen of tribes representatives is more often broadly-oval, rarely elongate-oval, blunted apically and without distinctly protruding ovipositor sheath. Front tergites are roughly wrinkled, usually strongly sclerotized and separated by sharply expressed constrictions. Gastrocoeli and thyridia are sharp, with narrow interval between them.

M o r p h o l o g y :

F l a g e l l u m : Of females, bristle-shaped, long and very slender, flattened ventrally beyond middle, but not widened, or only slightly widened, apical part very long and strongly attenuated toward apex. Of males with or without transversal bristle-ridges and nodosity, with or without tyloides.

H e a d : Always quite stout, with broad temples and genae; surface of face flat, but distinctly separated from genae, clypeus also separated from face by distinct clypeal foveae and lateral sutures. Occiput broadly and deeply concave; temples long, slightly and roundly narrowed behind eyes; mandible sickle-shaped, gradually curved, lower tooth moved inside and situated practically in same horizontal plane with upper tooth; sides of clypeus distinctly converged with rounded lateral corners, apical margin thinned and as a rule slightly impressed medially; labrum distinctly protrude from under clypeus; middle field of face practically not elevated above lateral fields; antennal cavities deeply impressed; ocelli small.

T h o r a x : Collar of pronotum sometimes lamelliform, with leaf-shaped broadened front margin; epomia slightly expressed. Mesonotum not longer or only just longer than width; notauli usually short or marked only at base; area of mesopleural fovea slightly impressed; sternaui atrophied; scutellum always high elevated, to pyramidal, strongly laterally carinated. Hind margin of metanotum smooth, without prominences (*Ctenocalus* SZÉPLIGETI). Propodeum from lateral convex, short, without teeth and tooth-like projec-

tions, areae dentiparae more or less deeply curved backwards; set of carinae varies between complete and to almost fully reduced; basal furrow of pronotum very narrow or fully absent; spiracles long, but not slit-shaped.

Legs : Moderately long; claws of females sometimes strongly pectinate.

Wings : Areolet from shortly petiolate to rectangular and slightly pentagonal, narrow in front; nervulus from interstitial to distinctly postfurcal; radius distinctly curved. Membrane of wing hyaline with tendency to darkened spots.

Abdomen : From above rather short and broadly-oval to longish-oval; of females oxygyous or semiamblypygous, apically blunted; ovipositor not protrude or only just visible protrude behind apex of abdomen. First tergite usually with narrow petiolus; postpetiolus without middle field or with narrow middle field. Gastrocoeli always transverse and deep, with narrow interval between them; thyridia distinct; tergites 2-3rd or 2-4th strongly sclerotized and roughly sculptured; sternites 2-3rd or 2-4th not sclerotized or sclerotized at lesser part. Hypopygium of males rather short, bluntly triangle.

Coloration : Tribe by color rather various. Thorax, as a rule, red or rusty-red sometimes with limited white pattern; basic color of abdomen can be rusty-red, or black (or metallic blue), often with white anal spots; of some species wings with dark spots.

***Ctenocalus schizoaspis* HEINRICH (Plate 6)**

Ctenocalus schizoaspis HEINRICH 1967 - Ichn. Stenop. of Africa 2: 381, 394, ♀, ♂.

Male :

Flagellum : Slender, bristle-shaped, with 36 segments and with white annulus on segments 13-18; all segments longer than wide, without constriction between segments, first segment 4 times longer than width at apex; tyloides absent. Flagellum almost equal by length to front wing and slightly shorter than body length.

Head : Head contour from front roundly-square, slightly transversal (1,3 times wider than height) with strongly swollen long genae; length of genae equal 0,4 of eye height; surface of face flat, but distinctly separated from genae, clypeus also separated from face by distinct clypeal foveae and lateral sutures; head contour from above transversal, 1,5 times wider than length. Vertex from lateral convex, roundly curved to occipital carina; temples long, longer than longitudinal diameter of an eye at the middle, temples from above swollen behind eyes, slightly and roundly narrowed backwards, from side parallel to hind margin of eye; occipital carina from above strongly roundly impressed but far not reach level of eyes and hind ocelli, sharp with the exception lower quarter, erased before place of confluence with hypostomal carina; malar space almost equal to mandible base width; mandible sickle-shaped, gradually curved, lower tooth moved inside and situated practically in same (horizontal) plane with upper tooth; clypeus flat with gradually rounded front margin and slightly impressed in middle, clypeus transversal, two times wider than height, not separated from face; clypeal foveae small, but distinct and quite deep; labrum long, triangular; middle field of face only just visible elevated (practically not elevated) in upper half above lateral fields; antennal cavities deeply impressed, reach level of front ocellus and laterally borders of eyes, laterally above antennal fossae without tubercles, with only just visible tubercle between antennal fossae; ocelli small, diameter of lateral ocellus equal 0,7 distance to eye. Only surface of face and clypeus with superficial punctures, other part of head not sculptured, smooth, polished.

T h o r a x : Collar long with leaf-like broadened front margin (lamelliform); pronotal base slightly and uniformly curved; epomiaae very slightly expressed, only just marked; pronotal ridge not thickened. Mesonotum moderately convex, only just wider than length, middle field slightly elevated above lateral fields; notauli marked just only at base as slight impressions; surface of mesonotum punctured by big punctures, more small on lateral fields, shining, without microsculpture; subalarum thin, sharp, high elevated; speculum with big punctures, shining; mesopleural fovea small, deep, area of mesopleural fovea slightly impressed; sternauli absent; surface of mesopleurae at upper half punctured by big punctures, at lower wrinkly-punctured, shining, without microsculpture; mesopleural suture not interrupted by distinct ribs, almost smooth; scutellum high elevated, laterally carinated by leaf-like broadened at horizontal part carinae; horizontal part with weak (pyramidal) elevation, its surface with sparse big smoothed punctures, shining; lateral foveae on postscutellum practically not developed. Hind margin of metanotum smooth, without projections opposite lateral longitudinal carinae of propodeum. Propodeum from lateral short, convex, without sharp bend between horizontal and vertical surfaces; length of horizontal part equal to length of area posteromedia in middle; carinae of horizontal part of propodeum slightly expressed, front branches of carinae, limiting area superomedia not expressed up to costulae and presented only by rugosity, costulae distinct; apical branch of lateral longitudinal carina and carina dentipara interiores of area dentipara absent; coxal carina absent, area of area coxalis marked by sharp longitudinal ribs; spiracles long, but not slit-shaped. Surface of propodeum wrinkled, shining, without microsculpture; metapleurae very densely and roughly wrinkly-punctured.

L e g s : Slender, thin; front coxae comparatively small; claws small, smooth, slightly curved.

W i n g s : Areolet pentagonal with very narrow base, almost symmetrical, intercubital veins of equal length; stigma narrow, dark; radius strongly curved; nervulus slightly postfurcal and reclival; ramulus expressed. Veins of both wings dark, membrane of wings hyaline. Length of front wing 1,4 shorter than body length.

A b d o m e n : From above broadly-oval with very sharp constrictions between segments. First tergite from lateral almost straight, without break at place of transition of petiolus to postpetiolus, lateral carinae of petiolus absent, petiolus from lateral smooth; from above petiolus very narrow, sharply and roundly transform into broad postpetiolus; middle field of postpetiolus only just marked and not limited by carinae, surface of postpetiolus with superficial elongated punctures. Gastrocoeli short, deep, oblique relatively longitudinal axis of a body and almost reach to lateral borders of tergite; thyridia distinct, three times wider than interval between them; surface of interval delicate wrinkled; lunulae absent; surface of second and third tergites very roughly wrinkly-punctured; forth tergite densely and roughly punctured, with slight rugosity, fifth tergite with traces of punctures, other tergites smooth.

C o l o r a t i o n : Head black, face dark-brown; thorax ferruginous; abdomen black with ferruginous base and white spots on 5th, stripe at apex on 6th and completely white tergite 7; legs black (front and middle dark-brown), front and middle coxae, stripes on front surface of femora and tibiae of front and middle legs and third segment of hind tarsi white.

S i z e : Body length: 12,0; front wing: 8,4; flagellum: 9,2 mm.

F e m a l e (according to HEINRICH 1967): «abdomen semiamblypygous, claws of tarsi of all legs strongly pectinate, frontal orbits narrowly white».

Tribe Compsophorini HEINRICH

Compsophorina HEINRICH 1962 - Syn. Nearct. Ichn. Stenop.: 638.

Compsophorini HEINRICH 1968 - Ichn. Stenop. of Africa 2: 297-299.

Type genus: *Compsophorus* SAUSSURE.

Compsophorini: HEINRICH 1975 - Ann. Zool. Wars. 32 (20): 470-471.

D i s t r i b u t i o n: Ethiopian (mainly) and Oriental Regions.

I n t r o d u c t i o n:

The representatives of tribe are characterized by moderately long bristle-shaped flagellum of females, thick head with genae long from front and temples from above. Surface of head and clypeus form single undifferentiated surface, not divided by sutures or impressions, like Listrodromini. Structure of strong short and very broad mandibles, with strong, almost equal teeth, divided by broad and deep gape and absence of lunulae on tergites of abdomen are shown to similarity with them. They are differed from Listrodromini by smooth claws, quadrangular areolet, peculiar morphology of propodeum and semiamblypygous abdomen of females. Mesonotum is with different unusually rough rugosity. Propodeum is gradually roundly slanted from base to apex and area superomedial begins practically from postscutellum. Abdomen of overwhelming number of species is broadly oval with strongly sclerotized second and third tergites. Flagellum of males without tyloides. There are species from small to very big, some species rust-colored, majority with metallic-blue or metallic-green basic coloration, abdomen apically often with white spots.

M o r p h o l o g y:

F l a g e l l u m: Of females slender, bristle-shaped, not widened or slightly widened beyond middle, attenuated toward apex. Flagellum of males without tyloides, moderately nodose. Of females moderately long, shorter than the front wing.

H e a d: Stout with broad temples and long genae; fields of face and clypeus not differentiated, without sutures and impressions. Occiput deeply impressed to ocelli; temples long; clypeus without expressed lateral corners; mandibles massive, short, very broad with large practically equal teeth situated in the same plane and divided by broad gape; clypeal foveae presented by only just visible pore; labrum not protrude, or only just visible protrude from under clypeus; ocelli small.

T h o r a x: Collar of pronotum with tendency to form developed in different degree, directed backwards lamellae, having middle notch of different form and expressed in different degree; sometimes, pronotal ridge transversally crenulated. Mesonotum almost always rather flat, short, only just longer than width; notauli in form of broad crenulated impression, developed all round of mesonotum; middle lobe, sometimes medially in front depressed and thus bipartite; external lobes of mesonotum often carinated by carina, parallel to external margin of mesonotum at some distance from it; surface of mesonotum with specific sculpture, extremely sharply wrinkled; every lobe of mesonotum usually with smooth and shining longitudinal band; subalarum thin, sharp; speculum smooth shining; area of mesopleural fovea slightly impressed or wide or in form of longitudinal impression; sternauli absent; scutellum always laterally carinated and elevated above

postscutellum, or convex, or pyramidal, of females as rule, less convex than of males, sometimes convex of females and pyramidal of associated males, sometimes with big apico-lateral projections (males *Eccoptosagellus*). Propodeum from lateral rather short, gradually slanting from base to apex; areas of propodeum more or less expressed, at least area superomedia and lateral carinae of vertical part distinct; basal furrow of propodeum narrow, if present; usually area superomedia in middle borders with postscutellum; spiracles large, slit-shaped. Surface of propodeum, usually roughly wrinkled, area superomedia, however, polished of most species; areae superoexternae often regularly longitudinally wrinkled.

L e g s : Moderately long, femora rather thin (slender); claws not pectinate; hind coxae of females, with tendency to develop of projections or carinae, varying in size and form at internal side of their apices; hind tarsi of one group of species thickened and shortened, with flattened from outside metatarsus.

W i n g s : Areolet mainly quadrangular or with very narrow base; nervulus postfurcal, rarely interstitial; radius distinctly sinuous; wings usually hyaline, often uniformly and deeply darkened, of some species with deeply darkened transversal bands.

A b d o m e n : Of females, semiamblypygous, longish-oval to stumpy and broadly-oval (of *Pyramidamblys* almost parallel sided and amblypygous, apically blunted). Petiolus of first tergite thin, at base not flattened, gradually broadened to postpetiolus, last usually transversal, without distinct median field, usually laterally scatterly punctured and in middle more or less considerably striated or longitudinally-wrinkled. Gastrocoeli always deep and transverse, triangle, with distinct thyridia, interspace between them narrow, striated or with longitudinal wrinkles; second and third tergites strongly sclerotized and very roughly sculptured, separated from each other by constrictions; surface of second and third tergites strongly sclerotized and very roughly sculptured, striated or wrinkly-punctured, subsequent tergites rather smooth.

C o l o r a t i o n : In the tribe dark metallic blue, or in some cases, metallic green basic color of abdomen predominate, usually in combination with rusty-red head or head and thorax and often with white anal marks; white rings on front tergites only in genera *Compsophorus* and *Oxyjoppa*; ferruginous basic color of abdomen, or some tergites, often ordinary of all tribe.

***Compsophorus (Epijoppa) verecundus angolae* (HEINRICH) (Plate 7)**

Epijoppa verecunda angolae HEINRICH 1967 - Ichn. Stenop. of Africa 2: 350, 375, 376, 394, ♀, ♂.

Compsophorus verecundus angolae: TOWNES H. & M. TOWNES 1973 - Mem. Amer. Ent. Inst. 19: 253.

F e m a l e

F l a g e l l u m : Slender, bristle-shaped, with 39 segments, without white annulus, ventrally flattened beyond middle; first segment three times longer than width at apex. Flagellum 1,2 times shorter than the front wing and 1,7 times shorter than body length.

H e a d : Head contour from front roundly narrowed downwards, slightly transversal, 1,2 times wider than height; genae from front very long, 0,6-0,8 height of eye; sutures and elevations on face surface fully absent; head from above 1,5 times wider than length. Vertex from lateral gradually slanting down to occipital carina; temples long, almost two

times longer than longitudinal diameter of an eye at the middle, from above very slightly roundly narrowed behind eyes, from side broadened toward mandible base; occipital carina from above strongly roundly impressed, occipital carina sharp all round, meeting with hypostomal carina on mandible base; malar space 1,3 times longer than the mandible base width; mandibles very broad with large practically equal teeth situated in the same plane and divided by broad gape, bent at the middle almost at right angle; clypeus confluent with face, with slightly rounded front margin; clypeal foveae presented by only just visible pore; labrum only just visible protrude from under clypeus, small and triangular; antennal cavities deeply impressed, almost reach borders of eyes but not reach level of front ocellus, without lateral tubercles and interantennal tubercle, margins of antennal fossae slightly elevated above face surface; ocelli small, diameter of lateral ocellus 3,5 times less than distance from ocellus to eye; ocellar triangle practically not elevated. Surface of head smooth, shining, without microsculpture, with sparse very small, only just visible superficial punctures.

T h o r a x : Collar of pronotum long, at front margin with long, directed backwards lamellae, divided by slight incision; lower angle of pronotum very sharp, pronotal base almost straight, epomiae sharp; pronotal ridge not swollen. Mesonotum almost flat, some longer than width; middle lobe of mesonotum medially slightly impressed; notauli in a form of broad crenulated impression, developed all round of mesonotum; lateral fields laterally carinated by distinct keel, forming thus strongly crenulated impression between keel and lateral margin of mesonotum; surface of mesonotum roughly wrinkled, shining, without microsculpture; subalarum thin, sharp; speculum smooth, shining; area of mesopleural fovea broadly, but slightly impressed; sternauli absent; lower part of mesopleurae with angulate bend to ventral part; surface of mesopleurae, with exception of area of speculum roughly longitudinally-wrinkled, shining, without microsculpture; scutellum from lateral conical, vertically abrupt from apex to postscutellum, carinated laterally, its surface longitudinally cellular-wrinkled. Hind margin of metanotum without sharp triangle projections opposite lateral longitudinal carinae, only with weak prominences. Propodeum short, transversal, from lateral gradually slanting backwards (without break); horizontal part equal only 0,6 of area posteromedial length in middle; almost all carinae of propodeum developed, with exception of apical transverse carina, thus area dentipara and area posteroexterna merged and area superomedial merged with area posteromedial; basal area absent; area superomedial only just wider than length, laterally rounded, costulae behind middle; spiracles slit-shaped. Surface of propodeum roughly wrinkly-punctured, with exception of entirely smooth area superomedial and slightly wrinkled first lateral field (area superoexterna), without traces of microsculpture.

L e g s : Slender, but rather strong, strongly darkened; hind tibiae with distinct longitudinal impression; claws of tarsi small, smooth, slightly curved.

W i n g s : Areolet quadrangular, asymmetrical, external vein of base longer than internal, an external vein of apex shorter than internal; stigma long and narrow, strongly darkened; radius sinuous, radial cell long and narrow; nervulus postfurcal; ramulus distinct; membrane of wing strongly darkened with violet tint, veins very dark. All veins of hind wing distinct throughout and strongly darkened. Length of front wing more than 1,4 shorter than body length.

A b d o m e n : Form of abdomen longish-oval, strongly pointed backwards with only just visible projected apices of ovipositor sheath, semiamblypygous; tergites of abdomen

strongly sclerotized with sharp constrictions between segments; sternites strongly sclerotized, but sternites 2-3 with unsclerotized longitudinal fold. Petiolus of first tergite thin, at base not flattened, from lateral almost straight, smooth, without lateral carinae, from above sharply broadened to postpetiolus; middle field of postpetiolus gradually and distinctly elevated, but not carinated, wider than lateral fields, longitudinally striated by sharp carinae; spiracles slit-shaped, distance between them 1,7 times more than from spiracles to apex of tergite. Gastrocoeli very deep, short, with distinct thyridia approached to base of second tergite; interval between thyridia slightly narrower than breadth of thyridia, with sharp longitudinal carinae (wrinkles) extend almost to apex of tergite and roughly punctured at interspaces; lunulae absent; surface of second tergite sharply striated by high longitudinal carinae with exception of densely and roughly punctured apex and lateral parts; third tergite with similar but less sharply expressed sculpture, 4-5th tergites densely superficially punctured, other smooth. Hypopygium triangle with rounded apex and without longitudinal fold.

C o l o r a t i o n : Predominate colors in coloration of body ferruginous and metallic violet. Ferruginous: head, thorax and front legs; abdomen and lower part of propodeum metallic violet; middle and hind legs blackened, membrane of front and hind wings strongly darkened with violet tint; light anal spots and annulus on flagellum absent.

S i z e : Body length: 14,5; flagellum: 8,6; front wing: 10,5 mm.

Tribe Ischnojoppini HEINRICH

Ischnojoppini HEINRICH 1938 - Mem. de l'Acad. Malgache **25**: 117.

Type genus: *Ischnojoppa* KRIECHBAUMER.

Ischnojoppini: HEINRICH 1968 - Ichn. Stenop. of Africa **1**: 213, 216-217.

D i s t r i b u t i o n : Mainly Ethiopian Region, including Madagascar; only one species is known from Oriental Region.

I n t r o d u c t i o n :

Head and structure of mandibles of this tribe are almost identical with such of Listrodromini. For Ischnojoppini slender and elongated body is characteristic. They are distinct from Listrodromini by structure of usually elongated propodeum, that usually considerably longer than vertical part in type genus and area superomedia, if present, several times longer than width, and additionally, by morphology of flagellum of both sexes. Rare, for *Pseudischnojoppa* HEINRICH horizontal part is only slightly longer than width. By coloration Ischnojoppini do not demonstrate any resemblance with Listrodromini. Areolet is usually pentagonal, strongly narrowed in front. Claws are smooth, never pectinate. Abdomen is cylindrical, second and third tergites of abdomen considerably longer than width, of females oxypygous, rare, semiamblypygous with usually projecting sheath of ovipositor.

M o r p h o l o g y :

F l a g e l l u m : Of females, moderately long, bristle-shaped, lanceolate, strongly flattened ventrally and usually strongly widened beyond middle, strongly attenuated toward apex, of females always, of males sometimes with white annulus. Flagellum of males nodose, with distinct transversal ridges and long row of rather weak or indistinct tyloides.

H e a d : Head contour from front with long genae; genae from lateral extraordinary

broad in comparison with eyes, which comparatively small and slightly convex; clypeus, face and malar space forming single, slightly convex surface, without traces of sutures, impressions or elevations. Occiput deeply concave; temples very long, not narrowed or slightly narrowed behind eyes; malar space at least equal to mandible base width, at genus *Ischnojoppa* considerably longer, sometimes two times longer than mandible base width; mandibles broad, with long large teeth situated in the same plane and with wide gape; antennal cavities moderately deep; ocelli small; ocellar triangle elevated and clearly expressed.

T h o r a x : Collar of pronotum very long, of *Ischnojoppa* with lamellae. Mesonotum moderately convex, of equal length and breadth, sometimes some longer than width in middle; notauli usually rather distinct basally, or at least marked; sternaui fully absent; scutellum strongly elevated above postscutellum, rather short and apically rounded, dorsally strongly convex, laterally carinated by high carinae, from apex abruptly slanted. Hind margin of metanotum with triangular projections. Propodeum from lateral usually of broken type, although often gradually slanting backwards, long, horizontal part longer than vertical, usually approximately two times, slightly shorter only of *Pseudischnojoppa*; areas of propodeum usually indistinct or partially atrophied; area superomedia, if distinguishable, much longer than width, merged with area basalis and gradually narrowed to apex; at *Pseudischnojoppa* with complete set of carinae; spiracles of propodeum long.

L e g s : Slender, moderately long; hind coxae of females sometimes with indistinct scopa; claws smooth.

W i n g s : Areolet pentagonal, narrow in front; radius sinuous or almost straight; nervulus usually interstitial, of some species strongly postfurcal.

A b d o m e n : Narrow, parallel sided, elongated; abdomen of females usually with sharpened apex, oxygyous, with slightly projecting ovipositor, as exception at one species blunted, semiamblypygous with cut last tergite and hidden ovipositor. First tergite not flattened at base, narrow, from lateral without sharp break to postpetiolus, from above distinctly broadened to postpetiolus; middle field of postpetiolus convex, but laterally indistinctly separated, wrinkly-punctured, sometimes more or less distinctly longitudinally striated. Gastrocoeli rather deep, with approximately quadrangular contour, thyridia distinct, interspace between them striated; lunulae absent; tergites 2-5 distinctly longer than width, densely sculptured and semimatt; hypopygium of males, rather short, apically broadly and bluntly rounded.

C o l o r a t i o n : Main color lightly ferruginous or yellowish, sometimes with limited white anal spots; apices of hind femora and tibiae of type species of *Ischnojoppa* and of some African species black.

***Ischnojoppa luteator* (FABRICIUS) (Plate 8)**

Ichneumon luteator FABRICIUS 1798 - Supplementum entomologiae systematicae: 222, ♀, ♂.

Ischnojoppa luteator: HEINRICH 1934 - Mitt. Zool. Mus. Berlin **20** (1): 237, ♀, ♂.

F e m a l e

F l a g e l l u m : Lanceolate, with 34 segments, most broad segments slightly more than three times broader than length, with white semiannulus dorsally on segments 8-12, rufous up to middle; first segment long, 4,8 times longer than the width at apex. Flagellum

relatively short, 1,2 times shorter than the length of front wing and 2,1 times of body length.

H e a d : Head contour from front narrowed downwards, with almost equal width and height; genae from front long, 0,7 height of eye; from above transversal, 1,5 times wider than length. Vertex from lateral gradually slanting down to occipital carina; temples very long, approximately equal to longitudinal diameter of an eye at the middle, slightly roundly narrowed backwards, from side broadened toward mandible base; occipital carina from above deeply roundly impressed, but far not reach level of eyes and hind ocelli, sharp all round, meeting with hypostomal carina on mandible base; malar space 2,3 times longer than the mandible base width; mandibles broad, with long large teeth situated in the same plane and separated by wide gape, sharply curved at the middle; clypeus with almost straight (slightly rounded front margin), forming with face single surface, without traces of sutures and impressions; clypeal fovea not impressed (but clearly visible through cuticula); antennal cavities moderately deep, laterally above antennal fossae with tubercles, without trace of tooth between antennal fossae; ocelli small, cross diameter of lateral ocellus some times less than distance from ocellus to eye, ocellar triangle elevated and clearly expressed. Surface of head with the exception of antennal cavities slightly superficially punctured.

T h o r a x : Collar of pronotum very long, from the front high leaf-shaped widened and slanting backwards, therefore transverse furrow very deep, interrupted in middle by keel with more weak carinae laterally, hind thin margin of front lamellae slightly impressed in middle, not reach epomia; epomia very sharp, thin, high elevated; pronotal ridge not thickened; pronotal base uniformly and sharply slanted backwards; only upper lateral part of pronotum densely punctured. Mesonotum moderately convex of equal length and breadth; notauli only just marked at base; surface very densely punctured, to wrinkled on lateral lobes, opaque; prepectus strongly impressed behind front coxae; subalarum low, but sharp; speculum smooth, shining, without of traces of punctures; mesopleural fovea moderately impressed; sternauli completely absent; ventral part of mesothorax with strong longitudinal impression broadened backwards; lower part of mesopleurae roughly wrinkly-punctured, with very slight shine; scutellum strongly convex, sharply carinated up to apex, its horizontal part punctured by big punctures (punctures much wider than interspace between them), vertical part wrinkled. Hind margin of metanotum with triangular projections. Propodeum from lateral roundly and gradually slanting backwards, without distinct break, horizontal part some longer than area posteromedial in middle; all carinae of propodeum, with exception of carinae, limiting basal area and slightly expressed hind branches of lateral carinae, distinct; basal area slightly impressed; area superomedial long, hexagonal, narrow, from costulae sharply narrowed backwards; spiracles long. Surface of propodeum cellular-wrinkled, without microsculpture.

L e g s : Slender; claws smooth, slightly curved.

W i n g s : Areolet pentagonal, narrow in front, asymmetrical, external vein of base longer than internal and external vein of apex shorter than internal; stigma narrow; radius sinuous; nervulus very slightly postfurcal, almost interstitial; ramulus only just marked; all veins of hind wing distinct; veins colored as a body; membrane of wing slightly-yellowish. Length of front wing 1,2 times longer than length of flagellum and 1,7 shorter than body length.

A b d o m e n : Long, narrow with strong constrictions between segments, second tergite

longer than width at apex, sheath of ovipositor protrude almost on length of sixth tergite, seventh tergite from above only just visible; abdomen sharply oxygygous. Petiolus of first tergite narrow, gradually broadened to postpetiolus, from lateral without sharp break; lateral and dorsal carinae not developed; distance between spiracles slightly more than distance from spiracles to apex; middle field of postpetiolus very slightly elevated (differentiated); middle field shagreen, lateral fields punctured by big superficial punctures. Gastrocoeli very deep, sharp, oblique; thyridia distinct, breadth of thyridia equal to interval between them; lunulae absent; interval between thyridia with sharp longitudinal wrinkles, middle part of tergite wrinkled up to apex, lateral parts very densely punctured (intervals narrower than punctures); third tergite with similar sculpture, fourth densely punctured, fifth and sixth practically smooth. All sternites with longitudinal fold.

C o l o r a t i o n : Main color of body, including veins of wings, ferruginous; black: apices of hind femora and tibiae, tergites 5-7, segments of tarsi darkened; dorsal strip on segments 8-13 of flagellum and dorsal spot on tergite 7 white.

S i z e : Body length: 14,5; flagellum: 7,0; front wing: 8,5 mm.

Tribe Listrodromini (FOERSTER)

Listrodromoidae FOERSTER 1868 - Verh. Nat. Ver. Preuss. Rhein. West. **25**: 144.

Listrodromini ASHMEAD 1895 - Proc. Ent. Soc. Wash. **3**: 278.

Type genus: *Listrodromus* WESMAEL.

Listrodromini: HEINRICH 1968 - Ichn. Stenop. of Africa **2**: 263, 265.

Listrodromini: HEINRICH 1975 - Ann. Zool. Wars. **32** (20): 457-458.

Listrodromini: HEINRICH 1977 - Ichn. Florida and Neighb. States **9**: 270-271.

D i s t r i b u t i o n : Holarctic, Oriental and Ethiopian Regions.

I n t r o d u c t i o n :

The representatives of the tribe are characterized first of all by peculiar structure of head. Face, clypeus, and malar space form together a single slightly convex surface, without sutures, elevations or impressions. Peculiar structure of mandibles, short and broad, bearing two strong almost equal teeth, separated from one another by broad gape supplement this special feature.

In contrast to African and Oriental Ischnojoppini and Compsophorini, with similar structure of head, Listrodromini is differed by shortened propodeum and from Ischnojoppini, except this, by flagellum morphology of females, which is not lanceolate.

Scutellum is elevated above postscutellum. Propodeum is of broken type, shortened. Claws of tarsi of females of some genera are pectinate. Areolet of front wings is always pentagonal. Abdomen of females is usually amblypygous or semiamblypygous, shortly-oval, sometimes conical, usually with white spots.

M o r p h o l o g y :

F l a g e l l u m : Of females short, only slightly attenuated toward apex, usually not widened, or slightly widened beyond middle and usually distinctly flattened ventrally. Flagellum of males without transversal ridges, not nodose, usually without tyloides, sometimes with tyloides; first segment sometimes shorter than second.

H e a d : Face, clypeus, and malar space form single, slightly convex not differentiated surface, without of sutures, impressions or elevations. Mandibles broad, with strong approximately equal teeth separated by wide gape.

T h o r a x : Mesonotum with approximately equal length and breadth, moderately convex; notauli atrophied, rarely rather distinct at base, never sharply impressed; sternaui distinct; scutellum short, more or less strongly elevated above postscutellum, usually sharply carinated laterally, more or less strongly convex dorsally. Propodeum shortened, with distinctly separated horizontal and vertical (slanting) parts, last considerably longer than horizontal one, at times several times longer; carinae of propodeum developed; spiracles small from roundish to longish-oval.

L e g s : Quite short and strong; coxae of females without scopa; claws of some genera pectinate.

W i n g s : Areolet distinctly pentagonal; radius straight; nervulus usually antefurcal.

A b d o m e n : Of females usually amblypygous or semiamblypygous and shortly-oval, sometimes conical, of one genus (*Deuterotypus* HEINRICH) extremely narrowed and elongated; sometimes tergites 2 and 3 distinctly sclerotized and roughly sculptured, contrasting with smooth and gradually narrowed cone of follow four tergites; gastrocoeli more or less deeply impressed, thyridia small to atrophied; hypopygium of males short and blunt-pointed.

C o l o r a t i o n : Tribe shows tendency to rich white pattern at apex of abdomen of both sexes; in addition, developed white latero-apical marks on front tergites, especially of genus *Neotypus* FOERSTER; thorax shows tendency to developed of red pattern, often more limited of males than of females.

S i z e : Quite small species.

B i o l o g y :

All Listrodromini are specialized parasite of Lycaenidae.

***Listrodromus nythemerus* (GRAVENHORST) (Plate 9)**

Ichneumon nythemerus GRAVENHORST 1820 - Mem. Acad. Sci. Torino **34**: 320, ♀.

Listrodromus nythemerus: WESMAEL 1844 - Nouveaux Mém. Acad. Roy. Let. Beaux-Arts Belgique **18**: 146, ♀.

F e m a l e

F l a g e l l u m : Short, filiform, with 21 segments, without white annulus, rufous, not widened and only slightly flattened at the apical third; basal segments short, first segment 1,8 times longer than width at apex, segment 11 square from lateral. Flagellum 1,5 times shorter than the front wing and 1,8 times shorter than body length.

H e a d : Head contour from front rounded, very slightly transversal, 1,1 times wider than length; genae from front long, only two times shorter than height of an eye; eyes not great; temples from the front visible far than to middle of eyes; head from above stout, transverse, 1,7 times wider than length. Vertex from lateral straightly slanting down to occipital carina; temples behind eyes from above strongly swollen, rounded, long, 1,7 times longer than longitudinal diameter of eye at middle, from side parallel to hind margin of eye; occipital carina sharp all round, moderately high, occipital carina from above roundly concaved, far not reach level of eyes and hind ocelli, meeting with hypostomal carina on base of mandible; hypostomal carina not visible from lateral; malar space 1,5 times longer than the mandible base width; mandibles wide and massive, sharply curved from above behind base almost at right angle, not narrowed to apex, with two approxi-

mately equal teeth separated by wide gape and situated in the same plane; clypeus flat, transverse, 1,5 times wider than length, confluent with face, of peculiar form, with thinned apex, apically with tooth and rather sharp lateral corners; clypeal foveae small, scarcely expressed; labrum not protrude from under clypeus; surface of face not differentiated; antennal cavities very slightly impressed not reach level of front ocellus and borders of eyes, laterally above antennal fossae with tubercles and with slight interantennal tubercle; margins of antennal fossae slightly elevated above face surface; ocelli moderately convex, of normal size, diameter of lateral ocellus 1,5 times less than distance from ocellus to eye; ocellar triangle slightly elevated. Front surface of head with the exception of apex of clypeus, densely punctured; other part of head smooth, shining, without microsculpture.

T h o r a x : Collar of pronotum moderately long, front border of pronotum straight from above; transverse furrow of pronotum deep, not interrupted by keel; pronotal base almost uniformly straight; pronotal ridge thickened, but not strongly. Mesonotum convex, of equal length and breadth; notauli developed in front third; axillary tongue not developed; surface of mesonotum with big superficial punctures, shining, without microsculpture; prepectus behind front coxae deeply impressed; prepectal carina sharp, at apex not reach front margin of mesopleurae; subalarum thick, high, not sharpened; speculum smooth, shining; area of mesopleural fovea very deeply and broadly impressed forms with mesopleural suture unit impression to hind margin of mesopleura; lower part of mesopleurae not separated angularly; sternauli very broad and deep, reach to middle of mesopleurae; lower part of mesopleurae roughly wrinkly-punctured, shining, without microsculpture; scutellum convex, from apex abrupt to scuto-scutellar groove and more gradually slanting to postscutellum, laterally carinated up to apex, its surface smooth, shining; postscutellum with two hollows and sharp longitudinal wrinkles on interspace. Hind margin of metanotum without projections opposite lateral longitudinal carinae. Propodeum from lateral strongly shortened, with sharp break; horizontal part 1,8 shorter than length of area posteromedia in middle; all carinae of propodeum developed, sharp and high; basal area short and deep; area superomedia hexagonal, 1,2 times shorter than breadth between costulae, costulae at middle of area superomedia; carina metapleuralis with sharp break at level of costulae; area dentipara at apex without tooth, only with broadened transversal carina; spiracles small, roundish. Surface of propodeum, except densely wrinkly-punctured metapleurae, roughly cellular-wrinkled.

L e g s : Quite strong; segments of tarsi of all legs distinctly thickened to apex; hind coxae without scopa; claws small, sharply curved at apex, pectinate, with 5 teeth.

W i n g s : Areolet big, pentagonal, symmetrical, with wide base; stigma dark and broad; radius short, straight, radial cell broad; nervulus antefurcal; ramulus slightly developed or not expressed; all veins of hind wing developed; membrane of wing hyaline, yellowish; veins dark. Front wing 1,2 times shorter than body length.

A b d o m e n : Amblypygous, shortly-oval; second tergite transversal, 1,5 times shorter than breadth at apex; tergites 2 and 3 divided by strong constriction. Petiolus slightly flattened at base, dorsomedian and dorsolateral carinae of petiolus meeting at its middle, ventrolateral carina slightly expressed; lateral surface of petiolus smooth; petiolus from lateral gradually transform to postpetiolus, first tergite almost straight as of *Heresiarches*, from above sharply broadened to postpetiolus; middle field only just marked and not carinated; spiracles small, circular, distance between them 3 times more than distance

from spiracles to apex of tergite; surface of postpetiolus smooth, shining. Gastrocoeli sharply impressed, transverse, short, narrower than interval; interval longitudinally-wrinkled; thyridia sharp, short, approached to base of second tergite; lunulae absent; lateral surface of second tergite vertical; surface of second tergite very densely punctured, shining, without microsculpture; base of third tergite longitudinally-wrinkled; third tergite with more delicate punctures, other tergites smooth, shining, polished. Hypopygium compressed from sides with oblong apex, but without fold. Sternites 2-4 strongly unsclerotized, with fold.

C o l o r a t i o n : Body black; white or yellow: face, except middle stripe, frontal orbits, external orbits broadly, pronotal ridge, subalarum, scutellum, postpetiolus, broad interrupted apical band on second tergite, band on third, apical spots on tergites 4-7; legs with exception of coxae and trochanters with yellow or light-brown pattern.

S i z e : Body length: 7,0; front wing: 5,7; flagellum: 3,8 mm.

M a l e

Flagellum of males with narrow tyloides on segments 5-14; claws smooth, gradually curved; coloration similar.

Tribe Oedicephalini HEINRICH

Oedicephalini HEINRICH 1934 - Mitt. Zool. Mus. Berlin **67**: 118-119.

Type genus: *Oedicephalus* CRESSON

Oedicephalini: HEINRICH 1967 - Ichn. Stenop. of Africa **2**: 255-256.

D i s t r i b u t i o n : Neotropic, Oriental and Ethiopian Regions (lowlands).

I n t r o d u c t i o n :

For representatives of tribe very long and slender, bristle-shaped flagellum (same as Platylabini tribe), not widened or slightly widened beyond middle, at males with slight tyloides or without them are characteristic. Head is very thick, almost cubical with convex vertex between hind ocelli and occipital carina and broad genae from lateral. Mandibles are strong with two almost equal teeth, situated in the same plane and divided by broad gap. Clypeus is almost flat, structurally slightly separated from face and bent forward. Thorax is convex with mesonotum abruptly slanting in front. Scutellum is from slightly to strongly elevated above postscutellum, carinated up to apex often by very high carinae, with thorn-shaped projection. Propodeum from lateral is roundly slanted and shortened with set of carinae, reduced in different degree and various shape of spiracles. Abdomen is of various form, more often flattened, of females oxygygous with projecting sheath of ovipositor. Gastrocoeli are large and deep, transverse with narrow interval.

M o r p h o l o g y :

F l a g e l l u m : Long and slender; of females bristle-shaped, attenuated toward apex, flattened ventrally beyond middle, but not or slightly widened. Flagellum of males with small, slightly noticeable tyloides, or without tyloides, not nodose. Flagellum of female often longer or equal by length to front wing.

H e a d : Extremely stout, almost cubic; vertex from lateral practically not sloping or only just sloping down, convex and very broad; genae between outer orbits and hypostomal carina very broad and visible from front; malar space shorter than the mandibles base width; mandibles strong, massive, frequently mandibles sharply curved at the mid-

dle almost at right angle, tooth large, upper tooth slightly longer than lower with broad gape, situated in the same plane; mandibles frequently sharply twisted and turned up close beyond base in such a way that their upper surface is in the plane of face and clypeus; clypeus not convex, practically flat, not separated from face by suture, only bent forward, front margin gradually rounded or gradually turned from lateral corners to visible middle triangular projection; antennal cavities slightly impressed.

T h o r a x : Collar usually simple, of type species with two, and *Imeriella* HEINRICH from Madagascar with four lamellae; epomia distinct. Mesonotum of equal length and breadth, convex, abruptly sloping at front; notauli atrophied, only in form of very slight impressions at base; hind transversal carina of mesosternum interrupted, slight, or not developed before hind coxae; sternauli slightly marked more often in a form of broad slight impression; scutellum from slightly to very strongly elevated above postscutellum with thorn-like projection (*Oedicephalus* CRESSON), laterally with high lamelliform carinae, ascending from base to apex, sometimes hind apices of lateral carinae more or less protrude on each side. Propodeum from lateral roundly slanted and shortened, area posteromedia some longer than horizontal part in middle; propodeum more often with narrow basal furrow behind postscutellum, distinctly short; set of carinae usually not complete; particularly coxal carina absent or weak, also carina metapleuralis often slight or atrophied, or lateral carinae of basal area absent; area superomedia not elongated; spiracles of propodeum from roundish or oval (*Aulojoppa* CAMERON) to slit-shape (*Oedicephalus* CRESSON).

L e g s : Distinctly long and thin; claws usually smooth, rarely pectinate.

W i n g s : Areolet pentagonal, often strongly narrowed in front; nervulus interstitial or slightly postfurcal; radius from almost straight to sinuous.

A b d o m e n : From above from short-oval, almost conical to elongated; sheath of ovipositor distinctly protrude, usually on length of seventh tergite, or length of two last tergites of abdomen; abdomen of females oxygygous. Petiolus of first tergite not flattened, postpetiolus without distinct median field, convex, punctured, wrinkly-punctured or without any sculpture. Gastrocoeli rather large and deep, transverse, interval between them narrow; base of second tergite sometimes longitudinally-wrinkled; tergites 3-7, sometimes only 4-7 weakly sclerotized.

C o l o r a t i o n : Various variant of black-yellow-red coloration, sometimes with white pattern at apex of abdomen.

***Oedicephalus variegatus* (SZÉPLIGETI) (Plate 10)**

Poecilojoppa variegata SZÉPLIGETI 1903 - Ann. Mus. Nat. Hungarici 1: 482.

Oedicephalus variegatus: TOWNES H. & M. TOWNES 1966 - Mem. Amer. Ent. Inst. 8: 218.

F e m a l e

F l a g e l l u m : Slender, long, bristle-shaped, with 41 segments, with white annulus on segments 7-17, beyond white annulus widened and flattened ventrally; first segment 3,2 times longer than width at apex, segment 13 square, segment 18 transverse; segments of flagellum weakly separated (differentiated). Flagellum 1,2 times shorter than the front wing and 1,1 times shorter than body length.

H e a d : Head contour from front slightly narrowed downwards, 1,3 times wider than height; considerable part of temples visible from front; genae from front 4,5 times shorter

than height of eye; head stout, from above 1,6 times wider than length. Vertex from lateral gradually slanting down to occipital carina; temples long 1,3 times shorter than longitudinal diameter of an eye at middle, parallel to hind margin of eye, from above very slightly and roundly narrowed behind eyes; occipital carina sharp from above, lower upper third erased, from above strongly roundly impressed, but far not reach level of eyes and hind ocelli; hypostomal carina not visible from lateral and independently reach base of mandible; malar space 2,2 times shorter than the mandible base width; mandibles strong, massive, sharply curved at the middle almost at right angle, with large tooth situated in the same plane, upper tooth slightly longer than lower, with broad gape; clypeus not convex, practically flat, equal by length to height of middle field of face, not separated from face by suture, only bent forward, approximately 2,4 times wider than height, front margin gradually rounded; clypeal foveae small but sharp; labrum not protrude from under clypeus; middle field of face only just elevated above lateral fields, in middle 1,5 times wider than lateral field; antennal cavities slightly impressed reach borders of eyes but not reach level of front ocellus, lateral and interantennal tubercles absent; ocelli of normal size, diameter of lateral ocellus 1,3 times less than distance from ocellus to eye; ocellar triangle elevated but upper border of ocelli in the same level with eyes border. Surface of head polished without traces of punctures.

T h o r a x : Collar of pronotum rather long with rounded, sharpened front margin (from above), from front with two lateral leaf-like projections (lamellae) which laterally not reach epomiae and with broad interspace between them; pronotal ridge at hind third thickened; epomiae sharp, but short; pronotal base gradually curved, almost straight, with acute apex. Mesonotum slightly convex, of equal length and breadth; notauli only in a form of very slight impressions at base; lateral margin of mesonotum above axillae strongly elevated (with projection); axillary tongue not developed; surface of mesonotum smooth, shining, not sculptured; subalarum moderately elevated, not sharpened; prepectus (epicnemium) behind front coxae very strongly impressed; prepectal carina sharp, high, ventrally strongly elevated; speculum and middle part of mesopleurae not sculptured, smooth, polished; area of mesopleural fovea broadly, but slightly impressed; mesopleural suture straight, interrupted by slight transversal ribs; border between vertical and horizontal part of mesopleurae sharp; sternauli in form of broad slight impression to middle of mesopleurae; scutellum gradually slanting to postscutellum, but with high thorn on horizontal part, carinated laterally by high carinae up to apex, horizontal part smooth, shining. Hind margin of metanotum with slight triangle projections opposite lateral longitudinal carinae. Propodeum from lateral slanted, slightly divided on horizontal and vertical parts, horizontal part 1,8 times shorter than area posteromedia in middle; all carinae of propodeum, except carinae, limiting basal area laterally, developed; area superomedia rounded in front, of equal length and breadth, from costulae narrowed backwards; costulae at middle of area superomedia; area dentipara without tooth at apex; spiracles long, slit-shaped; coxal carina sharp. Horizontal part of propodeum in front from costulae smooth, shining, not sculptured, vertical part wrinkled, without microsculpture, shining; surface of metapleurae with sparse punctures, shining, without microsculpture.

L e g s : Long and very slender, hind femora narrow; hind coxae without scopa. Claws long, thin, smooth, sharply curved at upper third and not widened at base.

W i n g s : Areolet pentagonal, narrow in front, slightly asymmetrical (internal vein of apex longer than external); stigma narrow, dark, radial cell narrow and long, radius very

slightly sinuous, almost straight; nervulus interstitial; ramulus only just expressed; all veins of hind wing pigmented; membrane of wing hyaline. Length of front wing of female 1,2 times shorter than body length.

A b d o m e n : Abdomen from above almost conical, from apex of second tergite almost straightly narrowed backwards; abdomen oxygyous (semiamblypygous); sheath of ovipositor long, equal by length to fourth tergite. First tergite from lateral with distinct bend to postpetiolus, with very narrow petiolus at base, from lateral smooth, without traces of lateral carinae and any sculpture; from above petiolus sharply broadened to short postpetiolus; distance between spiracles two times more than distance from spiracles to hind margin of tergite; middle field not expressed; surface of postpetiolus smooth, shining, polished, without any sculpture. Gastrocoeli large, very deep, perpendicular to longitudinal axis of a body, short; thyridia distinct, approached to base of second tergite and reach to its lateral borders, 2,5 times wider than interval between them; lunulae only just expressed, situated at once beyond spiracles; interspace between gastrocoeli and front half of second tergite longitudinally-wrinkled, other parts of second and third tergite completely smooth, without microsculpture, only with very sparse smoothed punctures, other tergites completely smooth, shining. Hypopygium large, from lateral triangle with acute apex, without longitudinal fold, with long bristles; all sternites unsclerotized.

C o l o r a t i o n : Black-yellow-red. Head with reach yellow pattern: face practically completely, large spots on vertex, temples in most part, with exception of apex. Thorax with extremely reach yellow pattern. First tergite of abdomen yellow with black, other tergites of abdomen red. Front and middle legs, including coxae mainly yellow, hind coxae and femora red, tibiae and tarsi yellow.

S i z e : Body length (without ovipositor sheath): 12,0; flagellum: 11,2; front wing: 9,7 mm.

Tribe Joppocryptini (VIERECK)

Joppocryptinae VIERECK 1918 - Proc. Biol. Soc. Wash. **31**: 73.

Type genus: *Joppocryptus* VIERECK.

Acanthojoppini HEINRICH 1934 - Mitt. Zool. Mus. Berlin: 65, 67, 138.

Acanthojoppini: HEINRICH 1968 - Ichn. Stenop. of Africa **2**: 433-434.

Type genus: *Eccoptosage* KRIECHBAUMER (= *Acanthojoppa* CAMERON).

Joppocryptini: HEINRICH 1977 - Ichn. Florida and Neighb. States **9**: 268-269.

D i s t r i b u t i o n : Oriental, Ethiopian, Neotropical Regions (most number of genera) and Holarctic (1 genus *Pseudoplatylabus* SMITS van BURGST with 2 species)

I n t r o d u c t i o n :

It differs from Ichneumonini first of all by peculiarities of head morphology. For representatives of tribe combination of clypeus and mandibles morphology is characteristically. Clypeus is nearly always with thinned, leaf-shaped, or broadly bent, or projected medially (rarely almost straight) apex, usually slightly convex basally and more or less distinctly concave to apex. Mandibles are sickle-shaped, curved, with long, sharply pointed apical tooth, but also with short subapical tooth, bent inside and situating almost in the same (horizontal) plane with apical one. Similar morphology of mandibles is typical for tribe Heresiarchini and some of Ichneumonini genera. For *Hymenura* TOWNES (= *Neopyga* HEINRICH), *Rhadinodonta* SZEPLIGETI (Cratichneumonina) it is with maximal

reduction of the lower tooth, of *Aethioplites* HEINRICH (Aethioplitina) – with analogous tendency.

Flagellum is always long, slender, sharpened. Scutellum is from moderate to very strongly elevated above postscutellum, always carinated by high carinae. Propodeum is of broken type, with teeth at apex and tendency to develop of apophyses. Claws of tarsi of females are smooth. Areolet of front wings is pentagonal, narrow in front. Abdomen of females is oxygyous with projecting sheath of ovipositor and with slight long gastrocoeli with distinct thyridia. Surface of mesonotum and of propodeum is dull.

M o r p h o l o g y :

F l a g e l l u m : Of females bristle-shaped, long and slender, ventrally flattened beyond middle, sometimes distinctly widened, always with long and strongly attenuated apical part and with considerably elongated basal segments. Flagellum of males with short row of small tyloides or without tyloides, distinctly nodose and with transversal ridges to the apex on ventral side.

H e a d : Head contour from front strongly narrowed. Vertex and temples from lateral sharply and roundly slanting to occipital carina after ocelli; occipital and hypostomal carinae normal, without specialization; genae quite broad from side; mandibles particular, very specific structure, curved, with long, sharply pointed apical tooth, sickle-shaped, with short lower tooth moved inside and situated in the same horizontal plane with upper tooth; clypeus usually punctured and slightly convex basally, polished and more or less clearly concave to apex, apex thinned leaf-like and usually broadly curved and protrude medially, rarely almost straight. Lower part of temples and genae of males often wider than of females, sometimes swollen.

T h o r a x : Mesonotum strongly convex, from slightly to considerably more long than width in middle; notauli at basal part vary from very sharp impression to full lacking; surface of mesonotum densely punctured, usually dull or almost dull; scutellum from moderately to very strongly elevated above postscutellum, laterally always with high carinae, dorsally more or less strongly convex. Hind margin of metanotum with projections opposite lateral longitudinal carinae. Propodeum distinctly of broken type, declivous part some shorter, equal, or some longer than horizontal one, the latter flat; set of carinae of propodeum from complete to incomplete and sometimes to full lacking of carination; areae dentiparae with tendency to develop of apophyses of different size, often less developed at males than at females; spiracles long.

L e g s : Long and slender; claws not pectinate.

W i n g s : Areolet pentagonal with narrow, sometimes with very narrow base; nervulus usually interstitial, sometimes slightly postfurcal; radius straight, sometimes very slightly curved at apex. Wings membrane usually hyaline, of one African species deeply darkened.

A b d o m e n : Of females narrow, elongated, sharply pointed to apex, oxygyous, with distinctly projecting sheath of ovipositor. First tergite long, thin, from lateral without distinct sharp bend to postpetiolus; from above petiolus gradually broadened to postpetiolus; sculpture of postpetiolus usually more or less smoothed. Gastrocoeli long, slightly impressed; thyridia usually small and narrow, sometimes very broad, with interval more narrow than breadth each of them, always from distinctly to very far removed from base of second tergite; tergites 2-3 or 2-4 densely and delicate sculptured, punctured or wrinkled, often dull; hypopygium of males, broadly and bluntly triangle.

C o l o r a t i o n : Basic color most species orange or dully ferruginous or uniformly, or (often) with head and apical tergites more or less intensively black, with white spots or without them. Only at two Madagascarian species basic color of abdomen black, with expressed white bands. Flagellum usually with white annulus or semiannulus of both sexes.

***Eccoptosage brevispinosa* (TOSQUINET) (Plate 11)**

Hoplismenus brevispinosus TOSQUINET 1903 - Mém. de la Soc. Entom. Belg. **10**: 347, ♂.

Acantojoppa brevispinosa: HEINRICH 1934 - Mem. Zool. Mus. Berlin **20**: 143, ♂.

Acantojoppa charlottae HEINRICH 1934 - Mem. Zool. Mus. Berlin **20**: 246, ♀.

Eccoptosage brevispinosa: TOWNES et al. 1961 - Mem. Amer. Ent. Inst. **1**: 351.

F e m a l e

F l a g e l l u m : Bristle-shaped, with 3[7] segments, first segment moderately long, 3,3 times longer than width at apex, black with white semiannulus on segments (7)8-13, flattened and widened ventrally from segment 16 (already segment 16 square from lateral). Flagellum equal by length to front wing and 1,7 times shorter than body length.

H e a d : Head contour from front strongly narrowed downwards, transversal, 1,4 times wider than height; eyes large, genae from front 5 times shorter than height of eye; head from above transversal, 1,8 times wider than length. Occiput roundly impressed behind hind ocelli; temples almost two times shorter than longitudinal diameter of an eye at the middle, from above sharply almost straightly narrowed behind eyes, from side parallel to hind margin of an eye; occipital carina from above deeply but roundly impressed to level of eyes, but not reach level of hind ocelli, sharp all round, meeting with hypostomal carina on mandible base; malar space 1,3 times shorter than mandible base width; mandibles narrow, sickle-shaped, upper tooth long, lower considerably short, but sharp, strongly moved inside in comparison with upper tooth; clypeus broad, flat, only just convex at base, strongly concave at apex, with oblong rounded front margin, separated from face by clear, but not sharp impression; clypeal foveae practically not expressed, presented by only just visible pore, similar to adjoined superficial punctures; labrum broad, triangular, far protrude from under clypeus, with long pubescence along front margin; middle field of face narrow, slightly separated and only just elevated above lateral fields; antennal cavities not great, very deep, laterally reach borders of eyes, but far not reach level of front ocellus, without lateral tubercles and tooth between antennal fossae; margins of antennal fossae slightly elevated above face surface; ocelli of normal size, diameter of lateral ocellus 1,4 times less than distance from ocellus to eye; ocellar triangle practically not elevated. Surface of face and upper third of clypeus densely punctured by large smoothed punctures (interspaces considerably more than their diameter); front part of clypeus without distinct sculpture, only front margin with slight rugosity; surface of head without microsculpture or with slightly visible microsculpture, dully-shining.

T h o r a x : Collar of pronotum long, transverse furrow of pronotum with pit in middle; pronotal base gradually uniformly curved; epomiaae strong, pronotal ridge not thickened; most part of pronotum surface matt. Mesonotum moderately convex, of equal length and breadth; notauli sharp in front third; surface very densely wrinkly-punctured, matt; prepectus behind front coxae densely punctured by small shallow punctures, slightly shining; subalarum thin, high, sharp; surface of speculum with sparse punctures; mesopleural fovea small, deep, with slightly impressed, shining bordered area; lower part of meso-

pleurae (mesosternum) angularly separated; sternauli slightly impressed in front third; upper part of mesopleurae under subalarum longitudinally-wrinkled, other part densely wrinkly-punctured; surface of mesopleurae matt; scutellum high elevated above postscutellum, carinated laterally up to apex by high carinae, horizontal part of scutellum slightly convex, densely wrinkly-punctured, matt. Hind margin of metanotum with small triangle projections opposite lateral longitudinal carinae. Propodeum from lateral of angle-form, its horizontal part only just shorter than area posteromedia in middle; all carinae of propodeum sharp, only coxal carina weak, but distinct; basal area long; area superomedia elongated, sharply hexagonal, narrowed from costulae forward and backwards, costulae almost at middle of area superomedia; areae dentiparae at apices with long (strong) turned up teeth; spiracles long, rather narrow. Horizontal and vertical surface of propodeum densely wrinkly-punctured, slightly shining; metapleurae very roughly densely punctured, matt.

L e g s : Legs long and slender; hind coxae of female without traces of scopa; claws small with strongly curved apex.

W i n g s : Areolet pentagonal with very narrow base (almost quadrangular), asymmetrical, external vein of apex shorter than internal; stigma narrow; radius slightly sinuous, long; nervulus slightly postfurcal, ramulus only just marked; nervellus at hind wing strongly reclival; veins of both wings brown; membrane of wings hyaline. Length of front wing more than 1,8 shorter than body length.

A b d o m e n : From above narrow, fusiform, with strongly projecting sheath of ovipositor, sharply oxyptygous, flattened dorso-ventrally, sternites 2 and 3 completely unsclerotized. First tergite from lateral without distinct bend at place of transform of petiolus to postpetiolus; lateral surface of petiolus not sculptured, shining, lateral carinae completely absent; petiolus narrow, from above gradually broadened to postpetiolus; middle field of postpetiolus slightly elevated, not carinated; postpetiolus only laterally with sparse shallow punctures, smooth, shining. Gastrocoeli long, slightly impressed; thyridia slightly expressed, many narrower than interval between them; lunulae only just marked, practically absent; surface of tergites 2-3 densely sculptured by very small punctures, matt, only at apex slightly shining, other tergites very densely sculptured more small punctures, slightly shining. Sheath of ovipositor protrude on length of third segment of hind tarsus.

C o l o r a t i o n : Head, prothorax, most part of mesothorax and apex of abdomen black; apex of mesothorax, propodeum, segments 1-3 of abdomen and legs, including coxae of basic color; broad spots on apex of frontal orbits, scutellum, hind margin of fifth and sixth tergites of abdomen completely light-yellow; apices of hind femora, tibiae and tarsi darkened.

S i z e : Body length: 12,5; front wing: 7,1; flagellum: 7,3 mm.

Tribe Goedartiini TOWNES

Goedartiini TOWNES 1961 - Cat. Reclass. Indo-Austr. Ichn.: 399-402 (part).

Type genus: *Goedartia* BOIE.

Goedartiini: HEINRICH 1967, 1968 - Ichn. Stenop. of Africa **1**: 22 (2): 201.

Goedartiini: HEINRICH 1975 - Ann. Zool. Wars. **32** (20): 494-496.

D i s t r i b u t i o n : Palaearctic and Oriental Region.

Introduction :

Goedartia and Compsophorini, integrated by H. TOWNES (1961) in single tribe Goedartiini are fundamentally different in morphology of propodeum. G. HEINRICH distinctly substantiates independence of each of these tribes, being grounded on fundamental difference of their propodeum morphology (HEINRICH 1968). Propodeum of Compsophorini is closely connected to postscutellum and metanotum and without basal furrow and steeply uniformly slanted backwards, whereas propodeum of *Goedartia* distinctly of broken type as of Ichneumonini tribe, with horizontal and abrupt slant, and with distinct basal furrow. Additionally, in contrast to Compsophorini clypeus, middle and lateral fields of face and malar space are sufficiently distinctly differentiated.

For the species of the tribe long, bristle-shaped flagellum, head with broad and convex temples, broad and flat clypeus, sufficiently distinct fields of face and large broad mandibles with almost equal teeth are characteristic. Thorax is with high scutellum, often with knoll on horizontal part, with rectangle from lateral propodeum, with indistinct fields and roughly-wrinkled sculpture, separated from metanotum by sharp basal furrow and with large slit-shaped pneusticae. Abdomen is long, parallel sided, amblypygous of females and with long narrow petiolus of first tergite.

Morphology :

Flagellum : Of females bristle-shaped, long and slender. Flagellum of males with strongly prominent transversal ridges, from slightly to considerably nodose, with small, well-defined (of *Goedartia* barely visible) bacilliform tyloides.

Head : Genae and temples wide and convex, mandibles short and wide with approximately equal teeth; clypeus wide, flat; face enough distinctly differentiated (as contrast to Compsophorini), with distinctly expressed fields, middle field separated from clypeus by impression, at *Goedartia* with impressions from lowest part of middle field to clypeal fovea and visible longitudinal impression on genae from eye to mandibles; antennal cavities deeply impressed.

Thorax : Mesonotum distinctly or only just visible longer than width, convex; notauli only as slight impressions at base or absent; surface of mesonotum from roughly to irregularly wrinkly-punctured (of *Goedartia* dull); sternaui practically absent, sometimes in form of broad slight impression only at base; border between vertical and horizontal part of mesopleurae sharp; upper and lower part of mesopleurae longitudinally-wrinkled; scutellum high elevated above postscutellum (of *Goedartia* with knoll on horizontal part (conical), triangle from lateral), carinated laterally by high carinae up to apex. Hind margin of metanotum with projections opposite lateral longitudinal carinae. Propodeum from lateral of broken type, length of horizontal part equal, or shorter than sloping one; fields of propodeum expressed, but not distinct because of general roughly-wrinkled, cellular sculpture of surface, only coxal carina absent or only just marked; area dentipara very short; spiracles large, slit-shaped. Horizontal part of propodeum with roughly-wrinkled or cellular sculpture.

Legs : Comparatively long and very slender, hind femora narrow.

Wings : Areolet from pentagonal with very narrow base to petiolate; nervulus post-furcal; radius long, straight on considerable extent.

Abdomen : Of females *Goedartia* from above long, parallel sided, amblypygous with pointed, long seventh tergite, of other genera oxypygous, massive, long and slender.

First tergite with narrow petiolus at base, from lateral smooth, without traces of lateral carinae and any sculpture, only of males with visible slightly developed dorsolateral carinae; from above petiolus sharply broadened to postpetiolus; postpetiolus without distinct middle field, its surface from punctured to irregularly longitudinally-wrinkled, rarely to completely smooth, polished. Gastrocoeli large, very deep, slightly oblique (of *Pseudomaraces* gastrocoeli not deepened, rudimentary); thyridia distinct, approached to base of second tergite and equal or wider than interval.

***Goedartia alboguttata* (GRAVENHORST) (Plate 12)**

Trogus alboguttatus GRAVENHORST 1829 - Ichneumonologia europaea 2: 373, ♀, ♂.

Goedartia alboguttata: BOIE 1841 - Ent. Tidskr. 3: 318, syn.

F e m a l e

F l a g e l l u m : Slender, long, bristle-shaped, with 45 segments, with white annulus on segments (8)9-12, beyond white annulus slightly flattened ventrally; first segment only 2,3 times longer than width at apex; segments of flagellum separated (differentiated) slightly. Flagellum slightly shorter than the front wing and 1,3 times shorter than body length.

H e a d : Head contour from front slightly narrowed downwards, genae from front long, 3,5 times shorter than height of eye; head width 1,3 times wider than height; head massive, from above 1,7 times wider than length. Vertex from lateral gradually slanting down to occipital carina; temples behind eyes from above long, very slightly and roundly narrowed behind eyes, 1,3 times longer than longitudinal diameter of an eye at the middle, from side slightly narrowed toward mandible base; occipital carina high, sharp, from above strongly roundly impressed, but far not reach level of eyes and hind ocelli; hypostomal carina not visible from lateral, meeting with occipital carina not far from mandible base; malar space equal to mandible base width; mandibles strongly curved at the middle almost at right angle, teeth large, upper tooth slightly longer than lower, situated in the same plane; clypeus very slightly convex, practically flat, approximately 2 times wider than height, separated from middle field of face by broad impression, with uniformly rounded front margin; clypeal foveae small but sharp; labrum not protrude from under clypeus; middle field of face moderately elevated above lateral fields, equal to lateral fields by width; antennal cavities extremely deeply impressed, reach front ocellus level and borders of eyes, with small interantennal tooth and without lateral tubercles; ocelli of normal size, diameter of lateral ocellus 1,4 times less than distance from ocellus to eye; ocellar triangle limited by distinct impressions. Surface of head punctured by big punctures with longitudinally-wrinkled middle field of face, without microsculpture.

T h o r a x : Collar of pronotum moderately long with straight front margin (from above); transverse furrow of pronotum deep, not interrupted by keel, only with transversal ribs; pronotal base gradually curved with acute apex. Mesonotum slightly convex, slightly longer than width; notauli only as slight impressions at base; surface of mesonotum with big irregular punctures, matt, dull; lateral margin of mesonotum above tegulae elevated; axillary tongue not developed; subalarum high, thin, sharpened; speculum and middle part of mesopleurae not sculptured, smooth, polished; area of mesopleural fovea broadly, but moderately impressed; mesopleural suture straight, interrupted by strong transversal ribs; border between vertical and horizontal parts of mesopleurae sharp; sternaui practically absent, only at base in form of broad slight impression; upper and lower parts of meso-

pleurae longitudinally-wrinkled with shallow punctures, without microsculpture; scutellum high elevated with knoll on horizontal part (conical), from lateral triangle, carinated laterally by high carinae up to apex (carinae reach postscutellum), horizontal part with big punctures. Hind margin of metanotum with small triangle projections opposite lateral longitudinal carinae. Propodeum from lateral of broken outline, rather long, length of horizontal part approximately equal to length of area posteromedia in middle; areas of propodeum expressed, but not distinct because of general roughly-wrinkled, cellular sculpture of surface; basal area short and deep; area superomedia of indistinct variable hexagonal forms, from sharply narrowed backwards to oval, costulae at middle of area superomedia; area dentipara without tooth at apex; spiracles long, slit-shaped; coxal carina only just marked. Horizontal part of propodeum cellular; surface of metapleurae very densely punctured by big punctures to wrinkled.

Legs: Long and very slender, hind femora narrow; hind coxae without scopa. Claws long, thin, smooth, gradually uniformly curved and not widened at base.

Wings: Areolet usually petiolate, asymmetrical, rarely to pentagonal with very narrow base, external veins longer than internal; stigma narrow and dark, radial cell narrow and long, radius straight on considerable extent (except apex and base); nervulus postfurcal; ramulus long; all veins of hind wing pigmented. Length of front wing 1,3 times shorter than body length.

Abdomen: Amblypygous, from above long, parallel sided, seventh tergite sharpened, long. First tergite from lateral almost straight, with very narrow petiolus at base, from lateral smooth, without traces of lateral carinae and any sculpture; from above petiolus sharply broadened to postpetiolus; distance between spiracles many more than distance from spiracles to hind margin of tergite; middle field only just marked and not limited by dorsal carinae; its surface from irregularly longitudinally-wrinkled, rarely to completely smooth, polished. Gastrocoeli large, very deep, slightly oblique; thyridia distinct, approached to base of second tergite and reach to borders of tergite, 1,6-2 times wider than interval between them; lunulae practically not expressed; interspace between gastrocoeli and surface of second tergite to middle and more, usually longitudinally-wrinkled, rarely with smoothed sculpture, without rugosity, other part of second tergite and third completely with delicate dense punctures without microsculpture, other tergites with only just visible superficial punctures or completely smooth, shining; seventh tergite very long. Hypopygium from lateral triangle with acute apex, without longitudinal fold; second sternite broadly unsclerotized in middle, other sternites without longitudinal fold.

Coloration: Black with very slight violet tint with white or yellowish spots at corners of pronotum, on horizontal surface of scutellum, hind margin of first tergite or spots at hind corners, white membranous apex of tergites 4-6, long longitudinal spot on tergite 7. Legs mainly black with white or yellowish stripe along front margin of front femora, tibiae and tarsi, apex of middle femora and strip along front margin of tibiae and base of hind tibiae.

Size: Body length: 18,0; flagellum: 14,0; front wing: 14,2 mm.

Males

Males with similar coloration but with more reach white pattern: internal orbits, clypeus, with exception of middle, large spots on genae and mandibles and subalarum. Legs with more reach white pattern. Petiolus from lateral with only just visible slightly developed

dorsolateral carinae. Segments of males flagellum with transversal ribs, with only just visible bacilliform tyloides and more short first segment; flagellum without white annulus.

Tribe Ichneumonini ASHMEAD

Ichneumonini ASHMEAD 1895 - Proc. Ent. Soc. Wash. **3**: 279.

Type genus: *Ichneumon* LINNAEUS.

Amblytelini TOWNES 1944 - Mem. Am. Ent. Soc. **11**: 319.

Type genus: *Amblyteles* WESMAEL.

Joppini TOWNES 1961 - Mem. Am. Ent. Inst. **1**: 341.

Type genus: *Joppa* FABRICIUS.

Ichneumonini: HEINRICH 1967 - Ichn. Stenop. of Africa **1**: 26, **3**: 485-486.

Ichneumonini: HEINRICH 1977 - Ichn. Florida and Neigh. States **9**: 57.

D i s t r i b u t i o n : World-wide.

I n t r o d u c t i o n :

There is only one character, common to all genera of the tribe, structure of propodeum, which has «broken» form, i.e. distinctly separated on horizontal and declivous parts, meeting under angle of carinae dentiparae interiores and apical carina of area superomedial. All other parts by importance, mandibles, antennae, clypeus, head, scutellum, thyridia and abdomen show all possible variety of structures. Therefore, the diagnostic of this tribe is based mostly on the exceptions than on combinations of common real characters.

The tribe differs from Protichneumonini, Trogini and Compsophorini by structure of broken type propodeum, divided on distinct horizontal and declivous parts thus, that apex of area dentipara is far removed from hind coxae, and its surface does not fall arcuate to base of hind coxae. The apices of areae dentiparae have tendency to forming teeth and apophysises. It differs from Platylabini and Eurylabini by not flattened at base petiolus, from Listrodromini, Compsophorini and Listrodromini by distinct division of head surface on clypeus and fields of face, from Alomyini and Phaeogenini by usually long, more often slit-shaped spiracles, which are roundish only as an exception (*Neischnus* HEINRICH).

Tribe Ichneumonini is connected by intermediate forms with other tribes to a greater extent than any other one. Thus, African subtribe Apatetorina (Protichneumonini) is transitional between Ichneumonini and Protichneumonini, species of genus *Barichneumon* of groupe *peregrinator* LINNAEUS connect it with Phaeogenini, group of genera *Plagiotrypes* ASHMEAD (*Neopyga* HEINRICH *Hymenura* TOWNES) similar by mandibles morphology to Joppocryptini, pretending by peculiarities of apex of abdomen morphology on independent tribal status. The number of such samples is numerous.

G. Heinrich single out five subtribes: Cratichneumonina, Ichneumonina, Amblytelina, Hoplismenina and Aethioplitina.

Key to subtribes of Ichneumonini

- 1 Apex of abdomen of females amblypygous; gastrocoeli only just impressed, thyridia absent or indistinct. (Areolet pentagonal with wide base; middle field of postpetiolus aciculate or sometimes wrinkled; sternites with tendency to strong sclerotization of majority of genera, longitudinal plica usually expressed only on 2nd or 2-3rd sternites, sometimes absent; hypopygium of males often with projected apex; clypeus always normal).....Amblytelina (VIERECK)
- Apex of abdomen of females oxytygous or semiamblypygous or gastrocoeli developed and thyridia distinct.....2
- 2 Genae from front and temples from above strongly and almost straightly narrowed; mandibles thin, sharply narrowed behind base with two slight teeth at apex; scutellum very high elevated above postscutellum; apophyses usually strongly developed; legs usually very long and thin3
- Combination of characters diverse; if scutellum elevated, then mandibles or normal, or sickle-shaped, with atrophied lower tooth in case of abdomen amblypygous.....4
- 3 Clypeus distinctly convex in longitudinal and cross directions; scutellum laterally not carinated, or carinated indistinctly by low carinae; areolet pentagonal, with wide base; abdomen of females usually oxytygous, rarely amblypygous (*Amblysmenus* HEINRICH) Hoplismenina HEINRICH
- Clypeus flat or very slightly convex; scutellum laterally carinated by high, leaf-like broadened carinae; areolet quadrangular to petiolate; abdomen of females always oxytygous Aethioplitina HEINRICH
- 4 Postpetiolus regularly longitudinally striated; gastrocoeli distinct, sometimes deeply impressed, sometimes very large and transverse; postpetiolus and usually tergite 2 and subsequent tergites strongly sculptured, often medially striated or roughly wrinkly-punctured (Arolet usually pentagonal with wide base; thyridia distinct, sometimes very strongly expressed)Ichneumonina HEINRICH
- Postpetiolus not regularly longitudinally striated (with rare exception of *Crytea* CAMERON), with delicate punctures, coriaceous or irregularly wrinkled structure; gastrocoeli, with some exceptions, mainly at males, slightly or only just impressed, thyridia almost always distinct, but usually small.....Cratichneumonina HEINRICH

Subtribe *Cratichneumonina* HEINRICH

Cratichneumonina HEINRICH 1967-1968 - Ichn. Stenop. of Africa 1: 27, 3: 487, 4: 791-792.

Type genus: *Cratichneumon* THOMSON.

Cratichneumonina: HEINRICH 1977 - Ichn. Florida and Neigb. States 9: 124-125.

Cratichneumonina: RASNITSYN 1981 - Opr. Faun. SSSR 3 (3): 572.

Cratichneumonina: TERESHKIN 2004 - Russian Entomol. J. 13 (4): 277-292, figures.

D i s t r i b u t i o n : World-wide. There is most rich presented in Ethiopian Region.

I n t r o d u c t i o n :

Cratichneumonina is the least specialized group of Ichneumonini tribe. The subtribe has world-wide distribution and characterized by enormous variety of forms and is presented mostly in Ethiopian Region.

Cratichneumonina is characterized by usually slightly or only just impressed gastrocoeli (first of all of females), almost always distinct, but usually small thyridia, delicate punctured, coriaceous or irregularly wrinkled structure of postpetiolus (rarely longitudinally striated of *Crytea* CAMERON), oxytygous or rarely semiamblypygous abdomen of females (*Anisopygus* KRIECHBAUMER *Rhadinodonta* SZEPLIGETI). Scutellum of females as a rule is from flat to slightly elevated above postscutellum, laterally usually not carinated, rarely partially carinated.

For Neotropical genus *Plagiotrypes* ASHMEAD, in which G. Heinrich genus *Neopyga* HEINRICH 1930 introduced (HEINRICH 1977) and East-Palaearctic *Hymenura* TOWNES (= *Neopyga* HEINRICH) characteristic sickle-shaped mandibles as of Joppocryptini, high elevated scutellum and specifically modified apex of abdomen of females with long hypopygium are inherent. The group, according to G. Heinrich can pretend for higher, up to tribal, status, but previously it was placed by him to subtribe Cratichneumonina.

M o r p h o l o g y :

F l a g e l l u m : Of females as a rule filiform, almost filiform or semi bristle-shaped from stout to moderately long and, rarely distinctly bristle-shaped, as exception slender and long. Of males, as a rule, with short row bacilliform or long-oval, rarely (some *Eupalamus* WESM.) broadly-oval tyloides, more or less distinctly nodose.

H e a d : Contour of temples as a rule slightly narrowed behind eyes, often not narrowed, sometimes even broadened, usually distinctly curved. Vertex from lateral as a rule, not abrupt just after the ocelli to occipital carina; malar space never very long, usually equal or shorter than the mandible base width, never much longer; occipital carina and hypostomal carina without any specialization like Aethioplitina; clypeus usually normal, flat, with sharp apical margin, sometimes with medio-apical impression or tendency to development apical tooth or teeth (African species); sometimes clypeus in part slightly concave, at *Rhadinodonta* SZÉPLIGETI apical margin of clypeus prominent, extraordinary broad; mandibles as a rule normal, at some genera with one tooth (*Rhadinodonta*), sickle-shaped (*Neopyga* HEINRICH), as exception small subapical tooth moved inside (*Baranisobas* HEINRICH *Neopyga* HEINRICH).

T h o r a x : Mesonotum, as a rule, neither very long, nor strongly convex; basal part of notauli more often distinct; sternaui also usually marked or distinct; scutellum from flat to slightly elevated above postscutellum, laterally usually not carinated, rarely partially and not distinctly carinated or carinated laterally (*Stenaoplus* HEINRICH *Baranisobas* HEINRICH); scutellum elevated of many males (for example *Aoplus* TISCHBEIN and relatives groups). Propodeum, as a rule, more or less shortened, length of horizontal part more than length of area posteromedia in middle, especially of males; set of carinae of propodeum almost always complete, sometimes set of carinae of propodeum incomplete or carinae absent; at many genera area basalis with knoll (genera of *Melanichneumon* THOMSON group); area superomedia usually hexagonal, often longer than breadth, with costulae before middle, narrowed from costulae to area basalis; of some species of *Cratichneumon* genus area superomedia almost parallel sided and merged with area basalis, costula not distinct; of *Melanichneumon* THOMSON area superomedia large and in form of arch in front; apophysises usually absent, rarely only marked or developed; spiracles of propodeum as rule slit-shaped or longish-oval, sometimes small and short-oval, rarely almost circular (Holarctic *Neischnus* HEINRICH African *Parvaoplus* HEINRICH and *Spinamblys* HEINRICH).

L e g s : Short and strong, to moderately strong, never very long; claws smooth, never pectinate (with exception of *Deuterolabops* HEINRICH); hind coxae of females sometimes with scopa.

W i n g s : Nervulus postfurcal or interstitial; areolet with tendency to narrowing anteriad, from pentagonal to quadrangular; radius indistinctly sinuous, often short.

A b d o m e n : Of females of Holarctic species oxygyous, rarely semiamblypygous (*Anisopygus* KRIECHBAUMER *Rhadinodonta* SZÉPLIGETI); sheath of ovipositor not pro-

trude, slightly protrude, or strongly protrude behind apex of abdomen (of Holarctic genus *Crypteffigies* HEINRICH some African species); postpetiolus, as a rule, punctured of *Melanichneumon* group, coriaceous, irregularly wrinkled or aciculated of *Cratichneumon*, sometimes smooth, as exception, longitudinally striated (*Crytea*); gastrocoeli shallow, to full lacking, thyridia, however, recognizable, to very distinct; of genera *Aoplus* TISCHBEIN, *Virgichneumon* HEINRICH and others, gastrocoeli well developed and deep; sculpture of front tergites punctured, or coriaceous, sometimes almost smooth, without striations.

S i z e : From very small to large.

B i o l o g y :

In Holarctic there are mainly parasites of Geometridae. Imago does not hibernate, except of females *Rhadinodonta* and *Aoplus*.

***Cratichneumon unificatus* TERESHKIN (Plate 13)**

Cratichneumon unificatus TERESHKIN 2003 - Zool. Journ. **82** (5): 601-602, ♀.

F e m a l e

F l a g e l l u m : Filiform, with 23 segments, strongly thickened to the apex, practically not narrowed beyond middle; first segment from lateral only 1,2 times longer than width at apex, already segment 3 square from lateral, from segment 13 slightly flattened ventrally; white annulus on segments 6-11(12). Flagellum 1,7 times shorter than the front wing and 2 times shorter than body length.

H e a d : Head contour from front slightly narrowed downwards, only just transversal, only 1,1 times wider than length; genae long, from front 2,7 times shorter height of eye; head contour from above stout, transversal, 1,5 times wider than length, slightly roundly narrowed backwards behind eyes; front surface from side strongly convex, forming with frontal surface almost right angle. Vertex from lateral roundly sloping to occipital carina; temples long, 1,5 times shorter than longitudinal diameter of an eye at the middle, from side strongly broadened toward mandible base; occipital carina sharp all round, from above deeply impressed but not reach level of eyes and hind ocelli; hypostomal carina only just visible from lateral at lower part, meeting with occipital carina before mandible base; malar space 1,3 times longer than the mandible base width; mandibles long and wide, evenly narrowed from base to apex, upper tooth considerably longer than lower, teeth situated in the same plane and separated by slight notch; clypeus slightly convex, transverse, 2,6 times wider than length, with straight and sharp front margin and oblique lateral margins, separated from face by slight impression; clypeal foveae small, deep, round; labrum not protrude from under clypeus; middle field of face slightly elevated, triangular, in middle equal to lateral fields; antennal cavities deeply impressed, reach borders of eyes and far not reach level of front ocellus, laterally above antennal fossae without tubercles and with sharp tooth between antennal fossae; margins of antennal fossae slightly elevated above face surface; ocelli small, flat, diameter of lateral ocellus 1,5 times less than distance from ocellus to eye; ocellar triangle only just elevated. Surface of clypeus smooth, shining with sparse superficial punctures, frons between front ocellus and antennal cavities densely superficially-punctured; temples strongly shining with sparse punctures.

T h o r a x : Collar of pronotum long with rounded front margin (from above); transverse furrow of pronotum very shallow, not interrupted by keel; pronotal ridge not swol-

len; epomiae sharp; pronotal base gradually curved with moderately acute apex. Mesonotum only just convex, wider than length, laterally bordered by deep groove; notauli practically absent; axillary tongue not developed; middle lobe of mesonotum rather densely superficially-punctured, without microsculpture, lateral lobes with more sparse, smoothed punctures; subalarum high, thin, sharp; speculum shining, smoothly wrinkly-punctured; area of mesopleural fovea broadly, but not deeply impressed; mesopleural suture straight, deep, practically not interrupted by ribs; mesopleurae longitudinally wrinkly-punctured without microsculpture; mesopleurae at bottom without sharp bend; sternauli in form of deep impression in front third; scutellum flat, smooth, shining, with sparse shallow punctures, laterally not carinated; postscutellum strongly shining. Hind margin of metanotum with broad triangle projections opposite lateral longitudinal carinae. Length of horizontal part of propodeum equal to length of area posteromedial in middle; carinae of propodeum sharp, with exception of costulae and slightly expressed carina, limiting basal area from behind; area superomedial elongated, narrowed anteriorly; basal area long with strong longitudinal wrinkles, crossing basal furrow of propodeum; spiracles of propodeum long, slit-shaped; area posterodorsal and third pleural area not divided by distinct keel. Surface of propodeum wrinkly-punctured, without microsculpture and with rough sculpture, metapleurae densely punctured by big punctures.

Legs: Strong; hind coxae with slight scopae. Claws thin, in middle sharply curved.

Wings: Areolet pentagonal, asymmetrical, external vein of apex shorter than internal; stigma light; radial cell broad, radius almost straight, curved only at apex; nervulus very slightly postfurcal; ramulus only just marked; all veins dark; external branches of medial and cubital veins unsclerotized in form of slight trace; radius of hind wing strongly unsclerotized; membrane of wing hyaline. Front wing 1,8 times longer than length of flagellum and 1,2 times shorter than body length.

Abdomen: Oxyptergous, from above longish-oval, apical tergites not hidden; second tergite transversal, at apex 1,4 times wider than length; sheath of ovipositor only just visible protrude. First tergite from lateral with gradual bend between petiolus and postpetiolus; petiolus not flattened at base, from lateral sharply bordered by carinae and indistinctly sculptured between them by smoothed ribs; from above petiolus gradually broadened to triangle postpetiolus; middle field of postpetiolus expressed slightly, its surface slightly-wrinkled, with some superficial punctures at apex and at lateral corners. Gastrocoeli superficial, thyridia only just marked; lunulae in form of only just visible trace; tergites 2-3 densely punctured, without microsculpture. Hypopygium compressed from sides.

Coloration: Scapus and flagellum to white annulus light-ferruginous. Head and thorax entirely black. Scutellum entirely pale-yellow. Apex of postpetiolus, tergites 2-3 completely, 4th at base and sternites light-ferruginous; petiolus and tergite 4 in most part darkened, tergites 5-7 completely black. All legs, including coxae, of basic color; hind femora at apex and hind tibiae at apex and at base darkened; tibiae of all legs from outside with large white spots; spot on hind tibiae occupy almost third of its length.

Size: Body length: 5,5; flagellum: 2,8; front wing: 4,7 mm.

Male. Unknown.

Hymenura nigra* (HEINRICH) (Plate 14)Neopyga nigra* HEINRICH 1930 - Mitt. Zool. Mus. Berlin **15**: 546, ♀.*Hymenura nigra*: TOWNES et al. 1965 - Mem. Amer. Ent. Inst. **5**: 426.**F e m a l e**

F l a g e l l u m : Of females bristle-shaped (almost filiform), with 36 segments and white annulus on segments (7)8-13(14), slightly flattened beyond white annulus. First segment three times longer than width at apex, already segment 15 transverse from lateral, last but one segment square. Flagellum practically equal by length to front wing and 1,6 times shorter than body length.

H e a d : Head contour from front roundish, narrowed downwards, only just transversal, 1,2 times wider than height; genae from front short, equal 0,2 height of eye. Vertex from lateral roundly slanting down after the ocelli to occipital carina; temples long, equal to longitudinal diameter of an eye at the middle, from above roundly narrowed behind eyes, from side parallel to hind margin of an eye; occipital carina, from above gradually impressed, not reach level of eyes and hind ocelli, meeting with hypostomal carina on mandible base; malar space equal 0,7 mandible base width; mandibles almost sickle-shaped, lower tooth in form of only just visible tubercle moved inside; clypeus transverse, two times wider than length, with straight front margin and rounded lateral corners, practically flat with thickened lateral sides, only just visible separated from middle field of face by very slight impression (practically confluent); clypeal foveae large, deep; labrum not protrude from under clypeus; middle field of face only just visible elevated above lateral fields and in middle equal to lateral fields by width; antennal cavities moderately impressed, reach borders of eyes and far not reach front ocellus level, laterally above antennal fossae without tubercles and any interantennal tubercle; diameter of lateral ocellus approximately equal to distance from ocellus to eye, ocellar triangle not expressed. Surface of face shining, practically without microsculpture; surface of clypeus, except lateral corners, and also lateral fields densely punctured by big superficial punctures; middle field very densely, practically wrinkly-punctured; upper part of frons and vertex dull, coriaceous.

T h o r a x : Pronotal ridge not thickened; pronotal base gradually uniformly curved. Mesonotum moderately convex, only just longer than width; notauli sharp in front third; surface of mesonotum very densely punctured, matt; subalarum moderately thick, not sharpened; speculum smooth, shining, area of mesopleural fovea broadly and deeply impressed; sternali absent; surface of mesopleurae wrinkly-punctured, shining, without microsculpture; scutellum from lateral convex, gradually slanting to postscutellum, laterally carinated to middle, surface of scutellum densely punctured. Hind margin of metanotum with broad triangle projections opposite lateral longitudinal carinae. Propodeum from lateral with break, distinctly divided on horizontal and declivous parts; horizontal part approximately two times shorter than area posteromedia in middle; propodeum with complete set of carinae, lateral carinae of basal area only just expressed; basal area with distinct knoll; area superomedia hexagonal, only just longer than width, costulae at middle of area superomedia; area dentipara at apex with wide tooth; spiracles large, long, almost slit-shaped, 2,5 times, longer than width (equal 0,6 breadth of field at place of spiracle). Surface of propodeum wrinkly-punctured, without microsculpture, metapleurae very densely wrinkly-punctured.

L e g s : Rather strong, but slender. Claws smooth, gradually curved.

W i n g s : Areolet pentagonal, asymmetrical, external vein of apex considerably shorter than internal; stigma broad, dark, radius only just visible curved only at base and apex; nervulus interstitial, sharply inclival; ramulus distinct; veins strongly darkened, membrane of wing hyaline. Front wing almost equal by length to flagellum and 1,4 shorter than body length.

A b d o m e n : Abdomen from above elongated, parallel sided, second tergite with equal length and breadth; abdomen with truncate apex and cut out from above apical tergites (remind one of *Notopygus* HOLMGR.), amblypygous; apex of ovipositor sheath visible from above. Petiolus of first tergite not flattened at base, thin, from lateral with sharp passage to postpetiolus, dorsal and ventral lateral carinae sharp, interspace between them with slight rugosity; from above petiolus sharply broadened to postpetiolus, middle field of postpetiolus expressed, but not carinated by carinae, wider than lateral fields, its surface with irregular rugosity, aciculated; spiracles of postpetiolus roundish. Gastrocoeli short, rather deep, very slightly oblique; thyridia sharp, approached to base of second tergite, broad, 1,5 times wider than interval between them, interval densely wrinkly-punctured; lunulae very distinct, of moderate size, situated in middle of tergite; surface of tergites 2-4 very densely punctured, matt, with exception of narrow apical stripe, only tergites 6th and 7th with slight microsculpture. Sternites 2-3 not sclerotized, with longitudinal fold; hypopygium roundly pointed, without longitudinal fold.

C o l o r a t i o n : Black with white or light-yellow pattern: broad spots on frontal orbits, stripes at upper corners of pronotum, subalarum, scutellum, band at apex of tergites 5-6 and membranous part of apex.

S i z e : Body length: 11,0; flagellum: 7,0; front wing: 8,0 mm.

Subtribe Ichneumonina HEINRICH

Ichneumonina HEINRICH 1967 - Ichn. Stenop. of Africa 1: 26, 3, 486-488.

Type genus: *Ichneumon* LINNAEUS.

Ichneumonina: HEINRICH 1977 - Ichn. Florida and Neighb. States 9: 57.

Ichneumonina: RASNITSYN 1981 - Opr. Faun. SSSR 3 (3): 624.

D i s t r i b u t i o n : World-wide.

I n t r o d u c t i o n :

Decisive characters of this subtribe are distinct gastrocoeli and thyridia, in combination with comparatively rough, striated, usually regularly striated, or rarely punctured sculpture of postpetiolus and of front tergites of abdomen. Additional characters are oxygygous abdomen of females of overwhelming number of species, pentagonal, but narrowed in front areolet, normal structure of head and mandibles with not convex clypeus and 4th sternite almost always with longitudinal fold. Basal area of propodeum is almost always without tooth.

M o r p h o l o g y :

F l a g e l l u m : Of females bristle-shaped or filiform, flattened ventrally and often widened beyond middle. Flagellum of males usually bristle-shaped with tyloides.

H e a d : Genae and temples usually moderately narrowed behind eyes, sometimes more or less swollen; clypeus usually normal with truncated apical margin, flat, sometimes medio-apically impressed and with small apical tubercle; mandibles normal, usually moderately wide, subapical teeth shorter than apical, sometimes rudimentary, always in the same plane with apical.

T h o r a x : Mesonotum usually from flat to moderately convex and rarely considerably longer than width; scutellum usually not elevated or only moderately elevated, rarely strongly elevated above postscutellum, with or without lateral carinae; carinae of propodeum, often slight, costulae absent, sometimes with complete set of carinae; areae dentiparae rarely with moderate apophyses.

L e g s : Strong to moderately long; claws smooth, rarely at some genera pectinate (for example *Ctenochaeres* FOERSTER); hind coxae of females often with scopa.

W i n g s : Areolet, as a rule, pentagonal, with veins at base from slightly to strongly converge anteriad, rarely coalescent.

A b d o m e n : Of females oxygygous, rarely semiamblypygous or even amblypygous (then gastrocoeli deep and thyridia sharply expressed); front tergites with rather rough sculpture, middle part of postpetiolus and of second tergite often regularly striated or densely longitudinally wrinkly-punctured; gastrocoeli distinctly, more or less deeply impressed, always with distinct thyridia. Hypopygium of males sometimes broadly rounded, often triangle, but never elongated and not form long, sharpened projection; sternites of abdomen without strong sclerotization.

S i z e : From very small to very big.

B i o l o g y :

Parasites of different Macrolepidoptera.

***Ichneumon extensorius* LINNAEUS (Plate 15)**

Ichneumon extensorius LINNAEUS 1758 - Systema Naturae ..., edition 10 (1): 561, ♀.

Ichneumon extensorius extensorius HILPERT 1992 - Entomofauna, Suppl. 6: 179-182, ♀, ♂.

F e m a l e

F l a g e l l u m : Filiform, with 34 segments, stout, first segment short, only 1,3 times longer than width at apex, already segment 4 square from lateral, last but one segment slightly transverse, with white dorsal semi-annulus on segments 7-13, flattened beyond white annulus. Flagellum 1,7 times shorter than the front wing and 2,2 times shorter than body length.

H e a d : Head contour from front slightly narrowed downwards, transversal, 1,2 times wider than height; genae from front 3,7 times shorter than height of eye; head contour from above stout, transversal, 1,6 times wider than length, slightly roundly narrowed behind eyes. Vertex from lateral straightly (slightly-roundly) slanting down after the ocelli to occipital carina; temples long, equal to longitudinal diameter of an eye at the middle, from side slightly broadened toward mandible base, from above slightly roundly narrowed behind eyes; occipital carina sharp all round, from above slightly roundly impressed, not reach level of eyes and hind ocelli; hypostomal carina not visible from lateral, occipital carina meeting with hypostomal carina far before of mandibles base; length of abscissula equal 0,6 of mandible base width; malar space 1,4 times shorter than the mandible base width; mandibles long, gradually narrowed behind base, upper tooth distinctly longer than lower; clypeus transversal, slightly convex, three times wider than length, with straight, thinned front margin and oblique lateral sides, separated from face by slight impression; clypeal fovea small, deep, round; labrum not protrude from under clypeus; middle field of face slightly elevated, in middle equal to lateral fields; antennal

cavities deeply impressed, reach borders of eyes and far not reach front ocellus level, laterally above antennal fossae without tubercles and with sharp tubercle between antennal fossae; margins of antennal fossae slightly elevated above face surface; ocelli small, flat, diameter of lateral ocellus 1,5 times less than distance from ocellus to eye; ocellar triangle not expressed. Surface of clypeus and lateral fields of face with big, sparse, superficial punctures, without microsculpture; middle field wrinkly-punctured without microsculpture, frons punctured by big superficial punctures, temples densely punctured by superficial punctures, without microsculpture.

T h o r a x : Collar of pronotum long with rounded front margin (from above); transverse furrow of pronotum shallow, not interrupted by keel; pronotal ridge not swollen; epomiaie sharp; pronotal base gradually curved with acute apex; mesonotum only just convex, of equal length and breadth; notauli in form of very slight impressions at base; axillary tongue not developed; middle lobe of mesonotum superficially wrinkly-punctured, without microsculpture, lateral lobes with superficial punctures; subalarum high, thin; speculum with sparse superficial punctures, shining; area of mesopleural fovea in a form of sharp longitudinal impression; mesopleural suture straight, deep, interrupted by very delicate, short ribs; mesopleurae at bottom without sharp bend; sternauli in a form of indistinct impressions in front third; lower part of mesopleurae longitudinally wrinkly-punctured, shining, without microsculpture, upper third slightly longitudinally-wrinkled; scutellum flat, laterally not carinated. Hind margin of metanotum with sharp triangle projections opposite of lateral longitudinal carinae. Length of horizontal part of propodeum 1,5 times longer than area posteromedia in middle; carinae of propodeum sharp, with exception of costulae; basal area long and not deep; area superomedia big, rectangular, only just visible elongated, slightly narrowed backwards, or parallel sided; areae dentiparae at apices without apophyses and teeth; spiracles long, along external contour 2,5 times longer than width. Surface of propodeum, with exception of punctured by big punctures metapleurae, wrinkled, shining, without microsculpture.

L e g s : Strong. Hind coxae with small light scopa. Hind tibiae with slight, sparse spinules. Claws normal, uniformly, but strongly curved.

W i n g s : Areolet pentagonal, asymmetrical, front veins longer than hind, internal vein of apex considerably longer than external; stigma normal, dark, radial cell broad, radius very slightly sinuous, almost straight; nervulus postfurcal; ramulus only just marked; all veins dark; membrane of wing hyaline; all veins of hind wings distinct. Length of front wing considerably longer than length of flagellum and some shorter than body length.

A b d o m e n : Oxyptygous, from above longish-oval, apical tergites not hidden; second tergite transversal, at apex 1,5 times wider than length; sheath of ovipositor only just visible protrude. First tergite from lateral with sharp bend between petiolus and postpetiolus; petiolus not flattened at base, from lateral sharply carinated, sculptured between carinae by smoothed punctures and ribs; from above petiolus sharply broadened to triangle postpetiolus; distance between spiracles many more than distance from spiracles to hind margin of tergite; middle field of postpetiolus sharply expressed and high elevated, only just wider than lateral fields, its surface regularly longitudinally-wrinkled (striated) without microsculpture. Gastrocoeli distinct, moderately deep, oblique; thyridia developed, but not sharp, approached to base of second tergite, interval between them equal to breadth of middle field of postpetiolus; lunulae small, weak, roundish, situated beyond middle of lateral surface of tergite; medial surface of second tergite slightly

wrinkly-punctured up to apex, other part densely superficially punctured, without microsculpture, shining; tergite 3 densely superficially wrinkly-punctured, apical tergites shagreen. Hypopygium flattened, without longitudinal fold.

C o l o r a t i o n : Body black; second and third tergites red, frontal orbits narrowly yellow-red, vertex with slightly limited yellow-red spots, collar red; scutellum and moderately narrow spots on tergites 6-7 white; tibiae and tarsi of all legs red.

S i z e : Body length: 11,0; flagellum: 4,9; front wing: 8,4 mm.

M a l e

Flagellum bristle-shaped, with 38 segments and narrow bacilliform tyloides on segments 6-13, without white annulus, ribbed from segment 4; gastrocoeli in contrast to females sharply and deeply impressed; facial orbits broadly, frontal narrowly whitely-yellow, scutellum white, tergites 2-3 of abdomen red, other black, without traces of white pattern.

Subtribe Amblytelina (VIERECK)

Amblytelina VIERECK 1918 - Proc. Biol. Soc. Wash. **31**: 74.

Type genus: *Amblyteles* WESMAEL.

Amblytelina: HEINRICH 1967 - Ichn. Stenop. of Africa **1**: 26, 3: 486, 648.

Amblytelina: HEINRICH 1977 - Ichn. Florida and Neigb. States **9**: 88.

Amblytelina: RASNITSYN 1981 - Opr. Faun. SSSR **3** (3): 612.

D i s t r i b u t i o n : World-wide.

I n t r o d u c t i o n :

Subtribe is characterized by amblypygous abdomen of females in combination with, as rule, indistinct or absent thyridia and usually small or superficial gastrocoeli. Clypeus is always normal. Areolet of front wings is pentagonal, with broad base. Hind coxae of females are without scopa. Middle field of postpetiolus is striated or longitudinally-wrinkled, sometimes punctured, when the subsequent tergites have tendency to less rough sculpture than of Ichneumoninae. The sternites are with tendency to strong sclerotization, 4th sternite, but sometimes 2nd and 3rd, usually without fold. Hypopygium of males of many genera is with tendency to form projection medially.

M o r p h o l o g y :

F l a g e l l u m : Of females, always bristle-shaped, from moderately to very slender and strongly attenuated toward apex. Flagellum of males with more or less distinct tyloides.

H e a d : Genae and temples usually moderately narrowed, sometimes more or less swollen; clypeus always normal, flat, with straight front margin; mandibles usually normal, teeth always in the same plane, sometime subapical tooth very small, rudimentary or fully absent, sometimes mandibles very broad in a form of spade, rarely narrow (*Hybophorellus* SCHULZ).

T h o r a x : Mesonotum usually flat to moderately convex, rarely considerably longer than width; scutellum usually not elevated, or only slightly, rarely strongly elevated above postscutellum, without lateral carinae. Propodeum often with slightly expressed carinae; costulae absent; areae dentiparae often with small projections, sometimes with strong apophyses (as of type genus *Amblyteles*).

Legs : From moderately strong to rather long and slender. Claws smooth. Hind coxae of females without scopa.

Wings : Areolet always distinctly pentagonal usually with wide base.

Abdomen : Of females amblypygous, from broadly-oval to narrow, elongated and strongly conical. Middle field of postpetiolus often striated or longitudinally wrinkled, sometimes punctured. Thyridia indistinct or absent; gastrocoeli comparatively small, only just marked or absent, only of *Ctenichneumon* usually rather distinctly impressed; tergites of abdomen usually slightly, rarely (*Ctenichneumon* THOMSON) medially roughly sculptured. Hypopygium of males with tendency to long, pointed projection as of Holarctic genus *Spilichneumon* THOMSON, *Triptognathus* BERTHOUMIEU and *Eutanyacra* CAMERON; sternites have tendency to more strong sclerotization than of other subtribes, therefore fold usually developed only on sternites 2-3, sometimes only on sternite 2, or absent at all.

Size : Species from moderately to large size.

Biology :

Mainly parasites of Noctuidae. Females of Holarctic species are hibernate.

***Amblyteles armatorius* (FÖRSTER) (Plate 16)**

Ichneumons armatorius FÖRSTER 1771 - Novae species insectorum, Centula 1: 82, ♂.

Amblyteles armatorius: HOLMGREN 1856 - Svenska Vetensk. Akad. Handl. 75: 39, ♀, ♂.

Female

Flagellum : Bristle-shaped, with 50 segments, moderately thick, first segment rather short, only three times longer than the width at apex, without white annulus, scarcely widened, very slightly flattened ventrally beyond middle; segments slightly elongated, already segment 14 square from lateral. Flagellum 1,3 times shorter than the front wing and 1,4-1,5 times shorter than body length.

Head : Head contour from front quite slightly narrowed downwards, only just transversal, only 1,2 times wider than height; genae from front 3,2 times shorter than height of eye; head contour from above strongly transversal, 1,8 times wider than length, strongly, almost linearly narrowed backwards behind eyes. Vertex from lateral sloping nearly perpendicularly from hind borders of ocelli to occipital carina; temples long, in the middle 1,2 times shorter than longitudinal diameter of an eye at middle, parallel to hind margin of an eye; occipital carina sharp all round, from above slightly roundly impressed, far not reach level of eyes and hind ocelli; hypostomal carina not visible from lateral, occipital carina meeting with hypostomal carina far before base of mandible; malar space 1,3 times longer than the mandible base width; mandibles narrow, evenly narrowed from base to apex, upper tooth considerably longer than lower; clypeus two times wider than length, with straight front margin and distinctly expressed lateral corners, separated from face, by slight impression; clypeal foveae small, deep; labrum equal by breadth to front margin of clypeus, rounded, moderately long; middle field of face slightly expressed, in middle slightly narrower than lateral fields; antennal cavities quite deeply impressed, reach borders of eyes and far not reach front ocellus level, laterally above antennal fossae without tubercles and with slight but distinct interantennal tubercle; margins of antennal fossae slightly elevated above face surface; ocelli of normal size, diameter of lateral ocellus 1,7 times less than distance from ocellus to eye; ocellar triangle practically not

elevated. Surface of clypeus with big punctures, lateral fields wrinkly-punctured, frons roughly wrinkly-punctured, temples densely punctured; surface of head without microsculpture.

Thorax : Collar of pronotum from above long with straight front margin; transverse furrow of pronotum deep, narrow, not interrupted by keel; pronotal ridge not swollen; epomiae sharp; pronotal base gradually curved. Mesonotum moderately convex, only just (1,1 times) longer than width; notauli in form of very slight impressions, with slightly different sculpture; surface of mesonotum densely wrinkly-punctured, without microsculpture; axillary tongue not developed; subalarum high, thick; speculum densely wrinkly-punctured, same as other part of upper third of mesopleurae; mesopleural fovea sharply expressed, deep; mesopleural suture straight, deep, interrupted by sharp ribs; mesopleurae at bottom without sharp bend; sternauli in a form of indistinct impressions in front third; lower part of mesopleurae wrinkly-punctured, shining, without microsculpture; scutellum slightly convex, almost flat, laterally not carinated. Hind margin of metanotum with triangle projections opposite of lateral longitudinal carinae. Length of horizontal part of propodeum 2 times less than length of area posteromedia in middle; carinae of propodeum expressed, with exception of costulae and coxal carina (indistinct), but indistinct because of general roughly-wrinkled sculpture of surface; basal area short and deep; area superomedia rectangular, transversal, two times wider than length; areae dentiparae at apices with apophyses; spiracles long, slit-shaped, along external contour 4 times longer than width. Surface of propodeum, including metapleurae, roughly-wrinkled to cellular, shining, without microsculpture.

Legs : Slender. Hind tibiae with sparse spinules. Claws long, uniformly curved.

Wings : Areolet pentagonal, practically symmetrical, front veins longer than hind one; stigma broad, light, radial cell broad, radius very slightly sinuous, almost straight; nervulus sharply postfurcal; ramulus long; all veins light; membrane of wing slightly yellowish. Front wing longer than length of flagellum and shorter than body length.

Abdomen : Amblypygous, from above broadly-oval, apical tergites not hidden; second tergite transversal, at apex 1,4 times wider than length; sheath of ovipositor not protrude. First tergite from lateral with sharp bend between petiolus and postpetiolus, not flattened at base, from lateral sharply bordered by carinae and with strong transversal ribs between them; from above petiolus sharply broadened to triangle postpetiolus; distance between spiracles many more than distance from spiracles to hind margin of tergite; middle field of postpetiolus sharply expressed and high elevated, 1,5 times wider than lateral fields, its surface irregularly roughly longitudinally-striated. Gastrocoeli small, only just impressed, short, oblique; thyridia not developed; lunulae very distinct, elongated; surface of second tergite up to apex very densely punctured to slightly wrinkled, shining; tergites 3-4 densely superficially punctured by very small punctures, apical tergites shagreen. Hypopygium triangle from lateral, without longitudinal fold; sternites 2-3 completely unsclerotized medially.

Coloration : Body black with reach yellow pattern: internal orbits, collar and hind corners of pronotum, subalarum and scutellum completely, bands along front margin of 2nd and 3rd and apically of other tergites; all trochanters and partially femora and tibiae of all legs; tarsi of basic color.

Size : Body length: 14,0; flagellum: 8,0; front wing: 11,2 mm.

Male

Flagellum of male with yellow bacilliform tyloides on segments 4-19; interspace between dorsal and ventro-lateral carinae of petiolus punctured, without transversal ribs. Hypopygium with slightly elongated, rounded apex. Yellow coloration more expanded: face completely, front half of second and third tergite completely and so on.

Subtribe Aethioplitina HEINRICH

Aethioplitina: HEINRICH 1968 - Ichn. Stenop. of Africa 4: 697-698.

Type genus: *Aethioplites* HEINRICH.

Distribution: Ethiopian Region.

Introduction:

For representatives of subtribe long and slender flagellum is character. Head is with long genae, narrowed toward mandibles base, with vertex slanting almost vertically from ocelli and narrowed, sometimes bent inwards temples and narrowed mandibles with slight apical teeth. Mesonotum is considerably elongated with elevated and sometimes divided on lobes middle field. Scutellum is extremely sharply elevated above postscutellum and carinated by high, often lamellate carinae, sometimes developed along hind border. Legs are slender, long. Wings are with areolet from quadrangular to petiolate. Propodeum is elongate, with apophyses, sometimes long. Abdomen is slender with projecting ovipositor.

Habitually they are similar to *Hoplismenus*. These are form of a head, morphology of the mandibles, high elevated scutellum, strong apophyses of propodeum and morphology of abdomen. Main visible differences are flat clypeus, petiolate quadrangular areolet, strongly carinated scutellum and elongated propodeum.

Morphology:

Flagellum: Of females bristle-shaped, very long and slender, not widened or only slightly widened beyond middle, with very long, gradually attenuated and very sharply pointed apical part. Flagellum of males usually with short row of small, oval or bacilliform tyloides, in some genera without distinct tyloides.

Head: Head contour from front with big, swollen eyes, narrowed downwards; genae from front long. Vertex from lateral abrupt just after the eyes and ocelli; head from above behind eyes sharply and straightly narrowed behind eyes (at some genera temples quite broad and distinctly convex); abscissula and lower part of hypostomal carina often lamelliform, or anomalous in a different way; malar space usually longer, often considerably longer than mandible base width; mandibles usually very slender, with weak apical teeth; clypeus often slightly convex and with small medio-apical impression.

Thorax: Mesonotum usually considerably longer than width, from moderately to strongly convex, middle lobe from slightly elevated (*Aethioplites* HEINRICH) to often projected or bipartite; scutellum from considerably, to very strongly elevated above postscutellum, carinated laterally or laterally and along hind border. Propodeum not shortened, from distinctly to very long, usually with apophyses of different length; areas and carinae of propodeum often reduced, not distinct, or absent; area superomedia distinctly longer than width, hexagonal, with costulae far before middle, often of horse-shoe arch; coxal carinae usually absent.

Legs : Very long and thin. Claws smooth.

Wings : Areolet quadrangular, pointed in front, sometimes shortly petiolate; nervulus often postfurcal, sometimes interstitial.

Abdomen : Form approximately as of Holarctic genus *Hoplismenus*, at females always oxygygous, with more or less strongly projecting ovipositor. Petiolus gradually broadened to postpetiolus; postpetiolus densely punctured or delicate wrinkled, sometimes almost smooth, nothing striated. Gastrocoeli from slightly marked to atrophied; thyridia usually distinct, of some genera transverse, very large, with narrow interval between them; lunulae present; sculpture of front tergites, usually densely and delicate wrinkled, or striated, nothing roughly wrinkled.

Coloration : Combinations of red, rusty-red and black coloration with whitely-yellow pattern common.

***Aethioplites madagascariensis* HEINRICH (Plate 17)**

Aethioplites madagascariensis HEINRICH 1938 - Mém. Acad. Malgache **25**: 75, ♀, ♂.

Aethioplites madagascariensis HEINRICH 1969 - Ichn. Stenop. of Africa **4**: 701, 785, ♀, ♂.

Female

Flagellum : Slender, bristle-shaped, very long, not widened beyond middle but flattened ventrally, with 40-43 segments, with white semiannulus dorsally on segments 7-12 or 5-(13); first segment long, 5,4 times longer than width at apex, approximately segment 17 square. Flagellum 1,2 times shorter than the front wing and 1,4 times shorter than body length.

Head : Head contour from front sharply, almost straightly narrowed downwards, only just transversal, only 1,2 times wider than height; genae from front very long, 4 times shorter than height of eye; head from above transversal, 2 times wider than length. Vertex from lateral straightly slanting down after the ocelli to occipital carina; temples 1,6 times shorter than longitudinal diameter of an eye at the middle, from side parallel to hind margin of an eye, from above sharply narrowed behind eyes; occipital carina high, sharp, from above deeply and roundly impressed, far not reach level of eyes and level of hind ocelli; hypostomal carina not visible from side, meeting with occipital carina far from mandible base; malar space approximately equal to mandible base width, or 1,3 times more; mandibles narrow, with small weak apical teeth, lower tooth moved inside relative to upper; clypeus flat, transversal, approximately 1,9 wider than height, not separated from middle field by impression, front margin of clypeus slightly concave, lateral corners distinct; clypeal fovea small, but sharp; labrum protrude from under clypeus, roundish, equal by breadth to clypeus front margin; middle field of face only just elevated, wider than lateral fields; antennal cavities slightly impressed, reach borders of eyes and far not reach front ocellus level, laterally above antennal fossae with distinct tubercles but with only just visible tubercle between antennal fossae; margins of antennal fossae high elevated above face surface; ocelli of normal size, diameter of lateral ocellus equal to distance from ocellus to eye; ocellar triangle expressed. Surface of head dull with only just visible superficial punctures.

Thorax : Collar of pronotum rather long with straight front margin (from above); transverse furrow of pronotum moderately deep, not interrupted by keel; pronotal ridge not swollen; epomia sharp, short; pronotal base gradually curved. Mesonotum moder-

ately convex, 1,2 times longer than width; notauli only as slight impressions at base (middle lobe only just elevated in front third); surface of mesonotum with confluent punctures, matt; axillary tongue not developed; subalarum high, thin, sharpened; speculum matt, as well as other part of mesopleurae and as thorax in whole; area of mesopleural fovea broadly, but slightly impressed; prepectal carina reach pronotum, sharp all round; mesopleural suture straight, deep, interrupted by only just expressed transversal ribs; sharp border between vertical and horizontal parts of mesopleurae not expressed; sternauli absent (only as slight impressions at base); surface of mesopleurae slightly wrinkly-punctured, matt; scutellum very sharply elevated above postscutellum, carinated laterally up to apex by high lamelliform carinae, its horizontal part slightly convex. Hind margin of metanotum with small triangular projections. Horizontal part of propodeum almost two times shorter than length of area posteromedia in middle; areas and carinae of propodeum reduced, only carina metapleuralis and slightly marked apical transverse carina developed; spiracles long, slit-shaped; propodeum with strong apophyses. Surface of propodeum wrinkled, matt.

Legs: Very long and slender; hind coxae without scopa. Claws massive, smooth, gradually curved.

Wings: Areolet quadrangular, pointed in front, almost petiolate, symmetrical; stigma narrow, light brown; radial cell narrow and long; radius almost straight, slightly curved only at apex; nervulus slightly postfurcal; ramulus practically absent; all veins of hind wing pigmented. Membrane of wing yellowish. Length of front wing of female 1,2 times shorter than body length.

Abdomen: From above long, fusiform; second tergite longer than width at apex; ovipositor considerably protrude behind apex; abdomen oxygyous, at apex compressed from sides. First tergite from lateral gradually curved to postpetiolus, with very narrow petiolus at base, from lateral smooth, without traces of lateral carinae and any sculpture; from above petiolus gradually broadened to postpetiolus; middle field only just marked and not limited by dorsal carinae, its surface smooth, only lateral fields of postpetiolus with slight rugosity. Gastrocœli slightly impressed, long; thyridia small, far removed from base of tergite and reach its lateral margins, perpendicular to longitudinal axis of a body; lunulae very small; surface of second and third tergites with small punctures, matt, other tergites, slightly shining.

Coloration: Body mainly rusty-red. Head mainly whitely-yellow with black pattern on ocellar triangle and vertex. Apex of abdomen black with white pattern: tergites 5-6 with broad white band at apex, seventh practically completely white.

Size: Body length: 12,8; front wing: 10,5; flagellum: 8,9 mm.

Male

Similar on morphology and coloration to female. Segments of males flagellum with transversal ridges and bacilliform tyloides on segments 10-15. Black coloration of abdomen more expanded, tergite 4 completely black.

Subtribe Hoplismenina HEINRICH

Hoplismenina HEINRICH 1967 - Ichn. Stenop. of Africa **1**: 26, 3: 485.

Type genus: *Hoplismenus* GRAVENHORST.

Hoplismenina: HEINRICH 1977 - Ichn. Florida and Neigb. States **9**: 122.

Hoplismenina: RASNITSYN 1981 - Opr. Faun. SSSR **3** (3): 588.

D i s t r i b u t i o n : Holarctic, Oriental and Neotropical (Central America and Chile) Regions. Absent in Ethiopian Region.

I n t r o d u c t i o n :

The subtribe differs by a combination of following characters: clypeus distinctly convex in longitudinal and transversal directions, scutellum sharply and high elevated above postscutellum, laterally not carinated or carinated not completely, propodeum with developed fields and large apophyses, wings with pentagonal areolet with broad base, postpetiolus nothing longitudinally striated with more or less distinct punctures or rugosity, gastrocoeli moderately deep with distinct thyridia, abdomen more often oxygyous, rarely amblypygous.

Mandibles are sharply narrowed behind base with slight teeth. **M o r p h o l o g y** of clypeus and additionally amblypygous abdomen at genus *Amblysmenus* HEINRICH are similar to Platylabini, especially to East-Palaearctic genus *Heinrichiellus* TERESHKIN.

M o r p h o l o g y :

F l a g e l l u m : Of females slender, long, bristle-shaped. Of males usually with tyloides.

H e a d : Head contour from front sharply narrowed downwards, with long genae; temples behind eyes from above long, sharply, almost straightly narrowed backwards; occipital carina sharp all round, meeting with hypostomal carina before base of mandible, hypostomal carina usually visible from lateral; mandibles sharply narrowed just behind base, narrow, parallel sided with weak teeth, lower tooth moved inside; clypeus convex in longitudinal and transverse directions.

T h o r a x : Mesonotum moderately convex, slightly longer than width; notauli not developed, only as slight impressions at base; sternali absent; scutellum high elevated above postscutellum from convex and rounded from lateral to high elevated to apex, laterally not carinated, rarely carinated, usually not entirely; axillary tongue expressed. Hind margin of metanotum with projections opposite lateral longitudinal carinae. Propodeum shorter than height with expressed fields and with sharp usually bent upwards apophyses; spiracles long, slit-shaped.

L e g s : Long and slender. Hind coxae of females without scopa; claws smooth.

W i n g s : Areolet pentagonal, symmetrical with wide base.

A b d o m e n : Usually sharply oxygyous, rarely (of *Amblysmenus* HEINRICH) amblypygous (similarity with Platylabini). Postpetiolus nothing longitudinally striated with more or less distinct punctures or rugosity. Gastrocoeli moderately deep, with distinct thyridia, closed to base of second tergite. Lunulae distinct.

C o l o r a t i o n : Body black, or black with red; tergites of abdomen often with white spots.

S i z e : Species of large or moderate size.

B i o l o g y :

Parasites of Rhopalocera. Females of Holarctic species are hibernate.

Hoplismenus pica* WESMAEL (Plate 18)Hoplismenus pica* WESMAEL 1855 - Bull. Acad. Sc. Belgique **22** (2): 406, ♀.*Hoplismenus pica*: CEBALLOS 1924 - Trab. Mus. Nac. Cien. Nat. **50**: 32-33, ♀.**F e m a l e**

F l a g e l l u m : Bristle-shaped, very long and slender, not widened beyond middle and slightly flattened ventrally, with 41 segments and white annulus on segments 7-12; segments of flagellum clearly separated (differentiated); first segment 3 times longer than width at apex; approximately segment 15 square from lateral. Flagellum 1,1 times shorter than the front wing and 1,4 times shorter than body length.

H e a d : Head contour from front sharply, almost straightly narrowed downwards, transversal, 1,3 times wider than height; genae from front very long, 3,4 times shorter than height of eye; head from above transversal, 1,6 times wider than length. Vertex from lateral straightly abrupt after the ocelli to occipital carina; temples long, equal to longitudinal diameter of an eye at the middle, from lateral slightly narrowed downwards, from above sharply and almost straightly narrowed behind eyes; occipital carina high, sharp, from above quite deeply and roundly impressed, far not reach level of eyes and hind ocelli; hypostomal carina visible from lateral, meeting with occipital carina far before base of mandible; length of abscissula equal 0,7 breadth of mandible base width; malar space 1,5 times longer than the mandible base width; mandibles narrow, sharply narrowed just behind base, with small weak teeth, lower tooth moved inside relative to upper; clypeus convex in longitudinal and transverse directions, transversal, approximately 1,8 times wider than length, separated from face by slight broad impression, with straight front margin and rounded lateral corners; clypeal foveae small, but sharp and deep; labrum protrude from under clypeus, equal by breadth to clypeus front margin, long, roundish; middle field of face distinctly elevated, in middle equal to lateral fields; antennal cavities deeply impressed, reach borders of eyes, without distinct upper border, laterally above antennal fossae without tubercles and with only just visible interantennal tubercle; front margins of antennal fossae high elevated above face surface; ocelli small, diameter of lateral ocellus 1,9 times less than distance from ocellus to eye; ocellar triangle distinct, but slightly elevated. Surface of head wrinkly-punctured with microsculpture, dull, except face and clypeus.

T h o r a x : Collar of pronotum rather long with rounded front margin (from above); transverse furrow deep, not interrupted by keel; pronotal ridge not swollen; epomiaae sharp, short; pronotal base gradually curved. Mesonotum moderately convex, 1,2 times longer than width; notauli only as slight impressions at base; axillary tongue developed; surface of mesonotum with confluent punctures, matt with strongly developed microsculpture; subalarum high, not sharpened; speculum roughly wrinkly-punctured without microsculpture; area of mesopleural fovea sharply impressed with transversal wrinkles; prepectal carina almost reach pronotum, sharp all round; mesopleural suture straight, deep, interrupted by sharp ribs; border between vertical and horizontal parts of mesopleurae expressed; sternauli absent; lower surface of mesopleurae roughly wrinkly-punctured, matt, upper third without microsculpture; scutellum very sharply elevated above postscutellum, gradually convex, laterally not carinated. Hind margin of metanotum with broad triangular projections. Horizontal part of propodeum 1,3 times shorter than area posteromedia in middle; carinae of apical half of area dentipara reduced, basal area short and deep, area superomedia high elevated above lateral fields and carinated by high

sinuous carinae, carina metapleuralis sharp and high all round, coxal carina in form of separate interrupted carinae; spiracles long, slit-shaped; propodeum with strong apophyses. Surface of propodeum cellular-wrinkled, without microsculpture.

Legs: Very long and slender. At dried samples hind tibiae with dorsal impression at base. Claws thin, smooth, gradually curved.

Wings: Areolet pentagonal, with wide base, symmetrical; stigma rather narrow, dark brown, radial cell long, radius almost straight, slightly curved only at apex; nervulus interstitial; ramulus long; all veins of hind wing pigmented; membrane of wing yellowish. Length of front wing of female 1,2 times shorter than body length.

Abdomen: Abdomen from above longish-oval; second tergite transversal, 1,3 times shorter than breadth at apex; ovipositor not protrude behind apex, tergite 7 long; abdomen oxygygous, at apex compressed from sides. First tergite from lateral gradually curved to postpetiolus, with very narrow petiolus at base, from lateral with sharp transversal ribs, carinated by sharp carinae; from above petiolus gradually, but sharply broadened to triangle postpetiolus; middle field distinctly elevated, its surface with sparse irregular punctures; lateral fields of postpetiolus wrinkly-punctured. Gastrocoeli moderately impressed, thyridia sharp and perpendicular to longitudinal axis of body, closed to base and reach to borders of tergite; lunulae distinct; surface of second tergite with small deep merging punctures, matt, puncturation of other tergites more superficial retrad, tergites 5-7 only just shagreen, slightly shining.

Coloration: Body black. White or yellowish: small spots on internal orbits, upper corners of pronotum, subalarum, scutellum and spots at corners of first and second tergites; sometimes spots on collar and narrow band at apex of second tergite.

Size: Body length: 13,5 (13-15); flagellum: 10,0; front wing: 11,2 mm

Tribe Heresiarchini ASHMEAD

Heresiarchini ASHMEAD 1900 - Proc. U.S. Nat. Mus. **23** (1206): 1-220.

Type genus: *Hesiarhes* WESMAEL.

Heresiarchina HEINRICH 1970 - Entom. Tidskr. **91**: 68-69.

Heresiarchini: PERKINS 1959 - Roy. Ent. Soc. London **7**, 2 (aii): 24-25, 45.

Heresiarchini: RASNITSYN 1981 - Opr. Faun. SSSR **3** (3): 508.

Distribution: Palaearctic (1 species) and Oriental Region.

Introduction:

The tribe is characterized by combination of two characters: 1 – sickle-shaped mandibles with long upper tooth and atrophied lower one, bent to internal margin of a mandible and 2 – sloped propodeum with peculiarity reduced fields.

The similar morphology of mandibles is peculiar to the representatives of Joppocryptini and to a number of genera of subtribe Cratichneumonina of tribe Ichneumonini (for example *Rhadinodonta* SZEPLIGETI and *Hymenura* TOWNES (= *Neopyga* HEINRICH).

Propodeum of Heresiarchini from lateral uniformly slanted from base to apex thus, that third pleural area (area posteroexterna) extremely sharply shortened, hereupon the apices of areae dentiparae especially close approach to the hind coxae. The fields of propodeum are reduced: area dentipara and area posteroexterna completely merged, fields of horizontal part, area superomedia, area basalis and area superoexterna are merged, forming single

polished surface. By morphology of propodeum, as per opinion of G. Heinrich one of the most significant segment for Ichneumoninae, Heresiarchini are closest to tribe Protichneumonini (African subtribe Apatetorina), even if are not a part of it.

Oxygygous abdomen with straight from lateral first tergite and deep gastrocoeli with small, but distinct thyridia are also typical to the representatives of the tribe.

M o r p h o l o g y :

F l a g e l l u m : Of females slender, long, bristle-shaped, slightly widened and flattened ventrally. Flagellum of males with tyloides.

H e a d : Temples short, behind eyes from above sharply roundly narrowed; mandibles sickle-shaped, slender, lower tooth far moved inside and practically not visible from front; clypeus flat, slightly impressed relatively face.

T h o r a x : Mesonotum moderately convex, of equal length and breadth; notauli completely absent; sternauli practically absent, only in form of broad slight impressions at base; scutellum practically not elevated, flat, only just carinated. Hind margin of metanotum with projections. Propodeum from lateral uniformly sloping from base to apex, without dividing on horizontal and vertical parts; fields reduced: area dentipara and area posteroexterna entirely merged; area superomedia merged with area basalis and area superoexterna, forming single solid surface; third pleural area (apical pleural area) extremely sharply shortened, as result apices of areae dentiparae especially close approach to hind coxae; coxal and metapleural carinae sharp; spiracles long, slit-shaped. Central part of propodeum up to apical transverse carina not sculptured, polished.

L e g s : Thin and slender; claws long, smooth, slightly curved; hind coxae of female without scopa.

W i n g s : Areolet pentagonal.

A b d o m e n : Abdomen from above long, fusiform, seventh tergite sharpened, long, ovipositor distinctly protrude behind apex; abdomen oxygygous. First tergite from lateral practically straight; from above with very narrow petiolus at base; from lateral smooth, without traces of lateral carinae and any sculpture; gastrocoeli deep, triangle, but small; thyridia distinct.

C o l o r a t i o n : Abdomen with white spots at corners of front tergites and developed bands and spots on apical tergites.

***Heresiarches eudoxius* (WESMAEL) (Plate 19)**

Hepiopelmus eudoxius WESMAEL 1844 - Nouv. mém. acad. sc. Bruxelles **18**: 142, ♂.

Heresiarches eudoxius WESMAEL 1859 - Mém. cour. sc. Belgique **8**: 93, ♀, ♂.

F e m a l e

F l a g e l l u m : Slender, long, bristle-shaped, with 30 segments, and with white annulus on segments 7-12(13), beyond white annulus slightly widened and flattened ventrally, most segments beyond white annulus transverse from lateral; first segment slender, 3,3 times longer than the width at apex. Flagellum 1,2 times shorter than the front wing and 1,5 times shorter than body length.

H e a d : Head contour from front roundish, 1,2 times wider than height, strongly narrowed downwards, with large eyes and short genae, genae from front 5,6 times shorter than height of eye; head from above strongly transversal, 1,7 times wider than length.

Vertex from lateral gradually sloping behind ocelli to occipital carina; temples short, 1,5 times shorter than longitudinal diameter of an eye at the middle, from side parallel to hind margin of an eye, behind eyes from above sharply roundly narrowed; occipital carina not high, but distinct all round, from above strongly and roundly impressed, but far not reach level of eyes; hypostomal carina not visible from lateral, meeting with occipital carina almost on mandible base; malar space equal 0,7 mandible base width; mandibles sickle-shaped, slender, lower tooth far moved inside and practically not visible from front; clypeus flat, slightly impressed relatively face, approximately 3 times wider than height, only just separated from middle field of face, with straight front margin and roundly oblique lateral corners; clypeal foveae small, but sharp; labrum narrow, triangular; middle field of face slightly differentiated; antennal cavities slightly impressed, reach borders of eyes and not reach front ocellus level, laterally above antennal fossae with tubercles and only just visible tubercle between antennal fossae; margins of antennal fossae high elevated above face surface; ocelli of normal size, diameter of lateral ocellus 1,4 times less than distance from ocellus to eye; ocellar triangle not elevated. Surface of clypeus and face with sparse superficial punctures, slightly shagreen between punctures, other part of head polished.

T h o r a x : Collar of pronotum long with straight front margin (from above); transverse furrow of pronotum broad, not interrupted by keel; epomiaae sharp; pronotal base gradually curved, almost straight, with acute apex; pronotal ridge not thickened. Mesonotum moderately convex, of equal length and breadth; notauli completely absent; surface of mesonotum densely punctured, front part of middle lobe shagreen, lateral lobes with coriaceous sculpture between punctures, mesonotum slightly shining; axillary tongue not developed; subalarum high, thin, but not sharpened; area of speculum and considerable surface around it not sculptured, smooth, polished; area of mesopleural fovea broadly, but moderately impressed; mesopleural suture straight, interrupted by strong transversal ribs; sternauli practically absent, only at base in form of broad slight impression; upper half of mesopleurae with sparse shallow punctures, polished, lower half densely punctured to wrinkled, with slight microsculpture; scutellum practically not elevated, flat, uniformly sloping to postscutellum, only just carinated up to middle, its horizontal part polished with sparse, scattered punctures. Hind margin of metanotum with sharp triangle projections opposite lateral longitudinal carinae. Propodeum from lateral uniformly sloping from base to apex, without dividing on horizontal and vertical parts; fields reduced: area dentipara and area posteroexterna completely merged, area superomedia merged with area basalis and area superoexterna, third pleural area (apical pleural area) extremely sharply reduced, as result apices of areae dentiparae especially close approach to hind coxae; coxal and metapleural carinae sharp; spiracles long, slit-shaped. Central part of propodeum up to apical transverse carina not sculptured, polished, other surface punctured, without microsculpture, shining.

L e g s : Thin and slender; claws long, smooth, curved slight; hind coxae of female without scopa.

W i n g s : Areolet pentagonal, asymmetrical, external vein of base longer than internal and external vein of apex shorter than internal; stigma broad, dark, radial cell broad and short, radius almost straight; nervulus slightly postfurcal; ramulus only just marked; all veins of front and hind wing pigmented; membrane of wing hyaline. Length of front wing 1,2 times shorter than body length.

A b d o m e n : Abdomen from above long, fusiform, seventh tergite sharpened, long, ovipositor distinctly protrude behind apex; abdomen oxypygous. First tergite from lateral practically straight; from above with very narrow petiolus at base; from lateral smooth, without traces of lateral carinae and any sculpture; from above petiolus gradually broadened to postpetiolus; distance between spiracles many more than distance from spiracles to hind margin of tergite; middle field practically not expressed and not limited by dorsal carinae; postpetiolus polished. Gastrocoeli deep, triangle, but small; thyridia distinct, occupy 0,5 of apex of gastrocoeli; lunulae small, but distinct; middle part of second tergite with sharp longitudinal wrinkles, other surface with dense punctures; third tergite with dense superficial punctures, other tergites smooth, shining. Hypopygium compressed from sides.

C o l o r a t i o n : Body with reach white pattern: face, with exception of narrow middle stripe, frontal and external orbits broadly, front and hind margins of pronotum, subalarum and spots on mesopleurae, scutellum and postscutellum, with exception of middle, spots at hind corners of propodeum, spots at corners of tergites 1-3 and apical stripes on tergites 5-6 and 7th completely. Legs red.

S i z e : Body length: 8,2; front wing: 6,8; flagellum: 5,5 mm.

M a l e

Similar by morphology and coloration to female. Flagellum of males without white anulus and with sharp moderately narrow tyloides on segments (8)9-16(17). Legs more strong.

Tribe Protichneumonini HEINRICH

Protichneumonini HEINRICH 1934 - Mitt. Zool. Mus. Berlin **20**: 64, 84.

Type genus: *Protichneumon* THOMSON.

Protichneumonini: HEINRICH 1968 - Ichn. Stenop. of Africa **1**: 27.

D i s t r i b u t i o n : World-wide.

I n t r o d u c t i o n :

The tribe differs from Ichneumonini by structure of propodeum. Form of propodeum is not of broken (box-shaped) type as of Ichneumonini, but slanting in different degree with distinctly expressed fields. Area dentipara is slanting to hind coxae thus, that its external carina follows parallel to metapleural carina or even drawing together with it toward apex (as for example of dissimilar tribe Compsophorini). Apices of areae dentiparae never form apophyses, teeth or even weak projections. Area superomedia shows tendency to narrowing in a direction to area basalis up to arcual or horseshoe form, not always distinctly limited from area basalis in front, sometimes even confluent with it (*Apatetor* SAUSSURE).

Flagellum of Protichneumonini is bristle-shaped, of females widened, to strongly widened and flattened beyond middle, of moderate length. Head is with moderately narrowed genae and temples and with distinctly differentiated fields of face and flattened clypeus, strong mandibles with teeth situated in the same plane. Coxae of hind legs of females of majority of species are with distinct scopa. Abdomen of females of majority of species is oxypygous, rarely amblypygous (for example genus *Amblyjoppa* CAMERON distributed in Holarctic and Oriental Region). Median field of postpetiolus of first tergite is of various sculpture, coarse or (usually) striate, striate-punctuated or with regularly punctuated sculpture. Abdomen is with distinct gastrocoeli and thyridia. The tribe has world-wide distribution.

To the tribe Protichneumonini, the tribe Heresiarchini is closely adjoined. G. HEINRICH (1974) has placed it to Protichneumonini in a status of subtribe. We preferred to keep it as an independent tribe by the reasons described above.

Tribe is presented by two subtribes – African *Apatetorina* and world-wide distributed *Protichneumonina*.

- 1 Propodeum short, areae dentiparae rather abruptly curved; carinae of propodeum usually complete; area superomedia always narrowed in front, in a form of horseshoe, semioval, in form of gothic arch, or hexagonal; areolet of front wing pentagonal. Abdomen without white anal spots Protichneumonina HEINRICH
- Propodeum more elongated, area posteromedia usually from distinctly to many more short than area superomedia and area basalis together; areae dentiparae more moderately fall to base of coxae III, with tendency to merge at apex with areae posteroexternae; area superomedia usually merged with area basalis, forming long central area, with tendency to protrude in middle to postscutellum and often reach it; areolet of front wing quadrangular. Abdomen often with anal spots Apatetorina HEINRICH

Subtribe Protichneumonina HEINRICH

Protichneumonina HEINRICH 1968. - Ichn. Stenop. of Africa 1: 26, 31-32.

Type genus: *Protichneumon* THOMSON.

Distribution: Holarctic (mainly) and Oriental (mountain) Region. 1 genus in Ethiopian Region.

Introduction:

There is differed from representatives of subtribe *Apatetorina* by more shortened propodeum with expressed fields. Area dentipara is rather abruptly curved. Area superomedia is always limited in front, in form of horseshoe, semioval, in form of gothic arch, or hexagonal. Abdomen is always without white spots at apex.

Morphology:

Flagellum: Of females, with the few exceptions, bristle-shaped, from moderately to very strongly widened beyond middle and attenuated toward apex. Flagellum usually considerably shorter than the front wing and coiled of dried samples. Flagellum of males slightly widened beyond middle, with tyloides.

Head: Genae and temples usually moderately narrowed, sometimes more or less swollen; hypostomal carina sometimes raised; apical margin of clypeus often with small or only just visible projection at middle; mandibles usually normal, at some genera shortened and broadened with strong, almost equal teeth.

Thorax: Scutellum usually almost flat, sometimes more or less convex and elevated above postscutellum; propodeum sloping backwards more or less steeply, rarely gradually, area dentipara curved backwards and usually close approach to base of hind coxae; apical part of lateral longitudinal carina of area dentipara from side, parallel to metapleural carina, or even converging with carina metapleuralis at apex; apex of area dentipara not form salient angle; basal furrow of propodeum from distinct to broad; fields of propodeum of overwhelming majority of species complete, with exception of sometimes merged area basalis and area superomedia; area superomedia always narrowed or rounded in front, horseshoe arch or arciform, semioval or hexagonal.

Legs: Usually moderately strong; hind coxae of females often with scopa.

W i n g s : Areolet pentagonal, symmetrical.

A b d o m e n : Abdomen of females usually sharply oxypygous, of some genera amblypygous or semiamblypygous (*Amblyjoppa* CAMERON); postpetiolus usually distinctly irregularly wrinkly-punctured, striated or sometimes punctured, rarely roughly coriaceous or coriaceous, middle field often slightly impressed; gastrocoeli of most part of species, large and deep, often more broad than interval between them, rarely of middle size, deep; thyridia weak.

S i z e : Large species, to very big.

C o l o r a t i o n : Basic color of thorax black or metallic blue, of abdomen black, metallic blue, red or brown. Abdomen always without white spots at apex, but sometimes with white spots at corners of front tergites.

B i o l o g y :

In Holarctic species of Protichneumonina are registered as parasite of Sphingidae, Arctiidae, Lymantriidae, Notodontidae, Noctuidae, Geometridae, Pyralidae and even Tortricidae.

In contrast to Ichneumonini, Holarctic females of this subtribe does not hibernate.

***Protichneumon pisorius* (LINNAEUS) (Plate 20)**

Ichneumon pisorius LINNAEUS 1758 - Systema Naturae..., edition 10 (1): 561, ♀.

Protichneumon pisorius: ROMAN 1932 - Ent. Tidskr. 53: 10.

F e m a l e

F l a g e l l u m : Stout, bristle-shaped, with 50 segments, with white annulus on segments 6-14(15), beyond middle strongly widened and flattened ventrally; first segment short, only 1,4 times longer than width at apex, already segment 6 square; segments of flagellum clearly separated (differentiated). Flagellum 1,8 times shorter than the front wing and 2,6 times shorter than body length.

H e a d : Head contour from front slightly narrowed downwards, slightly transversal, 1,2 times wider than height, genae short, 5,2 times shorter than height of eye; head massive, from above 1,5 times wider than length. Vertex from lateral gradually slanting down to occipital carina; temples long, 1,2 times longer than longitudinal diameter of an eye at the middle, not narrowed downwards, from above roundly, almost straightly narrowed behind eyes; occipital carina sharp, from above strongly and roundly impressed, but far not reach level of eyes and hind ocelli; hypostomal carina not visible from lateral, meeting with occipital carina before mandible base; malar space 1,5 times shorter than the mandible base width; mandibles strong, long, parallel sided at most part, teeth large, lower two times shorter than upper, situated in the same plane, gape between teeth narrow; clypeus scarcely convex, distinctly separated from face by impression, approximately 2,1 times wider than height, front margin not sharpened, with slight projection at the middle; clypeal foveae sharp, deep; labrum protrude from under clypeus, roundish, narrower than front margin of clypeus; middle field of face slightly elevated, middle field of face in middle narrower than lateral fields; antennal cavities deeply impressed, almost reach borders of eyes and far not reach front ocellus level, laterally with very deep hollow (concavity), characteristic also to species of *Amblyjoppa* genus; interantennal tubercle sharp; ocelli small, slightly convex, diameter of lateral ocellus 2,4 times less than distance

from ocellus to eye; ocellar triangle not elevated. Surface of head slightly wrinkly-punctured, shining, without microsculpture.

T h o r a x : Collar of pronotum moderately long with straight front margin (from above); transverse furrow of pronotum moderately deep, not interrupted by keel; pronotal ridge not thickened; epomia sharp; pronotal base gradually curved, almost straight. Mesonotum slightly convex, 1,2 times longer than width; notauli developed in front third; surface of mesonotum densely sculpturated by superficial punctures, interspaces between punctures shagreen in front part, shining; axillary tongue developed; subalarum moderately elevated, moderately thick, not sharpened; prepectus behind front coxae not impressed; prepectal carina sharp; speculum shining, only dorsally with big punctures, polished; area of mesopleural fovea deeply impressed; mesopleural suture straight, interrupted by transversal ribs; border between vertical and horizontal parts of mesopleurae rather sharp; sternauli not developed; apical margin of mesosternum elevated; scutellum almost flat, not carinated laterally, horizontal part smooth, shining, slightly sculpturated by small superficial punctures. Hind margin of metanotum with sharp triangle projections opposite lateral longitudinal carinae. Propodeum from lateral abruptly sloping from base to apex; external carina of area dentipara parallel to metapleural carina at hind half; area superomedia long, narrow, narrowed backwards (of changeable form) and swollen in different degree; costulae behind middle, distinct, only just marked or absent; lateral carinae of basal area expressed; basal area short and deep, other carinae distinct, coxal carina weak; spiracles long, slit-shaped. Surface of propodeum roughly wrinkly-punctured, including more smoothly sculpturated metapleurae, without microsculpture, shining.

L e g s : Strong; hind coxae without scopa. Segments of tarsi of front legs widened. Claws, smooth, sharply curved at upper third, or almost at middle (front tarsi) and slightly widened at base.

W i n g s : Areolet pentagonal, symmetrical; stigma narrow, dark; radial cell narrow and very long, radius sinuous at base and at apex; nervulus postfurcal; ramulus developed; all veins of hind wing pigmented; membrane of wing hyaline, slightly yellowish. Length of front wing 1,4 times shorter than body length.

A b d o m e n : Abdomen from above long, lanceolate (fusiform); second tergite from above 1,2 times longer than width at apex; abdomen sharply oxypygous; sheath of ovipositor slightly protrude behind apex. First tergite from lateral with gradual passage to postpetiolus, from lateral carinated and sculpturated by sharp transversal ribs; from above petiolus sharply broadened to postpetiolus; distance between spiracles only just more than distance from spiracles to hind margin of tergite; middle field of postpetiolus slightly elevated and not carinated; its surface slightly irregularly wrinkly-punctured; central part impressed. Gastrocoeli deep; thyridia only just expressed, slightly oblique, narrower than interval between them; lunulae in a form of slight impressions; surface of second tergite of abdomen in middle slightly longitudinally wrinkly-punctured other part of tergite and tergites 3-4 with very delicate dense superficial punctures, with microsculpture between punctures, tergites 6-7 shagreen, slightly shining.

C o l o r a t i o n : Head and thorax black with yellow pattern; yellow: fronto-vertical orbits, collar, upper margin of pronotum, subalarum, scutellum. Abdomen ferruginous, first tergite darkened in different degree. Coxae and femora of all legs mainly black, middle coxae with yellow spots, apex of trochanters I yellow; tibiae and tarsi of basic color with yellow pattern, front tibiae mainly yellow.

S i z e : Body length: 22,6; flagellum: 8,8; front wing: 16,2 mm.

M a l e

Flagellum of male long, bristle-shaped, scarcely widened and not flattened beyond middle, with 49 segments, with rather narrow oval tyloides on segments 5-18(19); segments quite closely connected, slightly ribbed, without white annulus; axillary tongue more developed; area superomedia of propodeum more short; coloration similar to female, yellow pattern more extended: face completely, genae and external orbits, axillary tongue, spots on prepectus and mesopleurae, legs more broadly; apical tergites of abdomen often darkened.

Subtribe Apatetorina HEINRICH

Apatetorina HEINRICH 1968. Ichn. Stenop. of Africa **1**: 50-51.

Type genus: *Apatetor* SAUSSURE.

D i s t r i b u t i o n : Ethiopian Region and Madagascar. Nearctic (*Neotropichneumon* HEINRICH 1938).

I n t r o d u c t i o n :

Subtribe Apatetorina is similar by majority of characters with subtribe Protichneumonina, differing by structure of propodeum. Propodeum of representatives of subtribe is more elongated. Area posteromedia is usually from distinctly to many more short than area superomedia and area basalis taken together. Area superomedia usually merged with area basalis, forming long central area, having tendency to protrude in middle to postscutellum and often reached it (adjoin to postscutellum). This central area is often parallel sided, gradually narrowing from base to apex, sometimes widened at place of costulae. It has a tendency to protrude in front in middle or on the whole width towards postscutellum, and from behind, to merging with area posteromedia, forming thus often practically continuous field from postscutellum to apex of propodeum. In contrast to Protichneumonina apex of abdomen of subtribe representatives is as a rule with white spots.

M o r p h o l o g y :

F l a g e l l u m : Of females bristle-shaped, lanceolate, strongly widened and flattened beyond middle. Flagellum of males bristle-shaped, nodose ventrally with narrow tyloides or without tyloides.

H e a d : Head contour from above from moderately to distinctly narrowed behind eyes, sometimes with curved outline. Clypeus slightly convex basally with straight apical margin, usually with slight projection at the middle; mandibles normal, from narrow to strong, apical tooth longer than lower, concavity between teeth from narrow to broad, lower tooth sometimes moved inside (*Apatetorides* HEINRICH).

T h o r a x : Horizontal part of propodeum more elongated, declivous part usually from distinctly to much considerably more short than merged areae superomedia and area basalis; areae dentiparae more gradually slanted downwards to base of hind coxae with tendency to merge apically with areae posteroexternae; area superomedia merged with area basalis and often slightly or not separated from area posteromedia, forming single very long central area, which often parallel sided, gradually narrowed from base to apex, sometimes widened at place of costulae; this central area has tendency protrude in middle in front or on full-width to postscutellum, forming often single continuous area to postscutellum.

Legs: Quite strong. Scopa on hind coxae of female present (for example of *Leptophatnus* CAMERON) or absent.

Wings: Areolet quadrangular.

Abdomen: Abdomen oxypygous. Gastrocoeli from small and shallow (*Apatetor* HEINRICH), small and deep (*Leptophatnus* CAMERON) to big and deep (*Coelapatetor* HEINRICH). Sheath of ovipositor usually slightly protrude.

Coloration: Basic color of mesonotum more often ferruginous; main colors of abdomen black, brown-red, ferruginous and intermediate colors. Apical tergites of abdomen usually with white spots.

***Apatetor blandus* SAUSSURE (Plate 21)**

Apatetor blandus SAUSSURE 1892 - In Grandier. Hist. Phys. Nat. Polit. de Madag. **20**: pl. 16, ♀ (fig. 7, 7a).

Apatetor blandus: HEINRICH 1938 - Mém. Acad. Malgache **25**: 59, ♀, ♂.

Apatetor blandus: HEINRICH 1967 - Ichtn. Stenop. of Africa **1**: 53, 195 ♀, ♂.

Female

Flagellum: Bristle-shaped, practically lanceolate, strongly widened and flattened beyond middle, with 39 segments and white semiannulus on segments 8-17, strongly flattened ventrally beyond it; first segment short, only 1,9 times longer than width at apex; most wide from flattened side segments three times wider than length. Flagellum 1,4 times shorter than the front wing and 1,7 times shorter than body length.

Head: Head contour from front slightly narrowed downwards, with equal width and height, genae from front short, 6 times shorter than height of eye; head from above transversal, 2,5 times wider than length. Vertex short, from lateral straightly slanting down after the ocelli to occipital carina; temples 1,8 times shorter than longitudinal diameter of an eye at the middle, from side gradually broadened toward mandible base, practically parallel to hind margin of eye, from above roundly narrowed behind eyes; occipital carina high, sharp, from above deeply and roundly impressed, reach level of eyes and not reach level of hind ocelli; hypostomal carina not visible from lateral, meeting with occipital carina not far before mandible base; malar space 2,5 times shorter than the mandible base width; mandibles narrow, upper tooth long, lower very short, situated in the same plane; clypeus flat, transversal, approximately 2,3 wider than height, not separated from middle field of face by impression, front margin of clypeus straight with slight projection at middle, lateral corners distinct; clypeal foveae small, but sharp; labrum not protrude from under the clypeus; middle field of face slightly elevated above lateral fields, in middle 1,3 times wider than lateral fields; antennal cavities quite deeply impressed, reach borders of eyes and not reach front ocellus level, laterally above antennal fossae with distinct tubercles, but without tooth between antennal fossae; ocelli of normal size, diameter of lateral ocellus equal to distance from ocellus to eye; ocellar triangle expressed. Surface of clypeus and face with sparse superficial punctures, other part of face smooth, shining, not sculptured.

Thorax: Collar of pronotum rather long with straight front margin (from above); transverse furrow of pronotum moderately deep, not interrupted by keel; pronotal base gradually sinuously curved with acute apex; epomia sharp, high; pronotal ridge not thickened. Mesonotum only just convex, longer than width; notauli only as slight impres-

sions at base (middle lobe only just elevated in front third); axillary tongue not expressed; surface of mesonotum with sparse shallow punctures, smooth, but not polished, only just visible shagreen; subalarum high, moderately thick, not sharpened; speculum smooth, polished; area of mesopleural fovea broadly and deeply impressed; prepectal carina at upper half strongly curved backwards so, that considerable part of prepectus visible from lateral, at the top reach pronotum; mesopleural suture straight, interrupted by transversal ribs; sharp border between vertical and horizontal parts of mesopleurae not expressed; sternauli absent; upper third of mesopleurae punctured; lower part of mesopleurae longitudinally-wrinkled with shallow punctures without microsculpture, shining; scutellum flat, long, sloped backwards and carinated laterally up to apex by high carinae, horizontal part polished with sparse superficial punctures. Hind margin of metanotum with small triangle projections opposite lateral longitudinal carinae. Propodeum from lateral slanting backwards, long, horizontal part shorter than vertical; fields of propodeum expressed, with exception of merged area basalis, area superomedia and practically merged with area posteromedia, forming together single central area; carinae, limiting area superomedia in front from costulae parallel and backwards from costulae narrowing; area dentipara strongly slanted backwards and approach to hind coxae; spiracles long, slit-shaped; coxal carina sharp. Horizontal part of propodeum with big punctures, punctures considerably bigger than interval between them; apices of areae spiraculifera wrinkled; surface of metapleurae with very dense big punctures; propodeum shining without microsculpture.

L e g s : Long and slender; hind coxae without scopa. Claws massive, smooth, front and middle curved almost at right angle, hind more gradually.

W i n g s : Areolet quadrangular, pointed in front, slightly asymmetrical, external vein of apex some shorter than internal; stigma narrow, light brown; radial cell narrow and long, radius almost straight, very slightly curved; nervulus interstitial; ramulus rather long; all veins of hind wing pigmented; membrane of wing hyaline. Length of front wing of female 1,3 times shorter than body length.

A b d o m e n : Abdomen from above long, fusiform, seventh tergite sharpened, long; second tergite longer than width at apex; abdomen oxypygous. First tergite from lateral almost straight, with very narrow petiolus at base, from lateral smooth, without traces of lateral carinae and any sculpture; from above petiolus gradually broadened to postpetiolus; middle field only just marked and not limited by dorsal carinae; its surface slightly shagreen, with sparse superficial punctures. Gastrocoeli deep and long, oblique; thyridia distinct, long, equal by breadth to interval between them; lunulae weak, small, peculiar elongated form; second tergite with delicate small superficial punctures with coriaceous sculpture between them, other tergites coriaceous; seventh tergite long; ovipositor from above slightly protrude behind apex.

C o l o r a t i o n : Head mainly yellow with black pattern on antennal cavities, ocellar triangle and vertex. Thorax mainly red-ferruginous with yellow (front and upper margins of pronotum, subalarum, scutellum and postscutellum) and black pattern (front surface of pronotum, spots on mesopleurae and area dentipara completely). Abdomen red-ferruginous with black sixth tergite; sixth tergite with yellow stripe at apex, seventh completely yellow. Legs ferruginous, hind tibiae and tarsi darkened.

S i z e : Body length: 12; front wing: 9,5; flagellum: 7 mm.

Male

Similar by morphology and coloration to female. Segments of males flagellum with transversal ribs and bristle ridges on ventral side; flagellum not widened and not flattened beyond white annulus, moderately attenuated to apex, with narrow bacilliform tyloides on segments 11-20.

Tribe Trogini (FOERSTER)

Trogoidae FOERSTER 1868 - Verh. Natur. Preuss. Rhein. West. **25**: 143.

Trogini: HEINRICH 1962 - Can. Ent., Suppl. **29**: 844.

Trogini: HEINRICH 1968 - Ichn. Stenop. of Africa **1**: 230, 233.

Trogini: HEINRICH 1977 - Ichn. Florida and Neighb. States **9**: 283.

Type genus: *Trogus* PANZER.

Distribution: World-wide.

Introduction:

The point of view of G. HEINRICH on volume and structure of the tribe Trogini (HEINRICH 1934, 1962), in contrast to H. TOWNES (1961) seems to be more reasonable. The tendency to shortening of propodeum reaches at Trogini extreme expression and it is a key in determination of a tribal status. A profile of propodeum gains triangular form and its surface abruptly sloping both forward to postscutellum, and back to apex of propodeum from upper point. Area superomedia of propodeum gains a view of smoothed triangular boss, reaching extreme expression in genus *Trogus*, where it gains a view of curved forward transversal carina. Additional characters are triangle from lateral form of scutellum with tendency to pyramidal and quadrangular areolet of front wings with tendency to petiolate. Head morphology of representatives of subtribe Callajoppina is similar to morphology of Protichneumonini. At the same time the listed above characters are more significant and testify for the benefit of G. Heinrich's point of view. An overwhelming majority of tribe representatives has amblypygous abdomen, whereas in Protichneumonini the invert correlation takes place. Form of abdomen of Trogini, in spite of sharp sculptural differences of the representatives of both subtribes, has broadly-oval, or drop-shaped (Callajoppina) form. The transitional Palaeartic genus *Catadelphus* WESMAEL., placed by G. Heinrich to subtribe Callajoppina is more relative to tribe Protichneumonini (high scutellum without knoll-shaped swelling, expressed area superomedia and lateral carinae of basal field). To the transitional forms it is possible to attribute species of African genus *Afrotrogus* HEINRICH female of which has oxygygous abdomen and developed scopa on hind coxae.

G. Heinrich gives also and reasonable arguments, based on a biology of the representatives of subtribe Callajoppina, parasitizing on the evolutionally oldest Sphingidae, as opposed to Protichneumonini, parasitizing on evolutionally younger Sphingidae.

The tribe is characterized by extremely high elevated, to pyramidal scutellum, shortened and triangle from lateral propodeum with smoothed arcuate prominence at upper point on place of area superomedia, abruptly slanting from it forward to basal furrow and backwards to apex of propodeum. Areolet of front wings is quadrangular (trapeziform), pointed in front to slightly petiolate, slightly asymmetrical.

Flagellum is bristle-shaped or semi bristle-shaped, of males with short-oval tyloides or without them. Mesonotum is longer than width; notauli are not developed, slightly im-

pressed or marked only at base; prepectus behind hind coxae is not impressed; subalarum is thick at most part not sharpened; sternauli are absent or only just marked; lower part of mesopleurae is with distinct bend; mesopleural suture is straight; scutellum is convex, conical to pyramidal, from lateral not carinated. Hind margin of metanotum is with distinct projections opposite lateral longitudinal carinae of propodeum. Lateral carinae of basal area are absent; coxal carina is only in a form of only just visible trace of different structure; spiracles are large, slit-shaped. Hind coxae of females are without scopa, rarely with scopa (*Afrotrogus* HEINRICH). Claws are smooth. Abdomen is usually amblypygous with flattened hypopygium, rarely oxygygous (African *Afrotrogus* HEINRICH and Neotropical *Macrojoppa* KRIECHBAUMER). As rule, there are large species, to largest in subfamily (Calojoppina).

Tribe is presented by two subtribes Trogina FOERSTER and Callajoppina HEINRICH:

- 1 Segments of abdomen sharply separated from each other, with sharp longitudinal wrinkles and very rough sculpture, tergites 2-5 trapezoidal in cross section; clypeus with thin concave front margin; ocellar triangle expressed and not surrounded by deep furrow; frons often with two teeth or carinae Trogina FOERSTER
- Abdomen of normal structure; clypeus with thickened or normal front margin; ocellar triangle surrounded by deep furrow; frons always without teeth and carinae Callajoppina HEINRICH

Subtribe Callajoppina HEINRICH

Callajoppina HEINRICH 1962 - Can. Ent., Suppl. 29: 809, 810.

Type genus: *Callajoppa* CAMERON.

Callajoppina: HEINRICH 1968 - Ichn. Stenop. of Africa 1: 233-234.

Callajoppina: HEINRICH 1977 - Ichn. Florida and Neighb. States 9: 283-284.

Distribution: Holarctic, Oriental, Neotropical and Ethiopian (some species) Regions.

Introduction:

The representatives of subtribe are differed from species of second subtribe by similar to Protichneumonini structure of a head, more long propodeum and normal sculpture of abdomen. Females of African genus *Afrotrogus*, putting by G. HEINRICH into Callajoppina, in contrast to other Trogini, have developed scopa on hind coxae and oxygygous abdomen (HEINRICH 1968). Therefore, their belonging to tribe Trogini, in the hereinabove treatment, seems to be doubtful (apparently representatives of genus are closer to tribe Protichneumonini, like to a genus *Catadelphus*). The subtribe includes largest species of subfamily.

Morphology:

Flagellum: Of females bristle-shaped, long with numerous number slightly differentiated segments, slightly flattened ventrally beyond middle and sometimes widened, strongly attenuated toward apex; basal segments relatively short. Flagellum shorter than the front wing and body length. Flagellum of males with weakly developed transversal ribs on internal side; tyloides pronounced or absent.

Head: Genae and temples with curved outline, temples behind eyes from above from broadened to swollen; genae long; front margin of clypeus not concave and not sharpened, mandibles strong, with two teeth; all parts of face distinctly differentiated; ocellar triangle, with exception of hind part, surrounded by deep furrow.

T h o r a x : Mesonotum slightly convex, notauli slightly expressed, often distinct in front third; mesopleurae with broad impression at area of mesopleural fovea; lower part of mesopleurae with distinct bend; scutellum always high elevated above postscutellum, sometimes semi-spherical or almost pyramidal, slightly carinated only at base. Hind margin of metanotum always with projections. Propodeum from lateral triangle, shortened, area superomedia strongly reduced, usually to small, elevated and smoothed projection from which propodeum abruptly sloping down to postscutellum, as well as and backwards to petiolus; front slope of propodeum smooth and without carinae, hind slope densely and roughly wrinkly-punctured and mainly presented by two unusually large areae dentiparae, carinated by very high carinae, and very long area posteromedia; metapleurae swollen, without coxal carinae.

L e g s : Moderately strong and long; hind coxae of females usually without scopa, in contrast to most of Protichneumonini.

W i n g s : Areolet of front wings irregularly quadrangular, to shortly petiolate; wings sometimes with dark pattern, often uniformly, deeply darkened.

A b d o m e n : Of females amblypygous (oxypygous of African species of genus *Afrotrogus*). Postpetiolus usually broad with slightly expressed middle field, of one genus with conical elevation at place of bend (HEINRICH 1962). Gastrocoeli distinct, of moderate size and depth, thyridia weak; tergites not many narrower at base than at apex, dorsally usually convex, not striated, densely and finely punctured or coriaceous, usually dull or semimatt, without expressed sculptural impressions and prominences as of *Trogina* subtribe.

C o l o r a t i o n : Black or rusty-red (red) or both color in combination; without white pattern, except (rare) annulus or semiannulus on flagellum. Sexual dimorphism in coloration slight. All known African species distinct by deeply darkened wings and by light-colored reddish-brown color of body, including legs and sometimes parts of flagellum, in combination with completely or partially blue-black abdomen; hind legs and flagellum sometimes mainly black (HEINRICH 1968).

B i o l o g y :

Females of species of Temperate Zone do not hibernate. All species are specialized parasites of Sphingidae, some specialize on one species of the host, other on groups of closely related species. In Temperate Zone there is only one generation annually. Both sexes occur in middle of summer (HEINRICH 1962).

***Callajoppa cirrogaster* (SCHRANK) (Plate 22)**

Ichneumon cirrogaster SCHRANK 1781 - Enumeratio insectorum austriacae indigenorum: 348, ♂.

Callajoppa cirrogaster: HEINRICH 1962 - Canad. Ent. **29**: 814-815, ♀, ♂.

F e m a l e

F l a g e l l u m : Moderately slender, bristle-shaped, with 50 segments, without white annulus, flattened ventrally beyond middle; first segment short, only 3,2 times longer than width at apex, already segment 8 square; segments of flagellum weakly separated (differentiated). Flagellum 1,3 times shorter than the front wing and 1,7 times shorter than body length.

H e a d : Head contour from front slightly narrowed downwards, transversal, 1,4 times

wider than height, considerable part of temples visible from front (up to middle of eye), genae from front long, 3,3 times shorter height of eye; head stout, from above 1,4 times wider than length. Vertex from lateral gradually slanting down after the ocelli to occipital carina; temples long, 1,5 times longer than longitudinal diameter of an eye at the middle, almost parallel to hind margin of eye, from above swollen and roundly narrowed behind eyes; occipital carina, from above strongly roundly impressed, but far not reach level of eyes and hind ocelli; hypostomal carina not visible from lateral, meeting with occipital carina before base of mandible; malar space only 1,1 times shorter than the mandible base width; mandibles strong, sharply curved behind middle, teeth large, lower tooth two times shorter than upper, situated in the same plane, cavity between teeth narrow; clypeus convex in the middle of base, sharply separated from middle field of face by suture, approximately 2,2 times wider than height, front margin not thinned, convex at middle; clypeal foveae large, deep; labrum not protrude from under clypeus; middle field of face strongly elevated above lateral fields, in middle only 1,1 times wider than lateral fields; antennal cavities deeply impressed, almost reach borders of eyes and not reach front ocellus level, laterally above antennal fossae without tubercles and with strong interantennal tubercle; ocelli of normal size, diameter of lateral ocellus 1,7 times less than distance from ocellus to eye; ocellar triangle separated from other parts of head by impressions. Surface of head rather densely punctured by superficial punctures, shining, without microsculpture, only genae between mandibles and eyes shagreen.

T h o r a x : Collar of pronotum moderately long with straight front margin (from above); transverse furrow of pronotum moderately deep, not interrupted by keel; pronotal ridge not thickened; epomiae sharp; pronotal base gradually curved, sinuous, with acute apex. Mesonotum slightly convex, 1,2 times longer than width; notauli only in form of very slight impressions at base; mesonotum bordered laterally by furrow, especially deep behind tegulae; axillary tongue developed; surface of mesonotum densely sculptured by delicate superficial punctures, interspaces between punctures shagreen, slightly shining; subalarum moderately elevated, thick, sharpened only at hind third; prepectus behind front coxae not impressed; prepectal carina sharp; speculum shining, sculptured by longitudinal wrinkles and smoothed punctures, polished; area of mesopleural fovea deeply impressed; mesopleural suture straight, interrupted by transversal ribs reaching hind border of mesopleurae; border between vertical and horizontal parts of mesopleurae sharp; sternauli not developed; scutellum from lateral of hump form, not carinated laterally, horizontal part smooth, shining, slightly sculptured by small superficial punctures. Hind margin of metanotum with sharp, short, almost bacilliform projections opposite lateral longitudinal carinae. Propodeum from lateral triangle, sharply sloping from apex to basal furrow and gradually backwards to apex of propodeum, not divided on horizontal and vertical parts; area supermedia in form of small swollen triangle; lateral carinae of basal area absent, other carinae sharp, high, except coxal carina, which visible in form of impression with sharp transverse ribs; spiracles long, slit-shaped. Surface of propodeum sharply transversally-wrinkled, without microsculpture, shining.

L e g s : Long, strong; hind coxae without scopa. Claws, smooth, gradually curved at upper third and slightly widened at base.

W i n g s : Areolet quadrangular, slightly asymmetrical, external vein of apex longer than internal (as of *Trogus*); stigma narrow, light; radial cell narrow and very long, radius sinuous at base and at apex; nervulus postfurcal; ramulus long; all veins of hind wing

pigmented; membrane of wing hyaline, yellowish. Length of front wing 1,3 times shorter than body length.

A b d o m e n : Abdomen from above drop-shaped, gradually widened from base to apex of forth tergite; second tergite from above 1,3 times longer than width at apex; abdomen amblypygous; sheath of ovipositor only just protrude. First tergite from lateral almost straight, uniformly widened from base to apex, from lateral carinated and sculptured by transversal ribs; from above petiolus sharply broadened to postpetiolus; distance between spiracles two times more than distance from spiracles to hind margin of tergite; middle field slightly elevated and not carinated; its surface slightly longitudinally wrinkly-punctured. Gastrocoeli deep, relatively short; thyridia expressed slightly, situated near base of second tergite, equal by breadth to interval between them; lunulae distinct, in form of slight impressions; surface of tergites of abdomen with very delicate superficial punctures, to shagreen, slightly shining. Hypopygium flattened, from below triangle with rounded apex, without longitudinal fold; only second and third sternites with longitudinal fold.

C o l o r a t i o n : Flagellum in most part ferruginous. Head and thorax black with yellow pattern: clypeus, face in most part of internal and external orbits, upper margin of pronotum, subalarum, scutellum and postscutellum. Apex of first and tergites 2-4 of abdomen yellow-red, other tergites black. Legs mainly yellow, with exception of black coxae and most part of femora of hind legs.

S i z e : Body length: 22; flagellum: 13; front wing: 17 mm.

M a l e

Flagellum of males long, bristle-shaped, slightly widened beyond middle and practically not flattened ventrally, with 46 segments, with rather large dark oval tyloides on segments 9-20; scutellum pyramidal; segments of flagellum of basic color only ventrally up to middle; face completely and ocellar orbits yellow; coxae more reach yellowish.

Subtribe Trogina (FOERSTER)

Trogidae FOERSTER 1868 - Verh. Natur. Preuss. Rhein. West. **25**: 143.

Trogina HEINRICH 1962 - Can. Ent., Suppl. **29**: 844.

Trogina: HEINRICH 1968 - Ichn. Stenop. of Africa **1**: 230.

Trogina: HEINRICH 1977 - Ichn. Florida and Neighb. States **9**: 294.

Type genus: *Trogus* PANZER.

D i s t r i b u t i o n : Holarctic (restricted number of species), Oriental and Neotropical (greatest number of species) Regions.

I n t r o d u c t i o n :

The representatives of subtribe are characterized by unusual morphology of front tergites of abdomen, which extremely strongly sclerotized and with very rough sculpture, expressed surfaces in form of convexities, concavities, ridges and lateral slopes. Front tergites are trapeziform in cross-section. In contrast to Callajoppina, temples behind eyes do not swollen, propodeum more shortened and area superomedia of propodeum is vastly reduced, approximating by form to transverse carina.

M o r p h o l o g y :

F l a g e l l u m : Of females bristle-shaped, moderately long, at type genus not flattened

ventrally and not widened beyond middle, at some genera flattened and widened, apically from moderately to strongly attenuated and pointed, without white annulus. Flagellum of males bristle-shaped with pronounced transversal ridges on external side of segments, sometimes sharply nodose, without tyloides; segments (particularly basal) not cylindrical, strongly overlapping.

H e a d : Temples and genae from moderately to sharply narrowed, genae never swollen; frons sometimes with two longitudinal carinae or horn-shaped projections; clypeus at apex concave or straight, mandibles with two teeth.

T h o r a x : Notauli usually absent; scutellum sharply conical (pyramidal), sharply pointed to apex, laterally not carinated. Propodeum triangle from lateral and shortened in extreme form, area posteromedial almost reach upper point of propodeum, area superomedial replaced by smooth, transverse, curved or triangle carina, propodeum sloping very abruptly forward and backwards to apex of propodeum; lateral carinae of basal area absent even in form of trace; coxal carina practically absent, other carinae of propodeum moderately high.

L e g s : From moderately to rather slender, at one Neotropical genus extremely long (HEINRICH 1962); hind coxae of females always without scopa, claws smooth.

W i n g s : Areolet of front wings as of Callajoppina, irregularly quadrangular and often petiolate; wings usually with dark pattern, often uniformly deeply darkened.

A b d o m e n : Of females amblypygous or oxypygous (*Macrojoppa* KRIECHBAUMER), from above broadly-oval; tergites (except one, two or three apical) always extremely sclerotized, with extremely rough sculpture and with tendency to form plastic features in a form of prominences, cavities, ribs and lateral bevels (trapeziform in cross-section).

C o l o r a t i o n : Black (sometimes bluish-black) or rusty-red, or both color in combination; some oriental and Neotropical species with white pattern.

B i o l o g y :

Females of species of Temperate Zone do not hibernate. Most species are specialized parasites of Rhopalocera, especially of species of genus *Papilio*, or sometimes Nymphalidae.

***Trogus lapidator* (FABRICIUS) (Plate 23)**

Ichneumon lapidator FABRICIUS 1787 - Mant. Ins. 1: 266.

Trogus lapidator: TOSQUINET 1889 - Ann. Soc. Ent. Belgique 33: 126.

F e m a l e

F l a g e l l u m : Bristle-shaped, 32-segments, with closely joined segments, practically not widened and not flattened beyond middle, uniformly attenuated toward apex; first segment rather short, only 2,5 times longer than width at apex, without white annulus. Flagellum 1,2 times shorter than the front wing and 1,4 times shorter than body length.

H e a d : Head comparatively small relative to body; head contour from front strongly narrowed downwards, transversal, 1,4 times wider than height; genae from front long, 2,7 times shorter than height of eye; head from above slightly transversal, 1,8 times wider than length. Vertex from lateral roundly slanting down after the ocelli to occipital carina, behind ocelli with roundish impression; temples long, 1,3 times longer than longitudinal diameter of an eye at the middle, from side slightly narrowed from middle toward mandi-

ble base, from above behind eyes narrowed almost straightly; occipital carina sharp all round, from above more high, slightly and roundly impressed toward ocelli, far not reach level of eyes and hind ocelli; hypostomal carina visible from lateral, meeting with occipital carina far from mandible base; length of abscissula equal 0,6 breadth of mandible base width; malar space equal by length to mandible base width; mandibles strong, quite sharply curved at middle and narrowed to apex, with two teeth, situated in the same plane; clypeus two times wider than height, convex, with thinned and impressed front margin, quite sharply separated from face by suture; clypeal foveae small, areae around foveae slightly impressed; labrum far protrude from under clypeus, triangular, equal by breadth to clypeus front margin; middle field of face sharply limited, convex, in middle, 1,4 times wider than lateral fields; antennal cavities sharply and deeply impressed, reach borders of eyes and not reach front ocellus level, without lateral tubercles and only just visible tubercle between antennal fossae; frons between antennal cavities dorsally with two horn-shaped projections; margins of antennal fossae high elevated above face surface; ocelli of normal size, diameter of lateral ocellus 1,5 times less than distance from ocellus to eye; ocellar triangle distinctly elevated. Surface of clypeus with big punctures, without microsculpture, lateral fields very densely punctured slightly or strongly shining and with or without visible microsculpture; top of frons slightly wrinkled, temples punctured by slightly impressed punctures, shining, without microsculpture.

T h o r a x : Collar of pronotum comparatively long with straight (from above) and very high elevated front margin; transverse furrow of pronotum very deep, not interrupted by keel (rarely medially with tubercle); pronotal ridge not thickened; epomiae very strong, sharp; pronotal base sharply sinuous. Mesonotum moderately convex, 1,3 times longer than width; notauli absent; axillary tongue not developed; middle lobe of mesonotum densely punctured by big smoothed punctures, shining, without microsculpture, lateral lobes with dense small punctures; subalarum high, thick, not sharpened; speculum and area of mesopleural fovea smooth, polished; area of mesopleural fovea deeply impressed; mesopleural suture straight, deep, interrupted by sharp ribs; lower part of mesopleurae with distinct bend; sternauli absent; upper front half of mesopleurae punctured, lower part longitudinally wrinkly-punctured, shining, without microsculpture; scutellum high, conical from lateral, slanted backwards and not carinated laterally, its surface densely punctured. Hind margin of metanotum with broad triangle projections opposite lateral longitudinal carinae. Propodeum from lateral triangle, shortened in extreme form, area posteromedia almost reach upper point of propodeum, with strong median longitudinal carina; area posteroexterna absent, area superomedia replaced by smooth, transverse, curved or triangle carina, propodeum very abruptly sloping forward and backwards to apex of propodeum; lateral carinae of basal area absent even in a form of trace; coxal carina practically absent, other carinae of propodeum sharp, high; spiracles large, slit-shaped. Surface of propodeum, with exception of punctured front dorsal half and of metapleurae, sharply transversally wrinkly-punctured, without microsculpture.

L e g s : Slender and long. Hind coxae of female without scopula. Claws long, thin, strongly curved, smooth.

W i n g s : Areolet quadrangular, with tendency to petiolation, slightly asymmetrical, external veins longer than internal, external intercubitus curved out; stigma long, narrow, slightly darkened; radial cell narrow and long, radius in most part straight, strongly curved only at base and apex; nervulus slightly postfurcal; ramulus not developed; all

veins dark; membrane of wing hyaline, slightly yellowish. Length of front wing 1,3 times longer than length of flagellum and 1,2 times shorter than body length.

A b d o m e n : From above broad, at most part parallel sided, strongly sculpturated and with sharp constrictions between segments and impressions on dorsal surface, cross-section of abdominal tergites pentagonal, abdomen amblypygous; second tergite from above transversal, at apex 1,4 times wider than length. First tergite from lateral very thick with gradual transform of petiolus to postpetiolus; dorsomedian, dorsolateral and ventrolateral carinae sharp at all distance; lateral surface of petiolus with dense big punctures and distinct ribs at ventrolateral carina; from above petiolus sharply broadened to triangle postpetiolus; distance between spiracles equal to distance from spiracles to hind margin of tergite; middle field of postpetiolus sharply elevated and carinated, wider than lateral fields, impressed medially; surface of postpetiolus punctured by rough punctures, middle field roughly wrinkly-punctured. Gastrocoeli very deep and short, perpendicular to longitudinal axis of a body; thyridia distinct, 3,7 times narrower than interval between them; lunulae absent; middle part of tergite elevated; surface of tergites of abdomen with sharp longitudinal rugosity, wrinkles very sharp (almost carinae). Apex of hypopygium not protrude, ovipositor hidden; only second sternite with longitudinal fold.

C o l o r a t i o n : Body black, with slight violet tint. Legs with exception of coxae and trochanters I rusty-red, tarsi of hind legs darkened.

S i z e : Body length: 17,0; front wing: 13,8; flagellum: 10,4 mm.

M a l e

Flagellum of male ribbed, without tyloides.

Generic structure of Platylabini tribe

Morphological peculiarities

Flagellum

All representatives of Platylabini tribe have **b r i s t l e - s h a p e d** flagellum. The only exception are representatives of genus *Ectopoides*, the males of which have semi bristle-shaped, and females bristle-shaped flagellum. Flagellum of overwhelming majority of genera can be characterized as slender, of three genera – *Ambloplisus*, *Apaeticus* and *Notoplatylabus* (males) – as moderately thick and of *Apaeticus* and males of *Ectopoides* – as thick. Flagellum, as a rule, is slightly broadened (*Abzaria*, *Ambloplisus*, *Clypeolabus*, *Cratolabus*, *Cyclolabellus*, *Cyclolabus*, *Dentilabus*, *Ectopius*, *Hirtolabus*, *Hypomecus*, *Lamprojoppa*, *Lissolaboides*, of female *Notoplatylabus*, *Platylabus*, *Poecilostictus*, *Pristicerops*, *Pristicerus*, *Pagarenes*), or not broadened at all (*Acantholabus*, *Afrectopius*, *Asthenolabus*, *Carlsonia*, *Dentilabus*, *Heinrichiellus*, *Linyus*, *Neolinyus*, *Neeurylabia*, males of *Notoplatylabus*, *Pachyjoppa*, *Platybirmania*, *Pyramidophorus*, *Rhyssolabus*, *Spanophatnus*, *Neeurylabia*). Only the representatives of genus *Apaeticus* flagellum can be qualified as strongly widened behind middle. As a

rule, flagellum of Platylabini is flattened ventrally behind middle in varying degree. More often it is slightly flattened (*Acantholabus*, *Afrectopius*, *Asthenolabus*, *Carlsonia*, *Dentilabus*, *Heinrichiellus*, *Afrectopius*, *Linytus*, *Neolinycus*, *Neeurylabia*, males of *Notoplatylabus*, *Pachyjoppa*, *Platybirmania*, *Pyramidophorus*, *Rhyssolabus*, *Spanophatnus*, *Neeurylabia*, *Pagarenes*), rarely rather distinctly or even sharply flattened (*Abzaria*, *Apaeleticus*, *Lamprojoppa*, *Neeurylabia*, at female of *Pristicerops*). Most representatives of a considerable number of genera, flagellum is practically not flattened ventrally – *Afrectopius*, *Dentilabus*, *Ectopius*, *Heinrichiellus*, at males of *Carlsonia*, *Notoplatylabus* and *Poecilostictus* and of females *Neolevansa*. Flagellum is attenuated to apex or sharply, as peculiar to *Abzaria*, *Apaeleticus*, *Asthenolabus*, *Hypomecus*, *Lamprojoppa*, *Lissolaboides*, *Neolinycus*, *Platylabus*, *Poecilostictus*, *Pristicerops*, *Afrectopius*, or gradually and slightly, as peculiar to the representatives of *Acantholabus*, *Afrectopius*, *Ambloplisus*, *Carlsonia*, *Clypeolabus*, *Cratolabus*, *Cyclolabellus*, *Cyclolabus*, *Dentilabus*, *Ectopius*, *Heinrichiellus*, *Linytus*, *Pachyjoppa*, *Pagarenes*, *Pristicerops*, *Pyramidophorus*, *Rhyssolabus*, *Spanophatnus* and *Cratolaboides*. Basal segments of flagellum are usually elongated, from strongly elongated, when the length of segment is more than six times larger than the width at apex – at *Acantholabus*, *Afrectopius*, *Ambloplisus*, *Cratolabus*, *Cyclolabellus*, *Cyclolabus*, *Dentilabus*, *Ectopius*, *Neeurylabia*, *Hypomecus* and to ten times of *Heinrichiellus*, to moderately elongated, with basal segments five times longer than the width at apex – *Abzaria*, *Asthenolabus*, *Carlsonia*, *Clypeolabus*, *Hirtolabus*, *Afrectopius*, *Lamprojoppa*, *Linytus*, *Lissolaboides*, *Neolinycus*, *Pachyjoppa*, *Platybirmania*, *Platylabus*, *Poecilostictus*, *Pristicerops*, *Pristicerops*, *Rhyssolabus*, *Pachyjoppa*, *Pyramidophorus*, *Rhyssolabus*, *Spanophatnus* and females of *Notoplatylabus*. At the same time, basal segments of representatives of some genera are elongated slightly. There are females of some species of *Apaeleticus* and males of *Ectopoides*. Separate group is presented by the representatives of genera, with flagellum, all segments of which longer than the width – *Afrectopius*, *Cyclolabellus*, *Cyclolabus*, *Dentilabus*, *Ectopius*, *Heinrichiellus*, *Linytus*, *Pagarenes*.

An important tribal character of Platylabini is comparatively long flagellum and its length in comparison with length of front wings and body length. Usually, flagellum is longer than the front wing (*Afrectopius*, *Asthenolabus*, *Cratolabus*, *Cyclolabellus*, *Cyclolabus*, *Dentilabus*, *Heinrichiellus*, *Hypomecus*, *Notoplatylabus*, *Poecilostictus*, *Cratolaboides*, males of *Ectopoides*), or equal to wing by length (*Abzaria*, *Afrectopius*, *Ambloplisus*, *Apaeleticus*, *Carlsonia*, *Clypeolabus*, *Ectopius*, *Linytus*, *Lissolaboides*, *Neolinycus*, *Platylabus*, *Pristicerops*, *Rhyssolabus*). Rarely, flagellum is shorter than front wing (*Apaeleticus*, *Lamprojoppa*, *Pachyjoppa*, *Pristicerops*, *Pyramidophorus*, *Spanophatnus*). More often flagellum is shorter than body length – *Abzaria*, *Afrectopius*, *Ambloplisus*, *Apaeleticus*, *Asthenolabus*, *Carlsonia*, *Clypeolabus*, *Cratolabus*, *Cyclolabus*, *Ectopius*, *Hypomecus*, *Lamprojoppa*, *Linytus*, *Lissolaboides*, *Neolinycus*, *Notoplatylabus*, *Pristicerops*, *Pyramidophorus*, *Rhyssolabus*, *Spanophatnus* and males of *Ectopoides*, rarely equal to body by length – *Heinrichiellus*, *Pachyjoppa*, *Platylabus*, *Pristicerops*, *Cratolaboides*, or even longer – *Dentilabus*, *Poecilostictus*, *Cyclolabellus*.

White annulus or semiannulus on flagellum of most representatives of genera is usually developed, rarely absent (both sexes of *Ectopius* and *Pachyjoppa* and males of *Ectopoides*, *Notoplatylabus* and *Pristicerops*).

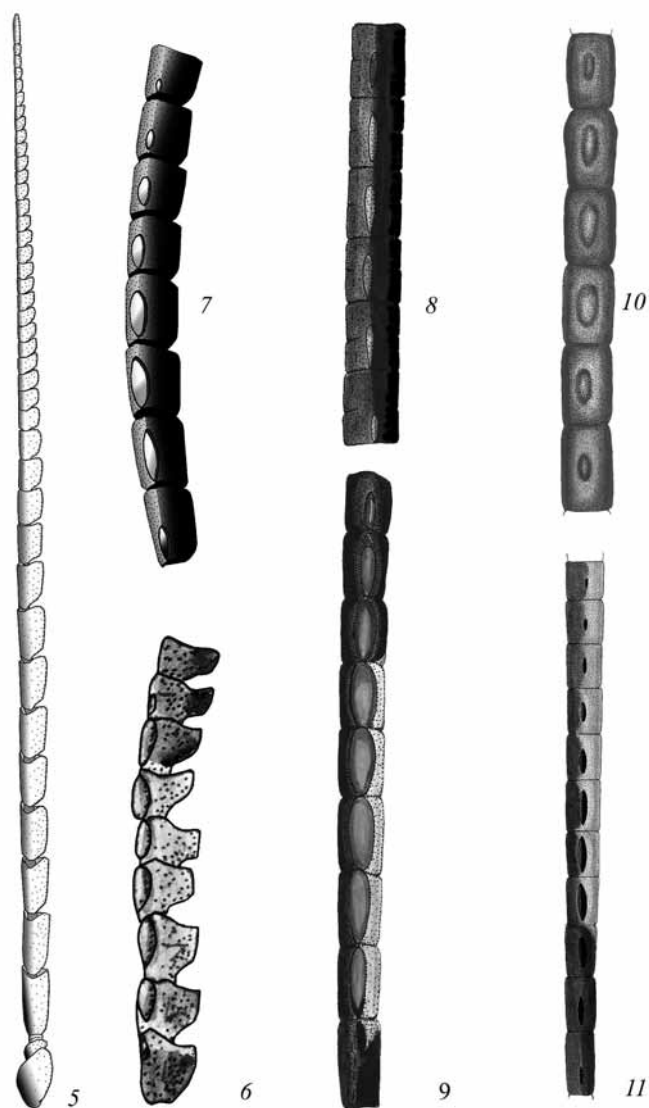


Fig. 5-11: Flagellum and tyloides of Platylabini males: (5) *Spanophatnus guillarmodi*, flagellum of male (according to HEINRICH 1967). Tyloides: (6) *Pristiceros serrarius*, (7) *Pristicerops infractorius*, (8) *Ectopius rubellus*, (9) *Hypomecus quadriannulatus*, (10) *Notoplatylabus podolicus conterranius*, (11) *Poecilostictus cothurnatus*.

Sexual dimorphism of Platylabini flagellum is shown in a shape and proportions of flagellum, presence or absence of white annulus and tyloides. More often flagellum of males is more stumpy and less long (in contrast to general tendency, for example *Cratichneumonina* (*Barichneumon*)). It is considered to be as filiform for females *Ectopoides* (HEINRICH 1951), for males – semifiliform, not widened behind middle. Females, in contrast to males, can have it flattened behind middle – *Carlsonia*, *Poecilostictus*, *Notoplatylabus* *Pristicerops*, and on the contrary, not flattened for females and flattened for males – *Neolevansa*. The special case is *serrate* form of males flagellum of *Pristicerops* and *Spanophatnus* or only with the incisions of males *Pristicerops* (fig. 5-7). White annulus, or semiannulus can be present at females and absent at males of genera *Ectopoides*, *Notoplatylabus*, *Pristicerops*.

Absence of *tyloides* on flagellums of males, which is considered as a tribal, does not comply with reality. Only eight genera do not have tyloides – *Ambloplisus*, *Apaeticus*, *Asthenolabus*, *Dentilabus*, *Heinrichiellus*, *Platylabus*, *Levansa* and *Spanophatnus*. In other genera they are developed in varying degree. By form and size, they can be subdivided as the following groups: bacilliform (*Afrectopius*), elongated or narrow (of males *Acantholabus*, *Ectopius*, *Hirtolabus*, *Platybirmania*, *Poecilostictus*, *Pristicerops* (*laetipictus* Grav.)), longish-oval (*Carlsonia*, *Clypeolabus*, *Cyclolabus*, *Ectopoides*, *Linytus*, *Notoplatylabus*, *Pristicerops* and *Neeurylabia*), oval of *Pristicerops*, broadly-oval of *Neolevansa* and at males of unique genus *Hypomecus* (fig. 6-11).

Proceeding from the described signs, flagellum of Platylabini can be characterized in the following way: flagellum, with very rare exceptions (*Apaeticus*, *Ectopoides*), long, thin, bristle-shaped, not broadened or slightly broadened behind middle, approximately equal by length to front wing, more often with white annulus or semiannulus; tyloides on flagellum of males are present or absent.

Head

Head contour of Platylabini varies from almost round head of *Ectopius* (*rubellus*), to narrowed in different degree downwards and almost rectangular of *Pachyjoppa* (*tibialis*). Practically for all genera breadth of head from front is more than height. More often, breadth and height of head are in the ratio 1,3:1. Breadth of head considerably exceeds its height (1,5:1) only for representatives of *Spanophatnus* and *Notoplatylabus*, and breadth and height are approximately equal for *Ectopius* and *Heinrichiellus*. Head contour from front varies from strongly and straightly, or almost straightly narrowed downwards for *Spanophatnus*, *Apaeticus*, *Linytus*, *Acantholabus*, *Dentilabus* and *Rhyssolabus* to strongly and gradually roundly narrowed for *Cyclolabus*, *Ambloplisus*, *Platybirmania*, *Asthenolabus*, *Clypeolabus*, *Cyclolabellus* and *Lissolaboides* to slightly narrowed at *Poecilostictus*, *Ectopius*, *Heinrichiellus* and almost rectangular at *Pachyjoppa* (fig. 12-42).

Visible from front part of genae varies from very short (*Apaeticus* *Acantholabus* *Ectopoides*), to long of *Spanophatnus*, *Abzaria*, *Ambloplisus*, *Lamprojoppa*, *Pachyjoppa*, *Poecilostictus* and *Heinrichiellus*. Sharply sinuously narrowed genae of *Notoplatylabus*, extremely strongly swollen genae of *Pyramidophorus* and visible almost on all height genae and temples of males *Neeurylabia* are at a distance from other genera.

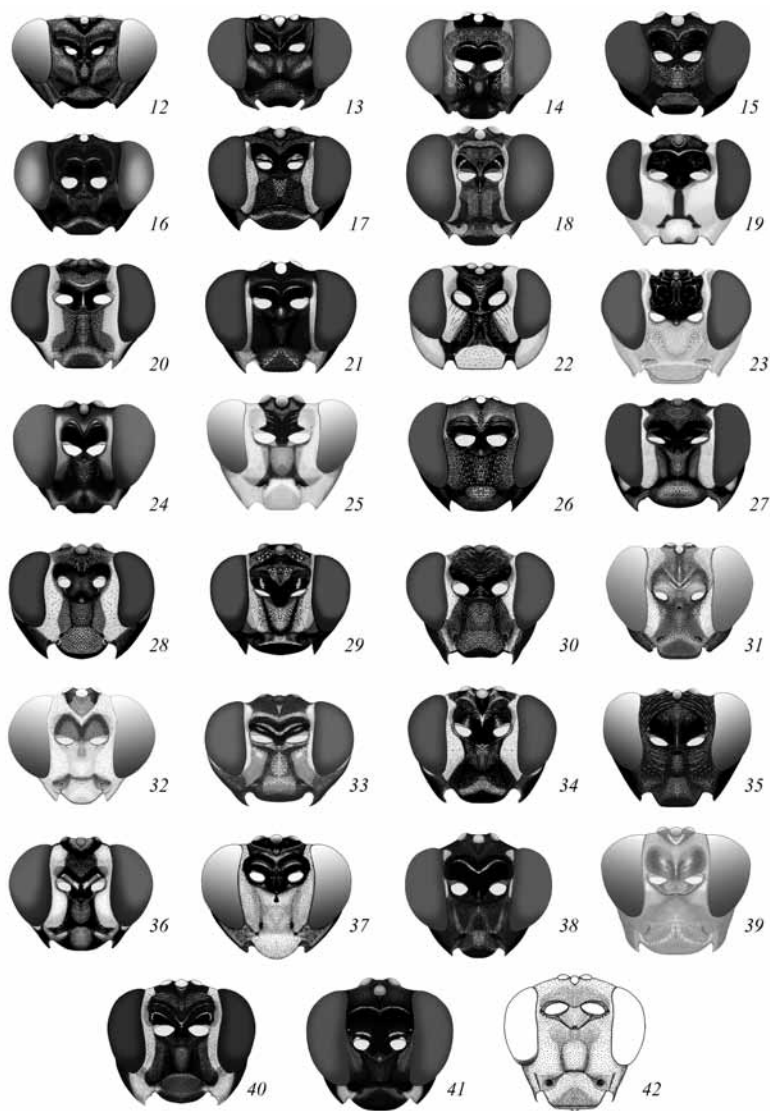


Fig. 12-42: Head contour of different genera of Platylabini, ranked by correlation of breadth and height: (12) *Spanophtatus bicinctorius*, (13) *Notoplatylabus podolicus*, (14) *Apaeleticus bellicosus*, (15) *Cyclolabus nigricollis*, (16) *Linytus exhortator*, (17) *Pristicerops serrarius*, (18) *Acantholabus malaisei*, (19) *Cratolabus insulindicus*, (20) *Hirtolabus alienoris*, (21) *Hypomecus quadriannulatus*, (22) *Pyramidophorus flavoguttatus*, (23) *Abzaria latipetiolaris*, (24) *Afrectopius seyrigi*, (25) *Ambloplisus ornatus*, (26) *Asthenolabus vitratorius*, (27) *Carlsonia perturbator*, (28) *Clypeolabus curtitaris*, (29) *Ectopoides brevicornis*, (30) *Lamprojoppa coerulea*, (31) *Lissolaboides flavorufus*, (32) *Neolymicus michaelis*, (33) *Platylabus rufus*, (34) *Pristicerops infractorius*, (35) *Rhyssolabus bassicus*, (36) *Cyclolabellus pertenuis*, (37) *Platybirmania acutinota*, (38) *Dentilabus variegatus*, (39) *Pachyjoppa tibialis*, (40) *Poecilostictus cothurnatus*, (41) *Ectopius rubellus*, (42) *Heinrichiellus hildegardae*.

For representatives of two genera – *Acantholabus* and *Neolinycus* – it should be noted, in comparison with other genera, the size of eyes in general outline of face is disproportionate (fig. 18, 32).

The dimensional features, such as ratio of breadth and height of face, height of eye and visible length of genae, height of eye and length genae, visible length of genae and length of genae do not allow to divide and to describe distinctly the peculiarities of Platylabini head contour.

Face of Platylabini species is always transversal in varying degree in interval from 4,7 times wider than height (*Lyncus exhortator*) to 2 or almost 2 times wider than height (of *Abzaria*, *Heinrichiellus*, *Acantholabus*, *Platybirmania* and *Hirtolabus*). For most genera width of face is usually 2-3 times more than height. Maximal exceeding of face width of *Lyncus* is distant from this parameter of other genera.

Length of genae (malar space), as minimum distance from lower margin of an eye to mandible base is from maximum of 0,5 of height of an eye of *Ambloplisus*, to minimum of 0,1 of height of an eye of *Ectopius*. These two genera are apart by these extreme values. Separately by this value, it is possible to mark out the genera *Heinrichiellus* and *Pyramidophorus* with long genae, equal 0,4 height of an eye. Length of genae of other genera of Platylabini is in interval of 0,2-0,3 of height of an eye, approximately in equal ratio, 12 and 14 genera respectively.

The ratio of visible from front "external length of genae" and length of genae proper (malar space) makes it possible to characterized in some extent a degree of their "swelling". The least discrepancy between these factors were marked at *Apaeticus*, *Acantholabus*, *Neolinycus*, *Abzaria*, *Cratolabus*, *Heinrichiellus* and *Lissolaboides*, and most, at *Notoplatylabus*, *Pyramidophorus*, *Spanophatnus*, *Ectopius*, *Platybirmania*, *Clypeolabus*, *Pristicerops*, *Pristicerops*, *Cyclolabus*, *Platylabus* and *Asthenolabus*.

Vertex from above often abruptly breaks to occipital carina just after the level of hind ocelli (*Abzaria*, *Acantholabus*, *Afrectopius*, *Ambloplisus*, *Cratolabus*, *Cyclolabus*, *Notoplatylabus*, *Platybirmania*), straightly sloped (*Ambloplisus*, *Apaeticus*, *Cratolabus*, *Lamprojoppa*, *Lyncus*, *Lissolaboides*, *Neolinycus*, *Pristicerops*), gradually sloped (*Pachyjoppa*, *Pristicerops*, *Pyramidophorus*, *Rhyssolabus*, *Spanophatnus*), or roundly curved to occipital carina (*Asthenolabus*, *Carlsonia*, *Clypeolabus*, *Dentilabus*, *Ectopius*, *Ectopoides*, *Heinrichiellus*, *Hirtolabus*, *Hypomecus* and *Poecilostictus*).

Temples from above are very long, equal, or only just less than longitudinal diameter of the eyes – at *Asthenolabus*, *Carlsonia*, *Clypeolabus*, *Heinrichiellus*, *Lamprojoppa*, *Pachyjoppa*, *Poecilostictus*, *Pristicerops* and *Pyramidophorus*, moderately long, less than longitudinal diameter of an eye – at *Cratolabus*, *Dentilabus*, *Ectopius*, *Ectopoides*, *Hirtolabus*, *Hypomecus*, *Lissolaboides*, *Platybirmania*, *Pristicerops* and *Rhyssolabus*, or short, many less than longitudinal diameter of an eye – at *Acantholabus*, *Afrectopius*, *Cyclolabus*, *Lyncus*, *Neolinycus*, *Notoplatylabus* and *Spanophatnus*. For most representatives, temples from above are roundly narrowed backwards, rarely narrowed straightly, or almost straightly – at *Afrectopius*, *Ambloplisus*, *Cratolabus*, *Levansa*, *Lamprojoppa* and *Pachyjoppa*, at some genera – sinuously narrowed (*Abzaria*, *Apaeticus*, *Asthenolabus*, *Afrectopius*). *Clypeolabus*' are narrowed slightly. From lateral temples narrowed downwards to mandibles (*Acantholabus*, *Apaeticus*, *Asthenolabus*, *Carlsonia*, *Ectopius*, *Ectopoides*, *Afrectopius*, *Hypomecus*), widened (*Spanophatnus*), usually parallel to hind margin of an eye (*Abzaria*, *Afrectopius*, *Ambloplisus*,

Clypeolabus, *Dentilabus*, *Heinrichiellus*, *Lamprojoppa*, *Linytus*, *Notoplatylabus*, *Pachyjoppa*, *Poecilostictus*, *Pristicerops*, *Pristicerus*, *Pyramidophorus* and *Rhyssolabus*). At *Hirtolabus* temples down to middle are parallel to hind margins of the eyes and from middle widened downwards.

Occipital carina from above is strongly angularly impressed to hind ocelli (*Afrectopius*, *Cyclolabus*, *Ectopoides*, *Hypomecus*, *Neolinycus*), or gradually angularly (*Lissolaboides*), almost straight (*Lamprojoppa*, *Pachyjoppa*, *Platybirmania*, *Heinrichiellus*, *Pyramidophorus* and *Neeurylabia*) or, for majority genera, gradually concave (*Asthenolabus*, *Carlsonia*, *Clypeolabus*, *Cratolabus*, *Dentilabus*, *Ectopius*, *Heinrichiellus*, *Hirtolabus*, *Linytus*, *Poecilostictus*, *Pristicerops*, *Pristicerus*, *Rhyssolabus* and *Spanophatnus*). Occipital carina of representatives of sixth genera is sharp and very high (*Abzaria*, *Cratolabus*, *Heinrichiellus*, *Lamprojoppa*, *Pachyjoppa*, *Pyramidophorus*), of others – low. Horizontal part of occipital carina of *Notoplatylabus* is reduced, and occiput impressed almost to level of hind ocelli. Horizontal part of occipital carina is erased as it has Nearctic genus *Neolinycus*. Occipital carina merges with hypostomal carina on the mandible base or almost on the base (*Apaeleticus*, *Carlsonia*, *Ectopoides*, *Notoplatylabus*, *Platybirmania*, *Poecilostictus*), or on some distance from the mandible base (*Abzaria*, *Ambloplisus*, *Cratolabus*, *Cyclolabus*, *Dentilabus*, *Ectopius*, *Heinrichiellus*, *Hypomecus*, *Lamprojoppa*, *Neolevansa*, *Neolinycus*, *Pachyjoppa*, *Pristicerops*, *Pristicerus*, *Pyramidophorus* and *Spanophatnus*). Special variants of occipital carina and abscissula are marked in genera *Notoplatylabus*, *Hirtolabus* and *Spanophatnus*. At *Notoplatylabus* occipital carina is parallel to the hind margin of an eye and before mandible base sharply curved forward opposite angular projection of pronotum and widened thus, that hypostomal carina is visible from lateral. *Hirtolabus*'s occipital carina does not meet with hypostomal carina, sharply abrupts at the level of genae and hypostomal carina from mandible base of level of occipital carina is lamelliform. Between them distinct impression is formed. *Spanophatnus*'s occipital carina conjugates with hypostomal carina not reaching mandible base and abscissula is approximately 2-3 times longer than mandible base width and distinctly lamellate.

Genae by length (malar space) more often are equal to mandible base width, rarely shorter (*Asthenolabus* (in part), *Carlsonia*, *Ectopoides*, *Linytus*, *Platybirmania*, *Pristicerus*), or longer than mandible base width (*Ambloplisus*, *Heinrichiellus*, *Lamprojoppa*, *Lissolaboides*, *Neolinycus*, *Pachyjoppa*, *Rhyssolabus* and *Spanophatnus*).

Mandibles of Platylabini is one of the main tribal characters. They are usually slender, narrowed to apex in different degree, with delicate teeth, lower of which is moved inside (fig. 44). Therewith, they can be divided into a number of groups. There are sharply narrowed just behind base (*Ambloplisus* (fig. 43), *Afrectopius*, *Cratolabus*, *Lamprojoppa*, *Notoplatylabus*, *Pachyjoppa* and *Rhyssolabus*), gradually narrowed behind base to apex (*Carlsonia*, *Clypeolabus*, *Cyclolabus*, *Dentilabus*, *Ectopius*, *Hirtolabus*, *Hypomecus*, *Linytus*, *Pristicerops*, *Pristicerus*, *Pyramidophorus*, *Spanophatnus* (fig. 45)), uniformly narrowed from base to apex (*Apaeleticus* (fig. 46), *Heinrichiellus*, *Ectopoides*, *Lissolaboides*, *Neolinycus*, *Poecilostictus*). As the special cases are broad and massive mandibles of *Poecilostictus* (fig. 47) and *Pyramidophorus* (fig. 49), sharply, almost at right angle curved in middle massive mandibles of *Platybirmania* (fig. 48) and mandibles of *Spanophatnus* with practically atrophied lower tooth (fig. 45).

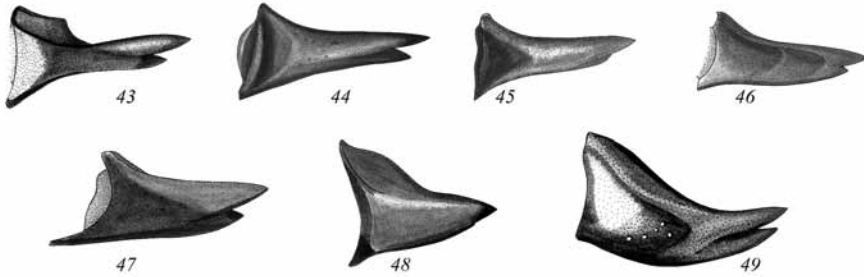


Fig. 43-49: Types of Platylabini mandibles: (43) *Ambloplisus ornatus*, (44) *Platylabus rufus*, (45) *Spanophatnus bicinctorius*, (46) *Apaeleticus bellicosus*, (47) *Poecilostictus cothurnatus*, (48) *Platybirmania acutinota*, (49) *Pyramidophorus flavoguttatus*.

As special case is the mandibles of *Neeurylabia* not character for Platylabini, similar to mandible of many Eurylabini and Ichneumonini.

Clypeus. Peculiarities of clypeus morphology is one of the main tribal characters. Clypeus of Platylabini is always wider than height. Representatives of two genera – *Ectopoides* and *Abzaria* – clypeus is very strongly transversal, almost three times wider than height, at *Ambloplisus*, almost square, only 1,3 times wider than height. Apex of clypeus of representatives of the most genera is with straight front margin and rounded lateral corners (*Abzaria*, *Afrectopius*, *Ambloplisus*, *Apaeleticus*, *Asthenolabus*, *Carlsonia*, *Cratolabus*, *Cyclolabus*, *Dentilabus*, *Hypomecus*, *Neolevansa*, *Neolinycus*, *Pachyjoppa*, *Pristicerops*, *Notoplatylabus*, *Spanophatnus*), or with rounded front margin and rounded lateral corners (*Acantholabus*, *Ectopius*, *Ectopoides*, *Heirichiellus*, *Hirtolabus*, *Lamprojoppa*, *Linycus*, *Lissolaboides*, *Pristicerops*). Rarely, clypeus is with straight front margin and distinctly expressed corners (*Pyramidophorus*, *Rhyssolabus*). As the special shape of clypeus, it is necessary to mark the clypeus of *Clypeolabus*, *Platybirmania*, *Poecilostictus* front margin which one uniformly curved in form of arch. The most characteristic character of the tribe is, as a rule, strongly convex clypeus of most number of the representatives of the genera *Acantholabus*, *Afrectopius*, *Apaeleticus*, *Asthenolabus*, *Cratolabus*, *Cyclolabus*, *Dentilabus*, *Ectopius*, *Ectopoides*, *Heirichiellus*, *Hirtolabus*, *Hypomecus*, *Lamprojoppa*, *Lissolaboides*, *Neolinycus*, *Notoplatylabus*, *Pachyjoppa*, *Pristicerops* and *Pristicerops*. At representatives of *Pristicerops* and *Spanophatnus*, it can be characterized as moderately convex, and at *Abzaria*, *Clypeolabus*, *Neolevansa*, *Pyramidophorus* as slightly convex. Clypeus of Platylabini as rule is distinctly separated from face, or sharply, by suture, or by impression (*Cratolabus*, *Cyclolabus*, *Ectopius*, *Hirtolabus*, *Hypomecus*, *Lamprojoppa*, *Notoplatylabus*, *Poecilostictus*, *Pristicerops* and *Rhyssolabus*), or by enough distinct impression (*Abzaria*, *Afrectopius*, *Apaeleticus*, *Asthenolabus*, *Carlsonia*, *Heirichiellus*, *Linycus*, *Lissolaboides*, *Neolinycus*, *Pachyjoppa*, *Pristicerops*, *Spanophatnus*), in some cases only slightly (*Clypeolabus*, *Dentilabus*, *Ectopoides* and *Platybirmania*). Only by way of exception, clypeus of *Pyramidophorus* is almost not separated from face, forming with middle field practically single surface (similarly to the representatives of genus *Hoplismenus*, tribe Ichneumonini). The special form of clypeus is characteristic also to *Neeurylabia* with clypeus elevated at base, impressed apically, with thin apical margin, and thus rather concave than convex apically.

Thus, it is necessary to characterized clypeus of Platylabini as strongly convex and slightly transversal, usually 1,5-2,5 times wider than height (with exception of strongly transverse clypeus of *Ectopoides* and *Abzaria*) with more or less straighten front margin and usually distinctly separated from face. The exceptions are rounded apically in a form of arch and flattened clypeus of *Clypeolabus*, *Platybirmania* and *Poecilostictus*, broad with distinct lateral corners and straightened front margin, slightly flattened and practically not separated from middle field of face clypeus of *Pyramidophorus* and elevated at base and impressed apically clypeus of *Neeurylabia*.

Clypeal foveae more often are large and deep, rarely small (*Abzaria*, *Apaeticus*, *Carlsonia*, *Cratolabus*, *Cyclolabus*, *Neolinycus*, *Notoplatylabus*, *Platybirmania*).

Labrum more often protrudes from under the clypeus, rarely, not protrudes from under clypeus (*Carlsonia*, *Clypeolabus* (only just protrude), *Ectopius*, *Ectopoides*, *Hirtolabus*, *Platybirmania*, *Spanophatnus*). For representatives of *Abzaria*, *Acantholabus*, *Afrectopius*, *Ambloplisus*, *Apaeticus*, *Cratolabus*, *Hypomecus*, *Lamprojoppa*, *Linycus*, *Notoplatylabus*, *Pachyjoppa*, *Pristicerops*, *Pyramidophorus*, *Rhyssolabus* it is strongly protruded, long. For *Asthenolabus*, *Cyclolabus*, *Dentilabus*, *Lissolaboides*, *Neolinycus*, *Poecilostictus*, *Pristicerops* it is slightly protruded, short. As per the shape, labrum is broadly rounded (*Afrectopius*, *Asthenolabus*, *Cratolabus*, *Cyclolabus*, *Dentilabus*, *Lamprojoppa*, *Lissolaboides*, *Notoplatylabus*, *Pachyjoppa*, *Poecilostictus*, *Pristicerops*, *Rhyssolabus*) or roundly triangle (*Abzaria*, *Acantholabus*, *Hypomecus*, *Pyramidophorus*) or narrow, narrower of front margin of clypeus, rounded (*Ambloplisus*, *Asthenolabus*, *Clypeolabus*), or rarely triangle (*Apaeticus*, *Heirichiellus*).

Maxillary palps of *Afrectopius* *seyrigi* and *Heinrichiellus* *hildegardae* are long and thin vastly. And, to the contrary, at species of a genus *Cratolabus* second segment of maxillary palps is thickened, and of *Cratolaboides* nov. gen. thickened vastly and the morphology of maxillary palps doubtlessly is generic character.

Middle field of face of most representatives is either strongly elevated above lateral fields (*Afrectopius*, *Apaeticus*, *Cyclolabus*, *Ectopoides*, *Lamprojoppa*, *Notoplatylabus*, *Poecilostictus*, *Pyramidophorus*, *Rhyssolabus*), or slightly elevated (*Abzaria*, *Acantholabus*, *Ambloplisus*, *Asthenolabus*, *Carlsonia*, *Clypeolabus*, *Dentilabus*, *Ectopius*, *Hirtolabus*, *Heirichiellus*, *Hypomecus*, *Linycus*, *Lissolaboides*, *Neolinycus*, *Pachyjoppa*, *Pristicerops*, *Pristicerops*, *Spanophatnus*). Rare, the middle field is only just expressed and slightly marked – at *Cratolabus*, *Platybirmania*. For the majority of genera it is possible qualified as narrow in comparison of lateral fields (*Afrectopius*, *Ambloplisus*, *Apaeticus*, *Clypeolabus*, *Ectopoides*, *Heirichiellus*, *Hirtolabus*, *Lamprojoppa*, *Linycus*, *Lissolaboides*, *Notoplatylabus*, *Poecilostictus*, *Pristicerops*, *Rhyssolabus*, *Spanophatnus*), rarely, as broad (*Carlsonia*, *Neolinycus*, *Pristicerops*). At *Cratolabus* and *Platybirmania* middle field is very slightly expressed.

Antennal cavities more often are deeply impressed (*Abzaria*, *Acantholabus*, *Ambloplisus*, *Asthenolabus*, *Carlsonia*, *Cyclolabus*, *Dentilabus*, *Ectopoides*, *Hirtolabus*, *Hypomecus*, *Lamprojoppa*, *Notoplatylabus*, *Pachyjoppa*, *Platybirmania*, *Poecilostictus*, *Pristicerops*, *Pristicerops*, *Pyramidophorus*), sometimes even reach level of front ocellus and the margins of eyes (*Lamprojoppa*, *Pachyjoppa* and *Pyramidophorus*). For species of *Abzaria* and *Notoplatylabus* margins of antennal cavities are high elevated above margins of eyes. Rarely, antennal cavities are slightly (*Clypeolabus*, *Cratolabus*, *Ectopius*), or moderately impressed (*Apaeticus*, *Linycus*, *Lissolaboides*, *Neolinycus*,

Rhyssolabus, *Spanophatnus*), and only at *Heirichiellus* it is not expressed practically. Laterally, some above of antennal fossae, antennal cavities can have roundly knoll marked at representatives of such genera as *Acantholabus*, *Afrectopius*, *Ambloplisus*, *Apaeleticus*, *Cyclolabus*, *Dentilabus*, *Ectopius*, *Linycus*, *Lissolaboides*, *Neolinycus*, *Pachyjoppa*, *Pristicerops* (indistinctly) and *Rhyssolabus*. Probably, in subsequent, availability or the absence of this sign can serve as the additional characteristic. At the same time, the problem of distribution of this sign inside generic groups is vague till now. The availability and a degree of development of tooth between antennal fossae seems to be rather important. The representatives of some genera have strong tooth between antennal fossae (*Abzaria*, *Clypeolabus*, *Cyclolabus*, *Dentilabus*, *Hirtolabus*, *Lamprojoppa*, *Pachyjoppa* and *Spanophatnus*). At *Pyramidophorus* it reaches of maximal expression as of high keel. At *Acantholabus*, *Asthenolabus*, *Ectopius*, *Lamprojoppa*, *Linycus*, *Poecilostictus*, *Pristicerops* interantennal tubercle is distinct, at *Afrectopius*, *Carlsonia*, *Lissolaboides*, *Notoplatylabus*, *Platybirmania*, *Pristicerops* and *Rhyssolabus* very slight, and at *Ambloplisus*, *Apaeleticus*, *Cratolabus*, *Ectopoides*, *Hypomecus* and *Neolinycus* it is absent completely.

Processes of frons. *Abzaria*'s frons is with two high lamellar projections. The similar structures can be found among the representatives of Ceratojoppini and Trogini (Trogus) tribes.

Ocelli of most representatives of genera is of normal, middle size. For some genera they can be qualified as ocelli of large size (*Acantholabus*, *Ectopius*, *Ectopoides*, *Hypomecus*, *Lissolaboides*, *Notoplatylabus* and *Platybirmania*). Only at *Heirichiellus* ocelli can be qualified as proportionally small, far apart from compound eyes.

Ocellar triangle can be high elevated above upper level of frons and vertex (*Abzaria*) or of eyes, as at *Dentilabus*, *Ectopoides*, *Hypomecus*, *Lissolaboides*, *Pachyjoppa*, *Platybirmania* and part of *Notoplatylabus*, slightly elevated, as at *Ectopius*, *Hirtolabus*, *Lamprojoppa*, *Linycus*, *Neolinycus*, *Poecilostictus*, *Pristicerops* and *Rhyssolabus*, or not elevated completely, as at *Heirichiellus*, parts of *Notoplatylabus*, *Pyramidophorus* and *Spanophatnus*.

Sculpture of head surface of the tribe representatives are characterized by a considerable variety. The head surface varies from smooth, shiny without microsculpture of *Abzaria*, *Cratolabus*, *Hirtolabus*, or wrinkled, without microsculpture, shining of majority of genera (*Ambloplisus*, *Apaeleticus*, *Asthenolabus*, *Carlsonia*, *Clypeolabus*, *Cyclolabus*, *Dentilabus*, *Ectopius*, *Ectopoides*, *Hirtolabus*, *Hypomecus*, *Lamprojoppa*, *Lissolaboides*, *Pachyjoppa*, *Platybirmania*, *Pristicerops*, *Pristicerops*, *Rhyssolabus*, *Spanophatnus*), or with developed microsculpture, but shining – at *Notoplatylabus*, *Poecilostictus* (except of clypeus), to matt, with developed microsculpture – at *Acantholabus*, *Afrectopius*, *Heirichiellus*, *Linycus* and *Neolinycus*. The surface of face of *Pyramidophorus* is coriaceous, slightly shining. Sculpture and surface of clypeus are characterized by a considerable variety: without microsculpture of majority of genera (*Abzaria*, *Ambloplisus*, *Asthenolabus*, *Carlsonia*, *Clypeolabus*, *Cratolabus*, *Cyclolabus*, *Dentilabus*, *Ectopoides*, *Hirtolabus*, *Hypomecus*, *Lamprojoppa*, *Lissolaboides*, *Notoplatylabus*, *Pachyjoppa*, *Platybirmania*, *Pristicerops*, *Rhyssolabus*, *Spanophatnus*), or with microsculpture (*Acantholabus*, *Afrectopius*, *Linycus*, *Neolinycus*), to completely matt (*Afrectopius* and *Poecilostictus*). The surface of clypeus is usually punctured in varying degree, wrinkled, or wrinkly-punctured.

Thus, main tribal characters, which head of Platylabini possesses are the peculiarities of clypeus and mandibles morphology. As was already spoken, clypeus of Platylabini is strongly convex and slightly transversal, usually 1,5-2,5 times wider than height, with more or less straightened front margin and usually distinctly separated from face. The exception is representatives of *Clypeolabus*, *Poecilostictus* and *Platybirmania* with practically flat uniformly arch rounded from front clypeus and *Pyramidophorus* with wide slightly convex clypeus with distinct lateral corners and elevated at base and impressed apically clypeus of *Neeurylabia*. And only at *Clypeolabus*, the absence of character morphology of clypeus is compensated by mandibles character for tribe. At other four genera there are considerable divergences in morphology of mandibles from signs character for all the genera of the tribe. Theirs tribal belonging is compensated by tribal characters peculiar to other parts of a body. Mandibles structure of Platylabini is one of the main tribal character, usually slender, narrowed in different degree to apex, with delicate teeth, lower of which moved inside. The exceptions are the broad and massive mandibles of *Poecilostictus* and *Pyramidophorus*, sharply, almost at right angle curved in middle, massive mandible of *Platybirmania* and mandibles of *Neeurylabia* similar to mandible of many Eurylabini and Ichneumonini.

Thorax

Thorax is the richest in attributes part of Platylabini's body. For Platylabini convex mesothorax, considerably elevated above propodeum is characteristic.

Prothorax

Pronotum

Pronotum of Platylabini has no tribal characters and sufficiently conservative by morphology.

Collar of pronotum of representatives of majority genera is short – *Asthenolabus*, *Platybirmania*, *Rhyssolabus*, *Pachyjoppa*, *Neolinycus*, *Acantholabus*, *Carlsonia*, *Afrectopius*, *Cyclolabellus*, *Cratolabus*, *Cyclolabus*, *Dentilabus*, *Ectopius*, *Hypomecus*, *Notoplatylabus*, *Lyncus*, *Platylabus* and *Rhyssolabus*. Long from above collar is character to representatives of genera *Abzaria*, *Clypeolabus*, *Ectopoides*, *Lamprojoppa*, *Poecilostictus*, *Pristicerops*, *Pristicerops* and *Pyramidophorus*. Collar of genera *Spanophatnus*, *Lissolaboides*, *Ambloplisus*, *Apaeleticus*, *Hirtolabus* is estimated as moderately long.

Transversal furrow of pronotum of majority of genera is shallow. For representatives of *Lissolaboides*, *Acantholabus*, *Afrectopius*, *Cyclolabellus*, *Hypomecus* (moderately), *Lyncus*, *Platylabus*, *Poecilostictus*, *Spanophatnus* transverse furrow is deep. At species of genera *Apaeleticus* and *Notoplatylabus* transverse furrow of pronotum medially is interrupted by keel.

Pronotal ridge (upper margin of pronotum) of some genera demonstrates some unique characters. Thus, pronotal ridge of *Spanophatnus* and *Platybirmania* is thickened. At *Platybirmania* it is vastly swollen in front part, thus, that in a view from above, line almost perpendicular to longitudinal axis of a body is formed. In contrast the named genera, species of *Levensa* pronotal ridge not thickened at most sharp form and pronotum impressed laterally practically reaching border with mesonotum. Species of *Notoplatylabus* have pronotal ridge with longitudinal impression, practically furrow, with cellular sculpture along the border of mesonotum.

Pronotal base of majority of Platylabini is gradually sinuously curved. At *Dentilabus*, it is almost straight. At *Carlsonia*, *Afrectopius*, *Clypeolabus*, *Pristicerops*, *Cyclolabellus* and *Hypomecus*, it is regularly convex. At *Linytus* pronotal base is broken almost at right angle and in addition, at species of *Notoplatylabus*, at place of break in addition tooth-like projection above front coxae, character only to representatives of this genus is forming.

Epomiae of all Platylabini are expressed in varying degree. Only two known exception *Levansa* and *Neeurylabia*, epomiae of which is practically absent.

Mesothorax

Mesonotum

Mesonotum of Platylabini is always convex, strongly (*Carlsonia*, *Platybirmania*, *Acantholabus*, *Rhyssolabus*, *Spanophatnus*, *Neolinycus*, *Lissolaboides*, *Afrectopius*, *Lamprojoppa*, *Cyclolabus*, *Dentilabus*, *Hypomecus*, *Notoplatylabus*, *Linytus*, *Poecilostictus*, *Pristicerops*), or moderately (*Abzaria*, *Ambloplisus*, *Apaeleticus*, *Asthenolabus*, *Hirtolabus*, *Cyclolabellus*, *Clypeolabus*, *Ectopoides*, *Cratolabus*, *Ectopius*, *Platylabus*, *Pachyjoppa*, *Rhyssolabus*, *Pristicerops*, *Pyramidophorus*, *Heinrichiellus*), never flattened. Of most genera mesonotum is longer than width or equal to length and breadth. *Apaeleticus*, *Cyclolabellus*, *Ectopoides*, *Ectopius* and *Afrectopius*' mesonotum is wider than length.

Notauli of majority of Platylabini are not developed (*Asthenolabus*, *Platybirmania*, *Spanophatnus*, *Pachyjoppa*), or only just marked at base (*Abzaria*, *Acantholabus*, *Platybirmania*, *Pachyjoppa*, *Lissolaboides*, *Ambloplisus*, *Cyclolabellus*, *Cratolabus*, *Ectopius*, *Poecilostictus*, *Pristicerops*, *Pristicerops*, *Hirtolabus*). Notauli of *Rhyssolabus*, *Neolinycus*, *Clypeolabus*, *Ectopoides*, *Cyclolabus*, *Hypomecus*, *Platylabus* are sharp in front third. And at last, notauli of *Carlsonia*, *Lamprojoppa*, *Apaeleticus*, *Linytus*, *Afrectopius*, *Notoplatylabus* and *Heinrichiellus* are sharply expressed to middle and far than to middle of mesonotum. Notauli of *Notoplatylabus* and *Lamprojoppa* are at most sharp expression. One can see that sharply developed notauli are more characteristic for genera with circular or roundish spiracles. However, the contrary example is the genus *Heinrichiellus* and also *Lamprojoppa*, with sharply expressed, practically within all length of mesonotum notauli. Some Platylabini, such as species of *Notoplatylabus* have hypertrophied development of lateral furrow of mesonotum, and *Platybirmania* – development of latero-apical triangle projection on its external border are observed.

Surface of mesonotum of Platylabini is sculptured practically in all the variants. Most often, dense punctuation of mesonotum is found. The sparse punctuation is of species *Platybirmania* and *Ectopius*. Species of *Clypeolabus*, *Dentilabus* (densely) and *Linytus* have wrinkly-punctured surface. The surface with developed microsculpture is typical for species of *Asthenolabus*, *Neolinycus*, *Lissolaboides*, *Acantholabus*, *Dentilabus*, *Hypomecus*, *Notoplatylabus*, *Linytus*, *Poecilostictus* and *Pyramidodophorus*. *Afrectopius*'s surface of mesonotum is matt, with slight microsculpture. Species of *Asthenolabus*, *Neolinycus*, *Lissolaboides*, *Acantholabus*, *Dentilabus*, *Hypomecus*, *Notoplatylabus*, *Linytus*, *Poecilostictus* and *Pyramidodophorus* surface between punctures is smooth, shining, without microsculpture.

Prepectus (epicnemium) does not show any specific structures. Only in *Platybirmania* genus it is strongly impressed behind front coxae, and at *Pyramidodophorus* protrudes to

lateral surface in a considerably extent, thus, that its considerable part visible from lateral.

Axillary tongue is distinctly expressed and strongly developed at *Pyramidophorus*.

Mesopleurae

Subalarum varies in form from narrow to thickened in considerable extent. It is possible to mark out four structural variants of subalarum: **thick not sharpened** (*Abzaria*, *Spanophtus*, *Lissolaboides*, *Pristicerops*, *Pristiceros*, *Neolevansa*, *Pyramidodophorus* (in extreme form)), **moderately thick (normal) not sharpened** (*Platybirmania*, *Rhyssolabus*, *Neolinycus*, *Ambloplisus*, *Apaeleticus*, *Platylabus*, *Pristicerops*), **thin, not sharpened** (*Cyclolabellus*, *Carlsonia*, *Clypeolabus*, *Cratolabus*, *Dentilabus*, *Notoplatylabus*, *Rhyssolabus*, *Neolinycus*) and **thin, sharp** (*Asthenolabus*, *Pachyjoppa*, *Hirtolabus*, *Ectopoides*, *Lamprojoppa*, *Cyclolabus*, *Ectopius*, *Hypomecus*, *Linycus*). Peculiar structure of subalarum is marked in genus *Poecilostictus* subalarum of which very high, slightly bent upwards and forming deep cavity between subalarum and subalar tubercle.

Speculum of majority of genera is punctured, shining (*Asthenolabus*, *Rhyssolabus* (partially), *Hirtolabus*, *Ectopoides*, *Lamprojoppa*, *Cratolabus*, *Dentilabus*, *Ectopius*, *Hypomecus*, *Poecilostictus*, *Notoplatylabus*, *Linycus*, *Platylabus*, *Pristicerops*, *Rhyssolabus*, *Pachyjoppa*, *Pyramidodophorus*). At number of genera, it is sculpturated almost as other part of mesopleurae (*Spanophtus*, *Cyclolabellus*, *Clypeolabus*, *Apaeleticus*, *Cyclolabus*, *Poecilostictus*, *Pristiceros* (not expressed), *Lissolaboides*). At *Abzaria*, *Platybirmania*, *Pachyjoppa*, *Neolinycus*, *Ambloplisus*, *Carlsonia* and *Afrectopius* speculum is smooth and shining, at *Acantholabus* wrinkled.

Mesopleural fovea is more frequent deep, rarely slightly expressed (*Spanophtus*, *Neolinycus*, *Asthenolabus*). Distinctive character is description of the degree and size of area of mesopleural fovea impression. For example: area of mesopleural fovea narrowly and deeply impressed (*Pristiceros*, *Hirtolabus*), moderately impressed (*Platylabus*), broadly but not deeply impressed (*Linycus*), or area of mesopleural fovea slightly or only just impressed (*Asthenolabus*, *Neolinycus*, *Rhyssolabus*, *Ambloplisus*, *Spanophtus*).

Bend of lower part of mesopleurae of majority of genera is not sharp (*Pristicerops*, *Pyramidophorus*), or not expressed at all (*Linycus*, *Apaeleticus*, *Asthenolabus*, *Ectopius*, *Hypomecus*, *Notoplatylabus*, *Platylabus*, *Poecilostictus*, *Pristiceros*). Sharp bend to ventrally surface is at *Lamprojoppa*, *Lissolaboides* and *Pachyjoppa*.

Sternauli of Platylabini demonstrate all number of variability from sharply developed to middle coxae at *Heinrichiellus* and to two third of mesopleura length of *Apaeleticus* with sharply expressed transversal rugosity, to full lacking at *Abzaria*, *Spanophtus*, *Pachyjoppa*, *Lissolaboides*, *Hirtolabus*, *Pristicerops*, *Pristiceros*, and *Pyramidophorus*. Sternauli can be developed in front third or to middle of mesopleurae (*Cyclolabus*, *Dentilabus*, *Platylabus*, *Rhyssolabus*, *Neolinycus*, *Acantholabus*, *Carlsonia*, *Afrectopius*, *Clypeolabus*, *Ectopoides*, *Lamprojoppa*, *Cratolabus*, *Ectopius*, *Notoplatylabus* (crenulated and deeply impressed to middle), *Linycus*, *Rhyssolabus*), or only marked at base (*Asthenolabus*, *Platybirmania* (weakest impressions), *Ambloplisus*, *Cyclolabellus*, *Poecilostictus* (only just marked) and *Hypomecus*).

Sculpture of surface of mesopleurae is also very different. *Abzaria*'s mesopleurae are smooth with sparse superficial punctures, at *Carlsonia*, *Cratolabus*, *Ectopoides*,

Platybirmania, *Pristiceros* punctured without microsculpture, *Neolinycus*'s delicate-wrinkled, *Acantholabus*, *Hypomecus* (matt, below middle) *Poecilostictus* (of females) and *Rhyssolabus* – densely wrinkly-punctured without microsculpture, *Lamprojoppa* – roughly wrinkled without microsculpture, *Notoplatylabus* (of males vastly), *Asthenolabus*, *Lamprojoppa* and *Pachyjoppa* – longitudinally-wrinkled without microsculpture, *Spanophatnus* – roughly wrinkly-punctured and *Pyramidophorus* – irregularly wrinkly-punctured. Species of *Pristiceros* and *Pristicerops* have some parts of mesopleurae with developed white pubescence.

Scutellum of all Platylabini is convex and elevated above postscutellum in varying degree and commonly carinated, that is tribal character.

Scutellum from above varies in form from triangle as of *Linytus*, *Afrectopius*, *Ectopius*, *Cyclolabus*, *Ectopoides*, *Notoplatylabus* to sharply square of *Hypomecus*. Profile of scutellum from lateral varies from rounded (*Spanophatnus*, *Cratolabus*) to triangle (*Pristicerops*, *Lissolaboides*, *Pyramidophorus*) and conical (*Lamprojoppa*).

Scutellum, as a rule is high or moderately elevated above postscutellum. Only scutellum of species of *Abzaria*, *Asthenolabus*, *Neolinycus*, *Ambloplisus* and *Hirtolabus* is elevated comparatively slightly. From lateral scutellum can be straightly slanted (*Hypomecus*, *Lissolaboides*, *Platybirmania*), straightly (vertically) abrupt (*Pachyjoppa*, *Acantholabus*, *Afrectopius*, *Pachyjoppa*), or gradually fall to postscutellum (*Rhyssolabus* *Spanophatnus*, *Neolinycus*, *Hirtolabus*, *Carlsonia*, *Cyclolabellus*, *Clypeolabus*, *Ectopoides*, *Cratolabus*, *Linytus*, *Rhyssolabus*, *Pyramidophorus*).

Horizontal surface of scutellum is flat (*Acantholabus*) or almost flat (*Ambloplisus*), convex or slightly convex of species *Abzaria*, *Platybirmania*, *Rhyssolabus* (partially), *Spanophatnus*, *Neolinycus*, *Hirtolabus*, *Carlsonia*, *Afrectopius*, *Cyclolabellus*, *Clypeolabus*, *Ectopoides*, *Cyclolabus*, *Dentilabus*, *Ectopius*, *Notoplatylabus* (sharply at base), *Linytus*, *Platylabus*, *Poecilostictus*, *Pristiceros*, *Pristiceros* *Apaeleticus*, *Asthenolabus*, *Ectopoides*, *Rhyssolabus*, *Neeurylabia*, cone-shaped (*Lamprojoppa*) or with knoll (*Pachyjoppa*).

Surface of descending (vertical) part of scutellum of some genera can be matt (*Poecilostictus*) or shagreen (*Hypomecus*). Vertical surface of scutellum of *Lissolaboides* is with longitudinal rugosity.

Scutellum of overwhelming majority of Platylabini is carinated laterally. At species of *Platybirmania*, *Ambloplisus*, *Heinrichiellus*, *Neeurylabia*, *Neolevansa* and *Afrectopius* scutellum is carinated laterally and along hind border. Only at species of *Abzaria*, *Pyramidophorus*, *Levansa* and *Ectopoides* scutellum is not bordered by carinae.

Postscutellum of Platylabini is usually smooth with normally developed lateral foveae. The exception is species of *Notoplatylabus* and *Acantholabus* postscutellum of which with sharp longitudinal wrinkles, and also *Platybirmania*, with merged lateral foveae.

Metanotum

Hind margin of metanotum is either smooth (*Abzaria*, *Spanophatnus*, *Levansa*), or with projections opposite lateral longitudinal carinae (fig. 50-55). Projections of most genera are of triangle shape. Projections of *Carlsonia*, *Clypeolabus*, *Ectopoides*, *Poecilostictus*, *Cyclolabus*, *Cyclolabellus* and *Hirtolabus* are long, bacilliform. Strongly developed

triangle projections of *Pyramidophorus* are bent downwards, and bacilliform projections of *Hirtolabus* are strongly oblique inside.

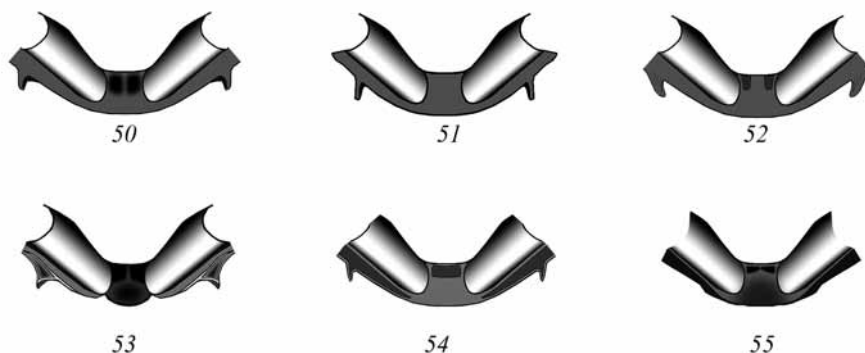


Fig. 50-55. Hind margin of metanotum: (50) *Clypeolabus curtitarsis*, (51) *Ectopoides brevicornis*, (52) *Hirtolabus alienoris*, (53) *Lamprojoppa coerulea*, (54) *Platybirmania acutinota*, (55) *Abzaria latipetiolaris*.

Propodeum

Propodeum of Platylabini is mostly reach by characters part of a body for identification of generic structure. Propodeum is more often of shortened form with considerably elevated (convex) «horizontal» part. The variety of propodeum morphology includes almost all variants, characteristic for all subfamily.

Profile of propodeum varies from broken type, also and not so evident as of Ichneumonini, to slanting backwards and almost triangular. The enough distinct angle-shaped profile is found in genera *Pachyjoppa*, *Ambloplisus*, *Afrectopius*, *Clypeolabus*, *Ectopoides*, *Lamprojoppa*, *Apaeleticus*, *Cratolabus*, *Cyclolabus* and *Lissolaboides*. Gradually curved backwards profile of propodeum is found in genera *Asthenolabus*, *Neolinycus*, *Lissolaboides*, *Carlsonia*, *Acantholabus*, *Dentilabus*, *Platylabus*, *Pristicerops*, *Pristicerops* and *Hypomecus*. Completely roundly-convex profile of propodeum is at *Pyramidophorus*, *Neeurylabia* and *Spanophatnus*. At *Notoplatylabus* propodeum is not shortened and slanted, and at *Lyncus*, *Neolinycus*, *Poecilostictus*, *Rhyssolabus* shortened and slanted and finally, at *Ectopius* and of males of *Pristicerops* propodeum is shortened and slanted in extreme form, triangular from lateral.

Horizontal part of propodeum of overwhelming majority of Platylabini is shorter than vertical: *Asthenolabus*, *Abzaria*, *Platybirmania*, *Rhyssolabus* *Pachyjoppa*, *Neolinycus*, *Acantholabus*, *Carlsonia*, *Afrectopius*, *Cyclolabellus*, *Pristicerops* *Clypeolabus*, *Ectopoides*, *Apaeleticus*, *Cyclolabus*, *Dentilabus*, *Hypomecus*, *Lyncus*, *Platylabus*, *Poecilostictus*, *Pristicerops*, *Pristicerops*, *Ectopius*, *Neolinycus* and *Pyramidophorus*. Horizontal part equal to vertical one is at *Lissolaboides*, *Ambloplisus*, *Lamprojoppa*, *Cratolabus*, *Notoplatylabus*. Only at *Hirtolabus* horizontal part of propodeum is longer than vertical.

Set of propodeum carinae is presented in genera of Platylabini by various combinations. Its characteristic is a good diagnostic character for determination of generic belonging. In genera *Acantholabus*, *Ectopoides*, *Apaeleticus*, *Cratolabus*, *Cyclolabus*, *Ectopius*, *Notoplatylabus*, *Poecilostictus*, *Pristicerops*, *Pristicerops*, parts of *Afrectopius* the set of carinae of propodeum is complete. The reduction of coxal carina is particular

for the most number of genera: *Abzaria*, *Asthenolabus*, *Rhyssolabus* *Pachyjoppa*, *Neolinycus*, *Lissolaboides*, *Ambloplisus*, *Hirtolabus*, *Carlsonia*, *Cyclolabellus*, *Clypeolabus*, *Lamprojoppa*, *Hypomecus*, *Lyncus*, *Levansa*, *Spanophatnus* and part of *Afrectopius*. Species of genera with reduced costula are on the second place: *Rhyssolabus* *Pachyjoppa*, *Ambloplisus*, *Hirtolabus*, *Cyclolabellus*, *Clypeolabus*, *Dentilabus*, *Afrectopius*, *Platylabus*, *Spanophatnus* and *Hypomecus* (in form of trace). At species of genera *Abzaria*, *Spanophatnus*, *Levansa* and parts of *Afrectopius* carinae of horizontal part of propodeum are atrophied. *Platybirmania* and *Ambloplisus* transverse carina between basal area and area superomedia is not developed (basal area and area superomedia merged). And, at last, for *Pyramidophorus* and *Neeurylabia* only pleural carina is distinctly developed.

Areas of propodeum in shape are subjected to considerable variability. For species of *Ambloplisus*, *Afrectopius* *Acantholabus*, *Asthenolabus*, *Cratolabus*, *Lissolaboides* area basalis is long, whereas in genera *Lamprojoppa*, *Dentilabus*, *Lyncus*, *Platylabus*, *Clypeolabus*, *Poecilostictus* *Cyclolabus*, *Pristicerops* area basalis is short and deep. At *Apaeleticus*, which similar habitually and by number of characters with some species of *Barichneumon* (Ichneumonini), basal area is with knoll (tooth). The shape of area superomedia and location of costulae are subjected to considerable variability. Area superomedia of *Pachyjoppa* and *Lamprojoppa*, its region of *Pyramidophorus* are high elevated above lateral fields or surrounding surface of horizontal parts of propodeum. At species of genera *Carlsonia*, *Clypeolabus*, *Cyclolabus*, *Dentilabus* (only just), *Lyncus*, *Platylabus*, *Poecilostictus*, *Pristicerops*, *Neolinycus* area superomedia is transversal (at *Ectopius* in extreme expression), especially at males. For *Asthenolabus*, *Platybirmania*, *Acantholabus*, *Ectopoides*, *Apaeleticus*, *Notoplatylabus*, *Pristicerops* area superomedia is equal by length to breadth. For species of *Afrectopius*, *Rhyssolabus* *Pachyjoppa*, *Ambloplisus*, *Hirtolabus*, *Cyclolabellus*, *Lamprojoppa*, *Cratolabus*, *Hypomecus* (square of males) area superomedia is longer than width. By form, area superomedia can be hexagonal (*Acantholabus*, *Carlsonia*, *Ectopoides*, *Apaeleticus*, *Cratolabus*, *Ectopius*, *Notoplatylabus*, *Pristicerops*, *Platybirmania* *Cyclolabus*, *Lissolaboides*, *Neolinycus*, *Poecilostictus*), quadrangular (*Asthenolabus*, *Dentilabus*, males of *Hypomecus*, *Platylabus*, *Pristicerops*), narrowed in front (*Platybirmania*, *Neolinycus*, *Lissolaboides*, *Carlsonia*, *Cyclolabus*), narrowed backwards (*Pachyjoppa*, *Cratolabus* *Lissolaboides*, *Acantholabus*, *Cyclolabellus*, *Lamprojoppa*, *Pristicerops* *Poecilostictus*), or roundly in front (*Rhyssolabus*, *Afrectopius*, *Cyclolabellus*, *Lyncus*, *Hypomecus*, *Pristicerops*). Costula, in case of its availability, can be situated before middle, in middle and behind middle of area superomedia.

The relevant value for generic structure of *Platylabini* is presence or absence of teeth at apices of areae dentiparae, and also theirs shape. We have tried to unify a nomenclature used for the description of this character.

Apex of area dentipara of species of genera *Pachyjoppa*, *Ambloplisus*, *Acantholabus*, *Lamprojoppa*, *Heinrichiellus*, part of *Afrectopius*, and of males *Dentilabus* is ended by strong, usually bend upwards **apophysis** (fig. 56-61). Area dentipara of majority of genera is with **strong tooth** (*Apaeleticus*, *Cratolabus*, *Cratolaboides*, of female *Dentilabus*, *Notoplatylabus*, *Ectopoides*, *Rhyssolabus*, *Platybirmania*, *Lissolaboides*, part *Afrectopius*), or **denticle** (*Neolinycus* (lamellate), *Hirtolabus*, *Carlsonia*, *Cyclolabellus*, *Clypeolabus*, *Cyclolabus*, *Hypomecus*, *Lyncus* (fig. 62-75)). Propodeum can have **lamellar broadening**

on place of apophyses (*Abzaria*, *Pyramidophorus*, *Pristicerops*) (fig. 76), or have no any teeth or projections (fig. 77-82).

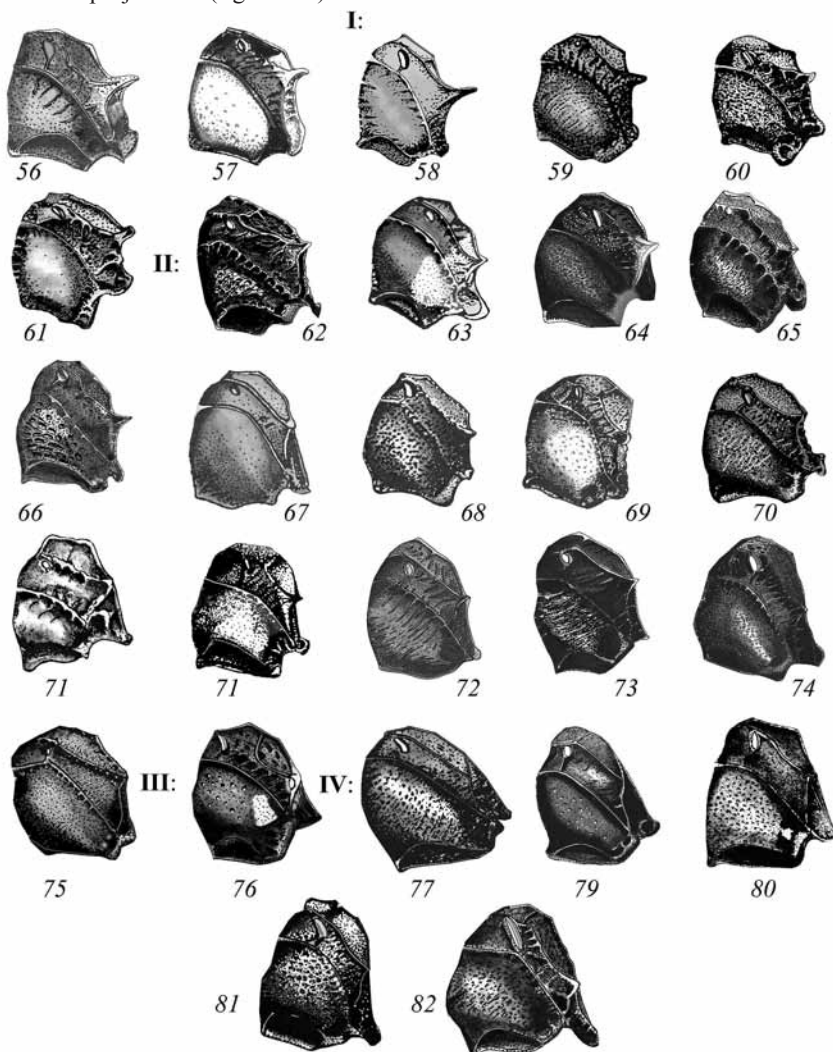


Fig. 56-82: Propodeum of Platylabini from lateral. **I – Apophysis:** (56) *Acantholabus malaisei*, (57) *Ambloplisus ornatus*, (58) *Heinrichiellus hildegardae*, (59) *Afrectopius seyrigi*, (60) *Lamprojoppa coerulea*, (61) *Pachyjoppa tibialis*. **II – Teeth:** (62) *Apaeleticus bellicosus*, (63) *Cratolabus insulindicus*, (64) *Dentilabus variegatus*, (65) *Notoplatylabus podolicus*, (66) *Ectopoides brevicornis*, (67) *Neolynicus michaelis*, (68) *Hirtolabus alienoris*, (69) *Lissolaboides flavorufus*, (70) *Clypeolabus curtitarsis*, (71) *Carlsonia perturbator*, (72) *Platybirmania acutinota*, (73) *Linyctus exhortator*, (74) *Cyclolabus nigricollis*, (75) *Hypomecus quadriannulatus*, (76) *Cyclolabellus pertenuis*. **III – Lamellar broadening:** (77) *Pristicerops infractorius*. **IV Without teeth and lamellar broadening:** (78) *Asthenolabus vitatorius*, (79) *Ectopius rubellus*, (80) *Platylabus rufus*, (81) *Poecilostictus cothurnatus*, (82) *Pristicerops serrarius*.

Spiracles

Morphology of Platylabini spiracles is the most important character used to delimit groups of genera. Unification and maximally definite description of this structure is rather a complicated task. Therefore, necessity of taxonomic illustrations preparation, first of all total drawings of imagines of ichneumon flies, is most obviously demonstrated with spiracles in Platylabini, and in Ichneumoninae in general, as well.

Practically all variants of spiracles shape, characteristic to representatives of subfamily, forming almost uninterrupted gradient from completely circular to slit-shape in extreme form can be found within Platylabini. Therefore, usage of spiracles morphology as tribal character is not obviously possible.

The terms used even by one author greatly differ (table 1), and this considerably complicates taxa identification. It is necessary to indicate size of spiracles in description, in addition to their shape. The attempt of linkage of the spiracles and any morphological structure by size binding is also ambiguous. In order to characterize spiracle size we used a ratio of spiracles length to the width of area spiraculifera at the point of its localization, that also is ambiguous. For example, spiracles occupying 0.5 and more of spiracle area width may be characterized as small (*Notoplatylabus*), moderate size (*Chypeolabus*, *Cratolabus*, *Pristicerops*, *Dentilabus*), and large (*Pachyjoppa*) (table 1), depending on propodeum morphology. More or less definitely, it is possible to characterize spiracles with length equal 0.4 width of field in the area of spiracle as "small".

Table 1.

Genus (species)	Length: width (external)	Length of spiracles: width of field	Terms in Heinrich's works	Accepted in work
<i>Afrectopius</i> (<i>seyrigi</i> HEINRICH)	1.1:1	0.3	spiracles small, almost circular	small, circular
<i>Cyclolabellus</i> (<i>pertenuis</i> HEINRICH)	1.0-1.2:1	0.4	klein und rund; [small and circular]	small, circular
<i>Cyclolabus</i> (<i>nigricollis</i> WESMAEL)	1.2:1	0.3	small and circular	small, circular
<i>Linycus</i> (<i>exhortator</i> FABRICIUS)	1.2:1	0.3	circular	small, circular
<i>Neolinycus</i> (<i>michaelis</i> HEINRICH)	1.2:1	0.4	very small, subcircular; very small, roundish	small, circular
<i>Ectopius</i> (<i>rubellus</i> GMELIN)	1.2:1	0.3		small, circular
<i>Apaeleticus</i> (<i>bellicosus</i> WESMAEL)	1.5:1	0.3(4)	small and circular	small, roundish
<i>Ectopoides</i> (<i>brevicornis</i> KRIECHBAUMER)	1.4:1	0.3(4)		small, roundish
<i>Notoplatylabus</i> (<i>podolicus</i> HEINRICH)	1.3:1	0.5	sehr klein und kreisrund [very small and roundish]	rather small, circular
<i>Cratolaboides</i> (<i>palpalis</i> TERESHKIN)	1.4:1	0.3		small, roundish
<i>Carlsonia</i> (<i>perturbator</i> HEINRICH)	1.7:1	0.4	very small, short-oval or almost circular	small, roundish

Genus (species)	Length: width (external)	Length of spiracles: width of field	Terms in Heinrich's works	Accepted in work
<i>Clypeolabus (curtitarsis)</i> HEINRICH)	1.3:1	0.5	kurz-oval [short-oval]	moderate size, longish-oval
<i>Hirtolabus (alienoris)</i> HEINRICH)	1.6(7):1	0.4	gross, breit-oval [large, short-oval]	moderate size (large), longish- oval
<i>Ambloplisus (ornatus)</i> CRESSON)	1.3:1	0.5	small, short-oval	large, longish- oval
<i>Rhyssolabus (bassicus)</i> TISCHBEIN)	1.4-2.4 (2.4:1)	0.6		large, longish- oval
<i>Acantholabus (malaisei)</i> HEINRICH)	1.6:1	0.55	elongated	large, longish- oval
<i>Platybirmania (acutnota)</i> HEINRICH)	1.9:1	0.6	gestreckt-oval [longish- oval]	moderate size, longish-oval
<i>Cratolabus (insulindicus)</i> HEINRICH)	2.0:1	0.5	deutlich länger als breit [distinctly longer than width]	moderate size, elongated
<i>Poecilostictus (cothurnatus)</i> GRAV.)	1.9:1	0.6	oval, ziemlich kurz [oval, rather short]	large, elongated
<i>Platylabus (rufus)</i> WESMAEL)	2.0:1	0.4	deutlich länger als breit [distinctly longer than width]	moderate size, elongated
<i>Pristicerops (infractorius)</i> LINNAEUS)	2.2:1	0.5		moderate size, elongated
<i>Hypomecus (quadriannulatus)</i> GRAV.)	2.0:1	0.5	oval	large, elongated
<i>Dentilabus (variegatus)</i> WESMAEL)	3.0:1	0.4(5)	gestreckt-oval [longish- oval]	moderate size, elongated
<i>Lissolaboides (flavorufus)</i> HEINRICH)	2.2:1	0.6	langgestreckt [long]	large, elongated
<i>Pyramidophorus (flavoguttatus)</i> TISCHBEIN)	1.8:1	0.6		large, long and broad
<i>Asthenolabus (vitatorius)</i> GRAVENHORST)	2.4:1	0.6	elongate elongated	large, long
<i>Spanophatnus (bicinctorius)</i> THUNBERG)	2.5:1	0.8	elongate, slit-shaped or oval elongated	large, broad, long, almost slit-shaped
<i>Abzaria (latipetolaris)</i> CAMERON)	2.4:1			large, broad slit-shaped
<i>Pristicerops (serrarius)</i> GRAVENHORST)	2.8:1	0.7		large, slit- shaped
<i>Pachyjoppa (tibialis)</i> CAMERON)	3.7:1	0.5		large, slit-shaped
<i>Lamprojoppa (caerulea)</i> CAMERON)	3.3:1	0.7		large, slit- shaped

In the description of this structure, there is an inconsistency between visual perception and description based on measurements. Thus, spiracles length in *Carlsonia* 2.0-1.7 times exceeds their width and, basing on this, they may be defined as longish-oval (short-

oval or almost circular by HEINRICH). At the same time, length of spiracles in related genera, such as *Linytus*, *Neolinytus*, *Cyclolabus*, only 1.2 times exceeds their width and the spiracles may be defined as circular. On the other hand, spiracles of *Hirtolabus* and *Acantholabus* are 1.6-1.7 times longer than width and are defined by us as longish-oval (broad-oval and elongated, respectively, after HEINRICH); spiracles of *Poecilostictus* are almost twice longer than width (oval, rather short, after HEINRICH) and are defined as elongated by us (fig. 100). Therefore, the proposed classification of spiracles has compromise nature. As an example, we qualify spiracles of *Carlsonia* as roundish, in spite of their measurements (length considerably exceeding width, fig. 92). The most objective notion of spiracles types is provided with graphic presentation (figs 83-107).

Spiracles of Platylabini perform practically continuous gradient both in size and in shape. Considerable differences between measurements fulfilled with respect to external or internal contour of this structure are observed. Thus, for spiracles, defined by us as slit-shaped, length measured made at internal contour considerably exceeds width, contrary to measurements on an external contour. We united spiracles in six groups according to their shape: **circular**, length at external contour exceeds width not more than 1.2 times (*Afrectopius*, *Cyclolabellus*, *Cyclolabus*, *Linytus*, *Neolinytus*, *Ectopius*), **roundish**, length exceeds width 1.3 to 1.5 times. (*Apaeleticus*, *Notoplatylabus* and, as exception, *Ectopoides*, *Carlsonia* and *Cratolaboides*), **longish-oval**, length exceeds width 1.4 to 1.9 times (*Clypeolabus*, *Hirtolabus*, *Ambloplisus*, *Rhyssolabus*, *Acantholabus*, *Platybirmania*), **elongate**, length exceeds the width of spiracles from 1.9 to 3 times or less, but parallel sided (*Neeurylabia*), **long**, length exceeds width 2.4 times (*Asthenolabus*) and **slit-shaped**, with length exceeding width 2.8 to 3.7 times (*Pristicerops*, *Lamprojoppa*, *Pachyjoppa*, *Neolevansa*). Such species as *Spanophatnus bicinctorius*, *Abzaria latipetiolaris* are apart from others. Theirs spiracles can be defined as long, broad, almost slit-shaped. Large, long and broad spiracles of *Pyramidophorus flavoguttatus* are also apart from the mentioned groups of spiracles.

Thus, division of Platylabini into groups becomes possible when using spiracles shape combined with their dimensional characteristics. The groups of spiracles types with respect to their shape are presented in figs. 83-107. Conditionally, they can be divided into following groups: **circular or roundish** (small as a rule), **longish-oval**, **elongated**, **long and slit-shape** (large to very large).

Surface of propodeum is characterized by various sculpture, more often wrinkled, or wrinkly-punctured, without microsculpture (only at *Neolinytus* finely coriaceous). In *Lissolaboides*, *Afrectopius*, *Cratolabus*, *Ectopius*, *Hypomecus*, *Linytus*, *Platylabus* (superficially), *Pristicerops* and *Cyclolabus* surface of propodeum is wrinkled, in *Asthenolabus*, *Platybirmania*, *Acantholabus*, *Cyclolabellus*, *Clypeolabus*, *Dentilabus*, *Poecilostictus* and *Pristicerops*, wrinkly-punctured. Finely wrinkled sculpture is characteristic to *Neolinytus* and *Platylabus*. Cellular or cellular-wrinkled sculpture of propodeum is peculiar to *Pachyjoppa*, *Carlsonia*, *Ectopoides*, *Apaeleticus*, *Notoplatylabus*, *Hirtolabus*, *Lamprojoppa*, *Pyramidophorus* and *Rhyssolabus*, reticulate sculpture is for *Spanophatnus* and *Neeurylabia*. Sculpture of propodeum of genus *Clypeolabus* can be characterized as roughly punctured. Surface of propodeum of genera *Abzaria* and *Lissolaboides* is smooth, shining.

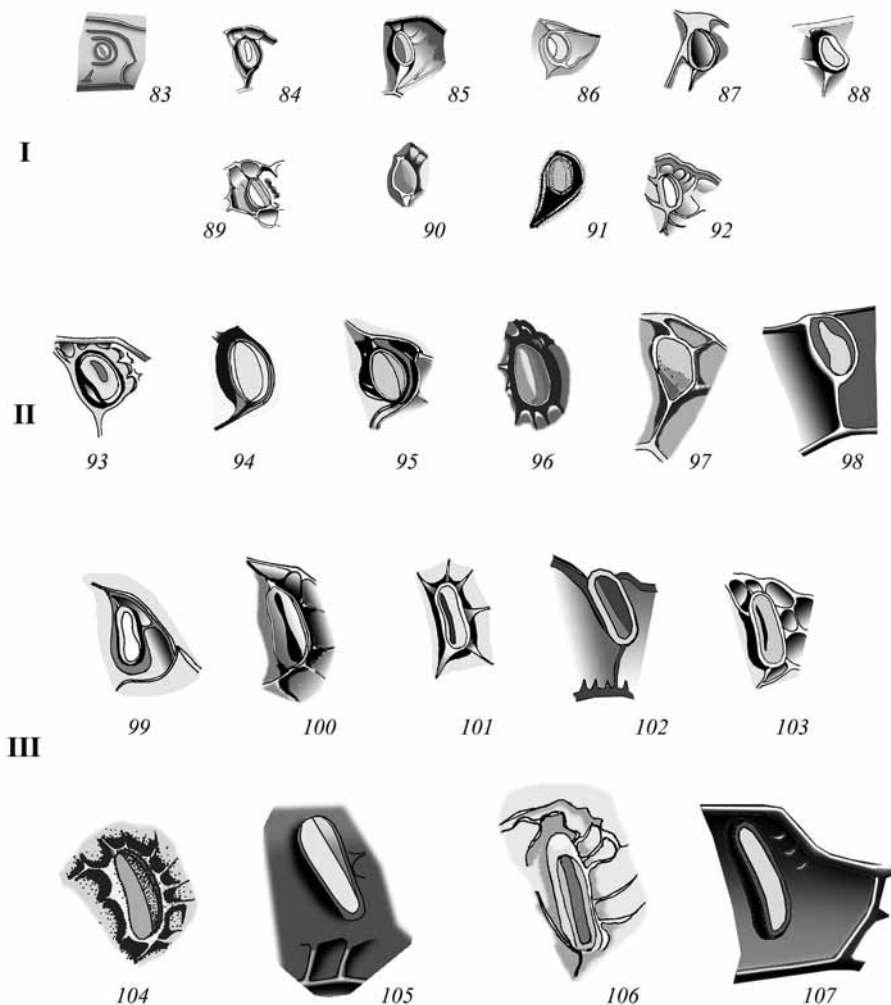


Fig. 83-107. Types of propodeum spiracles. **I – circular or roundish:** (83) *Afrectopius seyrigi*, (84) *Cyclolabellus pertenuis*, (85) *Cyclolabus nigricollis*, (86) *Linycus exhortator*, (87) *Neolinycus michaelis*, (88) *Ectopius rubellus*, (89) *Apaeleticus bellicosus*, (90) *Ectopoides brevicornis*, (91) *Notoplatylabus podolicus*, (92) *Carlsonia perturbator*; **II - longish-oval:** (93) *Clypeolabus curtitaris*, (94) *Hirtolabus alienoris*, (95) *Ambloplisus ornatus*, (96) *Rhyssolabus bassicus*, (97) *Acantholabus malaisei*, (98) *Platybirmania acutinota*; **III elongated:** (99) *Cratolabus insulindicus*, (100) *Poecilostictus cothurnatus*, (101) *Hypomecus quadriannulatus*, (102) *Dentilabus variegatus*, (103) *Lissolaboides flavorufus*; **IV long to slit-shape:** (104) *Spanophatnus bicinctorius*, (105) *Abzaria latipetiolaris*, (106) *Pachyjoppa tibialis*, (107) *Lamprojoppa caerulea*.

Surface of propodeum of Platylabini is without microsculpture. The exception is matt surface of propodeum of *Pachyjoppa*. Propodeum of *Pristicerops*, *Hirtolabus* and of males of *Pristicerops* is with pubescence.

Metapleurae, as a rule, are differed by sculpture from other parts of propodeum. Metapleurae of *Platybirmania*, *Lissolaboides*, *Platylabus*, *Ectopius* are superficially punctured, in genera *Pachyjoppa*, *Clypeolabus*, *Lamprojoppa*, *Hypomecus* roughly, and in *Acantholabus*, *Hirtolabus*, *Cyclolabellus*, *Ectopoides*, *Dentilabus*, *Cyclolabus*, *Pyramidophorus*, wrinkle-punctured. Wrinkled in different degree surface of metapleurae is typical for genera of *Afrectopius*, *Apaeleticus*, *Notoplatylabus*, *Linytus*, *Carlsonia* and *Lamprojoppa*. Metapleurae of *Pristicerops*, *Pristicerops*, *Pachyjoppa*, *Poecilostictus* are punctured in different degree. *Neolinytus*' surface of metapleurae is delicate wrinkled, coriaceous.

Thus, convex in different degree mesothorax, convex, as a rule, carinated scutellum and propodeum with convex, not flattened horizontal surface elevated in the area of area superomedia are typical for thoracal region of Platylabini. The combination of these characters can be considered as tribal.

Legs

The legs of majority of Platylabini can be characterized as slender. For genera *Lamprojoppa*, *Lissolaboides*, *Neolinytus*, *Platybirmania*, *Pristicerops*, *Pristicerops* they can be characterized as long and slender. Very long legs have *Acantholabus*, *Afrectopius* and *Heinrichiellus* (extensively). *Ambloplisus*, *Cyclolabellus*, *Ectopius* and *Rhyssolabus* have moderately thick legs. Strong legs have species of genera *Apaeleticus*, *Hirtolabus*, *Abzaria*, *Pachyjoppa* and *Poecilostictus*. Apart are species of *Neolevansa* and *Neeurylabia* with strong legs and thickened femora and segments of tarsi.

Coxae of hind legs of majority of genera are normal, females' always without scopa. Only *Acantholabus*' hind coxae are distinctly elongated.

Femora of hind legs of *Asthenolabus* are thickened. Hind femora of *Notoplatylabus* from outside are with impressed area (impression), and the hind femora of specific genus *Heinrichiellus* are long, sharply narrowed at base and at apex and uniformly thickened in the middle part.

Tarsi of majority of genera do not have any specific peculiarities. Only *Carlsonia* has shortened and thickened hind tarsi of females, hind tarsi of females *Pyramidophorus* are thickened, and of females *Neolevansa* shortened and thickened extensively. Segments of tarsi of all legs of females of *Abzaria* are ventrally flattened and uniformly covered by very dense short bristles. Similar peculiarity is typical for *Poecilostictus*, *Neolevansa* and *Neeurylabia* which have segments of front and middle tarsi with flattened area ventrally, surface of which is slightly differ by structure. First segment of hind tarsus (metatarsus) of *Cratolabus* from lateral is slightly curved. Segments of hind tarsi of *Neeurylabia* are sharply thickened and shortened. And, at last, for *Acantholabus* long and thin segments of all of tarsi are typical.

Claws of tarsi are smooth. The only exception is genus *Pyramidophorus* with thick, slightly pectinated at base claws of females tarsi. *Cyclolabus*, *Ectopoides* and *Rhyssolabus* have thick claws. Long and slightly curved claws are typical for *Acantholabus*, *Dentilabus*, *Hirtolabus*, *Lissolaboides*, *Notoplatylabus*, *Pachyjoppa* and

Poecilostictus and strongly curved are typical for *Cratolabus*, *Afrectopius*, *Lamprojoppa* and *Platybirmania*. The claws of *Notoplatylabus*, *Asthenolabus*, *Linycus*, *Pristicerops* are thin, strongly curved almost at right angle.

Thus, such characters as thin, slender (long) legs, absence of scopa on hind coxae of females and smooth claws with only exception of *Pyramidophorus flavoguttatus* Tischbein are possible to be treated as tribal.

Wings

M o r p h o l o g y of areolet, sinuosity of radius, position of nervulus to comparison of basal vein, presence or absence of ramulus on discocubital vein, morphology and coloration of stigma, an extent of transparence and coloration of wings membrane are the most important attributes when describing morphology of wings, first of all front wings.

Proportions of a body of majority of Platylabini are differed from representatives of other tribes, not only by more long flagellum, but also by sizes of wings in comparison with body length. One of the most important characters is ratio of length of front wing and the whole length of body because the majority of representatives of tribe are characterized by comparatively longer and more often by broader wings in comparison with the representatives of other tribes.

Length of front wing of representatives of genus *Pachyjoppa* and of many of *Platylabus* is practically equal to body length. In genera *Acantholabus*, *Ambloplisus*, *Chypeolabus*, *Cratolabus*, *Cyclolabellus*, *Ectopius*, *Lamprojoppa*, *Linycus*, *Poecilostictus*, *Pristicerops* and *Pyramidophorus* length of front wing is almost equal to length of body or shorter its only 1,1-1,2 times. For representatives of other genera (*Abzaria*, *Afrectopius*, *Apaeleticus*, *Asthenolabus*, *Carlsonia*, *Cyclolabus*, *Dentilabus*, *Heinrichiellus*, *Ectopoides*, *Hirtolabus*, *Hypomecus*, *Lissolaboides*, *Neolinycus*, *Notoplatylabus*, *Platybirmania*, *Rhyssolabus*, *Spanophatnus*) length of front wing is shorter than body length not more than 1,3-1,4 times.

M o r p h o l o g y of wing of the tribe representatives, like as other Ichneumoninae is rather conservative.

Areolet and its morphology is one of essential characteristic when dividing Platylabini as on specific as on generic level. In spite of all universality of the description of characters, even in works of G. HEINRICH some heterogeneity is observed at the description of structure of areolet. The following terms for areolet designation are used: quadrangular, rhomboidal, pentagonal, sessile, petiolate, regular and irregular form et al.

In investigated by us genera of Platylabini, all forms of areolet except of rhomboidal in our interpretation, i.e. areolet with all veins equal by length, are recorded (fig. 108-137).

Pentagonal areolet is usually typical for species with circular or elongated-oval spiracles. The only exception is *Spanophatnus* and *Heinrichiellus*, belonging of which to Platylabini by number of characters is not definite. Symmetrical pentagonal areolet narrow in front is peculiar to relative genera *Apaeleticus (bellicosus)* – 108 and *Ectopoides (brevicornis)* – 109, with wide base and to *Rhyssolabus (bassicus)* – 110. Asymmetrical pentagonal areolet to *Ectopius (rubellus)* – 111, *Heinrichiellus (hildegardae)* – 112, *Carlsonia (perturbator)* – 113, *Spanophatnus (bicinctorius)* – 114 and *Linycus (exhortator)* – 115.

Quadrangular not petiolate areolet is most typical for tribe representatives. **Symmetrical** areolet is rarely found among *Asthenolabus* (*vitatorius*) – 116, *Chypeolabus* (*curtitaris*) – 117, *Cratolabus* (*insulindicus*) – 118, *Afrectopius* (*seyrigi*) – 119, *Hypomecus* (*quadriannulatus*) – 120, *Platylabus* (*rufus*) – 121, *Acantholabus* (*malaisei*) – 122, *Abzaria* (*latipetiolaris*) – 123. **Asymmetrical** areolet with intercubital veins of different length is found more often: *Dentilabus* (*variegatus*) – 124, *Lissolaboides* (*flavorufus*) – 125, *Pachyjoppa* (*tibialis*) – 126, *Pyramidophorus* (*flavoguttatus*) – 127, *Ambloplisus* (*ornatus*) – 128, *Pristicerops* (*infractorius*) – 129 and *Cyclolabellus* (*pertenuis*) – 130 and veins of areolet apex of different length: *Dentilabus* (*variegatus*) – 124, *Hirtolabus* (*alienoris*) – 131, *Poecilostictus* (*cothurnatus*) – 132, *Ambloplisus* (*ornatus*) – 128, *Pristicerops* (*infractorius*) – 129, *Cyclolabus* (*nigricollis*) – 133, *Lamprojoppa* (*coerulea*) – 134, *Lissolaboides* (*flavorufus*) – 125, *Pachyjoppa* (*tibialis*) – 126, *Pristicerops* (*serrarius*) – 135, *Neolynicus* (*michaelis*) – 136, *Notoplatylabus* (*podolicus*) – 137.

Quadrangular petiolate areolet is registered in genera *Platybirmania* (*acutinota*) – 138 and *Ambloplisus* (*primus*) (see HEINRICH 1930).

Radius, more correctly its section from areolet to apex, is straight at *Acantholabus*, *Carlsonia*, *Cyclolabus*, *Heinrichiellus*, *Linytus*, *Neolinytus* and parts of *Platylabus*. For majority of Platylabini slightly sinuous radius is typical (*Abzaria*, *Afrectopius*, *Ambloplisus*, *Asthenolabus*, *Chypeolabus*, *Cratolabus*, *Cyclolabellus*, *Dentilabus*, *Hirtolabus*, *Hypomecus*, *Lamprojoppa*, *Lissolaboides*, *Notoplatylabus*, *Poecilostictus*, *Pristicerops*, *Pristicerops*, *Pyramidophorus*, *Rhyssolabus* and parts of *Platylabus*). At *Spanophatnus*, radius is curved at apex. For most part of genera radius is long. Short radius is typical to relative genera with circular or roundish spiracles – *Apaeticus*, *Carlsonia*, *Cyclolabus*, *Ectopius*, *Ectopoides* and *Neolinytus*.

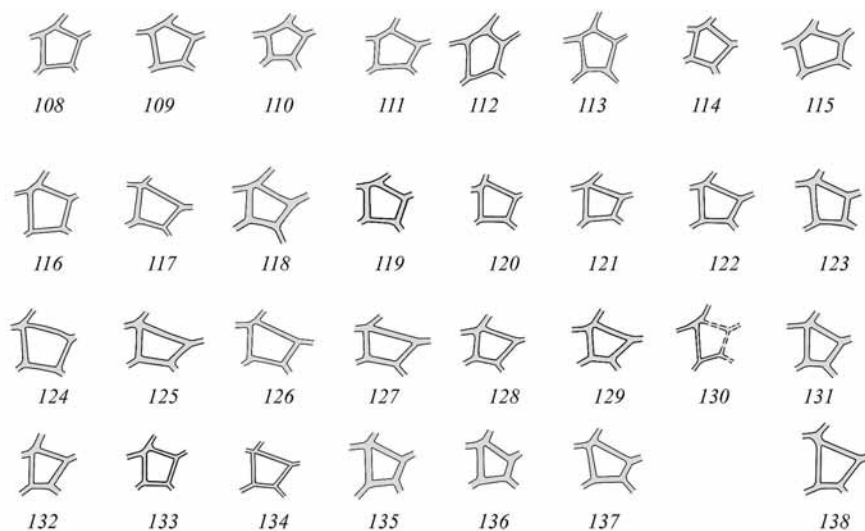


Fig. 108-137: Types of areolet: pentagonal (108–115); quadrangular not petiolate (116–137); quadrangular petiolate (138) (designations are in the text).

Nervulus of most parts of genera is interstitial (*Abzaria*, *Acantholabus*, *Afrectopius*, *Ambloplisus*, *Apaeleticus*, *Asthenolabus*, *Carlsonia*, *Clypeolabus*, *Cratolabus*, *Cyclolabellus*, *Cyclolabus*, *Dentilabus*, *Ectopius*, *Heinrichiellus*, *Hirtolabus*, *Hypomecus*, *Lamprojoppa*, *Linytus*, *Lissolaboides*, *Neolinycus*, *Notoplatylabus*, *Platybirmania*, *Poecilostictus*, *Pristicerops*, *Pristicerops*). Rarely, nervulus is slightly postfurcal (*Cyclolabellus*, *Ectopoides*) or distinctly postfurcal (*Pachyjoppa*, *Pyramidophorus*, *Rhyssolabus*). Only at *Spanophtatus* (*bicinctorius*) it is slightly, but distinctly antifurcal.

Ramulus (ramellus according to HEINRICH and RICHARDS) is developed as a rule. For *Ambloplisus*, *Apaeleticus*, *Asthenolabus*, *Carlsonia*, *Clypeolabus*, *Cyclolabellus*, *Cyclolabus*, *Heinrichiellus*, *Ectopoides*, *Ectopius*, *Lissolaboides* and *Pristicerops* it is only marked, at *Cratolabus*, *Dentilabus*, *Hirtolabus*, *Hypomecus*, *Neolinycus*, *Notoplatylabus*, *Platybirmania*, *Pyramidophorus* and *Rhyssolabus* distinct and at *Abzaria*, *Lamprojoppa*, *Pachyjoppa*, *Pristicerops* and *Spanophtatus* very long, in comparison with representatives of other genera. Full absence of ramulus is marked in genera *Acantholabus*, *Afrectopius*, *Linytus* and *Poecilostictus*.

Stigma of Platylabini is differ by sizes and coloration. For *Acantholabus*, *Ambloplisus*, *Apaeleticus*, *Asthenolabus*, *Cyclolabellus*, *Cyclolabus*, *Ectopius*, *Ectopoides*, *Linytus*, *Neolinycus*, *Notoplatylabus*, *Platybirmania*, *Pristicerops*, *Spanophtatus* it is broad. For *Abzaria*, *Afrectopius*, *Carlsonia*, *Clypeolabus*, *Cratolabus*, *Heinrichiellus*, *Dentilabus*, *Hypomecus*, *Lamprojoppa*, *Lissolaboides*, *Pachyjoppa*, *Poecilostictus*, *Pristicerops*, *Pyramidophorus*, *Rhyssolabus* it is narrow. For representatives of majority of genera stigma is dark.

Membrane of wing of overwhelming majority of genera is hyaline. For *Abzaria* and *Pristicerops* it is yellowish and for *Pachyjoppa* it is intensively yellow with darkened apex, and for *Neeurylabia* hyaline with darkened apex.

Veins of wings of majority of genera are dark-colored.

From examined genera of Platylabini, the wing of *Spanophtatus* differs greatly from character to the tribe, having pentagonal areolet along with sharply curved at apex radius, antifurcal nervulus and very long ramulus. That testifies, along with other characters about doubtful belonging of the genus to Platylabini.

Thus, wings of Platylabini are more often long and broad with respect to the body in comparison with representatives of other tribes. Only this character can be defined as tribal.

Abdomen

Shape of abdomen

Shape of abdomen of Platylabini is very diverse. Most common shape of abdomen from above can be described as longish-oval (*Abzaria*, *Rhyssolabus*, *Pachyjoppa*, *Neolinycus*, *Acantholabus*, *Hirtolabus*, *Afrectopius*, *Cyclolabellus*, *Asthenolabus*, *Dentilabus*, *Ectopius*). Form of abdomen of *Cyclolabus* and *Hypomecus* can be qualified as fusiform. Abdomen of *Lissolaboides* from above is long-conical, of *Platybirmania* narrowed backwards from middle and of *Afrectopius* (*seyrigi*) and *Linytus* rhomboidal from above. Species of some genera (*Carlsonia*, *Ectopoides* (males)) have parallel sided form of abdomen. Form of abdomen of *Neolevansa* can be qualified as longish-drop-shaped.

Abdomen of *Spanophatnus*, *Neolinycus*, *Ambloplisus*, *Acantholabus*, *Hirtolabus*, *Cyclolabellus*, *Clypeolabus*, *Lamprojoppa*, *Asthenolabus* is flattened dorso-ventrally. Abdomen of *Abzaria* is strongly sclerotized, segments are sharply separated.

Form of second tergite is one of the most important characteristic of abdomen form. More often second tergite of abdomen is transversal, shorter than breadth at apex (*Abzaria*, *Platybirmania*, *Rhyssolabus*, *Spanophatnus*, *Pachyjoppa*, *Neolinycus*, *Hirtolabus*, *Clypeolabus*, *Lamprojoppa*, *Lyncus*, *Apaeleticus*, *Asthenolabus* (only just), *Cyclolabus*, *Dentilabus*, *Ectopius*). Second tergite of abdomen with equal length and breadth is peculiar to *Afrectopius*, *Cyclolabellus*, and *Ectopoides*. Longer than width at apex second tergite is peculiar to *Ambloplisus*, *Acantholabus*, *Carlsonia* and *Hypomecus*.

Apex of abdomen can be compressed from sides (*Platybirmania*), or dorso-ventrally (*Lamprojoppa*), or truncated (*Apaeleticus*). Apical tergites of abdomen are usually well seen from above, but *Spanophatnus*, *Clypeolabus*, *Lyncus* and especially *Apaeleticus* have hidden apical tergites of abdomen.

First tergite

Petiolus of first tergite, as a rule is flattened at base. That is the major tribal character of Platylabini. However, for some representatives of some genera petiolus at the base is only slightly flattened (*Platybirmania*, *Lissolaboides*, *Ambloplisus*, *Carlsonia*, *Afrectopius*, *Apaeleticus*, *Asthenolabus*), or not flattened at all (*Ectopoides*, *Apaeleticus*, *Hypomecus*, *Heinrichiellus*). In such cases a combination of characters have crucial importance at definition of tribal belonging. The form of the first tergite from lateral is of essential value for the characteristic of Platylabini. For *Ectopius* and *Heinrichiellus* first tergite from lateral is almost straight, for majority (*Platybirmania*, *Spanophatnus*, *Neelyrabilia*, *Neolevansa*, *Lissolaboides*, *Ambloplisus*, *Acantholabus*, *Hirtolabus*, *Afrectopius*, *Cyclolabellus*, *Ectopoides*, *Lyncus*, *Asthenolabus*, *Dentilabus*, *Hypomecus*) first tergite is with gradual bend to postpetiolus, for representatives of number of genera first tergite is with sharp, sometimes angleform bend to postpetiolus (*Rhyssolabus*, *Pachyjoppa*, *Carlsonia*, *Clypeolabus*, *Lamprojoppa*, *Apaeleticus*, *Cyclolabus*). **Dorsomedian** and **dorsolateral carinae** of first tergite are usually merged near of the bend to postpetiolus. The exceptions are representatives of the genera *Cyclolabus* and *Dentilabus*, dorsomedian and dorsolateral carinae of which are merged in the middle of petiolus, *Cratolaboides* nov. gen. dorsolateral carina of which merge with dorsomedian carina below middle of petiolus and *Lyncus* dorsomedian and dorsolateral carinae of which are merged not far from base of tergite. **Dorsolateral** and **ventrolateral carinae of petiolus** of representatives of most of the genera are sharp (*Abzaria*, *Platybirmania*, *Rhyssolabus*, *Pachyjoppa*, *Ambloplisus*, *Hirtolabus*, *Carlsonia*, *Cyclolabellus*, *Clypeolabus*, *Ectopoides*, *Apaeleticus*, *Cyclolabus*, *Dentilabus*, *Ectopius*), sometimes only dorsolateral carina is sharply expressed, while ventrolateral only distinct, but not sharp (*Lissolaboides*, *Afrectopius*, *Asthenolabus*). In some genera ventrolateral carinae are practically not expressed (*Lamprojoppa*, *Hypomecus*, *Heinrichiellus*).

Lateral surface by structure varies from smooth of *Acantholabus*, *Asthenolabus*, *Heinrichiellus*, *Hypomecus* to cellular-wrinkled of *Dentilabus*, *Pyramidophorus* and almost cellular of *Rhyssolabus*. At *Abzaria*, *Ambloplisus*, *Apaeleticus*, *Clypeolabus*, *Cratolabus*, *Pachyjoppa* lateral sides of petiolus are sculptured by slight ribs. At *Lyncus*, *Carlsonia*, *Hirtolabus*, *Lamprojoppa*, *Platylabus*, *Poecilostictus*, *Pristicerus* lateral sur-

face of petiolus is sculpturated by sharp ribs. Slightly wrinkled lateral surface of petiolus is marked in *Afrectopius*, *Cyclolabus*, *Ectopoides*, *Notoplatylabus*, *Platybirmania*, *Pristicerops* and *Spanophatnus*.

Postpetiolus of first tergite from above is sharply broadened in *Platybirmania*, *Hirtolabus*, *Ectopoides*, *Lamprojoppa*, *Dentilabus*, *Heinrichiellus* and *Hypomecus*. For *Apaeeticus* postpetiolus from above is sharply, but gradually broadened. In species of *Cyclolabus*, *Ectopius*, *Cratolaboides* petiolus is gradually transformed to postpetiolus and postpetiolus of *Abzaria*, *Rhyssolabus*, *Neolinycus*, *Lissolaboides*, *Ambloplisus*, *Acantholabus*, *Carlsonia*, *Afrectopius*, *Cyclolabellus*, *Clypeolabus*, *Asthenolabus* is slightly and gradually broadened from above. In some genera, contrary to the majority of Ichneumoninae **distance between spiracles** is less than the distance from spiracles to apex of tergite (*Pachyjoppa*, *Lissolaboides*, *Lissolaboides*), or equal to distance from spiracles to apex of tergite (*Clypeolabus*, *Lamprojoppa*). **Middle field of postpetiolus** is high elevated and sharply carinated (*Platybirmania*, *Acantholabus*, *Carlsonia*, *Cyclolabus*), distinctly elevated, but not sharply carinated (*Cyclolabellus*, *Lamprojoppa*). Middle field of postpetiolus of *Apaeeticus* and *Hypomecus* is not carinated, but distinctly elevated. Slightly elevated and not carinated middle field of postpetiolus is of *Abzaria*, *Rhyssolabus*, *Spanophatnus* *Pachyjoppa*, *Neolinycus*, *Hirtolabus*, *Clypeolabus*, *Dentilabus*. Middle field of *Ectopoides*, *Asthenolabus*, *Spanophatnus*, *Lissolaboides*, *Ambloplisus* and *Ectopius* is not expressed. For most genera with expressed middle field, their breadth is wider than lateral fields (*Platybirmania*, *Rhyssolabus*, *Neolinycus*, *Lissolaboides*, *Acantholabus*, *Carlsonia*, *Afrectopius*, *Cyclolabellus*, *Clypeolabus*, *Lamprojoppa*, *Apaeeticus*, *Dentilabus*, *Hypomecus*, *Heinrichiellus*). *Hirtolabus* and *Cyclolabus* have equal or broader than lateral fields middle field. The surface of middle field of postpetiolus is smooth for *Pachyjoppa*, *Neolinycus*, *Lissolaboides*, *Ambloplisus*, *Clypeolabus*, punctured for *Ectopoides* and *Apaeeticus*, wrinkled for *Acantholabus*, *Hirtolabus*, *Carlsonia*, *Afrectopius*, *Cyclolabellus*, *Asthenolabus*, *Dentilabus*, *Hypomecus*, smooth, shining with large wrinkles and punctures for *Abzaria*. The middle field of *Rhyssolabus* postpetiolus is roughly-wrinkled, surface of middle field of postpetiolus at the representatives of *Neolinycus*, *Lamprojoppa*, *Cyclolabus* is coriaceous.

Second tergite

Gastrocoeli and thyridia, theirs size and form are important taxonomic characters of Platylabini both on specific, and generic level. For most of genera of Platylabini **gastrocoeli** are **deep** (*Platybirmania*, *Rhyssolabus*, *Pachyjoppa*, *Ambloplisus*, *Hirtolabus*, *Carlsonia*, *Cyclolabellus*, *Clypeolabus*, *Lamprojoppa*, *Apaeeticus*, *Cyclolabus*, *Dentilabus*), rarely **slightly impressed** (*Abzaria*, *Spanophatnus*, *Neolinycus*, *Lissolaboides*, *Acantholabus*, *Ectopoides*, *Asthenolabus*,) or **superficial** (*Afrectopius* and *Hypomecus*). Specific in form gastrocoeli, **in form of narrow oblique longitudinal furrow** are peculiar to *Afrectopius*, *Ectopius*, *Heinrichiellus*, or gastrocoeli in a form of only just visible oblique impression at the base of second tergite are peculiar to *Neeurylabia*. Gastrocoeli can be **short** with thyridia (if developed) situated **near base of second tergite** (*Abzaria*, *Platybirmania*, *Rhyssolabus*, *Spanophatnus*, *Pachyjoppa*, *Ambloplisus*, *Clypeolabus*, *Lamprojoppa*, *Apaeeticus*, *Cyclolabus*, *Dentilabus*), or **long**, with thyridia remote from the base of tergite (*Lissolaboides*, *Acantholabus*, *Hirtolabus*, *Carlsonia*, *Afrectopius*,

Cyclolabellus, *Ectopoides*, *Hypomecus*). In number of genera gastrocoeli and thyridia can be **transverse, perpendicular to longitudinal axis** of a body (*Platybirmania*, *Rhyssolabus*, *Neolinycus*, *Cyclolabellus*, *Cyclolabus*), **slightly oblique** (*Ambloplisus*, *Carlsonia*, *Cyclolabellus*, *Clypeolabus*, *Dentilabus*), or strongly oblique, **triangle** gastrocoeli (*Pachyjoppa*, *Lissolaboides*, *Hirtolabus*, *Ectopoides*, *Lamprojoppa*, *Hypomecus*). **Thyridia** of Platylabini, as a rule, are developed and distinctly expressed in genera *Platybirmania*, *Rhyssolabus*, *Spanophatnus*, *Lissolaboides*, *Ambloplisus*, *Acantholabus*, *Platylabus*, *Lamprojoppa*, *Apaeleticus*, *Cyclolabus*, *Dentilabus*, *Hypomecus*, slightly expressed at *Pachyjoppa*, *Neolinycus*, *Carlsonia*, *Afrectopius*, *Cyclolabellus*, *Clypeolabus*, *Ectopoides*. In genera *Asthenolabus*, *Ectopius* thyridia are atrophied and in *Abzaria* and *Neurylabia* thyridia are absent at all. An important character is **breadth of interval between thyridia**. In genera *Platybirmania*, *Rhyssolabus*, *Acantholabus*, *Hirtolabus*, *Cyclolabellus*, *Clypeolabus*, *Apaeleticus*, *Cyclolabus*, *Dentilabus*, *Platylabus*, *Lamprojoppa* thyridia are wider than interval between them, in genera *Spanophatnus*, *Lissolaboides*, *Carlsonia*, *Ectopoides*, they are much narrower. In *Heinrichiellus hildegardae* thyridia are point-shape. **Interval between thyridia** of representatives of genera *Platybirmania*, *Acantholabus*, *Lamprojoppa*, *Dentilabus*, *Hypomecus* is with longitudinal impression, at *Spanophatnus*, *Acantholabus*, *Hirtolabus*, *Cyclolabellus*, *Dentilabus*, *Hypomecus* and *Apaeleticus* wrinkled, or wrinkly-punctured, and at *Carlsonia* with cellular sculpture.

Lunulae occur in the majority of genera of Platylabini. The exception is representatives of genera *Abzaria*, *Pachyjoppa* and *Lissolaboides*. More often they are large or moderately large (*Platybirmania*, *Rhyssolabus*, *Spanophatnus*, *Neolinycus*, *Carlsonia*, *Afrectopius*, *Clypeolabus*, *Apaeleticus*, *Dentilabus*, *Hypomecus*, *Ambloplisus*, *Hirtolabus*, *Cyclolabellus*, *Lamprojoppa*), rarely small (*Ectopoides*, *Asthenolabus*, *Cyclolabus*), or only just marked (*Ambloplisus*).

Sculpture of second tergite can be qualified as **densely punctured** (*Platybirmania* (roughly), *Pachyjoppa* (in middle), *Neolinycus*, *Cyclolabellus*, *Clypeolabus*, *Ectopoides*, *Apaeleticus*, *Cyclolabus*, *Dentilabus*, *Ectopius* (superficially)), **wrinkly-punctured** (*Spanophatnus*, *Hirtolabus*), **roughly wrinkly-punctured** (*Abzaria*) and **delicate wrinkled** (*Asthenolabus*, *Hypomecus*).

Surface of second tergite is with microsculpture in genera *Carlsonia* and *Hypomecus*, coriaceous, shining (at genera *Lissolaboides*, *Ambloplisus*, *Acantholabus*, *Afrectopius*, *Lamprojoppa*), or without microsculpture (*Abzaria*, *Spanophatnus*, *Lissolaboides*, *Hirtolabus*, *Clypeolabus*, *Ectopoides*, *Apaeleticus*).

Apex of abdomen

The sixth and seventh tergites **membranous** are marked to some extent in genera *Acantholabus*, *Asthenolabus* (at apex), *Cyclolabus* (at apex).

Sheath of ovipositor of Platylabini rarely can be considerably protruded behind apex of abdomen (*Afrectopius*, *Cyclolabus*). More often the sheath is only just protruded (*Rhyssolabus*, *Pachyjoppa*, *Neolinycus*, *Lissolaboides*, *Acantholabus*, *Hirtolabus*, *Cyclolabellus*, *Lamprojoppa*, *Linycus*, *Asthenolabus*, *Dentilabus*, *Ectopius*), or not protruded behind apex of abdomen (*Platybirmania*, *Spanophatnus*, *Ambloplisus*, *Clypeolabus*, *Apaeleticus*, *Hypomecus*, *Neurylabia*).

Hypopygium of Platylabini is long, abdomen amblypygous. Laterally, hypopygium is pointed, triangular, with longitudinal fold in *Platybirmania*, *Spanophatnus*, *Pachyjoppa*, *Neolinytus*, *Linytus*, *Asthenolabus*, *Cyclolabus*, *Ectopius*. Pointed laterally, triangular, but without longitudinal fold hypopygium is characteristic to *Rhyssolabus*, *Lissolaboides*, *Ambloplitis*, *Acantholabus*, *Hirtolabus*, *Cyclolabellus*, *Clypeolabus*, *Apaeleticus*. Hypopygium may be compressed from sides (*Dentilabus*) or very long at *Hypomecus*. In *Abzaria*, laterally triangular, with rounded apex and lacking fold, in *Lamprojoppa* flattened and blunt.

Thus, it is possible to consider following characters of abdomen as tribal.

Abdomen of Platylabini is amblypygous, as a rule, without strong sclerotization (with exception of *Abzaria*). Sternites of abdomen are slightly sclerotized. Petiolus of first tergite is flattened, with rare exceptions, wider than height at base. Dorsal carinae, if developed, are merged with spiracles carinae near bend, or (rarely) near middle of petiolus (the only exception is *Linytus* with dorsomedian and dorsolateral carinae merged not far from base of tergite). Hypopygium is compressed laterally, often with longitudinal fold, rarely (*Lamprojoppa*, *Neeurylabia*, *Neolevansa*) flattened.

The characters of Platylabini abdomen, like tribal characters of other parts of body possess several exceptions.

Basing on the consideration of Platylabini genera morphology, it is possible to characterize features of the tribe as a whole:

As a rule, Platylabini are distinguished by a combination of three following characters: clypeus convex, petiolus widened and dorsally flattened to some extent, abdomen amblypygous. There are some exceptions from combination of first two characters; in these cases, hypopygium elongate and additional characters present that are described below.

Flagellum, with very rare exceptions (*Apaeleticus*, *Ectopoides*), is long, slender, bristle-shaped, not broadened or slightly broadened behind middle, approximately as long as front wing, often with white annulus or semiannulus; tyloides on flagellum in males are present or absent.

Main tribal traits characterizing head of Platylabini are distinctive features of clypeus and mandible morphology. As was discussed above, clypeus in Platylabini is strongly convex and slightly transversal, usually 1.5-2.5 times wider than height, with more or less straightened front margin and usually distinctly separated from face. The exceptions are *Clypeolabus*, *Poecilostictus* and *Platybirmania* with practically flat, uniformly arcuate, rounded from front clypeus, *Neeurylabia* with apically impressed clypeus and *Pyramidophorus* with broad, slightly convex clypeus with distinct lateral corners. In *Clypeolabus*, aberrant in clypeus morphology, mandibles are typical for the tribe. Other three genera have considerable deviations from mandibles morphology common for all genera. Their tribal belonging is confirmed with tribal characters related to other parts of body. Mandibles of Platylabini are one of the main tribal characters, usually slender, narrowed to apex in different degree, with delicate teeth, of which lower ones are moved inside. An exception is broad and massive mandibles of *Poecilostictus*, *Neeurylabia* and *Pyramidophorus* and sharply, almost at right angle curved medially and massive mandibles of *Platybirmania*.

Mesothorax convex in different degree, scutellum convex and as a rule carinated, and

propodeum with convex, not flattened horizontal part, elevated in the region of area superomedia are characteristic for thoracal region of Platylabini. Combination of these characters may be considered as tribal.

Such characters as thin, slender (long) legs, absence of scopa on hind coxae of females and smooth claws (with only exception of *Pyramidophorus flavoguttatus* TISCHBEIN) may possibly be considered as tribal. Exceptions from the rule are stumpy legs of *Neeurylabia* and *Neolevansa* females.

Wings of Platylabini, when compared to body, are often longer and broader then in other tribes. Only these characters are possible to be treated as tribal.

Abdomen of Platylabini is amblypygous, as a rule without strong sclerotization (excluding *Abzaria*). Sternites of abdomen are slightly sclerotized. Petiolus of first tergite with rare exceptions is flattened, wider than height at base. Dorsomedian carinae, when developed, are merged with dorsolateral carinae near petiolus / postpetiolus border, or (rarely) near middle of petiolus (the only exception is *Linytus* with one dorsomedian and dorsolateral carinae merged not far from tergite base). Hypopygium is compressed laterally, often with longitudinal fold, rarely flattened.

Key to genera of Platylabini of world fauna

- 1 The combination of characters not correspond to diagnosis of tribe: or petiolus not flattened at base, or clypeus slightly convex with rounded arcuate front margin, or in middle almost from base to apex impressed or broad with sharp corners slightly separated and elevated on height of middle field of face (fig. 28, 37, 40)2
- Petiolus at base wider than height and synchronously clypeus convex as marked for tribe10
- 2 Petiolus not flattened, at base not wider than height; clypeus convex with form character to tribe; areolet of front wings pentagonal with broad base (fig. 108, 109, 112) (here genus *Acantholabus* can get, then lateral carinae at apex of scutellum from two sides distinctly protrude, and areolet of front wings quadrangular [fig. 122])3
- Petiolus flattened, at base wider than height; clypeus slightly convex with rounded arcuate front margin, or impressed apically with thinned front margin, or broad with sharp corners slightly separated and elevated on height of middle field of face6
- 3 Propodeum without apophyses and teeth, coxal carina not developed; flagellum of males with large broadly-oval tyloides. Profile of temples behind eyes sharply considerably narrowed; scutellum square from above, with long slanting part, laterally carinated by slight carinae with shagreen vertical surface with dense microsculpture, matt; thyridia very broad; hypopygium of female compressed laterally, long, strongly pointed, protrude behind apex of last tergite 23. *Hypomecus* WESMAEL 1884 (Holarctic, Oriental Region)
- Propodeum with apophyses or strong teeth (fig. 58, 62, 66), coxal carina developed; flagellum of males with, or without tyloides4
- 4 Spiracles of propodeum large, 3 times longer than width; transverse furrow of pronotum not interrupted by keel. Head from above rounded (head contour round); antennal cavities not expressed; apophyses strongly developed sharpened, practically perpendicular to surface of propodeum; gastrocoeli in a form of longitudinal furrow, thyridia point-shaped. Flagellum of male without tyloides 35. *Heinrichiellus* nom. nov. (= *Heinrichia* TERESHKIN 1996) (East Palaearctic)
- Spiracles of propodeum small, circular (fig. 89, 90); transverse furrow of pronotum often interrupted by keel (tubercle)5

- 5 Thyridia wider than interval between them, gastrocoeli distinctly impressed, apex of abdomen truncated, with hidden under the fifth, sixth and seventh tergites; flagellum of males without tyloides. Middle field of face sharply protrude; transverse furrow of pronotum interrupted by longitudinal keel; sternauli strongly developed; propodeum with roughly irregularly cellular-wrinkled sculpture and strongly developed teeth; flagellum bristle-shaped, shorter than front wing and front wing distinctly shorter than body length..... 1. *Apaeticus* WESMAEL 1884
(Holarctic)
- Thyridia narrower than interval between them, gastrocoeli very small and only just impressed; apical tergites of abdomen not hidden; flagellum of males with longish-oval tyloides. Transverse furrow of pronotum of males not interrupted by keel; notauli marked only at base, sternauli absent or in males expressed. Flagellum of females filiform, of males semi bristle-shaped..... 2. *Ectopoides* HEINRICH 1951
(Palearctic)
- 6 Clypeus slightly convex with rounded arcuate front margin..... 7
- Clypeus of different form..... 9
- 7 Propodeum at apex without teeth; clypeus small, flat, with almost arcuate rounded front margin, matt; propodeum shortened with sharply transverse area superomedia, more than twice, sometimes four times wider than length; petiolus narrow, very long, slightly flattened at base; gastrocoeli and thyridia slightly marked, almost not developed. Flagellum of males with distinct tyloides 21. *Poecilostictus* RATZBURG 1852
(Palearctic, Oriental Region)
- Propodeum at apex with teeth; clypeus broad..... 8
- 8 Mandibles narrow as marked for tribe. Clypeus slightly convex at middle, without lateral corners and straight front margin, forming in front uniform arch from base to base of mandibles and slightly separated from face; occipital carina not meeting with hypostomal carina, abrupt before it; hypostomal carina before mandible base strongly (lamellate) broadened. Flagellum of male with tyloides 14. *Clypeolabus* HEINRICH 1974
(Oriental Region: Burma)
- Mandibles very broad at base, in middle from above strongly curved almost at right angle, immediately from base uniformly narrowed (fig. 48). Clypeus flat, broadly rounded at apex in form of arch from one base of mandibles to another; occipital carina meeting with hypostomal carina on mandible base, at base of mandible broadened; pronotal ridge strongly convex (swollen); mesonotum behind base of front wings with vertical triangle projection; scutellum completely carinated by high carinae along hind border (areolet of front wings petiolate; gastrocoeli deep, thyridia sharp, considerably wider than interval between them; interval between thyridia with longitudinal impression; apical tergites of abdomen smooth, shining, some narrowed, approximately cylindrical and almost equal by length to length of second and third tergites taken together). Flagellum of male with narrow tyloides..... 19. *Platybirmania* HEINRICH 1974
(Oriental Region: Burma)
- 9 Clypeus broad, with straight apical margin, of females apically and laterally slightly elevated (slightly expressed in males), in middle almost from base to apex impressed (remind clypeus of *Eurylabus* Wesmael). Mandibles with strong teeth, situated in the same plane; carinae of propodeum reduced with exception of metapleural carina; spiracles elongated; tarsi of all legs, especially hind, thickened; gastrocoeli practically not expressed, thyridia absent; hypopygium of males apically broadly truncated, its apical margin at apex slightly emarginated in middle. Flagellum of males with long row unusually long tyloides 34. *Neeurylabia* HEINRICH 1967
(Africa: Kenya)

- Clypeus broad with sharp corners, slightly separated from face and elevated on height of middle face. Flagellum with extreme number of segments (more than 50); mandibles slightly uniformly narrowed (fig. 49); scutellum pyramidal, not carinated laterally; propodeum with cellular sculpture and not expressed fields and with slit-shaped spiracles; claws of tarsi of females pectinate at basal part. Black with numerous yellow spots. Largest species of the tribe (to 20 mm)..... 37. *Pyramidophorus* TISCHBEIN 1882
(Palearctic)
- 10 Frons above antennae with two longitudinal, slightly curved and flattened lamellar protuberances (fig. 23). Propodeum strongly shortened, transversal, with reduced fields; abdomen with strong constrictions between segments; first tergite unusually broad, sharply narrowed only at right base; gastrocoeli only just impressed and situated near base of second tergite, thyridia absent; lunulae absent; surface of body smooth, polished, without microsculpture 36. *Abzaria* CAMERON 1885
(Neotropic Region)
- Frons without protuberances; first segment of abdomen not unusually broad and sclerotized, rarely postpetiolus by breadth equal to distance between apices of lateral fields of propodeum (*Rhyssolabus*). Lunulae as a rule developed or marked 11
- 11 Spiracles of propodeum small, to 0,4 breadth of field at place of spiracle, circular or roundish (fig. 83-92) 12
- Spiracles more large, from longish-oval to sickle-shaped 24
- 12 Gastrocoeli not developed or in form of longitudinal furrow, thyridia only just marked, point-shaped or not developed 13
- Gastrocoeli and thyridia distinct (expressed) in varying degree 15
- 13 Propodeum with strong teeth or bend upwards apophysis (fig. 59). Postpetiolus of first tergite without distinct median field, with projecting spiracles and narrowed behind them, usually very superficially and irregularly wrinkled; gastrocoeli atrophied, thyridia present, but often rather indistinct..... 4. *Afrectopius* HEINRICH 1935
(Africa)
- Propodeum without apophyses, only with denticles at apices of areae dentiparae or without them 14
- 14 Area dentipara at apex with small denticle, coxal carina absent, area superomedia transversal but not sharply. Gastrocoeli presented only by narrow and shallow, rudimentary longitudinal impressions, with some rough, irregular longitudinal ribs. Flagellum of males with narrow almost bacilliform tyloides..... 7. *Linytus* CAMERON 1903
(Holarctic, Neotropical and Oriental Regions)
- Area dentipara at apex without tooth, propodeum slanted almost from apex, triangle from lateral; set of carinae complete, area superomedia sharply transversal. Gastrocoeli in form of longitudinal oblique groove, thyridia very small, also longitudinal or not expressed. Flagellum of males with narrow tyloides..... 3. *Ectopius* WESMAEL 1859
(Palearctic)
- 15 Pronotal base with angular prominence above front coxae. Occipital carina reduced from above, before mandible base sharply curved forward; lateral margins of antennal fossae elevated above margins of eyes; transverse furrow of pronotum in middle interrupted by keel; notauli sharp, crenulated; sternauli very deep, crenulated, extended behind middle of mesopleurae; postscutellum trapeziform from above with cellular sculpture. Flagellum of male with very slight indistinct tyloides 10. *Notoplatylabus* HEINRICH 1934
(Palearctic, Oriental Region: Burma)
- Pronotal base without angular prominence 16
- 16 Propodeum with rough reticulate-cellular sculpture, carinae of propodeal areas indistinct, sinuate; middle field of face strongly protrude; tergites 6-7 of abdomen of females hidden under 5th tergite and abdomen from above truncated. Flagellum of males without tyloides..... 1. *Apaeleticus* WESMAEL

- Propodeum without rough reticulate-cellular sculpture, carinae of propodeum distinct, if sculpture of propodeum cellular then carinae distinct; tergites 6-7 of abdomen of females not hidden under 5th tergite and distinctly visible from above. Flagellum of males with tyloides or without them 17
- 17 Set of propodeum carinae complete (all carinae of propodeum developed, fields limited by carinae, sometimes slightly)..... 18
- Set of propodeum carinae incomplete (some of carinae absent, fields of propodeum incomplete)..... 19
- 18 Second tergite of abdomen with very small and slightly impressed gastrocoeli with thyridia considerably more narrow than interval between them; area dentipara with distinct tooth at apex. Flagellum of male with distinct tyloides 2. *Ectopoides* HEINRICH
- Second tergite of abdomen with moderately deep distinct transversal (not oblique) gastrocoeli with rather large thyridia, of most species interval between them narrower each of them; area dentipara with denticle at apex. Flagellum of male with distinct tyloides 5. *Cyclolabus* HEINRICH 1935
(Holarctic, Neotropical and Oriental Regions)
- 19 Scutellum without lateral carinae or with carinae developed only at base; hind margin of metanotum without triangle projections; epomiae practically absent; distinctly developed only apical transverse carina of propodeum 11. *Levansa* TOWNES 1961
(New Zealand, Tasmania)
- Scutellum laterally carinated up to apex of horizontal surface; hind margin of metanotum with triangle projections opposite lateral longitudinal carinae of propodeum; epomiae developed; carinae of propodeum sharp 20
- 20 Costulae and coxal carina absent 21
- Absent or coxal carina or costulae 22
- 21 Propodeum with strong teeth, second segment of maxillary palps hypertrophied (swollen). Propodeum elongated, area superomedia long; gastrocoeli deeply impressed, closed to base of tergite, triangle; thyridia distinct, equal by breadth to interval between them; all tergites of abdomen with narrow white apical bands 12. *Cratolaboides* gen. nov.
(East Palaearctic)
- Propodeum with only just visible teeth, second segment of maxillary palps normal. Occipital carina meeting with hypostomal carina almost on base of mandibles; gastrocoeli distinctly impressed, rather long, approximately quadrangular; thyridia slightly expressed, interval some wider than breadth of thyridia 6. *Cyclolabellus* HEINRICH 1974
(Oriental Region: Burma)
- 22 Coxal carina developed at least up to middle, but costula absent (or only just marked). Maxillary palps normal; propodeum shortened, area superomedia quadrangular; tergites 2-3 of abdomen with big white-yellow apical spots (broad bands, interrupted medially) and 4th entirely black, 6-7th entirely white 13. *Pagarenes* CAMERON 1903
(Oriental Region: India, Burma)
- Costula developed, but coxal carina absent..... 23
- 23 Base of second tergite roughly-wrinkled; segments of abdomen strongly oblong, abdomen cylindrical, area superomedia transversal; occipital carina from above distinct, meeting with hypostomal carina on base of mandibles 9. *Carlsonia* HEINRICH 1973
(Nearctic)
- Base of second tergite without rough rugosity; abdomen from above uniformly longish-oval; occipital carina dorsally obliterated, meeting with hypostomal carina far from mandible base 8. *Neolinytus* HEINRICH 1971
(Nearctic)
- 24 Spiracles longish-oval (fig. 93-98)..... 25

- Spiracles from elongated to slit-shaped (fig. 99-107)28
- 25 Propodeum with apophyses (fig. 56, 57)26
- Propodeum with teeth or denticles (fig. 68)27
- 26 Head with proportionally very large eyes; temples from above roundish; scutellum carinated by very high sharp carinae, interrupted at apex. Area superomedia square or wider than length; costulae present or indistinct, coxal carina distinct; second tergite in middle of basal part with slight longitudinal impression. (Last tergite with white apical pattern, sometimes also first tergite with white apical band). Flagellum of males with row of very distinct elongated tyloides18. *Acantholabus* HEINRICH 1974
(Oriental Region: Burma)
- Eyes of normal size, temples from above behind eyes sharply and strongly, almost straightly, narrowed; scutellum carinated by normal carinae. Costula and coxal carina absent; apophyses long, pointed. Hypopygium of males more or less elongated and bipartite at apex. Flagellum of males without tyloides and without insections between segments17. *Ambloplisus* HEINRICH 1930
(Neotropic and southeast of Nearctic)
- 27 Propodeum with strong teeth. Occipital carina meeting with hypostomal carina not reaching mandible base, abscissula not leaf-shaped broadened. All parts of body with roughly wrinkled sculpture; notauli sharp in front third of mesonotum; scutellum carinated up to middle; propodeum roughly wrinkled with cellular area superomedia; wings with big pentagonal areolet; gastrocoeli deep with distinct thyridia16. *Rhyssolabus* BERTHOUMIEU 1896
(West Palaearctic: Europe)
- Propodeum with denticles. Occipital carina sharply abrupt at level of genae, hypostomal carina from base of mandibles to level of occipital carina (abscissula) leaf-shaped broadened, between it and gena distinct impression forming; propodeum elongated, horizontal part some longer than area posteromedia, area superomedia approximately three times longer than width, rectangular; medial part of second tergite from base to middle longitudinally striated; thorax, especially metapleurae and declivous part of propodeum with dense whitish pubescence15. *Hirtolabus* HEINRICH 1974
(Oriental Region: Burma)
- 28 Propodeum with strong, often bend upwards apophyses; scutellum from lateral sharply triangle, with conical or with blunt, pointed backwards elevation29
- Propodeum without strong apophyses, with teeth, denticles, lamellar broadenings, or without any formations on places of apophyses; scutellum without high and sharply elevated horizontal surface31
- 29 Front wings with darkened apices, wings and body yellow. Temples oblique, scutellum from lateral triangle with blunt, pointed backwards elevation on horizontal surface; area superomedia strongly elevated above lateral fields; coxal carina absent; gastrocoeli deep, triangle, thyridia weak27. *Pachyjoppa* CAMERON 1901
(Oriental Region: India, Burma)
- Wings without darkened apices, body not entirely yellow 30
- 30 Body with reach yellow pattern. Scutellum high elevated above postscutellum, almost perpendicularly raised from basal furrow and than with long steep slant to postscutellum, its lateral carinae unusually protrude; propodeum extremely roughly reticulate-rugose, with unusually projecting carinae; gastrocoeli transverse, extremely broad and deep, with very narrow interval 32. *Tropicolabus* HEINRICH 1959
(Nearctic)
- Body metallic blue or violet. Scutellum from lateral triangle with strong conical elevation on horizontal surface; area superomedia elongated, broadened anteriad, high elevated above lateral fields, coxal carina absent26. *Lamprojoppa* CAMERON 1901
(Palaearctic, Oriental Region)

- 31 Carinae of horizontal part of propodeum atrophied. Sculpture of body, including strongly sclerotized tergites 2-4, roughly and densely wrinkly-punctured. Flagellum of males serrate..... 33. *Spanophatnus* CAMERON 1905
(Southern Africa)
- Carinae of horizontal part of propodeum developed in varying degree 32
- 32 Costulae and coxal carina developed 33
- Or costulae or coxal carina absent..... 35
- 33 Area dentipara at apex with tooth, second segment of maxillary palps hypertrophied, metatarsus of hind tarsi curved. Thyridia sharply expressed, equal or wider than interval 20. *Cratolabus* HEINRICH 1974
(Oriental Region: Indonesia, Taiwan)
- Area dentipara at apex without distinct tooth, second segment of maxillary palps normal, metatarsus of hind tarsi not curved 34
- 34 Spiracles slit-shaped; flagellum of male serrate. Gastrocoeli deep, rectangular or almost triangle, thyridia equal to interval..... 29. *Pristicerops* GRAVENHORST 1829
(Holarctic)
- Spiracles elongated; flagellum of male at apical part from front with slight incisions between segments, but not serrate. Gastrocoeli not deep with distinct thyridia, considerably narrower than interval. Body with reach yellow pattern 28. *Pristicerops* HEINRICH 1962
(Holarctic, Oriental Region)
- 35 Costulae developed, coxal carina absent or only just marked 36
- Costulae absent, coxal carina developed 37
- 36 Tarsi of all legs of females thickened, ventrally with flattened area of all segments, segments of hind tarsi shortened, tarsi of males legs normal; propodeum with strong enough, almost lamellate teeth reminding lamelliform broadening; gastrocoeli and thyridia slightly expressed. Hypopygium of females with long hairs at apex. Flagellum of males with distinct tyloides..... 22. *Neolevansa* GAULD 1984
(Australia)
- Tarsi of all legs of females and males not thickened and shortened; area dentipara at apex with distinct tooth; gastrocoeli slightly impressed, thyridia sharp, oblique, far removed from the base of tergite; abdomen from above long, broadening to apex of second tergite and from it uniformly narrowed backwards. Hypopygium of females without long hairs at apex 31. *Lissolaboides* HEINRICH 1974
(Oriental Region)
37. Area dentipara at apex with very strong tooth; interval between thyridia with strong longitudinal impression. Gastrocoeli very deep, laterally reach margins of tergite, thyridia strongly developed; abdomen longish-oval 30. *Dentilabus* HEINRICH 1974
(Palearctic, Oriental Region)
- Area dentipara at apex without tooth; interval between thyridia without longitudinal impression 38
38. Gastrocoeli distinct, transverse, with large thyridia, or vertex with white spots. Spiracles of propodeum elongated, longer than width, abdomen at apex always without white anal spots 25. *Platylabus* WESMAEL 1844
(Holarctic, Ethiopian, Oriental Regions and north of Nearctic)
- Gastrocoeli only just impressed, thyridia atrophied. Vertex without white spots; spiracles slit-shaped 24. *Asthenolabus* HEINRICH 1951
(Holarctic, Oriental Region)

Genera of Platylabini

1. *Apaeleticus* WESMAEL

Apaeleticus WESMAEL 1884 - Mem. Acad. Bruxelles **18**: 238.

Type species: *Apaeleticus bellicosus* WESMAEL; designated by ASHMEAD 1900.

Apaeleticus: HEINRICH 1962 - Syn. Nearct. Ichn. Stenop.: 791-792.

Apaeleticus: HEINRICH 1977 - Ichn. Florida and Neigb. States **9**: 282.

Distribution: Holarctic. 1 species in Nearctic and 9 in Palaearctic.

Introduction:

There are small species with circular or roundish spiracles with combination of characters which distinguishes them from other Platylabini: strongly developed sternauli, sharply protruded middle field of face, roughly irregularly cellular-wrinkled sculpture of propodeum with developed teeth, pentagonal areolet with wide base and truncated apex of abdomen with hidden under fifth sixth and seventh tergites. Besides that, collar of pronotum is interrupted by longitudinal carina, character, which is marked still only for *Notoplatylabus*. Flagellum is bristle-shaped or semi bristle-shaped, shorter than front wing and wing is distinctly shorter than body length.

Habitually species of the genus remind small *Barichneumon* (*peregrinator* group). Strongly protruded middle field of face, interrupted furrow of pronotum, tubercle on area basalis and form of gastrocoeli and thyridia add to the said.

Morphology:

Flagellum: Of females bristle-shaped, from moderately long and moderately slender, ventrally flattened to very long and very slender, ventrally flattened beyond middle, from not widened to slightly widened, from moderately to strongly attenuated and pointed toward apex. Flagellum of males without tyloides.

Head: Head contour from front strongly, almost straightly, narrowed downwards, behind eyes from above backwards; occipital carina meeting with hypostomal carina on mandible base; mandibles with form character to tribe, gradually narrowed to apex and sharply carinated along upper border; clypeus transverse, convex, with straight impressed front margin, sometimes with teeth or tubercles; middle field of face strongly protrude, narrow.

Thorax: Transverse furrow of pronotum interrupted by keel; pronotal ridge not thickened, epomia very sharp; pronotal base strongly sinuous. Mesonotum moderately convex, slightly wider than length; notauli distinct almost to middle; subalarum not sharpened; mesopleurae at lower part without sharp break; sternauli extraordinary sharp, deep, reach hind third of mesopleurae; scutellum convex, moderately elevated above postscutellum, laterally carinated (at least at basal third), with gradually rounded apex. Hind margin of metanotum with triangle projections opposite lateral longitudinal carinae. All fields of propodeum distinct; basal area deep with tooth; area dentipara with tooth at apex; spiracles small, roundish. Surface of propodeum, except roughly-wrinkled metapleurae and area basalis extremely roughly reticulate rugose, cellular, without microsculpture, at expressed fields.

Legs: Quite strong.

W i n g s : Areolet pentagonal, rather symmetrical, narrowed in front; radius uniformly curved, almost straight, short. Front wing distinctly shorter than body length.

A b d o m e n : Of females from above elongated, truncated apically, tergites 6 and 7 usually hidden under fifth. Petiolus at base not flattened, from lateral with rather sharp bend to postpetiolus and developed lateral carinae; middle field of postpetiolus not limited by carinae with punctured or with finely irregularly-wrinkled surface. Gastrocoeli distinct, moderately impressed, vary in size subject to species, sometimes interspace slightly narrower, than each of them, usually some wider; lunulae distinct, large. Sheath of ovipositor only just sclerotized, directed from hypopygium upwards.

C o l o r a t i o n : Reddish-brown and black, with very limited white pattern; scutellum white; of males white pattern on head and thorax more reach than of females.

***Apaeleticus bellicosus* WESMAEL (Plate 24)**

Apaeleticus bellicosus WESMAEL 1844 - Acad. Sci. Bruxelles Nouv. Mém. **18**: 166.

F e m a l e

F l a g e l l u m : Bristle-shaped moderately slender, widened and flattened ventrally beyond middle, moderately attenuated toward apex, almost semi bristle-shaped, with 34-36 segments and white semiannulus on segments (6)7-11(12), or 7-13; basal segment from the side 2,1-2,3 times longer than width at apex, second segment 1,7 times longer than mandible base width, segment 5 square, remaining transverse. Flagellum slightly shorter than the front wing and distinctly shorter than body length.

H e a d : Head contour from front strongly, almost straightly, narrowed downwards, transversal, 1,4 times wider than height; genae from front short, strongly narrowed toward mandibles, 5,7 times shorter than height of eye; head from above 2 times wider than length. Vertex from lateral sharply sloping just after the ocelli; temples from above moderately long, strongly sinuously narrowed behind eyes, from side narrowed toward mandible base, 1,8 times shorter than longitudinal diameter of an eye at the middle, at lower part almost flat; occipital carina high, sharp all round, from above gradually impressed, at the bottom highly raised and curved, so, that bottom of hypostomal carina visible from lateral; occipital carina meeting with hypostomal carina on mandible base; malar space equal to mandible base width; mandibles with form character to tribe, gradually narrowed to apex and sharply carinated along upper border; clypeus transverse, convex, with straight front margin and rounded lateral corners, with long pubescence along front margin, clearly separated from face by impression; clypeal foveae small, deep labrum not protrude from under clypeus; middle field of face strongly protrude, narrow, in middle narrower than lateral fields; antennal cavities small, moderately deep, not reach borders of eyes and far not reach front ocellus level, laterally above antennal fossae with tubercles, interantennal tubercle absent or only just marked; ocelli moderately convex, diameter of lateral ocellus equal to distance from ocellus to eye; ocellar triangle slightly elevated and not sharply limited. Surface of face and frons punctured or wrinkly-punctured; clypeus with only just visible punctures, frons transversally wrinkly-punctured, vertex behind hind ocelli superficially longitudinally wrinkly-punctured.

T h o r a x : Collar of pronotum moderately long, from above with straight front margin; transverse furrow of pronotum shallow. Mesonotum moderately convex, 1,2 times wider than length; notauli distinct almost to middle; axillary tongue not developed; surface of

mesonotum densely punctured by big punctures (intervals narrower than diameter of punctures), shining, without microsculpture; subalarum not sharpened; area of speculum with same sculpture as other part of mesopleurae; area of mesopleural fovea deeply and broadly impressed; mesopleurae at lower part without sharp break; sternauli extraordinary sharp, deep, reach hind third of mesopleurae; mesopleurae very densely longitudinally wrinkly-punctured, without microsculpture; scutellum slightly convex, laterally carinated up to middle, at apex rounded, dorsal surface densely punctured, without microsculpture. Hind margin of metanotum with broad triangular projections opposite lateral longitudinal carinae. Propodeum with distinct division on horizontal and vertical parts, horizontal part 1,5 times shorter than length of area posteromedia in middle; all areas distinct (set of carinae complete, including costula and coxal carina); basal area deep with tooth; area superomedia hexagonal, with equal length and breadth; costulae at middle of area superomedia; area dentipara with tooth at apex; spiracles small (equal 0,3 breadth of field at area of spiracle), roundish, 1,5 times longer than width. Surface of propodeum extremely roughly reticulate rugose, cellular, without microsculpture, at expressed fields; metapleurae roughly wrinkled.

L e g s : Quite strong. Claws slightly and gradually curved.

W i n g s : Areolet pentagonal, rather symmetrical, narrow in front; stigma broad, darkened; radius uniformly curved, almost straight, short; radial cell broad; nervulus interstitial; ramulus only marked; membrane of wing hyaline, veins dark. Front wing 1,3 times shorter than body length.

A b d o m e n : From above rather long, almost parallel sided, truncate at apex; second tergite transversal, 1,2 times shorter than breadth at apex. Petiolus at base practically not flattened, from lateral with rather sharp bend to postpetiolus, lateral carinae of petiolus distinct, lateral surface with slight ribs; from above petiolus strongly, but gradually broadened to postpetiolus; middle field of postpetiolus not limited by carinae (first tergite without dorsal carinae), its surface punctured by big smoothed punctures; lateral fields of postpetiolus narrower than middle field. Gastrocoeli deep, laterally reach margins of tergite; thyridia distinct, very slightly oblique and closed to base of tergite, wider than interval; interval punctured by big punctures; spiracles of second tergite approximately at middle, lunulae distinct, large, slightly elevated; surface of second and third tergites, except apex densely punctured by distinct punctures, other tergites with more sparse and smoothed punctures, all tergites shining, without microsculpture; tergites 6-7 hidden under tergite 5 and thus abdomen from above truncated. Hypopygium without fold with membranous apex; sheath of ovipositor only just sclerotized, directed from hypopygium upwards.

C o l o r a t i o n : Head and thorax black with red-brown pattern: internal orbits, middle field of face, dorsal margins of pronotum, spots on mesopleurae and propodeum; abdomen red-brown with darkened apex, legs ferruginous, except of front trochanters; apex of hind femora, tibiae and tarsi darkened. Spots on collar, at lower surface of pronotum and scutellum completely, white.

S i z e : Body length: 7,0; front wing: 5,4; flagellum: 5,0 mm.

2. *Ectopoides* HEINRICH

Ectopoides HEINRICH 1951 - Bonn. Zool. Beitr. 2: 280-281, ♀, ♂.

Type species: *Ectopoides teunissenii* HEINRICH 1951 (= *brevicornis* KRIECHBAUMER 1890).

D i s t r i b u t i o n : Palaearctic.

I n t r o d u c t i o n :

According to G. HEINRICH (1951) the genus presents itself a connecting link between *Ectopius* WESM. and *Apaeticus* WESM. The most distinct characters, permitting to distinguish it from *Apaeticus* are very small and slightly impressed gastrocoeli with thyridia considerably more narrow than interval between them. G. Heinrich indicates also an absence of notauli and sternaui, but for the males from his collection, investigated by us, notauli and sternaui are present, although and developed in considerably less degree than at *Apaeticus*. Face and middle field are convex, clypeus and middle field of face are forming from lateral rather uniform arc and clypeus is comparatively slightly separated from face. It is necessary to mark, that similar morphology is observed at males *Apaeticus mesostictus* (GRAV.). Abdomen of females, according to Heinrich is not truncated at apex (i.e. apical tergites do not hidden as at species of *Apaeticus*). Thus, most distinct characters distinguishing *Ectopoides* from *Apaeticus* are peculiarities of gastrocoeli and thyridia morphology. Contrary to *Ectopius* propodeum with strong teeth and postpetiolus is strongly and gradually uniformly punctured. Form of males flagellum reminds one of *Barichneumon*.

M o r p h o l o g y :

F l a g e l l u m : Of females short, filiform with white semiannulus. Of males semi bristle-shaped, stout, not flattened ventrally, without traces of white pattern, with longish-oval tyloides on segments 8-16 (17). Flagellum of male longer than the front wing.

H e a d : Head contour from front roundish, with big eyes and very short genae; temples behind eyes (from above) gradually narrowed backwards and sharply (from side) downwards. Occipital carina meeting with hypostomal carina on mandible base, at place of junction sharply curved forward; mandibles rather short, evenly narrowed from base to apex; clypeus slightly separated from face, at apex with straight impression, transversal, front margin in a form of uniform arch; clypeus and middle field of face protrude on same height, forming from lateral uniform arch; antennal cavities not great but deeply impressed, without tubercle between antennal fossae. Clypeus punctured by big punctures, face and clypeus densely wrinkly-punctured.

T h o r a x : Transverse furrow of pronotum not interrupted by keel; pronotal ridge not thickened; pronotal base gradually sinuous. Mesonotum moderately convex, some wider than length, notauli of males expressed only in front third; surface of mesonotum densely punctured by big punctures (intervals narrower than punctures); subalarum thin, sharp; sternaui of males expressed only in front third, deep; scutellum convex, from above strongly narrowed backwards, without distinctly expressed lateral carinae. Hind margin of metanotum with long bacilliform projections. Propodeum from lateral with angle-shaped contour, horizontal part almost two times shorter than vertical; all areas and carinae of propodeum expressed, carinae sharp, high; spiracles small, roundish; areae denticulae at apices with distinct teeth. Surface of propodeum largely cellular-wrinkled.

L e g s : Slender.

W i n g s : Areolet pentagonal, symmetrical, narrow in front; stigma broad; radius slightly curved, practically straight; nervulus postfurcal. Front wing shorter than body length.

Abdomen : From above elongated, second tergite with approximately equal length and breadth at apex; last tergite of abdomen of female hidden, apical tergites of males not hidden. Petiolus at base not wider than height; dorsal and ventral lateral carinae of petiolus sharp; middle field of postpetiolus not or only just expressed, postpetiolus densely punctured by big punctures, shining. Gastrocoeli slightly impressed, long, slanted, thyridia small, only just marked, narrower than interval between them; lunulae distinct, small; second and third tergites densely punctured, shining between punctures, other tergites smooth with sparse shallow punctures.

Coloration : Body red and black with limited white pattern on head and of male also on mesothorax and coxae. Abdomen red.

***Ectopoides brevicornis* (KRIECHBAUMER) (Plate 25)**

Apalecticus brevicornis KRIECHBAUMER 1890 - Ent. Nahr. **16** (13): 241, ♀

Ectopoides teunissen HEINRICH 1951 - Bonn. Zool. Beitr. **2**: 280-281, ♀, ♂.

Ectopoides brevicornis: HEINRICH 1973 - NachBl. Bayer. Ent. **22**: 56, syn., ♀, ♂.

Male

Flagellum : Semi bristle-shaped, with 31 segments, stout, with weakly separated (differentiated) segments, not flattened ventrally, without traces of white pattern; basal segments short, length of first segment only 1,7 times longer than width at apex; tyloides longish-oval on segments 8-16(17). Flagellum 1,1 times longer than the front wing and 1,2 times shorter than body length.

Head : Head contour from front roundish, with big eyes, only 1,2 times wider than height; genae from front sharply narrowed downwards, 6,6 times shorter than height of an eye; head contour from above transversal, 1,7 times wider than length. Vertex from lateral gradually slanting down to occipital carina; temples behind eyes long, gradually narrowed backwards (from above) and sharply downwards (from side), in middle only 1,2 times shorter than longitudinal diameter of eye at middle; occipital carina not high, rather slightly, but angularly impressed to hind ocelli, far not reach level of eyes and hind ocelli; occipital carina meeting with hypostomal carina on mandible base, at place of junction sharply curved forward; malar space shorter than the mandible base width; mandibles enough short, evenly narrowed from base to apex; clypeus and middle field of face protrude on same height, forming from lateral uniform arch; clypeus slightly separated from face, at apex with straight impression, strongly transversal, forming by front margin uniform arch; clypeal foveae deep; labrum not protrude from under clypeus; middle field of face strongly elevated above lateral fields, narrowed downwards, narrower than lateral fields in middle; antennal cavities not great but deeply impressed, laterally not reach borders of eyes and far not reach front ocellus level, without lateral tubercles above and tubercle between antennal fossae; ocelli large, diameter of lateral ocellus equal to distance from ocellus to eye; ocellar triangle smoothly but quite high elevated. Clypeus punctured by big punctures (interspace narrower than punctures), without microsculpture; face and clypeus densely wrinkly-punctured, frons above antennal cavities with strong transversal rugosity.

Thorax : Collar of pronotum long, from above with straight front margin; transverse furrow of pronotum broad, shallow. Mesonotum moderately convex, some wider than length, notauli developed in front third; surface of mesonotum densely punctured by big punctures (intervals narrower than punctures), shining, without microsculpture; sub-

alarum thin, sharp; area of speculum punctured by big superficial punctures, shining; area of mesopleural fovea moderately deeply, but not broadly impressed; sternauli expressed at first third, deep; surface of mesopleurae shining, densely punctured by big punctures, without microsculpture; scutellum convex, from above strongly narrowed backwards, without distinctly expressed lateral carinae, from lateral gradually slanting to postscutellum, horizontal part of scutellum slightly convex with big sparse punctures. Hind margin of metanotum with long bacilliform projections opposite lateral longitudinal carinae. Propodeum from lateral with angle-shaped contour, horizontal part 1,8 times shorter than area posteromedia in middle; all fields of propodeum expressed, carinae sharp, high; area superomedia hexagonal, of equal length and breadth, costulae at middle of area superomedia; spiracles small, roundish, only just longer than width (approximately 1,4 times), equal 0,3 breadth of area spiraculifera at place of spiracle; area dentipara at apex with distinct tooth. Surface of propodeum largely cellular-wrinkled with big superficial punctures, shining, without microsculpture, metapleurae wrinkly-punctured.

L e g s : Slender. Claws short, thick, at apex strongly curved.

W i n g s : Areolet pentagonal, symmetrical, narrow in front; stigma broad, light; radius slightly curved, practically straight, short; nervulus postfurcal; ramulus only marked; membrane of wing hyaline, veins light. Front wing 1,4 times shorter than body length.

A b d o m e n : From above elongated, parallel sided, in cross-section roundish, second tergite approximately equal by length to breadth at apex, apical tergites not hidden. Petiolus at base not wider than height, from lateral first tergite gradually curved without sharp break; dorsal and ventral lateral carinae of petiolus sharp, surface between carinae almost not sculptured; from above petiolus rather sharply broadened to postpetiolus; middle field of postpetiolus not expressed, postpetiolus densely punctured by big punctures, shining. Gastrocoeli slightly impressed, long, oblique; thyridia small, only just marked, narrower than interval between them; interval densely punctured; lunulae distinct, small; second and third tergites densely punctured, shining between punctures, other tergites smooth with sparse shallow punctures.

C o l o r a t i o n : Body red and black with limited white pattern on head, mesothorax and coxae.

S i z e : Body length: 6,3; front wing: 4,5; flagellum: 5,1 mm.

3. *Ectopius* WESMAEL

Ectopius WESMAEL 1859 - Mem. Couronnes Acad. Roy. Sci. Let. Beaux-Art Belgique.: 14.

Type species: *Ichneumon rubellus* GMELIN.

D i s t r i b u t i o n : Palaearctic.

I n t r o d u c t i o n :

The genus is characterized by rounded head with dull white spot on genae, triangle, strongly sloped backwards propodeum with small roundish spiracles, complete carination and sharply transverse area superomedia. Gastrocoeli are in form of longitudinal oblique groove, thyridia very small, also longitudinal or not expressed.

M o r p h o l o g y :

F l a g e l l u m : Slender, beyond middle practically not widened and not flattened ventrally, without white annulus or only with its traces on one-two segments. Flagellum

scarcely longer than the front wing and shorter than body length. Flagellum of males with narrow tyloides.

H e a d : Head contour from front roundish, temples profile behind eyes from above roundly narrowed behind eyes; hypostomal carina meeting with occipital carina before mandible base; malar space approximately equal to mandible base width; form of mandibles character to Platylabini, gradually narrowed from base to apex; clypeus convex, transversal, with rounded front margin, distinctly separated from face; middle field of face slightly elevated above lateral fields, triangular; antennal cavities small, slightly impressed with distinct tooth between antennal fossae; ocellar triangle slightly differentiated.

T h o r a x : Transverse furrow of pronotum not interrupted by keel; pronotal ridge not thickened, epomia weak; pronotal base sinuously curved. Mesonotum moderately convex, some wider than length; notauli marked only in front third; surface of mesonotum with sparse delicate punctures, shining; subalarum thin, sharpened; sternauli distinctly impressed in front third; scutellum moderately elevated, from above triangle, laterally carinated; horizontal part convex. Hind margin of metanotum with triangular projections. Propodeum triangle from lateral, strongly slanting backwards, its horizontal part considerably shorter than length of area posteromedia in middle; all fields of propodeum distinctly separated by carinae, area superomedia sharply transversal, hexagonal, narrowed in front, of females to 3 times wider than length in middle, of males considerably wider; costulae behind middle of area superomedia; area dentipara at apex without tooth; spiracles of propodeum small, circular.

L e g s : Moderately slender.

W i n g s : Areolet pentagonal, narrow in front; asymmetrical; radius almost straight, short; nervulus interstitial or slightly postfurcal. Front wing shorter than body length.

A b d o m e n : Abdomen of females from above longish-oval, slightly drop-shaped; second tergite slightly transversal; sheath of ovipositor only just visible protrude behind apex of abdomen. First tergite from lateral practically straight, petiolus distinctly flattened at base, lateral carinae of petiolus sharp; from above petiolus gradually broadened to postpetiolus; middle field of postpetiolus almost not expressed. Gastrocoeli in form of longitudinal oblique groove, thyridia very small, also longitudinal or not expressed, lunulae distinct; abdomen shining, surface of second and third tergites densely punctured by superficial punctures. Hypopygium strongly pointed, from below with longitudinal fold.

C o l o r a t i o n : Body brown-black, genae with dull white spot.

***Ectopius rubellus* (GMELIN) (Plate 26)**

Ichneumon rubellus GMELIN 1790 - Linné: Syst. Nat. **12** (1): 2704.

Ectopius rubellus: WESMAEL 1859 - Mém. Cour. Acad. Sci. Belgique **8**: 14, ♂.

F e m a l e

F l a g e l l u m : Slender, with 32 segments, beyond middle scarcely widened (practically not widened) and not flattened ventrally, gradually attenuated toward apex, without white annulus, or only with its traces on one-two segments (12(13)) dorsally; basal segment from side 2,3 times longer than width at apex, segment 18 square from lateral. Flagellum 1,1 times longer than the front wing and 1,3 times shorter than body length.

H e a d : Head contour from front roundish, slightly transversal, 1,2 times wider than height, roundly slightly narrowed downwards; genae from front 5,3 times shorter than height of eye; head contour from above transversal, 1,7 times wider than length. Vertex from lateral roundly curved to occipital carina; temples behind eyes from above roundly narrowed behind eyes, long, equal to longitudinal diameter of eye at middle, from side slightly narrowed toward mandible base; occipital carina not high, from above very slightly impressed toward hind ocelli, far not reach level of eyes and hind ocelli, almost straight; hypostomal carina meeting with occipital carina before mandible base; malar space approximately equal to mandible base width; mandibles with form character to *Platylabini*, gradually narrowed from base to apex; clypeus convex, transversal, 2,5 times wider than length, with rounded front margin, distinctly separated from face; clypeal foveae narrow, deep; labrum not protrude from under clypeus; middle field of face slightly elevated above lateral fields, triangular, 1,4 times narrower than lateral fields in middle; antennal cavities small, slightly impressed, reach borders of eyes and far not reach front ocellus level, laterally with tubercles and distinct tooth between antennal fossae; ocelli large, high elevated, but ocellar triangle slightly differentiated. Surface of clypeus and lateral fields with sparse superficial punctures, shining, middle field laterally wrinkly-punctured.

T h o r a x : Collar of pronotum short, transverse furrow shallow. Mesonotum moderately convex, some wider than length; notauli marked only in front third; surface of mesonotum with sparse delicate punctures shining, without microsculpture; subalarum thin, sharpened; speculum punctured, shining; area of mesopleural fovea very broadly impressed; sternaui distinctly impressed in front third; mesopleurae without sharp bend at lower part; surface of mesopleurae at upper third with delicate superficial punctures, strongly shining, at other parts rather roughly wrinkly-punctured, without microsculpture, shining; scutellum moderately elevated, from above triangle, laterally carinated; its horizontal part convex with sparse delicate, superficial punctures, shining. Hind margin of metanotum with triangle projections opposite lateral longitudinal carinae. Propodeum from lateral triangle, strongly slanting backwards, horizontal part 2,5 times shorter than length of area posteromedia in middle; all fields of propodeum distinctly separated by carinae; area superomedia sharply transversal, hexagonal, narrowed in front, of females 2,5-3 times wider than length in middle, costulae behind middle of area superomedia; area dentipara at apex without tooth; spiracles of propodeum small, circular, 1,2-1,3 longer than width, equal 0,3 breadth of field at place of spiracle. Surface of propodeum shining, wrinkled, metapleurae with sparse superficial punctures.

L e g s : Moderately slender; claws thin, long.

W i n g s : Areolet pentagonal, narrow in front, asymmetrical (external vein of base longer than internal and external vein of apex shorter than internal); stigma broad, light; radius very slightly curved, almost straight, short; radial cell short and broad; ramulus only just marked, nervulus interstitial or slightly postfurcal, strongly inclival; membrane of wing hyaline; veins of wings at base light (yellow). Front wing 1,2 times shorter than body length.

A b d o m e n : Abdomen from above longish-oval, slightly drop-shaped, in considerably part almost parallel sided; second tergite slightly transversal, almost equal of length to breadth at apex; apical tergites not hidden and distinctly visible from above; sheath of ovipositor only just visible protrude behind apex of abdomen. First tergite from lateral

practically straight, petiolus distinctly flattened at base, lateral carinae of petiolus sharp, interspace between them superficially wrinkled; petiolus from above gradually broadened to postpetiolus; middle field of postpetiolus almost not expressed. Gastrocoeli in form of longitudinal oblique groove, thyridia very small, also longitudinal or not expressed; spiracles of second tergite behinds its middle, lunulae distinct; abdomen shining, surface of second and third tergites densely punctured by superficial punctures. Hypopygium from lateral triangle, strongly pointed, from below with longitudinal fold.

C o l o r a t i o n : Body brown-black, legs rusty-red, surface of genae with dully white spot.

S i z e : Body length: 6,0; front wing: 5,1; flagellum: 4,7 mm.

M a l e

Flagellum of males some more stout, without white pattern and with narrow weak tyloides on segments 11-16; area superomedia extremely sharply transversal, more than 3 times wider than length in middle. Head with white marks at apex of internal orbits.

4. *Afrectopius* HEINRICH

Afrectopius HEINRICH 1935 - Miss. Scient. de l'Omo **3**: 232-233.

Type species: *Afrectopius kenyae* HEINRICH.

Afrectopius HEINRICH 1967 - Ichn. Stenop. of Africa **2**: 398-399.

Type species: *Hoploplatystylus seyrigi* HEINRICH.

Hoplectopius HEINRICH 1967 - Ichn. Stenop. of Africa **2**: 398-399.

Type species: *Hoploplatystylus seyrigi* HEINRICH.

Afrectopius: TOWNES H. & M. TOWNES 1973 - Mem. Amer. Ent. Inst. **19**: 256.

D i s t r i b u t i o n : Africa. 17 species.

I n t r o d u c t i o n :

The genus, by number of characters is similar to *Ectopius*: circular spiracles of propodeum, atrophied gastrocoeli, presented by slight furrow and indistinct thyridia far removed from base of tergite. It is differed by propodeum with developed teeth or strongly developed apophyses. The character sign of species of genera is narrowed behind projecting spiracles postpetiolus of first tergite of abdomen.

M o r p h o l o g y :

F l a g e l l u m : Bristle-shaped, very long and slender. Of males with long row of long and narrow bacilliform tyloides.

H e a d : Head contour from front strongly narrowed downwards and from above roundly behind eyes; clypeus strongly convex with straight front margin. Face and clypeus densely punctured, coriaceous between punctures.

T h o r a x : Transverse furrow of pronotum not interrupted by keel; pronotal ridge not swollen; pronotal base gradually uniformly curved. Mesonotum strongly convex, notauli expressed basally at different extent, sometimes up to middle of mesonotum; sternali in certain cases more distinct; scutellum high elevated above postscutellum, vertically abrupt to postscutellum, sharply carinated basally and apically, sometimes with exception of top; horizontal part of propodeum slightly sloped to descending, approximately equal or shorter than last; carinae from distinct, with exception of costulae, to almost completely lacking, only carina metapleuralis always very distinct; coxal carina not devel-

oped; apices of areae dentiparae transformed into teeth up to developing very sharp apophyses; spiracles small, almost circular; sculpture of propodeum always densely and more or less delicate irregularly wrinkled.

L e g s : Long and slender.

W i n g s : Areolet from quadrangular slightly pointed anteriad, to pentagonal, strongly narrowed in front; nervulus usually interstitial, rarely slightly postfurcal.

A b d o m e n : Petiolus at the base distinctly wider than height, long, gradually curved and widened to postpetiolus; postpetiolus without distinct median field, with projecting spiracles and slightly narrowed behind them, usually very delicate and irregularly wrinkled. Gastrocoeli atrophied, thyridia present, but often rather indistinct. Sheath of ovipositor protrude behind apex of abdomen.

***Afrectopius seyrigi* (HEINRICH) (Plate 27)**

Hoploplatystylus seyrigi HEINRICH 1938 - Mém. Acad. Malgache **25**: 49, ♀, ♂.

Hoplectopius seyrigi: HEINRICH 1967 - Ichn. Stenop. of Africa **2**: 399-400, 432, ♀, ♂.

Afrectopius seyrigi: TOWNES H. & M. TOWNES 1973 - Mem. Amer. Ent. Inst. **19**: 258.

F e m a l e

F l a g e l l u m : Bristle-shaped, extremely long and slender, with 37 segments, not widened and not flattened ventrally beyond middle, with white annulus on segments (5)6-10; basal segments very long, first not less than 6th times longer than wide, all segments longer than wide. Flagellum equal or slightly longer than the front wing and 1,2 times shorter than body length.

H e a d : Head contour from front strongly narrowed downwards, slightly transversal, only 1,3 times wider than length; internal margins of eyes parallel, genae contour slightly sinuous, genae 6,4 times shorter than height of eye; head contour from above transversal, 1,9 times wider than length. Vertex from lateral abrupt just after the ocelli to occipital carina; temples short, from above sharply, almost straightly narrowed behind eyes, from side parallel to hind margin of eye; occipital carina strongly roundly impressed to level of eyes, at the bottom before mandible base weakened and not reach hypostomal carina; maxillary palps extremely elongated, thin; malar space approximately equal to mandible base width; mandibles narrow as characteristically for tribe (strongly narrowed at middle), long, lower tooth moved inside; clypeus strongly convex, transversal, with straight front margin and rounded lateral corners, separated from face by slight impression; clypeal foveae deep, sharp; labrum long rounded; middle field of face well-defined, narrow, equal by width to lateral fields in middle, high elevated above lateral fields; antennal cavities slightly impressed, reach borders of eyes and far not reach front ocellus level, with slightly elevated roundish tubercles laterally and with slight tubercle between antennal fossae; ocelli of normal size, diameter of lateral ocellus equal to distance from ocellus to eye; ocellar triangle practically not elevated. Surface of clypeus densely punctured by big punctures, very slightly shining (interspace between punctures sculptured), middle field of face wrinkly-punctured, frons above antennal cavities slightly wrinkled.

T h o r a x : Collar of pronotum short, transverse furrow narrow, deep. Mesonotum strongly convex, wider than length; notauli distinct up to middle of mesonotum; surface of mesonotum densely punctured by superficial punctures with slight microsculpture,

dull; subalarum slightly elevated, rather narrow, sharpened in hind half; speculum smooth, area of mesopleural fovea deeply and broadly impressed; sternauli at front half distinct; upper part of mesopleurae densely punctured, lower two third longitudinally-wrinkled; scutellum high elevated above postscutellum, vertically abrupt to postscutellum, sharply carinated basally and apically, from above rather acutely triangle; horizontal part convex, completely smooth. Hind margin of metanotum with triangular projections. Propodeum from lateral of broken type, short, vertical part strongly slanted; horizontal part shorter or equal to length of area posteromedia in middle; carinae of propodeum developed, with exception of costulae and coxal carina; area superomedia longer than width, rounded in front; apices of areae dentiparae with directed upwards apophyses; spiracles of propodeum small circular, approximately equal by length and breadth, equal 0,3 breadth of area spiraculifera at place of spiracle. Sculpture of propodeum wrinkled, without microsculpture, metapleurae very delicate wrinkled, dull.

L e g s : Long and slender. Claws strongly curved.

W i n g s : Areolet quadrangular, but slightly pointed, almost symmetrical, external veins only just longer than internal; stigma narrow, dark; radius very slightly sinuous, long; nervulus interstitial; ramulus absent; membrane of wing hyaline, veins dark. Length of front wing 1,4 shorter than body length.

A b d o m e n : Abdomen from above narrow, fusiform, second tergite equal by length to breadth at apex, apical tergites not hidden, visible from above; sheath of ovipositor distinctly protrude behind apex of abdomen. Petiolus long slightly flattened at base, from above and from lateral with gradual transform to postpetiolus, lateral carinae weak, but distinct, lateral surface of petiolus wrinkled; postpetiolus behind projecting spiracles with sharp narrowing; middle field slightly expressed, wider than lateral fields, irregularly-wrinkled, without microsculpture. Gastrocoeli atrophied, in form of oblique furrow or more smoothed superficial sculpture (remind *Ectopius*, *Linytus*), thyridia weak, indistinct, but visible, far removed from base of second tergite; second tergite sharply narrowed at base, its surface with only just visible shine, coriaceous; lunulae rather large, distinct, slightly elevated, other tergites coriaceous, slightly shining. Hypopygium triangle, compressed from sides, but without fold, with extended rounded apex.

C o l o r a t i o n : Main color of head and abdomen black, of thorax rusty-brown, with reach yellowish-white pattern – wanly-white internal frontal and facial orbits, most part of second tergite, apical part of forth, most part of tergite 5, 6-7 completely, sternite 2 completely and all other sternites with apical stripe.

S i z e : Body length: 9,5; front wing: 7,0; flagellum: 8,0 mm.

M a l e (according to Heinrich)

Flagellum of male with 38 segments, with long row of long and narrow bacilliform tyloides on segments 8-12; with white semiannulus on segments 7-13; scape with white spot ventrally. Margins of face and of clypeus broadly white, sometimes almost completely, with exception of narrow middle stripe; scapus ventrally white.

5. *Cyclolabus* HEINRICH

Cyclolabus HEINRICH 1935 - Dt. Entom. Zeitschr.: 198.

Type species: *Platylabus nigricollis* WESMAEL.

Cyclolabus: TOWNES 1951 - Hym. of A. North of Mexico: 280.

Cyclolabus: HEINRICH 1962 - Syn. Nearct. Ichn. Sten.: 756-772.

Cyclolabus: TOWNES et al. 1965 - Cat. Reclass. East. Pal. Ichn.: 513-514.

Cyclolabus: TOWNES H. & M. TOWNES 1966 - Cat. Reclass. Neotr. Ichn.: 273.

Cyclolabus: HEINRICH 1974 - Ann. Zool. Wars. **32** (8): 143-144.

D i s t r i b u t i o n : Holarctic, Neotropical and Oriental Regions.

I n t r o d u c t i o n :

The genus is distinguished by small, roundish or almost circular spiracles of propodeum, in combination with transversal (not oblique), rather large gastrocoeli and thyridia with interval narrower of each of them for most species. The width of gastrocoeli, nevertheless varies within the genus. For some species interval is equal by breadth to gastrocoeli, or even wider. Horizontal surface of propodeum in the middle is often two times shorter than length of area posteromedia. The genus is relative to *Platylabus* and differs by form of spiracles. The morphology of gastrocoeli and thyridia differs *Cyclolabus* from *Ectopius* WESMAEL and *Linycus* CAMERON with small and circular spiracles (as *Afrectopius* HEINRICH). All species are small, 6-8 mm by length.

M o r p h o l o g y :

F l a g e l l u m : Of female bristle-shaped, beyond middle scarcely widened and flattened ventrally. Flagellum practically equal by length to front wing. Flagellum of male with distinct tyloides.

H e a d : Head contour from front roundish. Temples behind eyes from above from slightly to strongly roundly narrowed; mandibles with form character to tribe, gradually narrowed to apex; clypeus convex, transversal, with straight front margin and rounded lateral corners, separated from face by deep impression; antennal cavities deep, with distinct tooth between antennal fossae.

T h o r a x : Transverse furrow of pronotum not interrupted by keel; pronotal ridge not thickened; epomia sharp; pronotal base sharply sinuously curved. Mesonotum strongly convex, with equal length and breadth; notauli sharp in front third; subalarum high, thin, sharpened; sternaui only just marked up to middle of mesopleurae; scutellum high, from above triangle, laterally carinated up to apex. Hind margin of metanotum with projections opposite lateral longitudinal carinae. Propodeum strongly shortened; all carinae of propodeum developed; area dentipara with denticle at apex; spiracles of propodeum small, circular.

L e g s : Long and slender. Claws small, thick sharply curved at apex.

W i n g s : Areolet from quadrangular, practically symmetrical, to pentagonal with very narrow base; radius straight, strongly curved at apex; nervulus interstitial. Front wing shorter than body length.

A b d o m e n : Abdomen of female from above longish-oval, second tergite wider than length at apex, ovipositor distinctly protrude. Petiolus of first tergite strongly flattened at base, from lateral with sharp passage to postpetiolus and strong carinae; from above petiolus gradually broadened to postpetiolus; middle field of postpetiolus sharply carinated. Gastrocoeli deep, transverse, perpendicular to longitudinal axis of a body; thyridia distinct, approached to base of tergite, interval narrow, vary by breadth; lunulae distinct. Hypopygium with longitudinal fold.

C o l o r a t i o n : Main color mainly red or black, or combination of red and black, with traces of white pattern on head and thorax and mainly with white pattern at apex of abdomen.

***Cyclolabus nigricollis* (WESMAEL) (Plate 28)**

Platylabus nigricollis WESMAEL 1844 - Nouv. Mém. Acad. Sci. Bruxelles **28**: 161.

Cyclolabus nigricollis: HEINRICH 1937 - Polskie Pismo Ent. **14** (15): 139, female, ♂.

F e m a l e

F l a g e l l u m : Bristle-shaped, with 30 segments, scarcely widened and flattened ventrally beyond middle, gradually attenuated toward apex, dorsally with white semianulus on segments 5-10; all segments longer than wide, basal segment 3,5 times longer than width at apex. Flagellum 1,1 times longer than front wing and 1,2 times shorter than body length.

H e a d : Head contour from front roundish, transversal, 1,4 times wider than height, strongly narrowed downwards; genae from front equal 0,4 height of eye; head contour from above strongly transversal, 1,9 times wider than length. Vertex from lateral abrupt just after the ocelli to occipital carina; temples from above strongly roundly narrowed behind eyes, 1,5 times shorter than longitudinal diameter of eye at middle, from side parallel to hind margin of eye; occipital carina from above strongly roundly impressed to hind ocelli and reach the level of eyes and far not reach level of hind ocelli, not high, but sharp all round, meeting with hypostomal carina slightly not reaching mandible base; malar space equal to mandible base width; mandibles with form character to tribe, gradually narrowed; clypeus convex, transversal, 1,7 times wider than length, with straight front margin and rounded lateral corners, separated from face by deep impression; clypeal foveae deep, narrow, of moderate size; labrum protrude from under clypeus, short, rounded; middle field of face distinctly elevated (well-defined), 1,4 times narrower than lateral fields in middle; antennal cavities deep, not reach borders of eyes and far not reach front ocellus level, laterally above antennal fossae with tubercles and with distinct tooth between antennal fossae; margins of antennal fossae rather high elevated; ocelli of normal size, diameter of lateral ocellus equal to distance from ocellus to eye; ocellar triangle expressed. Surface of face and frons densely wrinkly-punctured, slightly shining without microsculpture, clypeus roughly punctured.

T h o r a x : Collar of pronotum short; transverse furrow shallow. Mesonotum strongly convex, of equal length and breadth; notauli sharp in front third; surface of mesonotum densely and roughly punctured (first of all middle lobe), slightly shining; subalarum high, thin, sharpened; speculum wrinkly-punctured; area of mesopleural fovea broadly impressed; sternaui reach to middle of mesopleurae, weak (only just marked); mesopleurae without sharp bend at lower part; mesopleurae very densely wrinkly-punctured, shining, without microsculpture; scutellum high, from above triangle, laterally carinated up to apex, horizontal part slightly conically convex, densely punctured by big punctures, shining. Hind margin of metanotum with long bacilliform projections opposite lateral longitudinal carinae. Propodeum strongly shortened and slanted, horizontal part almost three times (2,7) shorter than length of area posteromedial in middle; all fields of propodeum developed, area superomedial transversal, hexagonal, costula distinct, situated at middle of area superomedial; area dentipara with denticle at apex; spiracles of propodeum small, circular, 1,1-1,2 times longer than width (equal 0,3 breadth of field at place of spiracle). Surface of propodeum wrinkled, of metapleurae wrinkly-punctured, shining.

L e g s : Long and slender. Claws small, thick with sharply curved, almost at right angle apices.

W i n g s : Areolet from quadrangular, practically symmetrical, to pentagonal with very narrow base; stigma narrow, rather dark; radius straight, strongly curved at apex; nervulus interstitial; ramulus absent or only just expressed; membrane of wing hyaline, veins slightly darkened. Front wing 1,4 shorter than body length.

A b d o m e n : Abdomen of female from above longish-oval, second tergite at apex 1,3 times wider than length, apical tergites strongly hidden, ovipositor distinctly protrude. Petiolus of first tergite strongly flattened at base, from lateral with sharp passage to postpetiolus and strong carinae; dorsomedian and dorsolateral carinae merged in middle of petiolus; lateral carinae sharp; surface between lateral carinae wrinkled; from above petiolus gradually broadened to postpetiolus; middle field of postpetiolus sharply carinated, its surface from coriaceous to slightly irregularly-wrinkled; lateral fields wider than middle field. Gastrocoeli deep, transverse, perpendicular to longitudinal axis of a body, short, reach margins of tergite; thyridia distinct, closed to base of tergite, considerably wider than interval (1,4 times); lunulae big, distinct; tergites 2-3 densely punctured, second tergite at base in middle wrinkled, with developed microsculpture, other tergites very delicate superficially-punctured, almost smooth; tergites 6-7 with membranous apex; apical sternites with membranous hind margin. Hypopygium with longitudinal fold; sheath of ovipositor protrude behind apex of abdomen on length of third segment of hind tarsus.

C o l o r a t i o n : Head and thorax completely black, abdomen ferruginous with darkened apex and white stripes on (4)5-7 tergites and last sternites; legs, with exception of coxae and trochanters of basic color; apices of hind femora and tibiae and hind tarsi darkened.

S i z e : Body length: 7,2; front wing: 5,1; flagellum: 5,8 mm.

6. *Cyclolabellus* HEINRICH

Cyclolabellus HEINRICH 1974 - Ann. Zool. Warszawa **32**: 145-146.

Type species: *Cyclolabellus pertenuis* HEINRICH.

D i s t r i b u t i o n : Oriental Region (Burma). 1 species.

I n t r o d u c t i o n :

The genus is affined with *Cyclolabus* by small, almost circular spiracles of propodeum. In contrast to *Cyclolabus* propodeum is shortened, horizontal part approximately two times shorter than area posteromedia in the middle. Area superomedia is distinctly longer than width. Notauli not developed. Gastrocoeli are distinctly impressed, rather long, nearly quadrangular. Thyridia are slightly expressed, interval is some wider than breadth of thyridia.

M o r p h o l o g y :

F l a g e l l u m : Very long and slender, bristle-shaped, beyond middle not widened with very long basal segments, all segments longer than wide. Flagellum considerably longer than the front wing.

H e a d : Head contour from front roundish, genae from front short, strongly narrowed toward mandibles base; eyes very large. Temples behind eyes (from above) very short; occipital carina meeting with hypostomal carina almost on mandible base; mandibles slender, evenly narrowed behind base, lower tooth moved inside; clypeus moderately

convex, transversal, with straight apical margin and rounded lateral corners; middle field of face only just elevated; antennal cavities small, slightly impressed with tooth between antennal fossae; ocellar triangle practically not elevated. Surface of face and clypeus densely and finely punctured, slightly shining.

T h o r a x : Transverse furrow of pronotum not interrupted by keel; pronotal ridge not thickened; pronotal base gradually uniformly curved. Mesonotum moderately convex, some wider than length, notauli only just marked in front third; surface of mesonotum very densely punctured; subalarum thin, not sharpened; sternali slightly impressed in front third; scutellum convex, laterally carinated up to apex, gradually sloping to postscutellum. Hind margin of metanotum with very long bacilliform projections opposite lateral longitudinal carinae. Propodeum from lateral gradually slanting; length of horizontal part approximately two times shorter than area posteromedia in middle; carinae of propodeum developed, with exception of costulae and coxal carina; area dentipara with only just visible denticle at apex; spiracles small, circular, only just longer than width. Surface of propodeum very densely wrinkly-punctured, slightly shining.

L e g s : Quite long, moderately slender.

W i n g s : Areolet big, quadrangular (almost pentagonal with very narrow base), almost symmetrical; radius slightly sinuous, long; nervulus interstitial. Front wing some shorter than body length.

A b d o m e n : Of females compressed dorso-ventrally. Petiolus flattened, from lateral with distinct, but gradual bend; laterally carinated; from above petiolus gradually broadened to postpetiolus; middle field of postpetiolus distinctly elevated, with slight rugosity. Gastrocoeli distinctly impressed, rather long, approximately quadrangular; thyridia slightly expressed; lunulae distinct, moderately large; tergites 2 and 3 delicate and rather densely punctured, distinctly shining.

C o l o r a t i o n : Head and thorax black, with rather reach, yellow-white pattern; most part of abdomen red, base and apex black, last tergite with white border at apex.

***Cyclolabellus pertenuis* HEINRICH (Plate 29)**

Cyclolabellus pertenuis HEINRICH 1974 - Ann. Zool. Warszawa **32**: 147, ♀.

F e m a l e

F l a g e l l u m : Very long and slender, with 30 segments, scarcely widened and very slightly flattened ventrally beyond middle, gradually attenuated toward apex, with white semiannulus on segments 8-13; basal segments very long, first segment 4 times longer than width at apex, all segments longer than wide. Flagellum longer than front wing and body length.

H e a d : Head contour from front roundish, 1,3 times wider than height; genae from front short, 0,2 height of eye; genae strongly narrowed toward mandibles base; eyes very large; head transversal, from above 2,3 times wider than length. Vertex from lateral gradually slanting down to occipital carina; temples behind eyes (from above) very short, strongly, but roundly narrowed backwards, from side parallel to hind margin of eye, 2,4 times shorter than longitudinal diameter of eye at middle; occipital carina from above slightly angularly impressed, not reach level of eyes and hind ocelli, sharp, but not high all round, meeting with hypostomal carina almost on mandible base; malar space approximately equal to mandible base width; mandibles thin, evenly narrowed behind base,

lower tooth moved inside; clypeus moderately convex, transversal, 2,2 times wider than length, apical margin straight, lateral corners rounded, distinctly separated from face; clypeal foveae rather large, deep; labrum broad, rounded, but short, equal by breadth to clypeus front margin; middle field of face only just elevated, slightly separated from lateral fields, only just wider than lateral fields in middle; antennal cavities small, slightly impressed, not reach borders of eyes and very far not reach front ocellus level, laterally above antennal fossae with tubercles and tooth between antennal fossae; margins of antennal fossae high elevated; ocelli of normal size, diameter of lateral ocellus approximately equal to distance from ocellus to eye; ocellar triangle practically not elevated. Clypeus and lateral fields densely superficially punctured; middle field superficially wrinkly-punctured; frons with only just visible wrinkled; surface of head shining.

T h o r a x : Collar of pronotum short, transverse furrow narrow, moderately deep. Mesonotum moderately convex, some wider than length, notauli only just marked in front third; surface of mesonotum very densely punctured, slightly shining; subalarum thin, but not sharpened; area of speculum slightly shining, sculpturated as other part of mesopleurae; area of mesopleural fovea broadly and deeply impressed; sternauli slightly impressed in front third; mesopleurae densely wrinkly-punctured, almost matt; scutellum convex, laterally carinated up to apex, gradually sloping to postscutellum, horizontal part with superficial punctures. Hind margin of metanotum with very long bacilliform projections opposite lateral longitudinal carinae. Propodeum from lateral gradually sloped; length of horizontal part approximately two times shorter than area posteromedia in middle; carinae of propodeum developed, with exception of lacking costulae and coxal carina; area superomedia longer than width (1,4 times), narrowed backwards, from front rounded; area dentipara with only just visible denticle at apex; spiracles small, circular, only just longer than width, equal 0,4 breadth of area spiraculifera at place of spiracle. Surface of propodeum very densely wrinkly-punctured, slightly shining; surface of area superomedia with slight rugosity, shining, metapleurae very densely punctured to wrinkled.

L e g s : Quite long, moderately slender.

W i n g s : Areolet big, quadrangular (almost pentagonal with very narrow base), almost symmetrical; stigma broad, moderately darkened; radius slightly curved, sinuous, long; nervulus interstitial; ramulus only just marked; membrane of wing hyaline, veins dark. Front wing some shorter than body length.

A b d o m e n : Longish-oval from above, dorso-ventrally compressed, second tergite with approximately equal length to breadth at apex, apical tergites not hidden, visible from above; sheath of ovipositor practically hidden (only just visible from above). Petiolus flattened, from lateral with distinct, but gradual bend, without sharp break; dorsal and ventral lateral carinae sharp; from above petiolus gradually broadened to postpetiolus; middle field of postpetiolus distinctly elevated, with slight rugosity, two times wider than lateral fields; postpetiolus shining. Gastrocoeli distinctly impressed, rather long, approximately quadrangular; thyridia slightly expressed, interval some wider than thyridia width, slightly wrinkled; lunulae distinct, moderately large, situated at hind third of tergite; surface of second and third tergites densely punctured with exception of apical parts; fourth tergite with superficial punctures, other smooth. Hypopygium from below triangle, sharply pointed, without longitudinal fold, flat, membranous at apex.

C o l o r a t i o n : Head and thorax black with yellow pattern: corners of clypeus, ex-

ternal and internal orbits (broadly), upper and lower margins of pronotum, scutellum, subalarum; abdomen ferruginous with darkened in most part first and tergites 5-6; tergites 5-6 with yellow margin apically, 7th in most part yellow.

S i z e : Body length: 6,0; front wing: 5,4; flagellum: 6,0 mm.

7. *Linytus* CAMERON

Linytus CAMERON 1903 - Entomologist **36**: 234.

Type species: *Linytus rufipes* CAMERON.

Linytus: PERKINS 1959 - Royal Ent. Soc. London **7**: 67.

Linytus: HEINRICH 1962 - Syn. Nearct. Ichn. Sten.: 777-783.

Linytus: TOWNES et al. 1965 - Cat. Reclass. East. Pal. Ichn.: 513, 600.

Linytus: TOWNES H. & M. TOWNES 1966 - Cat. Reclass. Neotr. Ichn.: 273.

Linytus: HEINRICH 1974 - Ann. Zool. Wars. **32** (8): 178-179.

Linytus: HEINRICH 1977 - Ichn. Florida and Neighb. States **9**: 278-279.

D i s t r i b u t i o n : Holarctic, Oriental and Neotropical Regions.

I n t r o d u c t i o n :

Linytus belongs to a group of genera with small circular or roundish spiracles of propodeum. From such genera as *Neolynicus* HEINRICH *Cyclolabus* HEINRICH *Carlsonia* HEINRICH *Cyclolabellus* HEINRICH and also from *Apaeleticus* WESMAEL and *Ectopoides* HEINRICH it is differed by peculiar structure of gastrocoeli, which is presented only by narrow and shallow rudimentary longitudinal impression with some rough, irregular longitudinal ribs. From New Zealand *Levensa* Townes it is differed by carinated scutellum and developed carination of propodeum. From *Afrectopius* (= *Hoplectopius*) HEINRICH and *Ectopius* WESMAEL it differs by absence of strongly developed teeth or apophyses on propodeum.

M o r p h o l o g y :

F l a g e l l u m : Of females slender, bristle-shaped, practically not widened beyond middle, with white semiannulus, beyond white annulus very slightly flattened ventrally, all segments longer than wide. Flagellum equal by length to front wing. Flagellum of males with white annulus or semiannulus and with distinct longish-oval, very narrow, almost bacilliform tyloides.

H e a d : Head contour from front narrowed downwards, genae almost straightly narrowed downwards, temples from above short, very strongly roundly narrowed behind eyes. Occipital carina meeting with hypostomal carina not far from mandible base; mandibles gradually and strongly narrowed behind base, with form character to Platylabini; clypeus convex with form character to tribe with straight front margin, strongly transversal, distinctly separated from face; antennal cavities small, slightly impressed, with strong tooth between antennal fossae; ocellar triangle slightly elevated. Clypeus with exception of front margin with dense rough punctuation, middle field wrinkly-punctured in different degree.

T h o r a x : Transverse furrow of pronotum not interrupted by keel; pronotal ridge not thickened in extreme form and pronotum impressed laterally practically up to border with mesonotum; epomia weak; pronotal base sharply curved almost angularly. Mesonotum strongly convex, of equal length and breadth, notauli sharp, turn behind middle of mesonotum; subalarum narrow; sternaui slightly impressed, distinct in front third; scu-

tellum strongly convex, triangle from above, from lateral gradually slanting to postscutellum, laterally sharply carinated up to apex by high carinae. Hind margin of metanotum with triangular projections. Propodeum from lateral strongly slanting backwards, without sharp break, horizontal part more than two times shorter than vertical; all carinae of propodeum, with exception of coxal, expressed; area superomedia transversal, pentagonal or rounded in front, costulae developed; area dentipara at apex with small denticle; spiracles of propodeum small, circular. Surface of propodeum irregularly-wrinkled.

L e g s : Moderately long and slender.

W i n g s : Areolet distinctly pentagonal with narrow base, slightly asymmetrical; radius straight, curved only at apex; nervulus interstitial. Front wing some shorter than body length.

A b d o m e n : Form of abdomen from above rhomboidal; second tergite transversal; Petiolus wider than height at base, from lateral gradually curved to postpetiolus; lateral carinae sharp, dorsomedian and dorsolateral carinae, in contrast to representatives of other genera, merge not far from base of tergite; middle field of postpetiolus slightly elevated, but distinct. Gastrocoeli presented by shallow, slightly sloped impressions; thyridia practically not expressed; lunulae big, distinct; 6th and 7th tergites hidden and only just protrude from under 5th; apical tergites with membranous hind margin. Hypopygium from lateral with acute apex, compressed from sides and membranous apically.

C o l o r a t i o n : Rusty-red with black; head black without white pattern.

S i z e : 7-8 mm.

***Linytus exhortator* (FABRICIUS) (Plate 30)**

Ichneumon exhortator FABRICIUS 1787 - Mantissa Insectorum ..., 1: 264, ♀.

Linytus exhortator: HEINRICH 1962 -Canad. Ent. **27**: 779-780, ♀, ♂.

F e m a l e

F l a g e l l u m : Slender, with 33 segments, strongly and gradually attenuated toward apex, beyond middle practically not widened, with white semiannulus on segments (4)5-9, beyond white annulus very weakly flattened ventrally, all segments longer than wide, basal segments moderately long, first segment 3,7 times longer than width at apex laterally. Flagellum equal by length to front wing and 1,2 times shorter than body length.

H e a d : Head contour from front narrowed downwards, 1,4 times wider than height, triangular; genae from front almost straightly narrowed downwards, equal 0,3 height of eye; head contour from above strongly transversal, 2 times wider than length. Vertex from lateral rectilinearly and obliquely abrupt just after the ocelli to occipital carina; temples from above short, very strongly roundly narrowed behind eyes, temples length 1,6 times shorter than longitudinal diameter of eye at middle, from side practically parallel to hind margin of eye; occipital carina from above strongly roundly impressed beyond level of eyes, but not reach level of hind ocelli, not high, sharp all round to place of meeting with hypostomal carina not far of mandible base; malar space approximately 1,5 times shorter than mandible base width; mandibles gradually and strongly narrowed behind base; clypeus with straight front margin, strongly transversal, 2,7 times wider than length, distinctly separated from middle field of face; clypeal foveae of average size, deep; labrum roundly rectangular, far protrude from under clypeus; middle field of face distinctly, but slightly elevated, narrow, at middle 1,5 times narrower than lateral fields;

antennal cavities small, slightly impressed, far not reach level of front ocellus and borders of eyes, laterally with tubercles and with strong tooth between antennal fossae; margins of antennal fossae high elevated; ocelli small, diameter of lateral ocellus only just more than distance from ocellus to eye; ocellar triangle slightly elevated. Clypeus with exception of front margin with rough punctures, middle field wrinkly-punctured in different degree, front surface of head with only just visible shine (on clypeus), surface of antennal cavities from smooth and shining to matt (rarely); surface of head with microsculpture and only just visible shine, practically matt.

T h o r a x : Collar of pronotum short with straight front margin (from above); transverse furrow of pronotum narrow and deep. Mesonotum strongly convex, of equal length and breadth, notauli sharp, extend behind middle of mesonotum; middle lobe of mesonotum with dense indistinct punctures to wrinkle-punctured at hind half, lateral lobes with dense smoothed punctures with developed microsculpture and very slight shine; subalarum narrow, sharpened (at hind half); speculum with sparse punctures, shining; area of mesopleural fovea broadly, but not deeply impressed, mesopleural fovea deep; sternauli slightly impressed, distinct in front third; mesopleurae without sharp bend between lateral and ventral parts; mesopleural suture straight, deep with slight transversal ribs; lower part of mesopleurae smoothly longitudinally wrinkly-punctured, shining, without microsculpture; scutellum strongly convex, from above triangle, from lateral gradually slanting to postscutellum, laterally sharply carinated up to apex by high carinae; horizontal part of scutellum strongly convex with sparse punctures, shining. Hind margin of metanotum with triangle projections opposite lateral longitudinal carinae. Propodeum from lateral strongly slanting backwards, without sharp break; horizontal part 2,5 shorter than length area posteromedia in middle; all carinae of propodeum with exception of coxal carina expressed; basal area short and deep; area superomedia transversal, rounded in front, costulae approximately at its middle; area dentipara at apex with small denticle; spiracles of propodeum small, circular, equal to 0,3 breadth of field at place of spiracle, only just longer than width, length of spiracles 1,2-1,5 times longer than width. Surface of propodeum irregularly-wrinkled, shining, without microsculpture; metapleurae smoothly transversally-wrinkled.

L e g s : Legs slender; claws thin, not thickened at base, sharply curved at apex.

W i n g s : Areolet distinctly pentagonal, slightly asymmetrical (external vein of apex slightly shorter than internal); stigma broad, light; radial cell short and broad; radius straight, curved only at apex; nervulus interstitial; ramulus absent; membrane of wing hyaline, veins light. Front wing 1,2 times shorter than body length.

A b d o m e n : Form of abdomen from above rhomboidal; second tergite transversal, at apex 1,2 times wider than length; sheath of ovipositor only just visible protrude behind apex. Petiolus wider than height at base, from lateral gradually curved to postpetiolus; lateral carinae sharp, dorsomedian and dorsolateral carinae merge not far from base of tergite; interspace between dorsolateral and ventrolateral carinae sculptured by transversal ribs; from above petiolus uniformly broadened to postpetiolus; middle field of postpetiolus slightly elevated, but distinct, approximately equal by breadth to lateral fields; surface of postpetiolus smooth, shining, with only just visible rugosity. Gastrocoeli presented by shallow, slightly sloped impression; thyridia practically not expressed, interval between gastrocoeli at base equal by breadth to middle field of postpetiolus; lunulae big, distinctly elevated; interspace between gastrocoeli wrinkled in different

degree; other part of 2nd and middle of tergite 3 with superficial punctures, with developed microsculpture, surface between punctures coriaceous; other tergites smooth, shining; tergites 6 and 7 hidden and only just protrude from under 5; tergites 4-7 with membranous hind margin. Hypopygium from lateral with acute apex, compressed from sides and membranous apically.

C o l o r a t i o n : Head black; most part of body mainly ferruginous; tergites 3-7 darkened, tergites 4-7 with white membranous apex; apices of hind femora, tibiae and tarsi darkened.

S i z e : Body length: 7,5; front wing: 6,0; flagellum: 5,7 mm.

M a l e

Flagellum of males with white annulus or semiannulus with distinct longish-oval, very narrow, almost bacilliform tyloides on segments 7-18, covered by short dense bristles, segments of apical third distinctly separated from each other.

Variability.

The variability especially impressively is shown in distribution of red (yellow) coloration on a body, up to the practically full colored thorax and abdomen. The form of areolet varies from pentagonal to rhomboidal and sculpture of the middle field of postpetiolus from irregularly-wrinkled to completely smooth. The intensity of sculpture of front surface of head varies to a greater or lesser extent. There are considerable variations in the ratio of body length and front wings.

8. *Neolinyus* HEINRICH

Neolinyus HEINRICH 1971 - Nat. Canad. **98**: 1025-1026.

Type species: *Neolinyus michaelis* HEINRICH.

Neolinyus: HEINRICH 1977 - Ichn. Florida and Neighb. States **9**: 280.

Distribution: Nearctic (southeast).

I n t r o d u c t i o n :

From other genera with small and circular spiracles it is differed by number of characters: from *Cyclolabus* HEINRICH (also from *Apaeleticus* WESMAEL) by superficial gastrocoeli and thyridia, from *Apaeleticus* WESMAEL in addition by not cellular structure of propodeum, by coriaceously-wrinkled middle field of postpetiolus and not protrude middle field of face, from *Linyus* CAMERON and *Ectopius* WESMAEL by peculiarities of a head structure, with strongly reduced, practically absent temples, by rhomboidal areolet (distinctly 5-angled of *Linyus* and *Ectopius*) and by structure of gastrocoeli, which not as at last genus marked by longitudinal impression, but by very strongly and characteristically irregularly-wrinkled slight impression.

It is close to oriental genus *Cyclolabellus* HEINRICH from which it is differed also by distinctly and deeply impressed sternali, by impressed in front third notauli, by shorter propodeum with area superomedia which is wider than length and with distinct costulae and by slightly impressed gastrocoeli and thyridia.

M o r p h o l o g y :

F l a g e l l u m : Bristle-shaped, slender, with white semiannulus, scarcely widened beyond middle and slightly flattened ventrally, strongly attenuated toward apex. Flagellum equal by length to front wing. Flagellum of males without tyloides.

H e a d : Head contour from front roundish, strongly narrowed downwards, eyes very large; temples from above very short, roundly narrowed backwards; occiput and temples abrupt just after the eyes and ocelli to occipital carina. Occipital carina dorsally atrophied, meeting with hypostomal carina far from mandible base; mandibles behind base strongly straightly narrowed with very small lower tooth; clypeus strongly convex relative to lower level of lateral fields with straight front margin; antennal cavities moderately impressed, without tubercle between antennal fossae; ocellar triangle slightly elevated. Surface of clypeus, face and frons densely punctured with microsculpture.

T h o r a x : Transverse furrow of pronotum not interrupted by keel; pronotal ridge not thickened; pronotal base strongly sinuous. Mesonotum strongly convex, of equal length and breadth, notauli distinct in front third; surface of mesonotum densely punctured, with microsculpture; subalarum thin, but not sharpened; sternali distinct up to middle of mesopleurae; scutellum slightly convex, gradually sloping to postscutellum, laterally carinated up to apex. Hind margin of metanotum with triangular projections. Propodeum from lateral gradually slanting to apex, horizontal part considerably shorter than area posteromedia in middle; carinae of propodeum, with exception of coxal carinae, distinct; area superomedia hexagonal, wider than length, costulae developed; area dentipara with distinct denticle at apex; spiracles small, circular. Surface of propodeum delicate wrinkled.

L e g s : Moderately long and slender.

W i n g s : Areolet quadrangular, radial cell broad; nervulus interstitial. Front wing shorter than body.

A b d o m e n : Longish-oval, flattened dorso-ventrally; second tergite transversal. Petiolus distinctly flattened, from lateral almost straight, lateral carinae distinct, from above petiolus gradually broadened to postpetiolus; middle field distinctly elevated. Gastrocoeli shallow, thyridia distinct, removed from base of second tergite, transverse, interval approximately equal to breadth of thyridia; lunulae distinct. Hypopygium with longitudinal fold and membranous apex.

C o l o r a t i o n : Body of females ferruginous with white coloration.

S i z e : 5 mm.

***Neolinycus michaelis* HEINRICH (Plate 31)**

Neolinycus michaelis HEINRICH 1971 - Nat. Canad. **98**: 1025, ♀.

F e m a l e

F l a g e l l u m : Bristle-shaped, very slender, with white semiannulus on segments 6-11, beyond middle scarcely widened and slightly flattened ventrally, strongly attenuated toward apex; basal segments moderately long, first segment 2,7 times longer than width at apex. Flagellum equal by length to front wing and 1,2 times shorter than body length.

H e a d : Head contour from front roundish, strongly narrowed downwards, 1,2 times wider than height; eyes very large; genae from front 5 times less than height of eye; internal margins of eyes parallel, with slight concave opposite antennal cavities; head contour from above transversal, 1,9 times wider than length. Vertex from lateral gradually slanting down to reduced in middle, low occipital carina; temples from above very short, more than 3 times shorter longitudinal diameter of an eye in middle, roundly nar-

rowed backwards, from lateral slightly broadened downwards; occipital carina from above angularly impressed behind level of eyes, but not reach level of ocelli, meeting with hypostomal carina far from mandible base; malar space longer than mandible base width; mandibles behind base strongly linearly narrowed with very small lower tooth; clypeus strongly convex relative to lower level of lateral fields above clypeal foveae, approximately with equal breadth and width, separated from middle field of face by impression, with thin, straight apical margin; clypeal foveae small, deep; labrum short, broad, rectangular; middle field of face practically not expressed, broad, more than two times narrower than lateral fields in middle; antennal cavities moderately impressed, reach borders of eyes but far not reach front ocellus level, with roundish tubercles laterally and without tubercle between antennal fossae; ocelli normal, ocellar triangle slightly elevated. Surface of clypeus, face and frons with dense punctures with microsculpture and only just visible shine (almost matt).

T h o r a x : Collar of pronotum short, transverse furrow shallow. Mesonotum strongly convex, with equal length and breadth, notauli distinct only in front third; surface of mesonotum densely punctured, with microsculpture (delicate coriaceous), slightly shining; subalarum thin, but not sharpened; speculum smooth, shining, area of mesopleural fovea not broadly and not deeply impressed; sternaui distinct, reach approximately to middle of mesopleurae; surface of mesopleurae delicate wrinkled, shining; scutellum slightly convex, gradually sloping to postscutellum, laterally carinated up to apex, surface delicate coriaceous with sparse punctures. Hind margin of metanotum with distinct broad triangle projections opposite lateral longitudinal carinae. Propodeum from lateral gradually slanting to apex, horizontal part considerably shorter than area postero-media in middle; carinae of propodeum, with exception of coxal, distinct; area supero-media hexagonal, wider than length, costulae approximately in middle of area supero-media; area dentipara with distinct denticle at apex, its apical carina high, widened; spiracles small circular, equal 0,4 breadth of area at place of spiracle, of equal length and breadth. Surface of propodeum delicate wrinkled, metapleurae delicate wrinkled, coriaceous.

L e g s : Moderately long and slender. Claws small, broad at base and slightly curved at apex.

W i n g s : Areolet quadrangular, almost symmetrical (external vein of apex some shorter than internal); stigma broad, light; radius almost straight, short; radial cell broad; nervulus interstitial; ramulus distinct; membrane of wing hyaline, veins light. Front wing 1,3 times shorter than body length.

A b d o m e n : From above uniformly longish-oval, flattened dorso-ventrally; second tergite shorter than width at apex; apical tergites not hidden; sheath of ovipositor only just protrude. Petiolus distinctly flattened, from lateral with gradual passage to postpetiolus, almost straight, lateral carinae distinct, surface between them sculpturated by ribs; from above petiolus gradually broadened to postpetiolus; middle field distinctly elevated, but not carinated, lateral fields many narrower than middle field; surface of postpetiolus delicate coriaceous with separate punctures, shining. Gastrocoeli shallow, thyridia distinct, removed from base of second tergite, transverse, interval approximately equal to breadth of thyridia; lunulae distinct, big; surface of tergites 2 and 3 densely and uniformly punctured by big punctures, slightly shining; third tergite with superficial punctures, other tergites with only just visible punctures. Hypopygium with longitudinal fold and membranous apex.

C o l o r a t i o n : Body of females ferruginous with white coloration on head and thorax: face, clypeus, external orbits, frontal orbits very broadly, collar, lateral and upper margins of pronotum, closed from behind stripes along notauli, scutellum and postscutellum, tegulae, subalarum, spots on mesopleurae, front and middle coxae.

S i z e : Body length: 5,1; front wing: 4,0, length of flagellum: 4,2 mm.

9. *Carlsonia* HEINRICH

Carlsonia HEINRICH 1973 - Nat. Canad. **100**: 461.

Type species: *Linytus perturbator* HEINRICH.

Distribution: Nearctic. 1 species.

I n t r o d u c t i o n :

Carlsonia belongs to the group of Platylabini with small, short-oval or almost circular spiracles of propodeum along with genera *Cyclolabus* HEINRICH *Linytus* CAMERON *Neolinytus* HEINRICH and *Apaeleticus* WESMAEL. *Carlsonia* is differed from all of these four genera by most sharply elongated form of females abdomen, adaptation of females abdomen to deposition of the eggs on specialized host, like number of species from other tribes. Some of the peculiarities are similar to *Linytus*, like only slightly impressed gastrocoeli, narrower than interval between them, irregularly reticulate rugose, same as interspace between them, and strongly developed at front third notauli.

Head is wider than of both sexes of *Linytus*, with temples strongly curved not narrowed behind eyes and genae laterally broad and strongly convex; clypeus rather strongly convex. Scutellum is moderately elevated above postscutellum and of females from lateral slightly carinated up to middle, of males more strongly carinated up to apex; area superomedia short, of females almost three times wider than length in middle.

M o r p h o l o g y :

F l a g e l l u m : Bristle-shaped, moderately long, flattened ventrally beyond middle but not widened, with white annulus. Flagellum equal by length to front wing. Flagellum of male with longish-oval light-colored tyloides.

H e a d : Head contour from front roundish, slightly narrowed downwards, from above strongly transversal, some more than two times wider than length. Temples convex, long; occipital and hypostomal carinae meeting on mandible base; malar space shorter than mandible base width; mandibles with form character to Platylabini, behind base gradually narrowed to apex; clypeus convex with straight front margin, distinctly separated from face by impression; antennal cavities not big, deep, with slight tubercle between antennal fossae.

T h o r a x : Transverse furrow of pronotum not interrupted by keel; pronotal ridge not thickened; pronotal base gradually uniformly curved. Mesonotum strongly convex, only just longer than width, notauli distinct up to middle; subalarum narrow; scutellum moderately elevated above postscutellum, gradually sloping backwards, laterally carinated. Hind margin of metanotum with projections opposite lateral longitudinal carinae. All carinae developed, with exception of carina, limiting coxal area; areae dentiparae without apophyses, only with small denticles; spiracles of propodeum small, roundish.

L e g s : Long and thin.

W i n g s : Areolet pentagonal, asymmetrical, narrow in front. Front wing considerably shorter than body length.

A b d o m e n : From above long, elongated, almost parallel sided. Petiolus only just wider than height; first tergite from lateral angulate, with sharp passage to postpetiolus and strong lateral carinae, from above gradually broadened to postpetiolus; middle field of postpetiolus limited by strong carinae. Gastrocoeli long with cellular sculpture; thyridia slightly expressed, but distinct, strongly removed from base of second tergite; lunulae distinct, large; second tergite almost parallel sided, at front half cellulate, third tergite some longer than width, also parallel sided same as subsequent tergites.

***Carlsonia perturbator* (HEINRICH) (Plate 32)**

Linytus perturbator HEINRICH 1971 - Nat. Canad. **98**: 1022-1024, ♂.

Carlsonia perturbator HEINRICH 1973 - Nat. Canad. **100**: 462-463, ♀, new comb.

M a l e

F l a g e l l u m : Moderately long, gradually attenuated toward apex, with 31 segments and with white annulus on segments (7)8-12, practically without constriction between segments, not flattened ventrally beyond middle; basal segments slightly elongated, first segment approximately 3 times longer than width at apex. Flagellum equal by length to front wing and distinctly shorter than body length, with longish-oval light-colored tyloides on segments 9-15.

H e a d : Head contour from front roundish, slightly roundly narrowed downwards, 1,3 times wider than height; genae very short; head from above strongly transversal, 2,2 times wider than length. Vertex from lateral gradually slanting down to occipital carina; temples convex, from above roundly narrowed behind eyes, long, from lateral slightly longer than longitudinal diameter of eye at middle and slightly narrowed downwards; occipital carina from above gradually roundly impressed, far not reach level of eyes and hind ocelli, meeting with hypostomal carina on mandible base; length of gena shorter than mandible base width; mandibles with small lower tooth, behind base gradually narrowed to apex; clypeus convex with straight (slightly rounded) thinned front margin and rounded lateral corners, separated from face by broad impression; clypeal foveae small, narrow, but deep; labrum not protrude from under clypeus; middle field of face broad, slightly differentiated and elevated above lateral fields, 1,4 times narrower than lateral field in middle; antennal cavities not large, deep, reach borders of eyes and far not reach front ocellus level, without lateral tubercles and with slight tubercle between antennal fossae; ocelli of normal size, diameter of lateral ocellus 1,5 times less than distance from ocellus to eye; ocellar triangle elevated. Clypeus and middle field punctured by big punctures, without microsculpture; frons wrinkly-punctured.

T h o r a x : Collar short, transverse furrow narrow, shallow. Mesonotum strongly convex, only just longer than width, notauli distinct up to middle, sharp in front third; surface densely punctured, strongly shining, without microsculpture; subalarum narrow, but not sharpened; speculum smooth, shining, mesopleural fovea deeply impressed; sternauli deeply impressed up to middle; mesopleurae with dense superficial punctures, shining; scutellum moderately elevated above postscutellum, gradually slanted, laterally carinated, almost to apex, horizontal part convex with sparse superficial punctures. Hind margin of metanotum with long bacilliform projections opposite lateral longitudinal carinae. Propodeum from lateral gradually slanting backwards; horizontal part of propodeum short, 2,5 shorter than length of area posteromedia in middle; all carinae developed, with exception of carina, limiting coxal area; area superomedia transverse, nar-

rowed in front, 2,4 times wider than length, costulae beyond middle of area superomedia; areae dentiparae without apophysises, only with small denticles; spiracles of propodeum small, roundish, 1,7-2 times longer than width (equal 0,4 breadth of area spiraculifera at place of spiracle). Surface of propodeum cellular, mesopleurae wrinkled, without microsculpture.

Legs : Long and thin. Claws long, thin, strongly curved.

Wings : Areolet pentagonal, asymmetrical (intercubital veins of equal length, but internal vein of apex shorter than external), narrow in front; stigma narrow, dark; radius short and almost straight; radial cell broad; nervulus interstitial; ramulus only just marked; membrane of wing hyaline, veins dark. Front wing 1,4 times shorter than body length.

Abdomen : From above long, elongated, almost parallel sided, second tergite longer than width, apical tergites not hidden, visible from above. Petiolus only slightly wider than height, first tergite from lateral angulate, with sharp passage to postpetiolus and strong lateral carinae, from above gradually transform to broad postpetiolus; middle field of postpetiolus limited by strong carinae, sharply diverging backwards, its surface irregularly-wrinkled, shining. Gastrocoeli long with cellular sculpture; thyridia expressed slightly, but distinct, strongly removed from base of second tergite and very slightly oblique, narrower than interval; lunulae distinct, large, practically not elevated; second tergite almost parallel sided, at front half with cellular (reticulate) structure, from middle to apex densely and roughly punctured; third tergite parallel sided, densely punctured, other tergites with delicate punctures.

Coloration : Head of male black with white (yellowish) internal orbits and spots on vertex and below temples; thorax black with red; yellow: collar and upper margins of pronotum, subalarum and spot at apex of scutellum; mesopleurae and propodeum red; abdomen and legs mainly red; tarsi of all legs white.

Size : Body length: 9,5; front wing: 7,2; flagellum: 7,0 mm.

10. *Notoplatylabus* HEINRICH

Notoplatylabus HEINRICH 1934 - Polskie Pismo Ent. **13**: 30-31.

Type species: *Notoplatylabus podolicus* HEINRICH.

Notoplatylabus: HEINRICH 1974 - Ann. Zool. Wars. **32** (8): 175-176.

Notoplatylabus: TERESHKIN 1993 - Entomofauna **14** (29): 479-482.

Distribution : Palaearctic, Oriental Region (Burma).

Introduction :

The number of unique characters puts this genus in special position equally with such genera as *Abzaria* CAMERON *Platybirmania* HEINRICH and *Hypomecus* WESMAEL.

Flagellum is longer than front wing. Males' flagellum is more short, not widened and not flattened and at some specimens with indistinct, peculiar to only this genus tyloides. Occipital carina is reduced from above, from lateral parallel to hind margin of eye, before mandible base sharply curved forward (opposite angular projection of front margin of pronotum). Mandibles of *Notoplatylabus* are extremely narrow, thin, sharply narrowed behind base, as of African genus *Afrectopius*. Lateral parts of antennal cavities are elevated above margins of eyes (as of *Abzaria*), usually with longitudinal striation. Transversal furrow of pronotum in middle is interrupted rather by low keel (as at *Apaeleticus*)

along with additional ribs laterally. Pronotal base is with angular projection above front coxae and opposite angular break of lower part of occipital carina, and dorsolateral margin of pronotum with cellular in different degree impression. Notauli of *Notoplatylabus* is extremely sharp, with strong transversal ribs, especially strongly developed at males, extend behind hind third of mesonotum. Mesonotum laterally is bordered by very deep furrow strongly broadened at hind half. Development of sternauli also reaches extreme degree for Platylabini. They are very deep, crenulated, extend behind the middle of mesopleurae. Scutellum of some males is with unique cellular horizontal surface. Postscutellum of *Notoplatylabus* is with unusual for other Platylabini structure. It is with sharply carinated angulated lateral foveae, trapeziform from above. Hind femora of females are widened, from outside with impressed area.

Many from above-listed characters, in addition to small circular spiracles of propodeum make this genus alike to *Apaeleticus*, *Ectopius* and *Cyclolabus*.

Main problem of the genus is absence of the distinct specific characters. At present, there are two species of genus, *Notoplatylabus podolicus* HEINRICH and *N. birmanicus* HEINRICH. The first species was described from central Europe, second, from Burma. Both species were known by single samples and only by females. In agreement with G. HEINRICH'S descriptions, distinct morphological differences between species are absent. Mainly, the differences concern the distribution of white spots on thoracal part of a body and distribution of brown coloration. *Notoplatylabus podolicus* has a local distribution: 15 samples of females (without males) of *Notoplatylabus podolicus* were collected by us only on the territory of Beresina National Reserve. The peculiarities of the species morphology are presented on color plate 33. The genus representatives from populations from Russian Far East presented both females and males were collected and investigated by us. An attempt to reveal distinct morphological characters of specific level were not successful. The main obvious difference is very small size, more saturated black coloration, absence of white pattern on subalarum, and, besides, presence of males in collections, which absent both in European, and Oriental collections. The collected representatives of the genus were described as subspecies *Notoplatylabus podolicus conterraninus* TERESHKIN probably being an independent species. The detailed description of the taxon is given below.

As it was already mentioned, main visible differences between European and Oriental species are distribution of white coloration on thoracal part. We investigated female from southwest Caucasus. It has white coloration on thorax, similar to coloration, described for *Notoplatylabus birmanicus* HEINRICH: subalarum, scutellum, apices of area dentipara and so on. More over, in series of females from Berezina National Reserve, some specimens have light (not white) spots on the same fragments of a thorax. The additional doubts are introduced by genus *Hypomecus*, widespread on all Holarctic and in Burma and presented by single species, not having essential variations of characters all over the areal. All listed data leave the issue of specific structure of the genus *Notoplatylabus* open up to present.

M o r p h o l o g y :

F l a g e l l u m : Of females long, slender, scarcely widened and flattened ventrally beyond middle, gradually attenuated toward apex, with white semiannulus; basal segments moderately elongated. Flagellum longer than the length of front wing and almost equal to body length. Flagellum of males shorter, not widened and not flattened ventrally

beyond middle, basal segments scarcely elongated, with long row poorly visible (indistinctly limited) short-oval tyloides, without traces of white annulus.

H e a d : Head contour from front sharply transversal with very large eyes and oblique (usually sinuously) genae; temples from above very short, behind eyes sharply, almost straightly narrowed; occipital carina reduced dorsally, before mandible base sharply curved forward and widened; hypostomal carina visible from lateral; occipital carina meeting with hypostomal carina practically on mandible base; mandibles extremely narrow, thin sharply narrowed behind base (as *Afrectopius*); clypeus slightly transversal, strongly convex with straight or slightly concave front margin and more or less distinct corners, sharply separated from face by suture; clypeal foveae small, deep; antennal cavities strongly developed, deep their lateral margins practically reach margin of eye, of *N. podolicus podolicus* with longitudinal striation, with only just marked tubercle between antennal fossae; ocelli large, ocellar triangle not expressed (of female *N. podolicus podolicus*) or distinctly elevated (of female and male *N. podolicus conterranius*). Face and clypeus very densely and finely punctured, slightly shining; rest surface with microsculpture. Eyes of males proportionally less than of females, ocelli high elevated above level of eyes, surface of head strongly sculptured.

T h o r a x : Transverse furrow of pronotum in middle interrupted by low keel; pronotal ridge not thickened and with impression along upper margin; epomiae sharp; pronotal base with angular prominence above front coxae. Mesonotum strongly convex, of equal length and breadth; notauli sharp, deep, crenulated, strongly converging backwards, almost reach scuto-scutellar groove; mesonotum laterally bordered by deep furrow broadened backwards; surface of mesonotum very densely punctured, to wrinkled, with developed microsculpture; subalarum thin; lower part of propodeum without of sharp bend; sternauli deep, broad, crenulated, reach to middle of mesopleurae; surface of upper part of mesopleurae densely punctured, lower part wrinkle-punctured; mesopleural suture interrupted by very sharp ribs; scutellum from above triangle, high elevated at base of horizontal part, sharply carinated up to apex; postscutellum with sharp longitudinal wrinkles between lateral foveae. Hind margin of metanotum with triangular projections. Propodeum from lateral slanted, horizontal part of propodeum equal to length of area posteromedia in middle; propodeum with complete set of carinae; area superomedia hexagonal, costulae before middle; areae dentiparae at apex with tooth-like projections; spiracles rather small, circular. Horizontal surface of propodeum with shallowly-cellular sculpture, without microsculpture, area spiraculifera with sharp transversal carinae; metapleurae strongly wrinkled.

L e g s : Long and slender.

W i n g s : Areolet quadrangular, slightly asymmetrical; stigma dark, broad; nervulus interstitial. Length of front wing more than body length.

A b d o m e n : Abdomen from above rather broad, dorso-ventrally not flattened; second tergite transversal; sheath of ovipositor only just visible protrude. First tergite at base flattened, from lateral thick with gradual bend to postpetiolus, laterally carinated; from above petiolus gradually broadened to postpetiolus; middle field elevated, not limited by carinae and considerably wider than lateral fields, smooth, with very sparse punctures. Gastrocoeli square, thyridia distinctly expressed, perpendicular to longitudinal axis of a body, wider than interval between them; lunulae distinct; 2-3 tergites with dense fine punctures, to slightly wrinkled. Hypopygium from lateral almost rectangular, ventrally with fold.

C o l o r a t i o n : Black. Abdomen black or brownish. Thorax from poor to richly presented yellow-white pattern, abdomen with large, white anal spots; legs for the most part rusty-red.

S i z e : Body length: 5,5-8,0 mm.

***Notoplatylabus podolicus podolicus* HEINRICH (Plate 33)**

Notoplatylabus podolicus HEINRICH 1934 - Polskie Pismo Entomol. **13** (1-4): 31-32, ♀.

Notoplatylabus podolicus HEINRICH 1974 - Ann. Zool. Wars. **32** (8): 175.

F e m a l e

F l a g e l l u m : Long, slender, with 35 segments, beyond middle scarcely widened and distinctly flattened ventrally, gradually attenuated toward apex, with white semiannulus on segments 6-10; basal segments moderately elongated, first segment 4,5 times longer than width at apex laterally. Flagellum 1,2 times longer than the front wing and practically equal to body length.

H e a d : Head contour from front sharply transversal, 1,5 times wider than height, with very large eyes and sinuously oblique genae; length of genae 5,2 times shorter than height of eye; contour from above transversal, 2,1 times wider than length. Vertex from lateral vertically abrupt just after the ocelli; temples from above very short, behind eyes sharply and gradually narrowed, from lateral at middle equal 0,3 of longitudinal diameter of eye; occiput from above gradually concave to ocelli, impression reach level of eyes; occipital carina reduced from above, from lateral parallel to hind margin of eye, before mandible base sharply curved forward (opposite angular projection of front margin of pronotum) and widened to mandible base; hypostomal carina visible from lateral at a long distance; occipital carina meeting with hypostomal carina practically on mandible base; malar space equal to mandible base width; mandibles extremely short, thin, sharply narrowed behind base; clypeus slightly transversal, 1,8 times wider than length, strongly convex with straight or slightly impressed front margin and with more or less distinct rounded corners, very sharply separated from face by suture; clypeal foveae deep; labrum long, broad, rounded in front; middle field of face distinct, but slightly elevated, narrow, in middle almost 2,5 times narrower than lateral fields; antennal cavities strongly developed, deep, their lateral margins practically reach margin of eye, raised above margins of eyes and longitudinally striated, laterally without tubercles and with only just marked tubercle between antennal fossae; ocelli large, diameter of lateral ocellus only just more than distance from ocellus to eye; ocellar triangle slightly elevated. Face and clypeus very densely punctured by small punctures, slightly shining along margins of face and on surface of clypeus; rest surface with microsculpture between punctures.

T h o r a x : Collar of pronotum very short, from above with straight front margin, transverse furrow rather shallow and narrow; pronotal base with angular projection above front coxae and opposite angular break of lower part of occipital carina. Mesonotum strongly convex, of equal length and breadth; notauli sharp, deep, crenulated, strongly converge backwards, almost reach scuto-scutellar groove; mesonotum laterally bordered by very deep furrow strongly broadened at hind half; surface of mesonotum very densely punctured by small punctures, to wrinkled, with developed microsculpture and slightly shining; subalarum thin, but not sharp; speculum with more sparse and big punctures than other part of mesopleurae, shining; area of mesopleural fovea very deeply impressed, sternauli very deep, crenulated, reach to middle of mesopleurae; surface of

upper part of mesopleurae densely punctured, of lower part longitudinally-wrinkled; mesopleural suture with very sharp ribs; scutellum from above triangle, high elevated at base of horizontal part, sharply carinated up to apex; horizontal part of scutellum with sparse punctures; postscutellum with sharply carinated angular lateral foveae, from above trapeziform. Hind margin of metanotum with triangle projections opposite lateral longitudinal carinae. Propodeum from lateral slanted, horizontal part of propodeum equal to length of area posteromedia in middle; propodeum with complete set of carinae; area superomedia hexagonal, of equal length and breadth, costulae before middle; areae dentiparae at apex with teeth-like projections (but not apophyses); spiracles rather small, equal 0,5 breadth of field at place of spiracle, longish-oval, 1,5 longer than width along internal contour or 1,3 times longer than width along external one. Horizontal part of propodeum with shallow cellular sculpture, without microsculpture, area spiraculifera with sharp transverse carinae; metapleurae strongly convex with sharp transversal rugosity.

L e g s : Long and slender; hind femora from outside with impressed area. Claws thin, strongly curved in middle almost at right angle.

W i n g s : Areolet quadrangular, almost symmetrical (external vein of apex some shorter than internal); stigma dark, broad; radial cell broad; radius slightly sinuous, long; nervulus interstitial; ramulus distinct; membrane of wing hyaline, veins dark. Length of front wing 1,3 times shorter than body length.

A b d o m e n : Abdomen from above rather broad, parallel sided, dorso-ventrally not flattened; second tergite transversal, at apex 1,2 times wider than length; all tergites visible from above; sheath of ovipositor only just visible protrude. First tergite at base flattened, from lateral thick with gradual bend to postpetiolus; lateral carinae distinct, interspace between them slightly wrinkled; dorsomedian carina only just marked; from above petiolus gradually broadened to postpetiolus; middle field not limited by carinae, but elevated, smooth, only with very sparse punctures, lateral fields with punctures. Gastrocoeli square, short; thyridia distinctly expressed, parallel to front margin of tergite, only just wider or equal to interval between them; lunulae distinct, of moderate size; tergites 2-3rd with dense fine punctures to slightly wrinkled, 4-5th shagreen, slightly shining; sheath of ovipositor pointed. Second sternite sclerotized in considerably part; hypopygium from lateral slightly triangle, almost rectangular, ventrally with fold.

C o l o r a t i o n : Black. Abdomen black or brownish, 5th tergite at apex with white margin, 6th in most part and 7th completely white, subalarum with white spot; legs brown-black, hypopygium with white membranous apex

S i z e : Body length: 7,8; front wing: 6,0; flagellum: 7,1 mm.

Variation of body length: 6,4-8,0 mm

***Notoplatylabus podolicus conterranius* TERESHKIN (Plate 34)**

Notoplatylabus podolicus conterranius TERESHKIN 1993 - Entomofauna **14** (29): 477-488, ♀, ♂.

F e m a l e

Morphologically it is similar to female of *Notoplatylabus podolicus podolicus* HEINRICH being different by more sharp sculpture of body, more small size and by saturated black coloration. The characters, only differing it from European *Notoplatylabus podolicus podolicus* HEINRICH are given below.

F l a g e l l u m : Flagellum 1,3 times longer than the front wing.

H e a d : Malar space 7 times shorter than height of eye from front; head contour from above more sharply transversal, 2,9 times wider than length. Clypeus more convex, slightly transversal, 1,6 times wider than length; lateral margins of antennal cavities less raised above margins of eyes and practically not striated longitudinally, high raised only in lower part; ocellar triangle distinctly elevated.

T h o r a x : Pronotal ridge not thickened and with cellular impression along margin; front part of pronotum to epomiae with sharp longitudinal wrinkles; pronotal base with more sharp angular projection above front coxae than of European subspecies. Surface of mesonotum around notauli with sharp transversal wrinkles; subalarum more low. Costulae at middle of area superomedia. Metapleurae slightly convex, very densely irregularly wrinkled.

A b d o m e n : Abdomen from above rather broad, longish-oval to drop-shaped, broadening up to apex of third tergite. Gastrocoeli some narrower than interval between them; lunulae only just expressed; third tergite with impression at base, often sharp. Second sternite almost completely unsclerotized.

S i z e : Body length: 5,7; front wing: 4,6; flagellum: 5,9 mm.

Variation of body length: 5,5-5,8 mm.

M a l e

M o r p h o l o g y :

Surface of body of males in contrast to that of females with variable, very rough sculpture from moderately, to vastly expressed.

F l a g e l l u m : Bristle-shaped, with 31-34 segments, not widened beyond middle and not flattened ventrally, basal segments scarcely elongated, first segment three times longer than width at apex laterally, with long row very poorly visible (indistinctly limited) short-oval tyloides (to practically full absence), without traces of white annulus.

H e a d : Head contour from front sharply narrowed downwards, with large eyes, from above sharply narrowed behind eyes; occiput abrupt just after the ocelli, from above deeply impressed to ocelli; temples from lateral sharply narrowed downwards, 2,4 times shorter than longitudinal diameter of eye at middle. Occipital carina from above absent, from lateral sharp, at bottom angularly curved forward, opposite of projection of pronotal base, lower of fracture slightly widened; hypostomal carina visible from lateral on considerable length, meeting with occipital carina on mandible base; malar space 1,2 times shorter than mandible base width; mandibles as of female very narrow and thin with small lower tooth strongly moved inside; clypeus separated from face by deep groove, strongly elevated at the base, with thin straight apical margin, slightly impressed at middle; clypeal foveae sharp, deep; labrum equal by breadth to clypeus front margin, rectangular, rather long; internal margins of eyes parallel, face transversal; middle field of face convex, narrower than lateral fields; antennal cavities slightly impressed, not reach front ocellus level, theirs lateral margins only just elevated above margins of eyes, with only just visible tubercle between antennal fossae; ocelli very large, high elevated; distance from hind ocellus to eye approximately equal to 0,7 diameter of an ocellus; ocellar triangle sharply elevated. Middle field of face wrinkly-punctured; lateral fields punctured, shining, with indistinct microsculpture; clypeus with sparse punctures, more dense at base, its surface without microsculpture, shining; malar surface with strong microsculpture, matt.

T h o r a x : Collar of pronotum very short with straight front margin; transverse furrow of pronotum shallow, narrow, interrupted keel and laterally from it by ribs; pronotal ridge with deep longitudinal impression with cellular sculpture; pronotal base above front coxae with angulate projection; epomia strongly developed, reach pronotal ridge; surface of pronotum smooth, polished. Mesonotum strongly convex, wider than length; middle lobe of mesonotum high elevated, roughly-wrinkled, matt, laterally slightly shining; notauli very deep and long, almost reach to scuto-scutellar groove, with strong transversal carinae; lateral lobes of mesonotum densely wrinkly-punctured, slightly shining; mesonotum bordered by deep furrow with transversal carinae; scuto-scutellar groove very deep with polished surface; prepectus behind front coxae strongly impressed up to margin of prepectus; subalarum thin, low; speculum smooth, shining, not sculptured; area of mesopleural fovea very deeply impressed; sternauli deep, long with transversal carinae, reach two third of mesopleurae; mesopleurae, with exception of speculum, with strong longitudinal sinuous carinae; longitudinal furrow of mesosternum very deep, with transversal ribs and strongly broadened backwards; scutellum high elevated above postscutellum, laterally carinated by high carinae, dorsal surface cellular in different degree; postscutellum more often trapeziform, with cellular sculpture, sharply carinated. Metanotum with triangle projections opposite lateral longitudinal carinae. Propodeum from lateral shortened and slanted, horizontal part of propodeum almost two times shorter than length of area posteromedia in middle. All fields of propodeum distinct; area basalis very deep, its surface from smooth, polished, to with transversal projection (rib); area superomedia hexagonal, transversal, costulae at middle; carinae, bordering area superomedia and costulae very high; spiracles of propodeum very small, circular, equal 0,25 breadth of field at place of spiracle; area dentipara at apex with strong tooth. Surface of propodeum roughly cellular-wrinkled with numerous strong sinuous carinae; metapleurae cellular, or with strong sinuous ribs.

L e g s : Legs moderately slender, hind stumpy; hind femora strongly widened, with very slight impression on external surface; claws very small, thin, sharply curved at upper third.

W i n g s : Areolet quadrangular, almost symmetrical; stigma very broad, dark; radius short, practically straight; nervulus interstitial; ramulus developed. Front wing 1,3 times shorter than body length.

A b d o m e n : From above rather broadly-oval; second tergite transversal. First tergite flattened, from lateral with gradual, but distinct bend to postpetiolus; lateral carinae sharp, surface between them wrinkled; dorsomedian carinae of first tergite not developed; dorsally petiolus gradually broadened to postpetiolus; middle field of postpetiolus convex, not carinated by carinae, its surface from smooth, to slightly irregularly-wrinkled. Gastrocoeli moderately impressed, rectangular; thyridia distinct, short, transverse, wider or equal to interval between them; lunulae distinct; base of second tergite often impressed in different degree; surface of second and third tergites densely punctured, other tergites with slight superficial punctures. Second and third sternites almost completely unsclerotized.

C o l o r a t i o n : Completely black, with exception of white apex of sixth tergite and seventh tergite completely; paramerae black; legs from light to dark-brown; hind tibiae at apex darkened.

S i z e : Body length: 5,8; front wing: 4,0; flagellum: 4,6 mm.

11. *Levansa* TOWNES

Levansa TOWNES 1961 - Cat. Reclass. Indo-Austr. Ichn.: 474.

Type species: *Ichneumon decoratorius* FABRICIUS.

Distribution: New Zealand. Tasmania.

Introduction:

The genus is relative and similar in outward appearance with *Linyctus* CAMERON and differs from it as follows: longer temples, scutellum without lateral carinae or with carinae developed only at base, carinae of propodeum, presented by apical transverse carina and often parts of lateral longitudinal carina and part of median longitudinal carina (other carinae are absent or only just expressed). Longitudinal carinae of first tergite are not distinct or partially absent. Postpetiolus is slightly wider and shorter than at *Linyctus*. Gastrocoeli are presented by shallow, slightly sloped impression, thyridia practically not expressed same as at *Linyctus*.

Morphology:

Flagellum: Without white annulus, all segments elongated. Of males without tyloides.

Head: Head contour from front with big eyes, narrowed downwards, temples behind eyes from above narrowed, almost straight; occipital carina meeting with hypostomal carina far from mandible base; abscissula equal by length to mandible base width; hypostomal carina visible from lateral to a long distance; mandibles with form character to Platylabini; clypeus with straight front margin and slightly rounded corners; ocellar triangle distinctly elevated.

Thorax: Transverse furrow of pronotum not interrupted by keel; pronotal ridge not thickened at most sharp form and pronotum impressed laterally practically reaching border with mesonotum; epomia practically absent; pronotal base gradually sharply curved. Mesonotum strongly convex, almost equal of length and breadth, notauli broad, developed up to middle of mesonotum; sternali in form of slight impressions, distinct up to middle; scutellum strongly convex, from above triangle, laterally carinated just only at base (not carinated). Metanotum without projections. Propodeum only with developed apical transverse carina, area superomedia, if developed, transversal; lateral carinae of area superomedia weak; spiracles of propodeum oval to circular.

Legs: Legs slender; claws thin, smooth, at apex rather strongly curved.

Wings: Areolet quadrangular with blunted base; nervellus of hind wing broken at top.

Abdomen: Petiolus wider than height at base, from lateral sharply, but gradually transform to postpetiolus; dorsomedian carinae of first tergite not expressed. Gastrocoeli presented by shallow, slightly oblique impression; thyridia practically not expressed, interval between gastrocoeli at base equal by breadth to middle field of postpetiolus. Hypopygium long, reach to apex of abdomen and completely overlap sheath of ovipositor, from below triangle, flat, slightly compressed from sides only at apex.

Size: Small species.

***Levansa decoratoria* (FABRICIUS) (Plate 35)**

Ichneumon decoratorius FABRICIUS 1775 - Systema entomologiae: 333, ♀.

Levansa decoratoria: TOWNES 1961 - Cat. Reclass. Indo-Austr. Ichn.: 394, 474.

Female

Flagellum : Slender, 34-segments, gradually attenuated to apex, beyond middle practically not widened, without white annulus, ventrally practically not flattened, all segments elongated, basal segments long, first 4 times longer than width at apex laterally. Flagellum 1,3 times shorter than front wing and 1,1 times shorter than body length.

Head : Head contour from front narrowed downwards, 1,4 times wider than height, triangle; genae from front almost straightly narrowed downwards, equal 0,4 height of eye; head contour from above strongly transversal, 2 times wider than length. Vertex from lateral straightly and obliquely sloping to occipital carina; temples from above moderately long, sharply almost straightly narrowed behind eyes, temples length at middle 1,7 times shorter than longitudinal diameter of eye, temples from lateral practically parallel to hind margin of eye; occipital carina from above strongly roundly impressed, not reach level of eyes and far not reach level of hind ocelli, not high, sharp all round, meeting with hypostomal carina far from mandible base; length of abscissula equal to mandible base width; hypostomal carina visible from lateral on long distance, up to level of third of eye; malar space equal to mandible base width; mandibles gradually and strongly narrowed behind base; clypeus with form character to tribe, with straight front margin, transversal, 2 times wider than length, distinctly separated from face by impression; clypeal foveae of middle size, circular, deep; labrum roundly rectangular, slightly protrude from under clypeus; middle field of face high elevated above lateral fields, narrow, in middle 1,2 times narrower than lateral fields; antennal cavities small, short, moderately impressed, reach borders of eyes and far not reach front ocellus level, reach only to middle of frons and forming uniform uninterrupted impression, laterally above antennal fossae with tubercles and with only just visible interantennal tubercle; margins of antennal fossae high elevated; ocelli large, strongly convex, diameter of lateral ocellus equal to distance from ocellus to eye; ocellar triangle distinctly elevated. Clypeus and middle field of face with sparse punctures, middle field with slightly and lateral fields with strongly developed microsculpture, front surface of head with only just visible shine, surface of antennal cavities and frons mainly shagreen; surface of head with microsculpture and only just visible shine, practically matt.

Thorax : Collar of pronotum short with smoothed front margin; transverse furrow of pronotum narrow and deep. Mesonotum strongly convex, 1,1 times longer than breadth, notauli broad, developed up to middle of mesonotum; middle lobe and lateral lobes with superficial punctures, shining with only just visible microsculpture; subalarum narrow, sharpened; speculum smooth, shining; area of mesopleural fovea broadly, but slightly impressed, mesopleural fovea only just expressed; sternauli in form of slight impressions, distinct up to middle; mesopleurae with gradual, but expressed bend between lateral and ventral parts; mesopleural suture straight, deep, practically without transversal ribs and bend toward mesopleural fovea; surface of mesopleurae smoothly-punctured, shining, without microsculpture; scutellum strongly convex, from above triangle, from lateral gradually slanting to postscutellum, in contrast to other Platylabini scutellum laterally carinated just only at base (not carinated); horizontal part of scutellum strongly convex with singular punctures, shining. Hind margin of metanotum practically without projections, only with only just visible bulges. Propodeum from lateral strongly slanting backwards, without sharp break, horizontal part only 1,2 shorter than length of area posteromedia in middle; carinae of horizontal part of propodeum, with exception of

slightly expressed apical parts of lateral longitudinal carina of area dentipara, reduced; apical transverse carina and carinae of vertical part of propodeum developed, carina metapleuralis distinct, coxal carina absent; basal area short and deep; apices of area dentiparae without teeth; spiracles of propodeum of moderate size, roundish, only just longer than width, length of spiracles 1,3 times longer than width. Surface of propodeum slightly shining, shagreen; only area spiraculifera slightly transversally-wrinkled; metapleurae smooth, shining, not sculptured.

L e g s : Legs slender; claws rather long, not thickened at base, at apex rather strongly curved.

W i n g s : Areolet quadrangular with blunted base, strongly asymmetrical (external vein of base considerably longer than internal, and external vein of apex sharply shorter than internal); stigma broad, light; radius short, straight at most part, sharply curved only at apex; radial cell short and broad; nervulus slightly postfurcal; ramulus absent; nervellus of hind wing broken at top; membrane of wing hyaline, veins light. Front wing 1,1 shorter than body length.

A b d o m e n : Form of abdomen from above drop-shaped; second tergite long, 1,4 times longer than width at apex; sheath of ovipositor not protrude behind apex and not visible from above. Petiolus wider than height at base, from lateral sharply, but gradually transform to postpetiolus; only lateral carinae weakly but distinctly developed; interspace between dorsolateral and ventrolateral carinae with slight irregular rugosity; from above petiolus uniformly broadened to postpetiolus; middle field not expressed, only at apex elevated above lateral fields; surface of postpetiolus shagreen, shining. Gastrocoeli presented by shallow, slightly oblique impression; thyridia practically not expressed, interval between gastrocoeli at base equal by breadth to middle field of postpetiolus; lunulae not expressed; all tergites of abdomen shagreen (densely superficially punctured by only just visible punctures), shining; tergite seven hidden under sixth. Hypopygium long, reach to apex of abdomen and completely overlap sheath of ovipositor, from below triangle, flat, slightly compressed from sides only at apex.

C o l o r a t i o n : Most part of body mainly ferruginous; only tergites 3-4 darkened; flagellum and hind tarsi darkened.

S i z e : Length of body: 7,5; front wing: 6,8; flagellum: 5,0 mm.

12. *Cratolaboides* nov.gen.

Type species: *Cratolaboides palpalis* nov.sp.

D i s t r i b u t i o n : Russia, Far East, Primorye.

I n t r o d u c t i o n :

Habitually it is similar to genus *Cratolabus* HEINRICH. Most of characters of genus *Cratolabus* are present. They are – form and characters of a head, hypertrophied second segment of the maxillary palps, occipital carina meeting with hypostomal carina far from the mandible base, rather sharp lateral furrow at margins of mesonotum, presence of developed teeth on propodeum, morphology of postpetiolus and second tergite of abdomen, curved metatarsus, similar sculpture of body and also almost full coincidence by coloration. By coloration and presence of teeth of propodeum they are similar also to

Dentilabus HEINRICH from which there are distinct by small roundish spiracles of propodeum and by morphology of the second tergite of abdomen. At the same time, some characters which characteristic for *Cratolabus* are hypertrophied. I.e. extraordinary large size of second segment of maxillary palps (it does not meet at any representatives of the tribe Platylabini) and sharper lateral furrow of mesonotum. From the other side, some of the characters are not characteristic for *Cratolabus*: propodeum is with strongly elongated area superomedia and atrophied costula, marked only at base, very small only just elongated (roundish) spiracles, considerably more slightly flattened at base petiolus and not flattened abdomen with more strongly pointed hypopygium.

By morphology and coloration, it is extremely similar to genus *Pagarenes*, spiracles of propodeum of which are also small and roundish, area superomedia only with rudiment of costula, gastrocoeli and thyridia are similar and also sharply narrowed behind eyes temples and not developed notauli. At the same time, at *Pagarenes* maxillary palps normal, whereas of *Cratolaboides* second segment of it is extremely hypertrophied. Coxal carina of *Pagarenes* is expressed up to middle, of *Cratolaboides* – reduced. Propodeum *Pagarenes* is shortened with quadrangular area superomedia, whereas of *Cratolaboides* it is elongated with long area superomedia. Except that for *Pagarenes* large whitely-yellow apical spots on 2-3rd tergites and fully black forth are marked, whereas of *Cratolaboides* all tergites of abdomen are with narrow yellow apical bands. The most important character, from our point of view, extraordinary large, swollen second segment of maxillary palps is absent at *Pagarenes*.

In case of an admission of independent status of the genus, it should be esteemed as occupying an intermediate position between genera *Cratolabus* and *Pagarenes*.

M o r p h o l o g y :

F l a g e l l u m : Of female slender, bristle-shaped, slightly widened and flattened ventrally beyond middle and slightly attenuated toward apex, long, appreciably longer than the front wing.

H e a d : Head contour from front rather strongly narrowed downwards; temples from above strongly and roundly narrowed behind eyes. Occipital carina sharp all round, meeting with hypostomal carina far from mandible base; second segment of maxillary palps extraordinary large size, swollen; clypeus strongly convex, transversal, with straight thinned front margin and oblique lateral corners; middle field of face distinct; antennal cavities slightly impressed; ocellar triangle slightly and smoothly elevated.

T h o r a x : Transverse furrow not interrupted by keel; pronotal ridge not swollen; pronotal base gradually rounded with very acute apex. Mesonotum slightly convex, longer than width, laterally bordered by sharp and deep furrow; notauli not developed; surface of mesonotum with dense punctures, without microsculpture; subalarum thin, not sharpened; sternauli slightly and broadly impressed; scutellum from lateral moderately convex and gradually slanting backwards, laterally carinated up to apex. Hind margin of metanotum with sharp projections. Propodeum from lateral long, slightly angleform; fields of propodeum distinct; costulae and coxal carina absent; area superomedia rectangular, elongated, 1,5 times longer than width; areae dentiparae with strong teeth at apex; spiracles small, roundish. Horizontal part of propodeum shining with irregular wrinkles, metapleurae uniformly punctured by big punctures, shining.

L e g s : Long, hind rather strong.

W i n g s : Areolet quadrangular, roundly pointed in front, almost symmetrical; stigma narrow, dark; radius slightly sinuous, long; nervulus interstitial. Front wing almost equal to body length.

A b d o m e n : From above broadly-oval, not flattened; apical tergites strongly hidden, ovipositor slightly protrude; second tergite transversal. First tergite from lateral without sharp transform to postpetiolus, laterally carinated, dorsolateral carina merge with dorsomedian carina below middle of petiolus (as of *Cyclolabus* and *Linycus*), from above uniformly broadened to postpetiolus; middle field of postpetiolus slightly elevated; surface of postpetiolus very slightly wrinkled, shining. Gastrocoeli deeply impressed, triangle, short, equal by breadth to interval between them; thyridia distinct; lunulae distinct, small; tergites 2-3 densely punctured, with microsculpture, slightly shining, apical tergites slightly shagreen. Hypopygium pointed with longitudinal fold, compressed from sides.

C o l o r a t i o n : Body with reach yellow-white pattern; abdomen with apical bands on all tergites.

S i z e : Body length: 6-7 mm.

***Cratolaboides palpalis* nov.sp. (Plate 36)**

Holotype. ♀, Russia, Far East, Primorskyi Kray, Ussurijskiy Reserve, *Pinus sibirica*, 15.07.1981, D. Kasparyan. The holotype is deposited in the collection of Zoological Institute of St. Petersburg.

F e m a l e :

F l a g e l l u m : Slender, bristle-shaped, with 32 segments and with white semiannulus on segments (8)-12 dorsally, beyond middle widened and flattened ventrally, basal segment long, slender, 3,7 times longer than width at apex laterally, segment 13 and last but one square laterally. Flagellum 1,2 times longer than the front wing and practically equal to body length.

H e a d : Head contour from front rather strongly narrowed downwards with large eyes; genae from front roundly narrowed to mandibles base, short, 5 times shorter than height of eye. Vertex from lateral gradually slanting down to occipital carina; temples from above strongly and roundly narrowed behind eyes, from side parallel to hind margin of eye, short, at middle 1,6 times shorter than longitudinal diameter of eye; occipital carina slightly, but angularly impressed to hind ocelli but not reach level of eyes and hind ocelli, sharp all round, meeting with hypostomal carina far from mandible base; malar space equal to mandible base width; mandibles sharply narrowed at base, from place of constriction convexly-parallel to apex, with long upper tooth and short lower one rather strongly moved inside; second segment of maxillary palps of extraordinary large size, swollen; clypeus strongly convex, transversal, with straight thinned front margin and oblique corners, rather sharply separated from face by deep impression; clypeal foveae small, deep, roundish; labrum rounded, rather far protrude from under clypeus, equal by breadth to clypeus front margin; middle field of face distinct, but slightly elevated and approximately equal by width to lateral fields in middle; antennal cavities slightly impressed, polished, laterally reach margins of eyes, but not reach front ocellus level, without lateral tubercles, but with tubercle between antennal fossae; front margins of antennal fossae high elevated; ocelli rather strongly convex, of moderate size, diameter of lateral

ocellus equal to distance from ocellus to eye; ocellar triangle slightly and gradually elevated. Surface of face and clypeus densely punctured by big smoothed punctures, without microsculpture, shine; frons polished.

T h o r a x : Collar of pronotum short, transverse furrow shallow; lateral surface practically not sculptured, without ribs, only with slight, superficial punctures dorsally, with very short sharp epomiae and with only just expressed ribs at hind corners. Mesonotum slightly convex, longer than width, laterally bordered by rather sharp and deep furrow from level of epomiae; notauli not developed; surface of mesonotum with dense punctures (punctures almost merging), without microsculpture, slightly shining; subalarum thin, but not sharpened; speculum with sparse big smoothed punctures, shining; area of mesopleural fovea deeply and broadly impressed; sternauli slightly and broadly impressed up to middle of mesopleurae; lower part of mesopleurae without distinct bend; surface of mesopleurae at lower half wrinkly-punctured, without microsculpture; scutellum from lateral moderately convex and gradually slanting backwards, laterally carinated up to apex; horizontal part moderately convex, with sparse big punctures, without microsculpture. Hind margin of metanotum with sharply developed triangle-bacilliform projections, reaching of level of lateral longitudinal carinae. Propodeum from lateral long, slightly angle-shaped, length of horizontal part 1,2 times longer than area posteromedial in middle; carinae of propodeum, with exception of transversal carina between area superomedial and basal area sharp; costulae and most part of coxal carina, with exception of base, atrophied; area superomedial rectangular, slightly narrowed backwards, 1,5 times longer than width, practically not elevated above lateral fields; areae dentiparae with strong teeth, carina closed it from behind not broadened; spiracles very small, roundish, 1,4 times longer than width (length of spiracles equal 0,3 breadth of field at place of spiracle). Horizontal part of propodeum shining, with irregular wrinkles, surface of area superomedial smooth, metapleurae densely uniformly punctured by big punctures, shining.

L e g s : Long, slender, hind rather strong; claws of hind tarsi rather long and thin, curved almost at right angle.

W i n g s : Areolet quadrangular, roundly pointed in front, almost symmetrical (external vein of apex some longer than internal); stigma narrow, dark; radius slightly sinuous, long; nervulus interstitial; ramulus distinct; membrane of wing hyaline, veins dark. Front wing only 1,1 shorter than body length.

A b d o m e n : From above broadly-oval, not flattened; tergites 6-7 strongly hidden and only just protrude from above, ovipositor slightly protrude; second tergite at apex 1,2 times wider than length. Petiolus distinctly wider than height, gradually broadened to postpetiolus (from above); first tergite from lateral without sharp transform to postpetiolus, with distinct, but slight lateral carinae, dorsolateral carina merge with dorsomedian carina below middle of petiolus; middle field of postpetiolus distinct, but slightly carinated, slightly wider than lateral fields; distance between spiracles more than distance from spiracles to apex; surface of postpetiolus very slightly wrinkled, shining. Gastrocoeli deeply impressed, short, triangle; thyridia distinct, equal by breadth to interval between them; interval punctured; lunulae distinct, small; surface of tergites 2-3 densely punctured to wrinkled, intervals narrower than punctures, with microsculpture, slightly shining, third tergite with very sparse shallow punctures, other tergites only slightly shagreen. Hypopygium pointed, compressed from sides, but not unsclerotized medially.

C o l o r a t i o n : Body with reach yellow-white pattern: genae, mandibles, margins of clypeus, internal orbits and stripes on external, spots on vertex, slight spot on scutellum and postscutellum, teeth of propodeum and apical pleural area, apical stripes on all tergites of abdomen, front and middle coxae richly, trochanters of front and middle legs completely and first segment of hind tarsi. Front and middle legs mainly light-red, hind mainly brownish black.

S i z e : Body length: 6,8; front wing: 6,0; flagellum: 7 mm.

13. *Pagarenes* CAMERON

Pagarenes CAMERON 1903 - Ztchr. Hym. Dipt. **3**: 183-184.

Type species: *Pagarenes erythropus* CAMERON

Pagarenes: HEINRICH 1974 - Ann. Zool. Wars. **32** (8): 167-168.

D i s t r i b u t i o n : Oriental Region (Burma, India). 1 species.

I n t r o d u c t i o n .

There is differed from *Platylabus* WESMAEL by apical yellow-white spots on 6th and 7th tergites of abdomen, by developed teeth of propodeum and small short-oval, almost circular spiracles.

M o r p h o l o g y :

F l a g e l l u m . Of female very long and slender, bristle-shaped, slightly widened beyond middle, distinctly longer than front wing; first segment 4 times longer than width at apex, other longer than wide. Black with white annulus (semiannulus) on segments 7-11; scape ventrally yellowish-white.

H e a d . Temples profile very strongly and straightly narrowed behind eyes, temples and occiput abrupt almost vertically just after of eyes and ocelli; genae profile strongly and straightly narrowed downwards; clypeus strongly convex, with straight front margin, distinctly separated from face; maxillary palps normal; middle field of face only just protrude. Face and clypeus densely punctured by superficial punctures, only just shining.

T h o r a x . Transverse furrow of pronotum shallow, not interrupted by keel. Mesonotum strongly convex, only just longer than width, extremely densely punctured; notauli slightly marked only at base; scutellum moderately elevated above postscutellum, convex from above, with strong lateral carinae, sparse punctures and shining. Horizontal surface of females propodeum shorter than area posteromedia; carinae of propodeum except costulae developed; coxal carina distinct in front part; area superomedia of females approximately square; area basalis deepened in front; areae dentiparae with distinctly projecting teeth; spiracles of propodeum very small, oval, almost circular.

L e g s . Long, slender.

W i n g s . Nervulus interstitial; area superomedia quadrangular; radius rather long, curved.

A b d o m e n . Of females longish-oval; petiolus distinctly two times wider than height, at base more broad; postpetiolus with indistinct middle field, delicate and indistinctly irregularly-wrinkled, shining. Gastrocoeli distinct, not strongly impressed, with sharp thyridia, interval of females only just narrower each of them; contour of gastrocoeli quadrangular; tergites 2 and 3 strongly and densely punctured, slightly shining, tergite 4 also rather densely, but more delicate punctured.

C o l o r a t i o n . Black with reach yellow-white pattern on head abdomen and femora.

S i z e . Body length 7 mm.

***Pagarenes erythropus* CAMERON (Plate 37)**

Pagarenes erythropus CAMERON, 1903 - Ztschr. Hym. Dipt. **3**: 184, ♀.

Pagarenes erythropus: HEINRICH, 1974 - Ann. Zool. Wars. **32** (8): 168-169, ♀, ♂.

F e m a l e

F l a g e l l u m . Slender bristle-shaped with 34 segments and white annulus (semiannulus) dorsally on 7-10(11) segments, behind white annulus widened and flattened ventrally, basal segment long, thin, from lateral 3,7 times longer than width at apex, all segments elongated. Flagellum 1,2 times longer than front wing and body length.

H e a d . Head contour from front strongly narrowed downwards with large eyes; genae from front straightly narrowed to mandible base, short, 4,8 times shorter than height of an eye. Vertex straightly slanted down to occipital carina; temples from above strongly and roundly narrowed behind eyes, from lateral parallel to hind margin of eye, short, in middle 1,3 times shorter than longitudinal diameter of an eye; occipital carina roundly impressed, reach level of eyes but not reach level of hind ocelli, sharp on all distance, meeting with hypostomal carina far from mandible base; length of genae 1,5 times shorter than mandible base width; mandibles at base sharply narrowed and place of narrowing concavely-parallel sided to apex with long upper tooth and short lower considerably moved inside; second segment of maxillary palps normal, not swollen, palps long, thin; clypeus strongly convex, transversal with straight thinned front margin and oblique lateral ones, rather sharply separated from face by deep impression; clypeal foveae small, deep, roundish; labrum triangle, rather strongly protrude from under clypeus, equal by width to front margin of clypeus; middle field of face only just elevated and approximately equal by width to lateral fields in middle; antennal cavities slightly impressed, polished, laterally reach to margins of eyes, but not reach front ocellus level, with sharp lateral tubercles but without tubercle between antennal fossae, at its place margin of antennal cavities sharply elevated above middle field of face; front margins of antennal fossae sharply elevated; ocelli rather strongly convex, of moderate size, diameter of lateral ocellus only just lesser than distance from ocellus to eye; ocellar triangle distinctly elevated. Surface of face and clypeus densely punctured by small punctures.

T h o r a x . Collar of pronotum short, pronotal furrow shallow, pronotal base smoothly rounded, strongly sharpened backwards; lateral surface with distinct punctures at upper half; epomia sharp. Mesonotum strongly convex, only just longer than width; notauli only in form of broad impressions at base; surface of mesonotum with dense rough punctures (punctures almost merged), without microsculpture, with slight shine; subalarum moderately thick, not sharpened; speculum with sparse shining; area of mesopleural fovea deeply and broadly impressed; sternauli in form of only just visible impressions at base; lower part of mesopleurae without distinct bend; surface of mesopleurae at lower half distinctly wrinkle-punctured, without microsculpture; scutellum from lateral distinctly convex and smoothly slanted backwards, laterally sharply carinated up to apex, carinae from behind practically close and scutellum thus practically

carinated from behind; horizontal surface moderately convex with dense smoothed punctures; without microsculpture. Hind margin metanotum with triangle projections opposite lateral longitudinal carinae. Propodeum from lateral weakly angular, short, length of horizontal part two times shorter than length of area posteromedia in middle; carinae of propodeum, with exception of most part of costulae and hind part of coxal carina sharp, costula marked only at base; area superomedia square, slightly rounded in front, high elevated above lateral fields; areae dentiparae with strong flat teeth, carina closing areae dentiparae backwards also strongly broadened; spiracles very small, roundish, 1,4 times longer than width (length of spiracle equal 0,4 breadth of field at place of spiracle). Horizontal part of propodeum irregularly roughly-wrinkled; metapleurae roughly densely-punctured by large punctures; surface of propodeum with slight shine.

L e g s . Long, slender; claws of hind tarsi rather long and thin, gradually curved.

W i n g s . Areolet quadrangular, symmetrical; radius strongly sinuous, long; nervulus interstitial; ramulus only just marked; pterostigma rather broad, light; membrane of wing hyaline, veins dark. Front wing only 1,2 times shorter than body length.

A b d o m e n . From above longish-oval; tergites 6-7 not retracted, ovipositor sheath not protrude; second tergite at apex 1,2 times wider than length. Petiolus distinctly wider than height, from above gradually broadened to postpetiolus with distinct but slight lateral carinae, dorsomedian carina merged with median one at middle of petiolus; middle field of postpetiolus slightly elevated, some wider than lateral fields; distance between spiracles more than distance from spiracles to apex; surface of postpetiolus only just wrinkled. Gastrocoeli distinctly impressed, moderately long; thyridia distinct, slightly oblique, somewhat wider than interval between them; interval wrinkled; lunulae expressed, small; surface of tergites 2-3 densely punctured, interspaces narrower than punctures, without microsculpture, slightly shining, third punctured by superficial punctures, others slightly shagreen. Hypopygium pointed with longitudinal fold.

C o l o r a t i o n : Body with rich yellow-white pattern: genae, mandibles, most part of clypeus and face and fronto-vertical orbits broadly and stripes on outer ones, scutellum and postscutellum completely, apical part of propodeum, apical band of first tergite, interrupted bands on tergites 2-3, 5-th narrowly on apex, 6-th at most part, 7-th completely; front coxae completely, middle at most part, hind at apex, trochanteres 1 of front and middle legs completely and first segment of hind tarsi. Front and middle legs mainly light-red, hind ones mainly reddish black.

S i z e : Body length: 7,1; front wing: 6,2; flagellum: 8,4 mm.

14. *Clypeolabus* HEINRICH

Clypeolabus HEINRICH 1974 - Ann. Zool. Wars. **32** (8): 140-141.

Type species: *Clypeolabus lamellatus* HEINRICH.

D i s t r i b u t i o n : Oriental Region. 2 species from Burma.

I n t r o d u c t i o n :

It is different from other genera by morphology of slightly convex in middle clypeus, without lateral corners and straight front margin, forming in front uniform arch from base to base of mandible and slightly separated from face. Occipital carina does not conjugate

with hypostomal carina, abrupt before them. Hypostomal carina before mandible base is strongly (lamellate) broadened.

M o r p h o l o g y :

F l a g e l l u m : Of female bristle-shaped, slender and long, beyond middle slightly widened and flattened ventrally, with white semiannulus. Flagellum equal by length to front wing. Flagellum of males with distinct longish-oval tyloides.

H e a d : Head contour roundly narrowed downwards with long genae, from above transversal; temples from above slightly roundly narrowed behind eyes; occipital carina not meeting with hypostomal carina, abrupt before it; hypostomal carina before mandible base strongly widened (lamelliform); malar space equal to mandible base width; mandibles with form character to tribe, behind base gradually narrowed to apex; clypeus slightly convex at middle, forming in front uniform arch from base to base of mandible, slightly separated from face; middle field of face narrow, very slightly elevated above lateral fields, only just protrude; antennal cavities slightly impressed with strong tooth between antennal fossae; ocellar triangle distinctly elevated. Clypeus and middle field of face very densely and roughly punctured, shining, middle field at top wrinkly-punctured.

T h o r a x : Transverse furrow of pronotum not interrupted by keel; pronotal ridge not thickened; pronotal base gradually uniformly curved. Mesonotum moderately convex, of equal length and breadth, notauli visible only in front third; surface of mesonotum strongly and extremely densely wrinkly-punctured, without microsculpture; subalarum narrow, but not sharpened; sternauli developed up to middle of mesopleurae; scutellum moderately elevated above postscutellum, convex, laterally carinated up to apex. Hind margin of metanotum with bacilliform projections. Propodeum from lateral of broken type, horizontal part of propodeum shorter than area posteromedia in middle; carinae of propodeum developed, with exception of costulae and coxal carinae; area superomedia approximately square or some wider than length; areae dentiparae with short tooth-like projections, apical transverse carina strongly widened; spiracles of propodeum longish-oval, of moderate size.

L e g s : Long, hind tarsi of females sometimes shortened and thickened.

W i n g s : Areolet quadrangular; radius very slightly sinuous, long; nervulus interstitial or slightly postfurcal. Front wing almost equal to body length.

A b d o m e n : Oval, rather short, flattened dorso-ventrally. Petiolus broad with strong lateral carinae, gradually transform to slightly widened postpetiolus; middle field of postpetiolus slightly expressed. Gastrocoeli deep, short, considerably wider than interval with large, slightly oblique thyridia; lunulae large; second tergite very densely and roughly punctured. Hypopygium pointed, flat.

C o l o r a t i o n : Head and thorax black with slight yellow pattern. Abdomen red-black, apical tergites with slight light borders.

***Clypeolabus curtitarsis* HEINRICH (Plate 38)**

Clypeolabus curtitarsis HEINRICH 1974 - Ann. Zool. Wars. **32** (8): 142-143, ♀.

F e m a l e

F l a g e l l u m : Slender, with 33 segments, beyond middle only just remarkably widened and flattened ventrally, with white annulus on segments 11-12(13), gradually

attenuated toward apex; basal segments long, first segment 4 times longer than width at apex, segment 16 square. Flagellum equal by length to front wing and shorter than body length.

H e a d : Head contour from front roundish, 1,4 times wider than height; genae long, roundly narrowed downwards, 4 times shorter than height of eye; head contour from above transversal, 1,5 times wider than length. Vertex from lateral convex, gradually slanting down to occipital carina; temples from above slightly roundly narrowed behind eyes, equal by width to longitudinal diameter of an eye at middle; occipital carina from above gradually impressed to ocelli, far not reach level of eyes and hind ocelli, from lateral parallel to hind margin of eye; occipital carina not meeting with hypostomal carina, abrupt before it; hypostomal carina before mandible base strongly widened; malar space equal to mandible base width; mandibles with form character to tribe, behind base gradually narrowed to apex; clypeus slightly convex at middle, without lateral corners and straight front margin, forming in front uniform arch from base to base of mandible, slightly separated from face; clypeal foveae deep, narrow; labrum practically not protrude from under clypeus; middle field of face narrow, in middle some narrower than lateral field, very slightly elevated above lateral fields; antennal cavities slightly (moderately) impressed without lateral tubercles, with strong tooth between antennal fossae, laterally reach internal margins of eyes and far not reach front ocellus level; diameter of lateral ocellus 1,8 times less than distance from ocellus to eye; ocellar triangle distinctly elevated. Clypeus and middle field of face very densely and roughly punctured, shining, middle field of face in upper part wrinkly-punctured; frons wrinkly-punctured, shining.

T h o r a x : Collar of pronotum long, transverse furrow shallow, almost not expressed. Mesonotum moderately convex equal by length to breadth, notauli visible only in front third; surface of mesonotum very densely wrinkly-punctured, without microsculpture, only lateral lobes slightly shining; subalarum narrow, but not sharpened; speculum roughly punctured, slightly shining same as other part of mesopleurae, mesopleural fovea deeply impressed; sternauli developed up to middle of mesopleurae; surface of mesopleurae wrinkly-punctured, slightly shining; scutellum moderately elevated above postscutellum, convex, laterally carinated up to apex, gradually sloped, horizontal part densely punctured by big punctures. Hind margin of metanotum with long bacilliform projections opposite lateral longitudinal carinae. Propodeum from lateral of broken type, horizontal part of propodeum two times shorter than area posteromedia in middle, with developed carinae with exception of costulae and coxal carina; area basalis deep, area superomedia 1,5 times wider than length, with high carina limited its from behind; areae dentiparae with short tooth-like projections, apical transverse carina strongly widened; spiracles of propodeum longish-oval, 1,2-1,3 times longer than width, of moderate size (equal 0,5 breadth of area spiraculifera at place of spiracle). Surface of propodeum, including metapleurae, very roughly punctured (interspaces narrower than punctures), to wrinkle-punctured (second lateral field) without microsculpture.

L e g s : Strong, long; hind tarsi of females shortened and thickened. Claws short, slightly curved.

W i n g s : Areolet quadrangular, almost symmetrical (external intercubitus only just longer than internal); stigma dark, narrow; radius very slightly sinuous, long; nervulus interstitial; ramulus only just marked; membrane of wing hyaline. Front wing only 1,1 shorter than body length.

A b d o m e n : Oval, rather short, flattened dorso-ventrally, apical tergites hidden, but visible from above; second tergite wider than length; sheath of ovipositor not protrude. Petiolus broad with strong lateral carinae, from lateral gradually transform to slightly widened from above postpetiolus; middle field of postpetiolus slightly expressed, wider than lateral fields; distance between spiracles equal to distance from spiracles to apex, surface smooth, shining with only just visible rugosity. Gastrocoeli deep, considerably wider than interval between them with large, slightly oblique thyridia, closed to base of tergite; lunulae large, slightly elevated; second tergite very densely and roughly punctured, without microsculpture, shining; punctuation of tergite 3 more delicate, other tergites smooth. Hypopygium pointed, flat, without longitudinal fold.

C o l o r a t i o n . Head and thorax black with slight yellow pattern: internal and external orbits, margins of pronotum, subalarum and apex of scutellum. Abdomen red-black, apical tergites with light-colored border. Legs brown-red, apices of hind femora and tibiae darkened.

S i z e : Body length: 8.0; front wing: 7.5; flagellum: 6.5-7.0, mm.

15. *Hirtolabus* HEINRICH

Hirtolabus HEINRICH 1974 - Ann. Zool. Wars. **32**: 137-139.

Type species *Hirtolabus alienoris* HEINRICH.

Distribution: Oriental Region. Burma.

I n t r o d u c t i o n :

The genus is characterized by the following set of characters, making it different from other genera of Platylabini: 1 – occipital carina is sharply abrupt at the level of genae; hypostomal carina from base of mandibles to the level of occipital carina (abscissula) is lamellate broadened; between them and gena distinct impression is formed, 2 – propodeum is elongated; horizontal part is slightly longer than area posteromedia; area superomedia is approximately three times longer than width, rectangular, 3 – thorax, especially metapleurae and sloped part of propodeum is with dense whitish pubescence, 4 – medial part of second tergite from base to middle is longitudinally striated.

M o r p h o l o g y :

F l a g e l l u m : Bristle-shaped, not widened beyond middle, with white annulus; basal segments long. Flagellum of males with pronounced elongated tyloides.

H e a d : Head contour from front narrowed downwards, genae long; temples, from above roundly narrowed behind eyes, from lateral widened below middle. Occipital carina sharply abrupt at level of genae, hypostomal carina from mandible base to level of occipital carina lamelliform, between abscissula and gena distinct impression forms; mandibles with form character to Platylabini, gradually narrowed behind base to apex; clypeus convex, transversal, with straight front margin, distinctly separated from face by impression; middle field of face distinctly protrude and bordered by deep lateral impressions; antennal cavities of not great size, deep, with strong tooth between antennal fossae.

T h o r a x : Transverse furrow of pronotum not interrupted by keel; pronotal ridge not thickened; pronotal base gradually sinuously curved. Mesonotum moderately convex, some wider than length, notauli marked in front third; surface of mesonotum with very

dense rough punctuation; subalarum high, thin, not sharpened; sternauli not expressed; scutellum comparatively slightly elevated above postscutellum, laterally carinated by slightly bent outside carinae, its horizontal part slightly convex. Hind margin of metanotum with bacilliform projections. Propodeum from lateral long, horizontal part only some slanting backwards; costulae and coxal carinae not developed, area superomedia longer than width approximately three times; carina dentipara externa straight and parallel to lateral carina of area superomedia; apical transverse carina high; areae dentiparae with small denticles at apex; costulae and coxal carinae absent; spiracles longish-oval, of moderate size. Surface of area superomedia cellular; metapleurae and vertical part of propodeum with dense white pubescence.

Legs: Strong, long.

Wings: Areolet quadrangular; radius slightly sinuous, long; nervulus interstitial. Front wing shorter than body length.

Abdomen: Of females longish-oval; sheath of ovipositor slightly protrude behind apex of abdomen. Petiolus distinctly flattened, from lateral gradually transform to postpetiolus, lateral carinae distinct; from above postpetiolus considerably broadened in comparison with petiolus; middle field of postpetiolus slightly elevated, but rather distinct. Gastrocoeli moderately deepened, long with distinct slightly oblique thyridia, interval narrower than breadth each of them; second tergite of females uniformly roughly longitudinally striated approximately up to middle, of males roughly wrinkly-punctured; lunulae distinct, tergites 3-4 densely, but delicate punctured. Hypopygium from below triangle, without longitudinal fold, at apex membranous.

Coloration: Head and thorax mainly black with yellowish-white pattern. Abdomen red-brown with darkened first and middle part of second tergites and yellow border apically of all tergites.

***Hirtolabus alienoris* HEINRICH (Plate 39)**

Hirtolabus alienoris HEINRICH 1974 - Ann. Zool. Wars. **32**: 139, ♀, ♂.

Female

Flagellum: Not widened beyond middle, with white annulus; basal segments long, first segment 5 times longer than width at apex.

Head: Head contour from front narrowed downwards, 1,3 wider than height; internal margins of eyes parallel; genae long, 4 times shorter than height of eye; head contour from above transversal, 1,9 times wider than length. Vertex behind hind ocelli from lateral roundly slanting to occipital carina; temples, from above roundly narrowed behind eyes, moderately long, 1,5 times shorter than longitudinal diameter of an eye in middle, from side approximately parallel to hind margin of an eye, widened below middle; occipital carina gradually impressed to ocelli, far not reach level of eyes and hind ocelli, not high, not meeting with hypostomal carina, sharply abrupt at level of genae; hypostomal carina from mandible base to level of occipital carina lamelliform, between abscissula and gena with distinct impression; malar space approximately equal to mandible base width; mandibles gradually narrowed behind base to apex; clypeus convex, transversal, with straight front margin and oblique lateral ones with rounded corners, distinctly separated from face by impression; clypeal foveae of moderate size, deep; labrum not protrude from under clypeus; middle field of face slightly but distinctly elevated;

antennal cavities of not large size, deep, laterally not reach borders of eyes and far not reach front ocellus level, without rounded tubercles laterally and with strong tooth between antennal fossae; ocelli of normal size, diameter of lateral ocellus 1,3 times less than distance from ocellus to eye; ocellar triangle slightly elevated. Clypeus and middle field of face with dense punctures, shining; lateral fields also with very dense punctures, frons very densely wrinkly-punctured.

T h o r a x : Collar of pronotum moderately long, transverse furrow shallow. Mesonotum moderately convex, some wider than length, notauli marked in front third, slightly expressed; surface of mesonotum with very dense rough punctures, punctures almost merged, slightly shining, without microsculpture; subalarum high, thin, at apex not sharpened; speculum wrinkly-punctured; mesopleural fovea deep with not broad triangle impression around; sternaui not expressed; mesopleurae very densely wrinkly-punctured, without microsculpture, slightly shining; scutellum moderately (comparatively slightly) elevated above postscutellum, laterally carinated by slightly bent outside carinae; horizontal part of scutellum slightly convex with big smoothed punctures. Hind margin of metanotum with long bacilliform projections bent inside. Propodeum from lateral sloping, without distinct break; horizontal part only just longer than area postero-media in middle, apical part of propodeum with long white pubescence; costulae and coxal carinae not developed, area superomedia longer than width approximately three times, its lateral carinae not sharp, apical transverse carina high; area dentipara with small denticle at apex; spiracles longish-oval approximately 1,6(1,7) times longer than width, of moderate size (large) (0,4 breadth of field at place of spiracle). Surface of area superomedia cellular, area dentipara and metapleurae densely wrinkly-punctured.

L e g s : Strong (massive), long. Claws long, very slightly curved.

W i n g s : Areolet quadrangular, slightly asymmetrical (external veins longer than internal); radius slightly sinuous, long; nervulus interstitial; ramulus expressed, but slightly; stigma dark, membrane of wing hyaline, veins dark. Front wing 1,3 times shorter than body length.

A b d o m e n : From above longish-oval, compressed dorso-ventrally; second tergite shorter than breadth at apex; apical tergites not hidden, visible from above; sheath of ovipositor slightly protrude behind apex of abdomen. Petiolus distinctly flattened, from lateral with gradual transform to postpetiolus, lateral carinae distinct, surface between them with ribs; from above petiolus considerably broadened to postpetiolus; middle field of postpetiolus slightly elevated, but rather distinct, approximately equal by width to lateral fields; surface of postpetiolus shining with sparse wrinkles. Gastrocoeli moderately deepened, rather long with distinct slightly oblique thyridia, interval narrower than breadth each of them; interval with sharp longitudinal wrinkles; lunulae distinct, moderately large; second tergite medially striated almost to middle, other part densely and roughly, 3-4 tergites densely, but delicate punctured; all tergites shining. Hypopygium from below triangle, without longitudinal fold, membranous at apex.

C o l o r a t i o n : Head and thorax black; yellow: internal and external orbits, spots at corners of clypeus, upper and lower margins of pronotum, scutellum, subalarum, epimerae (mesepimeron) at upper parts, apical corners of metapleurae above hind coxae. Abdomen red-brown with darkened first and of second tergites at middle and yellow border apically of all tergites, legs reddish-brown.

S i z e : Body length: 10,5; front wing: 8,0 mm.

16. *Rhyssolabus* BERTHOUMIEU

Platymischus TISCHBEIN 1868 - Ent. Ztg. Stettin. **29**: 257, 9.

Type species: *Platymischus bassicus* TISCHBEIN.

Rhyssolabus BERTHOUMIEU 1896 - Ann. Soc. Ent. France **65**: 402.

Platymischus TISCHBEIN 1868; preocc. by WESTWOOD 1832 [= *Rhyssolabus*]

Rhyssolabus: ANENTO & SELFA 1996 - Boln. Asoc. esp. Ent. **20** (3-4): 41-46.

Distribution: Palaearctic.

I n t r o d u c t i o n :

For the genus the following is typical: roughly wrinkled sculpture of all parts of a body, big pentagonal areolet, notauli sharp in front third of mesonotum, scutellum carinated to middle, roughly wrinkled propodeum with cellular area superomedia and strong teeth and big longish-oval spiracles, deep gastrocoeli with distinct thyridia of second tergite of abdomen.

M o r p h o l o g y :

F l a g e l l u m : Bristle-shaped, slightly widened and flattened ventrally beyond middle. Flagellum equal by length to front wing and shorter than body length.

H e a d : Head contour from front almost straightly narrowed downwards, temples from above strongly roundly narrowed backwards. Occipital carina from lateral parallel to hind margin of eye, meeting with hypostomal carina not reaching mandible base; mandibles with form character to tribe; clypeus convex with straight front margin and expressed corners, sharply separated from middle field of face by narrow impression; middle field of face high elevated above lateral fields and clypeus, narrower than lateral fields; antennal cavities moderately impressed with tubercle between antennal fossae; ocellar triangle expressed, but slightly elevated. Surface of head roughly wrinkly-punctured, shining.

T h o r a x : Transverse furrow of pronotum not interrupted by keel; pronotal ridge not swollen; pronotal base sinuous, gradually curved. Mesonotum moderately convex longer than width, notauli distinct in front third; surface of mesonotum densely punctured, shining; subalarum moderately thin, not sharpened; sternauli distinct up to middle of mesopleurae; scutellum high, gradually slanting to postscutellum almost from base, laterally carinated up to middle. Hind margin of metanotum with projections. Propodeum from lateral shortened and slanted, horizontal part of propodeum shorter than area posteromedia in middle; carinae of propodeum developed, with exception of costulae and coxal carina; area superomedia longer than width, laterally and from front limited by sinuous carinae, high elevated above lateral fields, its surface cellular; area dentipara with strong tooth at apex; spiracles large, longish-oval. Horizontal part of propodeum and metapleurae roughly cellular-wrinkled.

L e g s : Moderately slender.

W i n g s : Areolet pentagonal, symmetrical, with wide base; nervulus postfurcal. Front wing shorter than body length.

A b d o m e n : Longish-oval, second tergite transverse; apex of ovipositor sheath slightly protrude. First tergite from lateral with angular transform to postpetiolus, sharply carinated laterally; from above petiolus very strongly broadened to postpetiolus; middle field of postpetiolus slightly elevated above lateral fields, not carinated, roughly wrinkled. Gastrocoeli deep and short, thyridia distinct, transverse, parallel to front margin of

tergite, some wider than interval; lunulae large, distinct; interval and front half of second tergite roughly-wrinkled, other surface with very dense punctures with microsculpture in most part, other tergites with superficial punctures, slightly shining. Hypopygium from below without longitudinal fold.

C o l o r a t i o n : Body black; legs in most part red.

S i z e : 5 mm.

***Rhyssolabus bassicus* (TISCHBEIN) (Plate 40)**

Platymischus bassicus TISCHBEIN 1868 - Ent. Ztg. Stettin **29**: 257.

Rhyssolabus bassicus: BERTHOUMIEU 1896 - Ann. Soc. Ent. Fr. **65** (1896): 306.

F e m a l e

F l a g e l l u m : Bristle-shaped, with 40 segments, slightly widened and flattened ventrally beyond middle, gradually attenuated toward apex, with white semiannulus on segments (6)7-10(11); basal segments moderately long, first segment 2,8 times longer than width at apex. Flagellum equal by length to front wing and 1,4 times shorter than body length.

H e a d : Head contour from front almost straightly narrowed downwards, 1,4 times wider than height; head contour from above transversal, 2,3 times wider than length; genae from front long, equal 0,3 height of eye; lower part of middle field of face from lateral strongly protrude above clypeus. Vertex from lateral gradually slanting down after the ocelli to moderately high occipital carina; temples from above strongly roundly narrowed backwards, long, from lateral at middle only just shorter than longitudinal diameter of eye; occipital carina from above gradually impressed to hind ocelli, far not reach level of eyes and hind ocelli, from lateral parallel to hind margin of eye, meeting with hypostomal carina not reaching mandible base; genae some longer than mandible base width, with impression from place of meeting occipital and hypostomal carinae to lower angle of mandible; mandibles with form character to tribe, sharply narrowed behind base; clypeus convex with straight front margin and expressed corners, transversal, 1,8 times wider than length, sharply separated from middle field of face by narrow impression; clypeal foveae rounded, strongly impressed; labrum rather short, wide, rounded in front; middle field of face high elevated above lateral fields and clypeus, narrower than lateral fields in middle; antennal cavities moderately impressed with lateral tubercles and small tubercle between antennal fossae, reach margins of eyes and far not reach front ocellus level; ocelli of normal size, cross diameter of lateral ocellus equal 0,6 distance from ocellus to eye; ocellar triangle distinct, but slightly elevated. Surface of head roughly wrinkly-punctured, shining, without microsculpture.

T h o r a x : Collar of pronotum short, transverse furrow shallow, only just marked. Mesonotum moderately convex, longer than width, notauli distinct in front third and only just marked towards apex; surface of mesonotum densely punctured, shining, without microsculpture; subalarum moderately thin, but not sharpened; speculum densely punctured, shining; mesopleural fovea deep, area around it only just impressed; sternaui distinct up to middle of mesopleurae, but slightly impressed; mesopleurae very densely wrinkly-punctured with microsculpture, matt with exception of parts of speculum and upper part adjoin to prepectal carina; scutellum high elevated, almost from base gradually slanting to postscutellum, lateral carinae developed up to middle, horizontal part

slightly convex with distinct punctures, shining. Hind margin of metanotum with broad triangle projections opposite lateral longitudinal carinae. Propodeum from lateral shortened and slanted, horizontal part of propodeum shorter than area posteromedial in middle; carinae of propodeum developed, with exception of costulae and coxal carina; area superomedial longer than width, laterally and from front limited by sinuous carinae, rounded in front, high elevated above lateral fields, its surface cellular; area dentipara with strong tooth at apex; spiracles large, longish-oval, 1,5 times longer than width, equal 0,6 breadth of area spiraculifera at place of spiracle. Horizontal part of propodeum and metapleurae roughly cellular-wrinkled.

Legs: Moderately slender. Claws rather broad at two third, curved slightly at apical third.

Wings: Areolet pentagonal symmetrical with wide base; stigma narrow, long, dark; radius almost straight, slightly sinuous, long; nervulus postfurcal; ramulus distinct; membrane of wing hyaline, veins dark. Front wing 1,4 shorter than body length.

Abdomen: From above longish-oval, second tergite transversal, shorter than breadth at apex, apical tergites not hidden, distinctly visible from above; apex of ovipositor sheath slightly protrude. Petiolus from lateral angularly separated from postpetiolus almost at right angle, lateral carinae of first tergite sharp, interspace between them with rough sculpture; from above petiolus very strongly gradually broadened to postpetiolus; middle field of postpetiolus slightly elevated above lateral fields, not carinated, roughly wrinkled, considerably wider than lateral fields. Gastrocoeli deep and short, thyridia distinct, transverse, parallel to front margin of tergite, interval some narrower each of them; lunulae large, distinct, approximately in middle of tergite; interval and front half of tergite roughly-wrinkled, apical half with dense punctures with microsculpture; second tergite with very dense punctures with microsculpture, matt with exception of apically parts; other tergites with superficial punctures, slightly shining. Hypopygium from below triangle without longitudinal fold.

Coloration: Black with exception of red femora, tibiae and tarsi of front and middle legs and hind femora.

Size: Body length: 9,7; front wing: 7,1; flagellum: 7,0 mm.

17. *Ambloplisus* HEINRICH

Ambloplisus HEINRICH 1930 - Mitt. Zool. Mus. Berlin **15**: 551, 552.

Type species: *Ambloplisus primus* HEINRICH.

Thaumatoteles HOPPER 1938 - Amer. Ent. Soc. Trans. **64**: 103.

Type species: *Hoplismenus ornatus* CRESSON.

Ambloplisus: HEINRICH 1962 - Synopsis Nearct. Ichn. Stenop.: 789-790.

Ambloplisus: HEINRICH 1977 - Ichn. Florida and Neighb. States **9**: 276-277.

Type species: *Hoplismenus ornatus* CRESSON.

Distribution: Neotropic and southeast of North America. 4 species.

Introduction:

The genus actually differs by two remarkable characters: long sharpened apophyses of both sexes and more or less elongated and bipartite at apex hypopygium of males. Additional characters of the genus are presented by form of a head with very sharply sloped, almost atrophied temples, slender mandibles and by set of carinae of propodeum.

M o r p h o l o g y :

F l a g e l l u m : Of females bristle-shaped, long and slender, flattened ventrally but only slightly widened beyond middle, strongly attenuated and pointed toward apex. Flagellum of males without tyloides and without notches between segments.

H e a d : Head contour from front strongly, almost straightly narrowed downwards with long genae; vertex from lateral slanting almost straightly from level of eyes and ocelli; temples strongly, almost straightly narrowed behind eyes, from side parallel to hind margin of eye; clypeus moderately convex, sharply separated from middle field of face; mandibles very narrow, strongly narrowed behind base, lower tooth slightly moved inside; antennal cavities deep without tooth between antennal fossae; ocellar triangle distinctly elevated.

T h o r a x : Transverse furrow of pronotum not interrupted by keel; pronotal ridge not swollen; pronotal base gradually sinuously curved. Mesonotum moderately convex, longer than width, notauli slightly marked only at base; subalarum moderately thick, not sharpened; sternali slightly marked only at base; scutellum slightly, but distinctly elevated above postscutellum, dorsally convex, with distinct lateral carinae. Hind margin of metanotum with triangle projections. Propodeum from lateral of broken type, horizontal part in middle approximately equal to length of area posteromedia of females and slightly shorter of males; areae dentiparae apically transformed into long apophyses; area superomedia usually longer than width, approximately parallel sided, apically usually limited by strong transverse carina, but often not separated in front from area basalis; spiracles rather large, longish-oval; costulae and coxal carina absent.

L e g s : Long, moderately slender.

W i n g s : Areolet quadrangular asymmetrical, nervulus interstitial; radius long, slightly curved. Front wing only just shorter than body length.

A b d o m e n : Of females from above broad, drop-shaped, flattened dorso-ventrally. Petiolus only just wider than height at base, from lateral with gradual passage to postpetiolus and from above gradually broadened to postpetiolus, with distinct lateral carinae; postpetiolus with slightly marked, irregularly delicate-wrinkled middle field. Gastrocoeli shallow, comparatively small, sometimes not distinct, with distinct thyridia, interval wider than breadth of thyridia; lunulae distinct; tergites 2-3 delicate coriaceous, without distinct punctures, semimatt. Hypopygium of females broad flat, of males more or less elongated and bipartite.

***Ambloplisus ornatus* (CRESSON) (Plate 41)**

Hoplismenus ornatus CRESSON 1868 - Amer. Ent. Soc. Trans. **2**: 92, ♀.

Ambloplisus ornatus HEINRICH 1959 - Ent. News **70**: 216, ♀.

Ambloplisus ornatus: HEINRICH 1962 - Canad. Ent. **27**: 790-791, ♀, ♂.

Ambloplisus ornatus: HEINRICH 1977 - Arthropods of Florida and Neighbor. Land Areas **9**: 277-278, ♀, ♂.

F e m a l e

F l a g e l l u m : Bristle-shaped, moderately stout, with 36 segments, scarcely widened beyond middle, slightly flattened ventrally, gradually attenuated toward apex, segment 11 square, with white semiannulus on segments (5)6-11(12); basal segments moderately long, first segment 4,3 times longer than width at apex. Flagellum 1,2 times longer than the front wing and 1,2 times shorter than body length.

H e a d : Head contour from front strongly almost straightly narrowed downwards, transversal, 1,6 wider than height, with long genae almost straightly narrowed downwards and equal almost third of eye height; head contour from above transversal, 2,3 times wider than length. Vertex from lateral slanting almost straightly just after the level of eyes and ocelli; temples (from above) strongly, almost straightly, narrowed behind eyes, from side parallel to hind margin of eye, equal in middle to 0,6 of longitudinal diameter of eye; occipital carina from above slightly almost angularly impressed behind ocelli, far not reach level of eyes and hind ocelli, meeting with hypostomal carina not reaching mandible base; genae long, malar space almost 1,5 times longer than the mandible base width; mandibles very strongly narrowed behind base (with form character to *Platylabini*); clypeus strongly convex, transversal, almost 2 times wider than length, with straight front margin and rounded lateral corners, sharply separated from middle field of face; clypeal foveae large and deep; labrum protrude from under clypeus, long, rounded, equal by breadth to clypeus front margin; middle field of face distinct, parallel sided, wider than lateral fields, but slightly elevated above them; antennal cavities deep with rounded tubercles laterally and without tooth between antennal fossae, their margins almost reach eyes, but not reach front ocellus level; ocelli large, diameter of lateral ocellus equal to distance from ocellus to eye, ocellar triangle distinctly elevated. Head surface shining, clypeus and middle field of face with superficial punctures, frons absolutely smooth.

T h o r a x : Collar of pronotum moderately long, transverse furrow shallow. Mesonotum moderately convex, longer than width, notauli marked only at base; surface densely punctured, without microsculpture, shining between punctures; subalarum moderately thick not sharpened; speculum smooth, shining, not punctured, mesopleural fovea moderately deep, with slightly impressed surrounding area; sternaui slightly marked only at base; mesopleurae longitudinally wrinkly-punctured shining; scutellum slightly elevated above postscutellum, laterally carinated up to apex, its surface with sparse shallow punctures, polished. Hind margin of metanotum with triangle projections opposite lateral longitudinal carinae. Propodeum from lateral of broken type, horizontal part of propodeum in middle approximately equal to length of area posteromedial; basal furrow deep; area superomedial not separated from area basalis by carina (area superomedial and area basalis merged), longer than width, approximately parallel sided; costulae and coxal carina absent; area dentipara with strong apophysis; spiracles rather large, longish-oval (equal 0,5 breadth of area spiraculifera at place of spiracle), 1,3-1,4 times longer than width. Surface of propodeum wrinkled without microsculpture, metapleurae shining, superficially punctured.

L e g s : Long, moderately slender. Claws curved almost at right angle.

W i n g s : Areolet quadrangular asymmetrical, intercubital veins equal by length, but external vein of apex longer than internal; stigma narrow, light; radius slightly sinuous, long; radial cell long; nervulus interstitial or very slightly postfurcal; ramulus slightly developed; wings hyaline, veins light. Front wing 1,2-1,3 shorter than body length.

A b d o m e n : From above broad, drop-shaped, flattened dorso-ventrally; second tergite longer than width at apex. Petiolus only just wider than height at base, from lateral with gradual passage to postpetiolus and distinct lateral carinae, from above gradually broadened to postpetiolus; distance between spiracles more than distance from them to apex; postpetiolus with only just marked middle field considerably more wider (2 times)

than lateral fields and with very slight rugosity, smooth, without microsculpture. Gastro-coeli moderately, deep, rather short with distinct slightly oblique thyridia, interval considerably wider than thyridia, its surface with big deep punctures; lunulae slightly marked, but distinct, moderately large; second tergite with sparse superficial punctures, delicate coriaceous, semimatt, other tergites with similar sculpture. Hypopygium broad flat, broadly pointed, reach apex of abdomen; sheath of ovipositor hidden, not protrude behind apex.

C o l o r a t i o n : Head, thorax, coxae and trochanters with very reach light-yellow pattern. Abdomen, femora, tibiae and tarsi, with exception of hind, dark- or light-red, abdomen with slight white spots at corners of 1-4 tergites.

S i z e : Body length: 8,8; front wing: 7,0; flagellum: 7,3 mm.

M a l e (according to HEINRICH)

Flagellum with 34-35 segments, without tyloides, with white annulus on segments (9)10-16; area posteromedia of males slightly shorter than horizontal part of propodeum; hypopygium of males elongated and bipartite. Unusually sharp sexual dimorphism in coloration: black with very reach white coloration on head and thorax and with white apical bands on all tergites of abdomen.

18. *Acantholabus* HEINRICH

Acantholabus HEINRICH 1974 - Ann. Zool. Wars. **32** (8): 157-158.

Type species: *Acantholabus malaisei* HEINRICH.

D i s t r i b u t i o n : Oriental Region (Burma). 3 species.

I n t r o d u c t i o n :

The genus is close to the genera *Platylabus* and *Dentilabus* by form of large and broad thyridia with narrow interval between them and elongated spiracles. With *Dentilabus*, it is similar due to apophyses and slight impression on interspace between thyridia (at least at *Acantholabus malaisei*). It is differed by specific morphology of scutellum.

M o r p h o l o g y :

F l a g e l l u m : Of females slender, bristle-shaped with long basal segments, not widened beyond middle, with white annulus or semiannulus. Flagellum of males with row very distinct elongated tyloides.

H e a d : Head contour rounded with very large eyes and short genae; vertex abrupt just after the ocelli; temples short, behind eyes from above sharply and strongly roundly narrowed backwards and from lateral from strongly, to very strongly downwards; occipital carina from above angularly impressed, but not reach level of eyes and hind ocelli; clypeus strongly convex, slightly separated from middle field of face; mandibles to apex strongly gradually narrowed and carinated.

T h o r a x : Transverse furrow of pronotum not interrupted by keel; pronotal ridge not thickened; pronotal base gradually uniformly curved. Mesonotum strongly convex, only just longer than width, very densely punctured; notauli marked only at basal third; surface of mesonotum with dull structure; subalarum thickened and sharpened; sternauli slightly impressed at front half; scutellum uniformly raised backwards from basal (scuto-scutellar) furrow, from above flattened, straightly narrowed backwards and sharply abrupt from apex to postscutellum; carinated laterally and at apex by high sharp carinae, at

apex carina interrupted, forming something like teeth. Hind margin of metanotum with teeth. Horizontal part of propodeum in middle distinctly shorter than area posteromedia; area superomedia varies from some wider than length to some longer one, costulae most often indistinct or, if present, situated at middle of area superomedia; areae dentiparae short, of character species with long apophysises, sometimes only with short denticles; coxal carina distinct; spiracles rather large, longish-oval.

L e g s : Very long and slender; hind coxae elongated.

W i n g s : Areolet big, quadrangular, symmetrical; radius almost straight, long; nervulus interstitial. Length of front wing approximately equal to body length or only just shorter.

A b d o m e n : Of females from above longish-oval, second tergite longer than width at apex, sheath of ovipositor slightly projecting behind apex of abdomen. Petiolus of first tergite rather thick, sharply flattened only at base. Gastrocoeli slightly impressed, long; thyridia large and broad, removed from base of second tergite, interval narrower than breadth each of them with slight impression; 2nd and 3rd tergites from delicate to very delicate punctured or with coriaceous sculpture. Hypopygium from below triangle, without distinct longitudinal fold.

C o l o r a t i o n : Similar to *Dentilabus*.

***Acantholabus malaisei* HEINRICH (Plate 42)**

Acantholabus malaisei HEINRICH 1974 - Ann. Zool. Wars. **32** (8): 158-160, ♀, ♂.

F e m a l e

F l a g e l l u m : Slender, bristle-shaped, [with 36 segments (acc. to G.H.)], not widened beyond middle and not flattened ventrally, with white semiannulus dorsally; basal segments long, first segment 6 times longer than width at apex [apical segments longer than wide (acc. to G.H.)]. Flagellum approximately equal by length to front wing and body length.

H e a d : Head contour from front rounded with very large eyes, only 1,2 times wider than height, narrowed downwards, only malar space visible from front; genae from front 7,4 times sorter than height of eye; head from above strongly transversal, 1,8 times wider than length. Vertex from lateral abrupt to occipital carina just after the ocelli; temples short, behind eyes from above sharply, strongly and roundly narrowed backwards and from lateral downwards; temples length at middle 5,2 times shorter than longitudinal diameter of eye; occipital carina from above angularly impressed, but not reach level of eyes and hind ocelli, from lateral, before mandible base erased and not reach hypostomal carina; malar space equal to mandible base width; mandibles with form character to Platylabini strongly and gradually narrowed to apex, sharply carinated dorsally and ventrally; clypeus narrow, but wider than length, strongly convex, with rounded front margin, slightly separated from middle field of face; clypeal foveae deeply impressed, of moderate size; labrum protrude from under clypeus, triangle, but rather broad; middle field of face slightly elevated, narrower than lateral fields in middle; antennal cavities very slightly impressed, with rounded tubercles laterally and distinct tubercle between antennal fossae, margins of antennal cavities laterally reach eyes, but far not reach front ocellus level; ocelli large, strongly convex, diameter of lateral ocellus equal to distance from ocellus to eye. Surface of face and clypeus with dense fine punctures, with dull shine (interspaces between punctures sculpturated), frons above antennal cavities shagreen.

T h o r a x : Collar of pronotum short, transverse furrow deep. Mesonotum very strongly convex, slightly longer than width, notauli marked only at basal third; surface of mesonotum with very dense punctures and strongly developed microsculpture, matt; subalarum thickened, but sharpened; speculum with wrinkled sculpture, mesopleural fovea deep with sharp enveloping impression; sternaui slightly impressed at front half; surface of mesopleurae densely wrinkly-punctured, matt; scutellum high elevated above postscutellum, carinated laterally and at apex by high sharp carina, at apex carina interrupted, forming something like teeth; surface of scutellum flat, with dense punctures and microsculpture, matt; postscutellum with strong longitudinal wrinkles. Hind margin of metanotum with triangle projections opposite lateral longitudinal carinae. Propodeum from lateral slanted, horizontal part of propodeum considerably shorter than area posteromedia in middle; all fields of propodeum developed; basal area very long; area superomedia hexagonal, approximately of equal length and breadth, costulae present or indistinct, situated before middle of area superomedia; area dentipara short with very long bend upwards apophysis at apex; coxal carina distinct; spiracles rather large, longish-oval, 1,6-2-times longer than width (equal 0,6 breadth of area spiraculifera at place of spiracle). Horizontal part of propodeum and metapleurae wrinkly-punctured, slightly shining.

L e g s : Very long and slender; segments of all tarsi long and thin; claws long, slightly curved, hind coxae elongated.

W i n g s : Areolet big, quadrangular, symmetrical (veins of base of equal length); stigma broad, dark; radius almost straight, long; nervulus interstitial; ramulus absent; membrane of wing hyaline, veins dark. Length of front wing approximately equal to body length or only just shorter.

A b d o m e n : Abdomen from above longish-oval (drop-shaped), flattened dorso-ventrally; second tergite longer than width at apex; apical tergites not hidden, visible from above; sheath of ovipositor slightly protrude behind apex of abdomen. Petiolus of first tergite rather thick, sharply flattened only at base; petiolus from lateral and from above with gradual passage to postpetiolus; lateral carinae distinct; middle field of postpetiolus high elevated and distinctly limited, lateral fields of postpetiolus narrower than middle field, its surface sinuously-wrinkled. Gastrocoeli slightly impressed, superficial, long, thyridia strongly removed from base of second tergite, wider than interval between them; interspace between thyridia with slight longitudinal impression, wrinkled; lunulae distinct, comparatively large and elevated; second and third tergites from delicate to very delicate punctured or with coriaceous sculpture; tergites 6-7 slightly membranous. Hypopygium from below triangle, without distinct longitudinal fold.

C o l o r a t i o n : Body black-brown; yellow: spots on vertex, internal orbits, front and upper margins of pronotum, subalarum, scutellum, apophyses. Apical margin of sixth and seventh tergites completely white.

S i z e : Body length - 6,7; front wing: 6,1; flagellum: 4,9 mm.

M a l e (according to G. HEINRICH)

Flagellum of male with 38 segments, with distinct longish-oval tyloides on segments 8-12 and white semiannulus on segments 11-15. Face and clypeus broadly white, tergites 5th and 6th with white membranous apex, 7th with white apical spot.

19. *Platybirmania* HEINRICH

Platybirmania HEINRICH 1974 - Ann. Zool. Wars. **32** (8): 191-192.

Type species: *Platybirmania acutinota* HEINRICH.

Distribution: Oriental Region (Burma).

Introduction:

It is very isolated genus, like *Abzaria* CAMERON. Clypeus is flat, broadly rounded at apex like clypeus of *Clypeolabus* HEINRICH in form of rounded arch from one base of mandible to another. Mandibles are very broad at base, in middle from above strongly curved almost at right angle, immediately from base uniformly narrowed. Middle field of face is only just expressed. Occipital carina is broadened at the base of mandibles. Pronotal ridge is strongly convex (swollen). Mesonotum behind base of front wings is with vertical triangle projection. Scutellum is high and completely carinated including hind border. Areolet of front wings is petiolate. All carinae of the propodeum are developed, with exception of carina between basal area and area superomedia. Costula is situated beyond middle of area superomedia. Area dentipara at apex is with tooth. Gastrocoeli are deep, thyridia sharp, considerably wider than the interval. The interval between thyridia is with longitudinal impression as at *Dentilabus* HEINRICH. Apical tergites are smooth and shining, slightly narrowed, approximately cylindrical. The length of apical tergites is almost equal to length of second and third tergites taken together.

Morphology:

Flagellum: Of female long and slender, not widened beyond middle, bristle-shaped, with white semiannulus. Flagellum of males with narrow tyloides.

Head: Head contour from front roundly narrowed downwards, from above transversal and triangle from lateral. Temples from above convex, roundly narrowed, from lateral slightly widened downwards from middle, with weak impression at mandible base; occipital carina from above almost straight, low, meeting with hypostomal carina on mandible base; mandibles very wide at base, in middle strongly curved almost at right angle, immediately from base uniformly narrowed, lower tooth small, slightly moved inside; clypeus flat, widely gradually rounded in form of arch, only just visible separated from face; middle field of face only just expressed; antennal cavities of moderate size, deep, with small tooth between antennal fossae; ocellar triangle high elevated. Surface of clypeus and face densely superficially punctured, without microsculpture.

Thorax: Transverse furrow of pronotum not interrupted by keel; pronotal ridge swollen; pronotal base smooth, gradually slightly sinuously curved. Mesonotum strongly convex, of equal length and breadth, notauli practically not developed; external margins of mesonotum between tegulae and scuto-scutellar groove with projecting triangle processes; surface of mesonotum rather densely punctured, shining; subalarum moderately thick, not sharpened; sternali absent; scutellum high elevated above postscutellum, sharply divided on horizontal and vertical parts, carinated laterally and at apex by high carinae; foveae of postscutellum merged. Hind margin of metanotum with triangular projections. Propodeum short; horizontal part considerably shorter than vertical; carinae of propodeum developed, with exception of carina between basal area and area superomedia; area superomedia hexagonal, of equal length and breadth, costulae behind middle; apices of areae dentiparae with short teeth; spiracles of moderate size, longish-oval.

Legs: Quite long and slender.

W i n g s : Areolet quadrangular, petiolate; radius practically straight; nervulus interstitial. Front wing shorter than body length.

A b d o m e n : Elongated, from middle of tergite 3 uniformly narrowed backwards, second tergite transversal, apex of abdomen compressed from sides. First tergite at base only just wider than height, from lateral with gradual, but distinct bend; lateral carinae sharp; from above strongly and sharply broadened to postpetiolus; middle field of postpetiolus high elevated and distinctly carinated; postpetiolus wrinkly-punctured, slightly shining. Gastrocoeli deep and broad; thyridia distinct, closed to base of tergite with narrow interval; interval with longitudinal impression almost to apex of second tergite; lunulae large, sharp; tergites 2-4 of abdomen densely and roughly punctured, other tergites smooth, shining.

C o l o r a t i o n : Black with reach yellow coloration on head, thorax and abdomen.

S i z e : 10 mm.

***Platybirmania acutinota* HEINRICH (Plate 43)**

Platybirmania acutinota HEINRICH 1974 - Ann. Zool. Wars. **32** (8): 192-193, ♀, ♂.

M a l e

F l a g e l l u m : With 39 segments, bristle-shaped with white semiannulus on segments 11-18; basal segments moderately long, first segment 3 times longer than width at apex. Flagellum with narrow tyloides on segments 11-18.

H e a d : Head contour from front roundly narrowed downwards, only 1,1 times wider than height; malar space almost 7 times lesser than height of an eye; from above head contour transversal, 1,9 times wider than length; contour of head triangle from lateral, angle between face surface and frons from side almost right. Vertex from lateral gradually slanting down to occipital carina directly behind hind ocelli; temples from above convex, roundly narrowed backwards, moderately long, in middle 1,5 times shorter than longitudinal diameter of an eye, from lateral slightly widened downwards from middle, at the base of mandible with slight impression; occipital carina from above almost straight, practically not impressed to ocelli, low, meeting with hypostomal carina on mandible base, at the base of mandible slightly widened; malar space approximately 2 times shorter than mandible base width; mandibles very wide at base, in middle strongly curved (almost at right angle), immediately from base uniformly narrowed, lower tooth small, slightly moved inside; clypeus flat, widely gradually curved in form of arch, 1,2 times wider than height, only just visible separated from face; clypeal foveae small, rounded; middle field of face only just expressed, wider than lateral fields; antennal cavities of moderate size, deep, not reach borders of eyes and far not reach front ocellus level, without rounded tubercles and with small tooth between antennal fossae; margins of antennal fossae high elevated; frons under front ocellus with slight impression; ocelli rather large, convex, diameter of lateral ocellus equal to distance from ocellus to eye; ocellar triangle high elevated. Surface of clypeus and face densely superficially punctured, without microsculpture, frons smooth, polished.

T h o r a x : Collar of pronotum short, transverse furrow shallow; pronotal ridge sharply thickened (swollen), especially in front, thus, that pronotal ridge from above from the front almost perpendicular to longitudinal axis of a body. Mesonotum strongly convex, of equal length and breadth, notauli only just marked at base, practically not developed; external margin of mesonotum between tegula and scuto-scutellar groove with projecting triangle process; surface of mesonotum rather densely punctured, shining, without microsculpture;

prepectus behind front coxae strongly impressed; prepectal carina at lower part high elevated, thick; subalarum normal, moderately thick, not sharpened; speculum smooth, shining, area of mesopleural fovea deep; sternauli absent or only just marked in front third in form of very slight impression; mesopleurae densely punctured; scutellum high elevated above postscutellum, sharply divided on horizontal and vertical parts, sharply carinated laterally and at apex, lateral carinae high, horizontal part slightly convex, roughly wrinkly-punctured, slightly shining; foveae of postscutellum practically merged. Hind margin of metanotum with small narrow triangular projections. Propodeum short, horizontal part considerably shorter than area posteromedia in middle; carinae of propodeum developed, with exception of carina, limiting area superomedia from front; area superomedia hexagonal, narrowed in front, approximately of equal length and breadth, costulae beyond middle; areae dentiparae with short, but distinct teeth; spiracles of moderate size, longish-oval (0,6 breadth of area spiraculifera at place of spiracle), 1,9-2,2 times longer than width. Surface of propodeum wrinkly-punctured, shining, without microsculpture; metapleurae with superficial punctures.

L e g s : Quite long and slender. Claws thin, sharply curved.

W i n g s : Areolet quadrangular, petiolate, asymmetrical, external vein of apex longer than internal; stigma broad, dark; radius practically straight; nervulus interstitial; ramulus distinct; membrane of wing hyaline, veins dark. Front wing 1,3 times shorter than body length.

A b d o m e n : Elongated, from above from middle of tergite 3 uniformly narrowed backwards, apical tergites far protrude, second tergite transversal, apex of abdomen compressed from sides. Petiolus at base only just wider than height; place of transform of petiolus to postpetiolus (from lateral) with gradual, but distinct bend, lateral carinae sharp, surface between them slightly wrinkled; postpetiolus from above strongly and sharply broadened; spiracles of postpetiolus roundish, small, distance between them equal to distance to apex; middle field of postpetiolus high elevated and distinctly carinated, lateral fields narrower than middle field; postpetiolus wrinkly-punctured, slightly shining. Gastrocoeli deep and broad, transverse; thyridia sharp, closed to base of tergite, interval many narrower than breadth of thyridia, with longitudinal impression almost to apex of second tergite; lunulae large, distinctly expressed; tergites 2-4 densely and roughly punctured, other tergites smooth, shining.

C o l o r a t i o n : Black with reach yellow coloration on head, thorax and abdomen. All tergites with white band at apex. Tarsi of hind legs yellow-white.

S i z e : Body length: 9,8; front wing: 7,3 mm.

20. *Cratolabus* HEINRICH

Cratolabus HEINRICH 1974 - Ann. Zool. Wars. **32** (8): 162-163.

Type species: *Platylabus insulindicus* HEINRICH.

Distribution: Oriental Region. 4 species.

I n t r o d u c t i o n :

The species of the genus are characterized by a number of characters, differing its representatives from other genera of the tribe: hypertrophied second segment of the maxillary palps, occipital carina meeting with hypostomal carina far from the mandible base, rather sharp lateral furrow at margins of mesonotum, narrow, elongated spiracles and developed

teeth of propodeum, morphology of postpetiolus and second tergite of abdomen and bent metatarsus. Gastrocoeli and thyridia are not very large with interval which wider or equal by breadth to thyridia (in comparison with *Dentilabus* and *Acantholabus*). Moreover, mesonotum is not matt but very densely punctured with shining interspaces between punctures. Thickened second segment of maxillary palps is met only in genus *Cratolaboides* nov.gen.

F l a g e l l u m : Of females long and slender, bristle-shaped, very slightly widened and scarcely flattened ventrally beyond middle. Flagellum longer than the front wing.

H e a d : Head contour from front narrowed downwards, genae from front sinuously narrowed. Temples (from above) sharply almost straightly narrowed behind eyes; occipital carina meeting with hypostomal carina far before mandible base; mandibles with form character to tribe; second segment of maxillary palps extraordinary strongly widened; clypeus strongly convex, (with form character to Platylabini); middle field of face only slightly elevated; antennal cavities slightly impressed, without tooth between antennal fossae. Head surface shining with superficial punctures.

T h o r a x : Transverse furrow of pronotum not interrupted by keel; pronotal ridge not thickened; pronotal base gradually sinuous, with strongly acute apex. Mesonotum moderately convex, some longer than width, notauli marked only at base, densely punctured, shining between punctures; subalarum narrow, but not sharpened; sternali distinct up to middle of mesopleurae; scutellum moderately elevated, rounded in profile, laterally carinated up to apex. Hind margin of metanotum with triangle projections. Propodeum from lateral of broken type, horizontal part of propodeum equal to length of area posteromedia; all carinae of propodeum developed; area superomedia approximately same length and width, hexagonal, some narrowed backwards; areae dentiparae with strong, curved upwards teeth; spiracles narrow, elongated, of moderate size.

L e g s : Long; femora rather strong; metatarsus of hind tarsi bent.

W i n g s : Areolet quadrangular, roundly pointed in front, asymmetrical; nervulus interstitial; radius slightly sinuous, long. Front wing slightly shorter than body length.

A b d o m e n : Of females from above broadly-oval, flattened; second tergite transverse; ovipositor slightly protrude. Petiolus distinctly wider than height, from above gradually broadened to postpetiolus; first tergite from lateral without sharp bend to postpetiolus, distinctly carinated; middle field only just marked; postpetiolus with irregular rugosity, shining. Gastrocoeli deeply impressed, triangle; thyridia distinct closed to base of tergite, equal by breadth to interval between them; lunulae distinct of moderate size; tergites 2 and 3 roughly and rather densely punctured, shining. Hypopygium sharpened with longitudinal fold, compressed from sides.

C o l o r a t i o n : Body with reach yellow-white pattern. Abdomen with apical bands of all tergites, sixth and seventh from above completely white or yellow.

S i z e : 9-10 mm.

***Cratolabus insulindicus* (HEINRICH) (Plate 44)**

Platylabus insulindicus HEINRICH 1934 - Mitt. Zool. Mus. Berlin **20**: 244, ♀.

Cratolabus insulindicus HEINRICH 1974 - Ann. Zool. Wars. **32** (8): 162, comb. n.

Female

Flagellum : Long and slender, bristle-shaped, slightly widened and flattened ventrally beyond middle, gradually attenuated toward apex, with white annulus on segments (7)-12(13); basal segments strongly elongated, first segment 3,9 times longer than width at apex. Flagellum longer than front wing and some shorter than body length.

Head : Head contour from front narrowed downwards, 1,3 times wider than height; genae from front sinuously narrowed downwards, rather long, 4,8 times shorter than height of eye; head contour from above transversal, 1,9 times wider than length. Vertex from lateral, obliquely and straightly abrupt just behind hind ocelli; temples (from above) sharply almost straightly narrowed behind eyes, from side 1,3 times shorter than longitudinal diameter of eye in middle, slightly widened downwards; occipital carina high, from above slightly almost angularly impressed to ocelli, far not reach level of eyes and hind ocelli; occipital carina meeting with hypostomal carina far from mandible base; length of genae approximately equal to mandible base width; mandibles sharply narrowed behind base, lower tooth moved inside; second segment of maxillary palps extraordinary strongly widened; clypeus strongly convex, 1,5 times wider than length, slightly impressed at apex (slightly concave apically), distinctly separated from face; clypeal foveae small, but deep; labrum broad, rather long, smoothly triangle (roundish); middle field of face almost not elevated above lateral fields, narrow; antennal cavities slightly impressed, laterally reach borders of eyes and far not reach front ocellus level, without lateral tubercles and atrophied interantennal tubercle; ocelli of normal size, diameter of lateral ocellus 1,4 times less than distance from ocellus to eye. Head surface shining with superficial punctures, without microsculpture; frons shining, not punctured.

Thorax : Collar of pronotum moderately short, transverse furrow shallow. Mesonotum moderately convex, some longer than width, notauli marked only at base; surface of mesonotum densely punctured, shining between punctures, without microsculpture; subalarum narrow, but not sharpened; speculum shining, punctured (intervals wider than diameter of the punctures); mesopleural fovea moderately and broadly impressed; ster-nauli distinct up to middle of mesopleurae; mesopleurae densely superficially-punctured, shining; scutellum moderately elevated, rounded in profile, laterally carinated up to apex, its surface with sparse superficial punctures. Hind margin of metanotum with triangle projections opposite lateral longitudinal carinae. Horizontal part of propodeum equal to length of area posteromedia in middle; all carinae of propodeum developed, sharp; basal area rather long and deep, area superomedia 1,3 times longer than width, hexagonal, slightly narrowed backwards, costulae approximately in middle; areae dentiparae with teeth curved upwards; spiracles narrow, elongated 2-2,5 times longer than width, of moderate size (length of spiracles equal 0,5 breadth of field at place of spiracle). Horizontal part of propodeum shining with irregular wrinkles, metapleurae densely uniformly punctured, shining.

Legs : First segment of hind tarsus from lateral slightly curved; claws long gradually and strongly curved.

Wing : Areolet quadrangular, roundly pointed in front, asymmetrical (external vein of base longer than internal, and external vein of apex shorter than internal); stigma narrow, dark; radius slightly sinuous, long; radial cell long narrow; nervulus interstitial; ramulus distinct; membrane of wing hyaline, veins dark. Front wing only 1,2 times shorter than body length.

A b d o m e n : From above broadly-oval, flattened; apical tergites not hidden and visible from above, ovipositor slightly protrude; second tergite transverse. Petiolus distinctly wider than height, from above gradually broadened to postpetiolus; first tergite from lateral without sharp transform to postpetiolus, with developed lateral carinae, middle field of postpetiolus slightly expressed, only just marked; distance between spiracles more than distance from spiracles to apex; surface of postpetiolus very slightly wrinkled, shining. Gastrocoeli deeply impressed, triangle; thyridia distinct, closed to base of tergite, equal by breadth to interval between them; interval punctured; lunulae distinct, of moderate size; tergites 2-3 densely punctured, intervals narrower than diameter of punctures, with very slight microsculpture, shining, forth tergite with very sparse shallow punctures, other tergites only slightly shagreen. Hypopygium sharpened with longitudinal fold, compressed from sides.

C o l o r a t i o n : Body with reach yellow-white pattern: genae, clypeus, face, with exception of narrow stripes on middle field, frontal orbits, stripes on pronotum, subalarum, spots on mesopleurae, scutellum and postscutellum, upper parts of metathorax (carinal triangle), propodeum apically, apical bands on all tergites of abdomen, sixth and seventh from above completely, front and middle coxae richly, hind with spot, trochanters I of front and middle legs completely and hind with spot.

S i z e : Body length: 9,3; front wing: 8,0 mm.

21. *Poecilostictus* RATZEBURG

Poecilostictus RATZEBURG 1852 - Die Ichneumoniden der Forstinsekten **3**: 174.

Type species: *Poecilostictus octopunctatus* RATZEBURG (= *Hoplismenus cothurnatus* GRAVENHORST)

Neoplatylabus HEINRICH 1935 - Dt. Entom. Zeitschr.: 196-198.

Type species: *Hoplismenus cothurnatus* GRAVENHORST.

Poecilostictus: PERKINS 1959 - Royal. Ent. Soc. London **7**: 56.

Poecilostictus: HEINRICH 1974 - Ann. Zool. Wars. **32** (8): 187-189.

D i s t r i b u t i o n : Palaearctic and Oriental Regions (highland).

I n t r o d u c t i o n :

This genus differs by morphology from all other genera of the tribe first of all by flat, almost arcuate rounded from the front matt clypeus and secondly by narrow and very long, slightly flattened at base petiolus. It differs moreover by only slightly marked, almost not developed gastrocoeli and thyridia and by shortened propodeum with sharply transversal area superomedia, more than twice, sometimes four times wider than length. Flagellum of males is with distinct tyloides.

M o r p h o l o g y :

Flagellum : Of females long, slender, scarcely widened and flattened ventrally beyond middle, strongly attenuated toward apex, with white annulus. Flagellum longer than the front wing and body length. Flagellum of males not flattened ventrally beyond middle, with pronounced long and narrow tyloides.

Head : Head contour from front slightly narrowed downwards, genae convex; temples behind eyes from above only just narrowed backwards, long. Occipital carina sharp, not high, meeting with hypostomal carina on mandible base; mandibles strong, slightly evenly narrowed behind base, teeth almost in a same plane; clypeus almost flat, matt, in

front almost smoothly arcuate rounded, sharply separated from face; middle field of face sharply limited, elevated above lateral fields, narrow; antennal cavities deep, but short with distinct tooth between antennal fossae; ocellar triangle only just expressed. Face and clypeus densely and finely punctured with developed microsculpture.

T h o r a x : Transverse furrow of pronotum not interrupted by keel; pronotal ridge not thickened; epomiae sharp; pronotal base gradually and uniformly curved. Mesonotum strongly convex, only just longer than width, notauli marked only at base; axillary tongue developed, but weak; surface of mesonotum densely punctured, matt; subalarum very high, slightly bent upwards, forming deep cavity between subalarum and subalar tubercle; sternauli only just marked only at base, not sculptured; scutellum strongly elevated, carinated laterally up to apex, horizontal part convex, declivous surface almost matt. Hind margin of metanotum with very thin projections. Propodeum short, transverse; horizontal part two times shorter than length of area posteromedia; all carinae of propodeum distinct, area basalis sharply abrupt, deep; area superomedia sharply transversal; areae dentiparae without teeth; coxal carina expressed, but slight; spiracles large, elongated, two times longer than width. Surface of propodeum densely wrinkly-punctured.

L e g s : Strong, rather long. Segments of front and middle tarsi with flattened area ventrally (as of *Abzaria* CAMERON *Neolevansa* GAULD and *Neurylabia* HEINRICH).

W i n g s : Areolet quadrangular, rarely almost pentagonal with very narrow base; radius almost straight; nervulus interstitial. Length of front wing some shorter than body length.

A b d o m e n : From above of females rather short, oval, almost parallel sided; second tergite longer than width at apex; tergite 7 cut out along hind border, ovipositor slightly protrude behind apex of abdomen. Petiolus of first tergite very long, slightly flattened at base, from lateral very gradually transform to postpetiolus; lateral carinae of petiolus sharp; middle field of postpetiolus distinct, high elevated, not carinated with delicate coriaceous sculpture. Gastrocoeli slightly impressed, long, thyridia slightly expressed; lunulae distinct; interval irregularly wrinkled, second tergite in middle coriaceous, with developed microsculpture; third tergite very delicate punctured. Hypopygium from lateral compressed, without fold.

C o l o r a t i o n : Main color black, of Palaearctic species with slight, at Oriental species with extremely reach yellow-white pattern, tarsi of hind legs of both species yellow-white; main color of femora and tibiae black or red.

S i z e : 9-12 mm.

***Poecilostictus cothurnatus* (GRAVENHORST) (Plate 45)**

Hoplismenus cothurnatus GRAVENHORST 1829 - Ichneum. Europea 2: 426, 428, ♀, ♂.

F e m a l e

F l a g e l l u m : Long, slender, with 37 segments, slightly widened and flattened ventrally beyond middle, strongly attenuated toward apex, with white annulus on segments (7)8-12; basal segments moderately long, first segment three times longer than width at apex laterally. Flagellum 1,3 times longer than the front wing and 2 times shorter than body length.

H e a d : Head contour from front roundish, slightly narrowed downwards, 1,2 times wider than height; genae convex, slightly narrowed to mandibles, malar space 3,8 times

shorter than height of eye; from above head contour transversal, 1,7 times wider than length. Vertex behind hind ocelli from lateral, roundly curved to sharp, low occipital carina; temples behind eyes from above only just narrowed backwards, long, almost equal to longitudinal diameter of eye in middle, from lateral only just narrowed downwards, almost parallel to hind margin of eye; occipital carina from above gradually impressed to hind ocelli, meeting with hypostomal carina almost on mandible base; malar space equal to mandible base width; mandibles strong, slightly evenly narrowed behind base, teeth almost in the same plane; malar space almost equal to mandible base width; clypeus almost flat, transversal, matt (shagreen), not punctured by distinct punctures, in front almost smoothly arcuate rounded, sharply separated from face by suture, 2 times wider than length; clypeal foveae large, deep; labrum rounded, almost not protrude from under clypeus; middle field of face sharply limited and elevated above lateral fields, rather narrow, in middle equal to lateral field breadth; antennal cavities deep, but short, far not reach front ocellus level, without lateral tubercles and with distinct tooth between antennal fossae; ocelli of normal size, rather small, diameter of lateral ocellus almost 1,5 times less than distance from ocellus to eye; ocellar triangle only just expressed. Surface of head and clypeus densely and finely punctured with developed microsculpture, only lateral fields of face slightly shining.

T h o r a x : Collar of pronotum long, from above with straight front margin; transverse furrow of pronotum narrow and rather deep. Mesonotum strongly convex, only just longer than width, notauli marked only at base; axillary tongue expressed, but weak; surface of mesonotum densely punctured, matt, with developed microsculpture; subalarum very high, slightly bent upwards, forming deep cavity between subalarum and subalar tubercle; prepectal carina straight, without curve forward; speculum only just expressed, with big, almost merged punctures; area of mesopleural fovea sharply and broadly impressed; mesopleural suture deep, straight, interrupted by only just visible ribs; sternaui only just marked at base, not sculptured; lower part of mesopleurae without sharp bend; surface of mesopleurae very densely punctured to wrinkled, with developed microsculpture, slightly shining; scutellum strongly elevated, carinated laterally up to apex, horizontal part convex with big punctures; declivous surface with very dense punctures, almost matt. Hind margin of metanotum with very thin, almost bacilliform projections opposite lateral longitudinal carinae. Propodeum short, from lateral gradually slanted; horizontal part two times shorter than length of area posteromedia in middle; all carinae of propodeum distinct, area basalis sharply abrupt, deep; area superomedia sharply transversal, costulae before its middle; areae dentiparae without teeth; coxal carina expressed, but weak; spiracles large, elongated, two times longer than width and equal 0,6 breadth of area at place of spiracle. Surface of propodeum densely wrinkly-punctured; metapleurae very densely punctured slightly shining.

L e g s : Strong and long. Segments of front and middle tarsi with flattened area ventrally, surface of which some different by structure. Claws thin, gradually curved.

W i n g s : Areolet quadrangular (rarely almost pentagonal with very narrow base), asymmetrical, external vein of apex longer than internal; stigma narrow, dark; radius almost straight (slightly sinuous), long; radial cell long; nervulus interstitial; ramulus not developed, or in form of slight projection; membrane of wing hyaline, veins dark. Length of front wing 1,2 times shorter than body length.

A b d o m e n : From above rather short, oval, almost parallel sided; second tergite 1,2

times longer than width at apex; tergite 7 cut out along hind margin, ovipositor slightly protrude behind apex of abdomen. Petiolus of first tergite very long, slightly flattened at base from lateral very gradually transform to postpetiolus; lateral carinae of petiolus sharp, interspace between them with ribs; from above petiolus rather sharply broadened to postpetiolus; middle field of postpetiolus distinct, high elevated, not carinated by carinae, with delicate coriaceous sculpture; lateral fields narrow, 4,5 times narrower than middle field. Gastrocoeli slightly impressed, long, thyridia strongly removed from base of tergite, many narrower than interval between them, slightly expressed; lunulae distinct, of moderate size; interval irregularly wrinkled, second tergite in middle coriaceous, at apical third distinctly punctured with developed microsculpture, slightly shining; third tergite very delicate punctured; 5-7th tergites with membranous apex. Hypopygium from lateral triangle with slightly sharpened apex, compressed from sides, but without fold.

C o l o r a t i o n : Mainly black-brown with yellowish-white pattern: genae broadly, corners of clypeus, internal orbits up to hind ocelli, hind corners of pronotum, membranous strip at apex of tergites 5-7, hind tibiae partially, front tarsi ventrally and hind tarsi completely.

S i z e : Body length: 9,2; front wing: 7,9; flagellum: 9,5 mm.

M a l e :

Flagellum of males beyond middle not flattened ventrally, with distinct long narrow dark tyloides on segments 8-15, arranged at the place of white annulus disposition. Surface of mesopleurae shining, without microsculpture; apex of abdomen slightly compressed from sides; most part of second tergite, with exception of apex roughly wrinkled; yellow coloration more extensive: internal orbits, genae and face entirely, hind margin and lower corners of pronotum, subalarum, big spot on scutellum, spots on front and middle coxae and trochanters 1 of front and middle legs, tarsi of all legs; main color of all legs ferruginous.

S i z e : Body length: 8,2; flagellum: 9,0; front wing: 7,2 mm.

B i o l o g y : It is reared by us from pupae of *Bupalus piniarius* (L.) (TERESHKIN 1997).

22. *Neolevansa* GAULD

Neolevansa GAULD 1984 - British Mus. (Nat. Hist.) Publ. **895**: 216-217.

Type species: *Neolevansa hirsuta* GAULD.

D i s t r i b u t i o n : Australia.

I n t r o d u c t i o n :

The genus occupies rather isolated position and has some characters not typical for majority of Platylabini. In contrast to other genera, legs of females are strong, stumpy, tarsi of all legs thickened and the segments of hind tarsi shortened. Strong legs sufficiently are met only in African genus *Neeurylabia* HEINRICH. But, in contrast to them, in *Neolevansa* sharp sexual dimorphism according to these characters is observed. Legs of males is slender and hind tarsi slightly thickened and theirs segments not shortened. Propodeum of *Neolevansa* is with enough strong almost lamellate teeth, resembling lamelliform broadening of *Pristicerops* HEINRICH and with slit-shaped spiracles. Front wings are considerably longer than body and flagellum length.

Neolevansa does not show any resemblance with New Zealand *Levansa* TOWNES, belonging to the group of genera of small species, possessing circular or oval spiracles and especially relative to *Linytus* CAMERON and *Neolinytus* HEINRICH.

M o r p h o l o g y :

F l a g e l l u m : Bristle-shaped, with white annulus, of males flattened ventrally in comparison with females, with big broadly-oval light-brown tyloides at place of white annulus.

H e a d : Head contour from front uniformly narrowed downwards with long genae. Temples from above strongly roundly narrowed behind eyes; occipital carina sharp, high, meeting with hypostomal carina not reaching mandible base; malar space slightly longer than mandible base width; mandibles with form character to tribe, gradually narrowed from base to apex, from above rather sharply curved; clypeus convex, transversal, two times wider than length, with form character to Platylabini, with straight front margin and rounded lateral corners, thinned on apex, distinctly separated from middle field of face; ocellar triangle distinctly separated.

T h o r a x : Transverse furrow of pronotum not interrupted by keel; pronotal ridge not thickened; epomia sharp; pronotal base with uniformly curved backwards front margin. Mesonotum moderately convex, notauli in form of slight impression in front third; subalarum thick; scutellum high elevated, laterally and at apex carinated. Hind margin of metanotum with triangle projections. Propodeum from lateral with distinct division on horizontal and vertical parts with approximately equal length; of most species, with complete set sufficiently strong carinae; carinae of horizontal part developed, except front branches of longitudinal lateral carinae; coxal carina not developed; area basalis long, area superomedia regularly hexagonal; areae dentiparae at apices with transversal lamellar broadenings (teeth); spiracles slit-shaped.

L e g s : Of females strong, stumpy, tarsi of all legs thickened, ventrally with flattened area on all segments. Segments of hind tarsi shortened. Legs of males slender, tarsi not thickened. Claws strong, smooth, strongly curved.

W i n g s : Areolet quadrangular, almost pentagonal; ramulus rather long; membrane of wing hyaline, veins dark. Front wing distinctly longer than body length.

A b d o m e n : Abdomen from above elongated, dorsally flattened, second tergite slightly transversal; ovipositor from above only just protrude; apex of abdomen cut. Petiolus at base distinctly wider than height, from lateral uniformly curved, without sharp bend, from above slightly broadened to postpetiolus. Gastrocoeli broadly impressed, with short thyridia; lunulae absent; all tergites of abdomen smooth, polished, without sculpture. Hypopygium of females broad, flat with slight longitudinal fold and with long hairs at apex; hypopygium of male small, uniformly pubescent.

C o l o r a t i o n : Combination of black and red pattern with extensive yellow spots.

S i z e : Medium size to moderately large species.

Neolevansa hirsuta GAULD (Plate 46)

Neolevansa hirsuta GAULD 1984 - British Mus. (Nat. Hist.) Publ. **895**: 216-217, ♀, ♂.

F e m a l e

F l a g e l l u m : Long and slender, [27]-segments, not widened beyond middle, gradu-

ally attenuated toward apex, with white annulus on segments 8-14, beyond annulus only just visible flattened ventrally; basal segments long with oblique apex, first segment from lateral 4 times longer than width at apex laterally. Flagellum 1,5 times shorter than front wing and 1,2 times shorter than body length.

H e a d : Head contour from front gradually narrowed downwards, transversal, 1,3 times wider than height; genae from front long, 4,5 times sorter than height of eye; head contour from above transversal, 2 times wider than length. Vertex from lateral straightly slanting to occipital carina; temples from above strongly roundly narrowed behind eyes, rather long, in middle 1,4 times shorter than longitudinal diameter of eye, laterally from upper third parallel to hind margin of eye; occipital carina from above gradually impressed to hind ocelli, far not reach level of eyes and hind ocelli, sharp, high, meeting with hypostomal carina not reaching mandible base; length of abscissula equal to mandible base width; malar space 1,2 times longer than mandible base width; mandibles with form character to tribe, gradually narrowed from base to apex, from above rather sharply curved; clypeus convex, transversal, two times wider than length with straight front margin and rounded lateral corners, with thinned apex, separated from middle field of face by suture; clypeal foveae moderately large, deep; labrum long, triangle, rounded in front, equal by breadth to front margin of clypeus; middle field of face only just elevated above lateral fields, but sharply limited, narrow, in middle considerably narrower than lateral fields; antennal cavities sharp, deep, but not big, not reach borders of eyes and far not reach front ocellus level with strong tooth between antennal fossae; frons before front ocellus with strong impression; ocelli of normal size, moderately convex, diameter of lateral ocellus equal to distance from ocellus to eye; ocellar triangle distinctly limited. Clypeus and face with slight superficial punctures, without microsculpture; temples with superficial punctures, shining.

T h o r a x : Collar of pronotum moderately long with shallow and narrow furrow, from above with straight front margin. Mesonotum convex, of equal length and breadth, notauli in form of slight impression in front third; axillary tongue not developed; surface densely punctured without microsculpture, shining; subalarum thick, not sharpened; speculum punctured by big punctures, shining; area of mesopleural fovea slightly broadly impressed; mesopleural suture deep, interrupted by sharp transversal ribs; mesopleurae without sharp bend at lower part; sternauli only just marked in form of slight impressions in front third; hind corner of mesopleurae strongly protrude above middle coxae; surface densely punctured, shining between punctures, without microsculpture; scutellum high elevated, laterally and at apex carinated, horizontal part strongly convex with sparse punctures, without microsculpture, shining. Hind margin of metanotum with sharp triangle projections opposite lateral longitudinal carinae. Propodeum from lateral with distinct division on horizontal and vertical parts approximately equal by length; all carinae of horizontal part developed, except front branches of lateral longitudinal carinae; area posteromedia and third lateral field merged; coxal carina not developed; area basalis long, area superomedia regularly hexagonal; costulae some before middle of area superomedia; areae dentiparae at apices with transversal lamellar broadenings (teeth); spiracles slit-shaped, long, 2,8 times longer than width, high elevated above surface of area spiraculifera. Surface of area superomedia smooth, shining, other areas wrinkled, shining, metapleurae strongly shining with big smoothed punctures.

L e g s : Strong, stumpy, tarsi of all legs thickened with flattened area of all segments as

of *Abzaria* CAMERON *Neolevansa* GAULD and *Poecilostictus* RATZBURG. Segments of hind tarsi shortened. Claws strong, smooth, strongly curved.

W i n g s : Areolet quadrangular with blunted base, almost pentagonal, slightly asymmetrical; stigma broad, dark; radius slightly sinuous, almost straight at most part, long; radial cell long, broad; nervulus slightly postfurcal; ramulus rather long; membrane of wing hyaline, veins dark. Front wing 1,4 times longer than body length.

A b d o m e n : Abdomen from above elongated, drop-shaped, dorsally flattened, second tergite slightly transversal, at apex 1,2 times wider than length; sheath of ovipositor only just protrude behind apex of abdomen, apex of abdomen cut. Petiolus at base distinctly wider than height, from lateral uniformly curved without sharp bend to postpetiolus, from above also gradually broadened to postpetiolus; from carinae of first tergite distinctly expressed only ventrolateral carina and base of dorsolateral carina; lateral surface of petiolus slightly wrinkled; middle field of postpetiolus not developed, surface of postpetiolus smooth, shining. Gastrocoeli broadly impressed, with weak thyridia, interval 1,2 times wider than gastrocoeli; lunulae completely absent; all tergites of abdomen smooth, polished, without sculpture. Hypopygium of females broad, flat with slight longitudinal fold and with fascicle of long hairs at apex.

C o l o r a t i o n : Head and thorax black with yellow and red pattern. Yellow: genae, margins of clypeus, internal orbits broadly, upper margin and base of pronotum, subalarum, spots on mesopleurae, scutellum, postscutellum, spots on metapleurae. Red: apex of clypeus, external orbits, abdomen entirely red, with exception of narrow, slightly expressed yellow apical stripes on apical tergites. Legs with exception of apices of hind femora and tibiae red. Scapus and some basal segments of flagellum mainly red.

S i z e : Body length: 11,5; flagellum: 10,0; front wing: 16,0 mm.

M a l e

Flagellum of male with big broadly-oval light-brown tyloides on segments 12-18 at place of white annulus. In contrast to females legs slender and hind tarsi slightly thickened and their segments not shortened. Yellow coloration more expanded on coxae. In other respects similar to females.

23. *Hypomecus* WESMAEL

Hypomecus WESMAEL 1844 - Mem. Acad. Brux.: 111.

Type species: *Mesoleptus quadriannulatus* GRAVENHORST (= *Hypomecus albitarsis* WESM.)

Hypomecus: TOWNES 1951 - Hymen. of A. North of Mexico: 181.

Hypomecus: HEINRICH 1962 - Syn. Nearct. Ichn. Sten.: 794-796.

Hypomecus: TOWNES et al. 1965 - Cat. Reclass. East. Pal. Ichn.: 514.

Type species: *Hypomecus tylus* UCHIDA

Hypomecus: HEINRICH 1974 - Ann. Zool. Wars. 32 (8): 193-195.

D i s t r i b u t i o n : Holarctic, Oriental Region.

I n t r o d u c t i o n :

It is isolated genus, distinct from other genera by number of unusual characters. It is presented by only one species, spread in Nearctic, Palearctic and Oriental Regions without any geographical variations. The two structural peculiarities of the genus do not coincide with the general diagnosis of the tribe Platylabini: form of petiolus, which is not flattened at the base and not wider than height and slender and elongated form of abdo-

men. On the other hand, structure of a head, convex clypeus, thin mandibles and even form of apex of abdomen of female are pointed on relationship with Platylabini. This position is also supported with the biological fact (by parasitism on Geometridae).

Hypomecus, in addition is characterized by the peculiar morphology of scutellum square from above, with long slanting part, laterally carinated by slight carinae with shagreen vertical surface with dense microsculpture.

M o r p h o l o g y :

F l a g e l l u m : Of females bristle-shaped, long and very slender, ventrally flattened, but not widened beyond middle, strongly attenuated toward apex. Flagellum longer by length than front wing and slightly shorter than body length. Flagellum of males with pronounced broadly-oval tyloides.

H e a d : Head contour narrowed downwards, with gradually narrowed downwards long genae; temples from above strongly, but roundly narrowed behind eyes. Occipital carina meeting with hypostomal carina before mandible base, lower part of hypostomal carina visible from lateral; mandibles sharply narrowed behind base, with form character to tribe; clypeus convex, transversal, with straight front margin; antennal cavities large, deep, without tooth between antennal fossae; ocellar triangle slightly elevated. Face and clypeus shining without microsculpture; clypeus punctured in different degree, middle field of face slightly wrinkled.

T h o r a x : Transverse furrow of pronotum not interrupted by keel; pronotal ridge not thickened; epomia sharp; pronotal base sharply uniformly curved. Mesonotum strongly convex, only just longer than width; notauli distinct in front third; surface of mesonotum very densely punctured, with developed microsculpture; subalarum thin, sharpened; sternauli weak, marked in front third; scutellum considerably elevated above postscutellum, square from above, with gradual slant, almost with equal length from apex to basal (scuto-scutellar) furrow and from apex to postscutellum, laterally carinated to middle; vertical surface of scutellum and postscutellum with dense microsculpture, shagreen. Hind margin of metanotum with triangular projections. Propodeum from lateral gradually slanting backwards; horizontal part shorter than length of area posteromedia; area superomedia usually elongated, rounded from front, of males often square; costulae atrophied; coxal carina not developed; apices of areae dentiparae angularly protrude; spiracles rather large, elongated.

L e g s : Slender and long.

W i n g s : Areolet big, from quadrangular to almost pentagonal with very narrow base, symmetrical; nervulus interstitial. Length of front wing shorter than body length.

A b d o m e n : Abdomen long, narrowed to apex, fusiform, second tergite elongated; sheath of ovipositor only just visible protrude behind apex of abdomen. First tergite from lateral gradually curved; petiolus at base not flattened, smooth from lateral, ventrally not bordered by carinae, from above broadened to rectangular postpetiolus with distinctly expressed, but not bordered by carinae middle field. Gastrocoeli superficial, long; thyridia very large, oblique, reach to borders of tergite, far removed from base of second tergite, with narrow interval between them; lunulae large, distinct. Hypopygium of female compressed from lateral, long, strongly sharpened, protrude behind apex of last tergite.

C o l o r a t i o n : Mainly black. Legs reddish-brown, hind tarsi with white annulus.

S i z e : 8-10 mm.

***Hypomecus quadriannulatus* (GRAVENHORST) (Plate 47)**

Mesoleptus quadriannulatus GRAVENHORST 1829 - Ichneum. Europ. **2**: 13, ♂.

Hypomecus quadriannulatus: HEINRICH 1962 - Canad. Ent. **27**: 795-796, ♀, ♂.

Hypomecus quadriannulatus: HEINRICH 1974 - Ann. Zool. Wars. **32** (8): 93-94, ♀, ♂.

F e m a l e

F l a g e l l u m : Bristle-shaped, long and slender with 38 segments and with white annulus on segments (8)9-12(13), slightly widened beyond middle and flattened ventrally, strongly attenuated toward apex; basal segments slender, long; first segment 5 times longer than width at apex laterally. Flagellum 1,2 times longer than front wing and 1,2 times shorter than body length.

H e a d : Head contour from front narrowed downwards, 1,2 times wider than height; genae moderately (uniformly) narrowed downwards, long, 5 times shorter than height of eye, head contour from above transversal, 2 times wider than length. Vertex from lateral behind eyes sharply rather gradually slanting down to occipital carina; occipital carina angularly impressed to hind ocelli, not high; temples from above behind eyes sharply and strongly, but roundly narrowed, from lateral narrowed downwards, moderately long, 2,1 times shorter than longitudinal diameter of an eye in middle; occipital carina meeting with hypostomal carina not reaching mandible base, lower part of hypostomal carina visible from lateral; malar space equal to mandible base width; mandibles sharply narrowed behind base, with form character to Platylabini; clypeus convex, transversal, 1,9 times wider than length, with straight front margin, separated from middle field of face by strong impression; clypeal foveae deep, of moderate size; labrum long, far protrude from under clypeus, broad, triangle; middle field of face moderately convex, narrowed downwards, wider than lateral fields at middle; antennal cavities large, deep, without lateral tubercles and tooth between antennal fossae, not reach front ocellus level; ocelli large, diameter of lateral ocellus slightly more than distance from ocellus to eye; ocellar triangle distinctly, but slightly elevated. Face and clypeus shining without microsculpture; clypeus from sparsely punctured at lower half to densely and delicate uniformly-punctured; middle field of face slightly wrinkled; antennal cavities with smooth surface; frons and vertex polished, shining, without traces of punctures.

T h o r a x : Collar of pronotum short, from above with straight front margin; transverse furrow moderately deep. Mesonotum strongly convex, only just visible longer than width; notauli distinct in front third; surface of mesonotum very densely punctured, with developed microsculpture, with only just visible shine; subalarum thin, sharpened; speculum very densely punctured, interspaces narrower than punctures, shining; area of mesopleural fovea deeply and broadly impressed; mesopleurae without sharp bend; sternauli weak, marked in front third; upper half of mesopleurae densely punctured, without microsculpture, lower part densely wrinkly-punctured, matt; scutellum convex, square from above, with long slanting part, laterally carinated by weak carinae; vertical surface of scutellum and postscutellum with dense microsculpture, shagreen, horizontal part densely wrinkly-punctured, without microsculpture. Hind margin of metanotum with narrow triangle projections opposite lateral longitudinal carinae. Propodeum from lateral strongly and gradually slanting backwards; horizontal part two times shorter than length of area posteromedia in middle; area superomedia usually longer than width, from front rounded; costulae atrophied and visible only in form of slight trace; front part of lateral longitudinal carina (above spiracles) atrophied; coxal carina absent, coxal area marked in form of more slightly sculptured surface; area dentipara at apex with denticle; spiracles

rather large, equal 0,5 breadth of field at place of spiracle, elongated, 1,7-2 times longer than width. Surface of area superomedia with slight wrinkles, lateral areas and area dentipara wrinkled, metapleurae densely and roughly punctured.

L e g s : Slender and long. Claws sharply curved at upper third.

W i n g s : Areolet big, from quadrangular to almost pentagonal with very narrow base, symmetrical; stigma comparatively narrow, dark; radius slightly sinuous; radial cell long and rather broad; ramulus distinct; nervulus interstitial; membrane of wing hyaline, veins dark. Length of front wing 1,3 times shorter than body length, but shorter than flagellum.

A b d o m e n : Abdomen from above long, narrowed to apex, fusiform, second tergite 1,3 times longer than width at apex; sheath of ovipositor only just visible protrude behind apex of abdomen. First tergite from lateral gradually curved; petiolus at base not flattened, laterally not sculpturated (smooth from lateral), ventrally not bordered by carinae; from above petiolus broadened to rectangular postpetiolus; middle field of postpetiolus distinctly expressed, but not carinated by carinae, its surface irregularly-wrinkled, lateral fields narrow, many narrower than middle field. Gastrocoeli superficial, long with very large oblique thyridia, reaching to borders of tergite, far removed from base of second tergite, two or more times wider than interval between them; interval irregularly-wrinkled, with similar sculpture to gastrocoeli; interval and second tergite medially with slight, but distinct broad impression; lunulae large, distinct; surface of tergites 3-4 delicate wrinkled, with dense microsculpture, matt, microsculpture of apical tergites more weak, tergites 5-7 slightly shining. Hypopygium of female compressed from sides, long, strongly sharpened, protrude behind apex of last tergite.

C o l o r a t i o n : Main color black with reddish-brown, head and thorax with slight white pattern, spots on vertex, internal orbits, spots on genae and yellowish stripes on external orbits, spot on subalarum and lateral spots on scutellum. Legs reddish-brown, hind tarsi with white annulus.

S i z e : Body length: 10,1; front wing: 7,5; flagellum: 8,7 mm.

M a l e

Flagellum of male some stouter with very large light broadly-oval tyloides equal by length to length of flagellar segments. Area superomedia of propodeum square. Face and clypeus of males completely white, upper margin of pronotum, pronotal base, prepectus and mesothorax ventrally, merged spots on scutellum; coxae and trochanters of front and middle legs with reach white pattern.

24. *Asthenolabus* HEINRICH

Stenolabus HEINRICH 1935 - Dt. Entom. Zeitschr.: 197.

Type species: *Platylabus latiscapus* THOMSON; Name preocc. by RECHBERG 1910.

Asthenolabus HEINRICH 1951 - Bonn. Zool. Beitr. 2: 240.

Asthenolabus: HEINRICH 1962 - Syn. Nearct. Ichn. Sten.: 772.

Asthenolabus: TOWNES et al. 1965 - Cat. Recl. East. Pal. Ichn.: 514, 600.

Asthenolabus: HEINRICH 1974 - Ann. Zool. Wars. 32 (8): 169-170.

D i s t r i b u t i o n : Holarctic, Oriental Region.

I n t r o d u c t i o n :

In contrast to *Cyclolabus*, it possesses long and narrow sickle-shaped spiracles, in contrast to *Platylabus* gastrocoeli and thyridia are atrophied.

M o r p h o l o g y :

F l a g e l l u m : Of females always very long and slender, not widened and strongly attenuated toward apex; of males normal, without notches between segments, without tyloides with the exception of *canadensis* (HEINRICH 1962).

H e a d : Head contour from front roundish, genae from front roundly narrowed; temples from above smoothly, roundly narrowed behind eyes; mandibles with form character to tribe, gradually narrowed from base to apex; clypeus convex, transversal, with form character to Platylabini, with straight front margin and rounded lateral corners.

T h o r a x : Transverse furrow of pronotum not interrupted by keel; pronotal ridge not thickened; epomiae sharp; pronotal base with gradual, but sharply curved backwards front margin. Hind margin of metanotum with triangle projections. Scutellum comparatively slightly elevated and carinated laterally. Propodeum from lateral strongly and gradually slanting backwards, carinae developed with exception of costulae; area denti-para without tooth at apex; spiracles large, long.

L e g s : Slender, hind femora thickened.

W i n g s : Areolet quadrangular, symmetrical; radius slightly sinuous. Front wing distinctly shorter than body length.

A b d o m e n : Abdomen from above longish-oval; sheath of ovipositor protrude behind apex of abdomen. Petiolus at base slightly wider than height, without sharp bend, from above slightly broadened to postpetiolus; petiolus slightly carinated; middle field of postpetiolus not developed. Gastrocoeli only just impressed, thyridia atrophied, interval many wider than gastrocoeli; lunulae small, distinct. Hypopygium of females with sharpened apex and slight longitudinal fold.

C o l o r a t i o n : Head and thorax black with limited white pattern; abdomen black or partially red; of type and relative species last tergite of females with distinct white anal spot in contrast to *Platylabus*.

***Asthenolabus vitratorius* (GRAVENHORST) (Plate 48)**

Mesoleptus vitratorius GRAVENHORST 1829 - Ichneum. Eur. 2: 34, ♂.

Platylabus vitratorius: SCHMIEDEKNECHT 1930 - Opusc. Ichneum. 9: 39-40, ♂, ♀.

Asthenolabus vitratorius: HEINRICH 1951 - Bonn. Zool. Beitr. 2 (3-4): 240, syn.

F e m a l e

F l a g e l l u m : Long and very slender, with 37-38 segments, not widened beyond middle, slightly flattened ventrally and strongly attenuated toward apex, with white annulus on segments 8-12; basal segments long; first segment 5 times longer than width at apex laterally, all segments longer than wide. Flagellum 1,3 times longer than the front wing and approximately equal to body length.

H e a d : Head contour from front roundish, 1,2 times wider than height; genae from front roundly narrowed, 3,8 times sorter than height of eye; head contour from above transversal, two times wider than length. Vertex from lateral roundly oblique to occipital carina; temples from above gradually roundly narrowed behind eyes, long, in middle only just shorter than longitudinal diameter of an eye, from lateral temples narrowed downwards; occipital carina from above gradually impressed to hind ocelli, not reach level of eyes and hind ocelli, sharp, before mandible base reduced; malar space equal to mandible base width; mandibles with form character to tribe, gradually narrowed from

base to apex; clypeus convex, transversal, with straight front margin oblique lateral margins and rounded lateral corners, thinned along apex, separated from middle field of face by impression; clypeal foveae moderately large, deep; labrum short, broad, rounded in front; middle field of face only just elevated above lateral fields and slightly differentiated, in middle some shorter than lateral fields; antennal cavities deep, but not big, not reach borders of eyes and far not reach front ocellus level, with roundish tubercle laterally and strong tooth (tubercle) between antennal fossae; ocelli of normal size, moderately convex, diameter of lateral ocellus only just less than distance from ocellus to eye; ocellar triangle not elevated. Clypeus punctured, middle field of face wrinkly-punctured, lateral fields of face with slight, superficial punctures; head surface slightly shining with microsculpture.

T h o r a x : Collar of pronotum short with shallow and narrow transverse furrow, from above rounded from front. Mesonotum moderately convex, of equal length and breadth, notauli not developed; axillary tongue not developed; surface of mesonotum densely punctured with developed microsculpture, matt; subalarum thin, sharp; speculum punctured by big punctures, shining; area of mesopleural fovea slightly impressed; mesopleurae with gradual bend at lower part; sternauli only just marked at base, practically not expressed; surface wrinkly-punctured, at lower half roughly longitudinally-wrinkled, shining between punctures; scutellum comparatively slightly elevated, laterally carinated up to apex, horizontal part slightly convex with sparse shallow punctures, without microsculpture. Hind margin of metanotum with broad triangle projections opposite lateral longitudinal carinae. Propodeum from lateral strongly and gradually slanting backwards, horizontal part 1,7 times shorter than area posteromedia in middle; all carinae with exception of costulae developed; area basalis rather long, area superomedia square; area dentipara without tooth at apex; spiracles large, long, 2,5 times longer than width (equal 0,6 breadth of area at level of spiracle). Propodeum shining, punctured by big punctures, surface of area superomedia slightly irregularly-wrinkled, metapleurae strongly shining with big punctures.

L e g s : Slender; hind femora thickened. Claws thin, strongly curved at apex, almost at right angle.

W i n g s : Areolet quadrangular, symmetrical; stigma not broad, light; radius slightly sinuous, especially at apical part, long; nervulus interstitial; ramulus only just marked; membrane of wing hyaline, veins light. Front wing 1,4 shorter than body length.

A b d o m e n : Abdomen from above longish-oval, dorsally flattened, second tergite at apex only just wider than length; sheath of ovipositor protrude behind apex of abdomen. Petiolus at base slightly wider than height, from lateral gradually transform to postpetiolus (without sharp bend), from above also slightly broadened to postpetiolus; dorsomedian carina of petiolus slightly expressed only to spiracles, dorsolateral carina developed, ventrolateral carina only just expressed; lateral carinae merge before base of petiolus; surface between lateral carinae not sculptured, smooth, shining; middle field of postpetiolus not developed, surface of middle field superficially-wrinkled. Gastrocoeli only just impressed, thyridia atrophied, interval many wider than gastrocoeli; lunulae small, distinct, but not elevated and distinct only by not sculpturated surface; middle surface of tergites 2 and 3 superficially-wrinkled, with dull shine, other tergites smooth, shining; tergites 6 and 7 with membranous apex. Hypopygium with sharpened apex and slight longitudinal fold.

C o l o r a t i o n : Head and thorax black with slight white pattern on frontal orbits (narrowly), often spot on subalarum, scutellum and often postscutellum white. Abdomen red with darkening on tergites 4 and 5-7; (5)-6th tergites with white membranous apex, 7th with large membranous spot. Legs with exception of coxae and trochanters red.

S i z e : Body length: 7,8; front wing: 5,6; flagellum: 7,0 mm.

M a l e

White pattern of males more reach: margins of clypeus and internal orbits broadly, subalarum, spot on tegulae, scutellum, spots at apex of tergites 5-7 of abdomen.

25. *Platylabus* WESMAEL

Platylabus WESMAEL 1844 - Nouv. Mem. Acad. Sci. Bruxelles **18**: 150, 153.

Type species: *Platylabus rufus* WESMAEL.

Platylabus: HEINRICH 1962 - Syn. Nearct. Ichn. Sten.: 698-754.

Platylabus: HEINRICH 1967 - Ichn. Stenop. of Africa **2**: 396-397.

Platylabus: HEINRICH 1974 - Ann. Zool. Wars. **32** (8): 107-109.

Platylabus: HEINRICH 1977 - Ichn. Florida and Neighb. States **9**: 273-274.

D i s t r i b u t i o n : Holarctic, Neotropical, Ethiopian and Oriental Regions.

I n t r o d u c t i o n :

The genus *Platylabus* is the largest by number of species genus of the tribe. The genus is characterized by the combination of following characters: 1 – spiracles of propodeum are elongated, longer than width, 2 – apices of areae dentiparae are always without apophyses and distinct teeth, 3 – area superomedia is without costulae, 4 – gastrocoeli are transverse with big thyridia, deeply impressed, each of them considerably wider than an interval (very rarely with equal breadth or even narrower than an interval) and 5 – abdomen at apex is always without white anal spots. The genus is close to the genera *Cyclolabus* HEINRICH with circular spiracles, *Lamprojoppa* CAMERON with strongly developed apophyses and conical scutellum and *Dentilabus* HEINRICH with developed costulae, teeth of propodeum and longitudinal impression between thyridia.

All species of the genus are almost exclusively the parasites of Geometridae. Only two European species are registered on another hosts (*Drepana*).

M o r p h o l o g y :

F l a g e l l u m : Of females long and slender, bristle-shaped, pointed toward apex, beyond middle flattened ventrally and sometimes slightly widened. Flagellum of males not nodose and not serrate (unlike of *Pristiceros* GRAVENHORST), mainly without tyloides, rarely with rudimentary punctiform or bacilliform tyloides. Flagellum approximately equal by length to front wing and body length.

H e a d : Head contour from front narrowed downwards in varying degree. Vertex more often gradually oblique to low and sharply expressed occipital carina; occipital carina from above from strongly roundly impressed to ocelli (e.g. type species), to only just impressed, almost straight; temples from above narrowed in varying degree and rounded behind eyes, to strongly convex or almost linearly oblique, from short to long; occipital carina meeting with hypostomal carina on base or before base of mandible, not modified at lower part; mandibles usually strongly narrowed behind base with delicate teeth, from sharply narrowed behind base, to gradually narrowed behind base to apex and to uniformly narrowed to apex, lower tooth moved inside in varying degree; clypeus as rule

transversal, convex, with straight front margin and rounded lateral corners, usually distinctly separated from face; clypeal foveae deep; labrum of various form, more often labrum not protrude from under clypeus; middle field of face expressed; antennal cavities distinct, tubercle between antennal fossae usually distinct; ocelli of normal size, ocellar triangle frequently elevated.

T h o r a x : Transverse furrow of pronotum not interrupted by keel; pronotal ridge not thickened, epomia developed; pronotal base with gradual sinuous margin. Mesonotum convex, mainly slightly longer than width in middle, or of equal length and breadth; notauli usually developed only at base of mesonotum; subalarum normal, high; sternauli slightly impressed; scutellum moderately elevated, laterally carinated up to postscutellum, its horizontal part slightly convex, not conical. Hind margin of metanotum with triangular projections. Propodeum from lateral of broken type, or gradually slanted, horizontal part almost always distinctly shorter than vertical; area superomedia approximately square or rectangular; all carinae, with exception of costulae developed; areae dentiparae often with sharp corners but without true apophyses and strong teeth; spiracles elongated, more rarely short-oval, never small and circular.

L e g s : Slender. Hind tarsi usually shorter than tibia. Claws thin.

W i n g s : Areolet quadrangular, more often almost symmetrical; radius slightly curved, long; nervulus interstitial; membrane of wing hyaline. Front wing approximately equal to body length.

A b d o m e n : Of females shortly-oval or broadly-oval, flattened, second tergite more often not longer than breadth; sheath of ovipositor usually slightly protrude. First tergite distinctly wider than height at base, from lateral usually with gradual passage to postpetiolus and distinctly carinated; middle field of postpetiolus from indistinct to distinct, irregularly wrinkled or almost smooth, not longitudinally striated. Gastrocoeli distinctly deeply impressed, usually transverse, with narrowed interval, of some species not distinctly transverse with rather wide interval; thyridia distinct; apex of females abdomen not pointed (truncated). Hypopygium long, sometimes from lateral protrude behind apex of last tergite.

C o l o r a t i o n : Basic color of body of most species black or red, without white or yellow pattern on abdomen, often in a little degree on head and thorax; of some species abdomen with marked by light-colored stripes and head and thorax more broadly marked by light-colored; abdomen without apical white spots; wings never strongly darkened.

***Platylabus rufus* WESMAEL (Plate 49)**

Platylabus rufus WESMAEL 1844 - Mém. Acad. Roy. Sci. Let. Beaux-Arts Belgique **18**: 154, ♀.

F e m a l e

F l a g e l l u m : Bristle-shaped, very long and slender, with 35 segments and white annulus on segments (7)-12, sharply pointed toward apex, not widened or moderately widened beyond middle, beyond white annulus scarcely flattened ventrally; basal segments moderately elongated, first segment 3,3 times longer than width at apex laterally. Flagellum by length approximately equal to front wing and body length.

H e a d : Head contour from front roundly narrowed downwards, 1,4 times wider than height; genae length from front four times shorter height of eye; head contour from above transversal, 1,8 times wider than length. Vertex gradually oblique to low and

sharply expressed occipital carina; temples behind eyes from above roundly narrowed behind eyes, moderately long, in middle 1,3 times shorter than longitudinal diameter of eye, from side parallel to hind margin of eye; occipital carina from above gradually concave, not reach level of eyes and far not reach hind ocelli; occipital carina meeting with hypostomal carina before mandible base; mandibles gradually narrowed from base to apex, lower tooth slightly move inside; clypeus transversal, 2,2 times wider than length; convex, with straight thinned front margin and distinct rounded corners, separated from face by shallow impression; clypeal foveae deep, of moderate size; labrum protrude from under clypeus, equal by breadth to front margin of clypeus, rounded, moderately long; middle field of face expressed, slightly elevated, 1,2 times narrower than lateral fields in middle; antennal cavities distinct, reach borders of eyes but far not reach front ocellus level, with lateral tubercles and tubercle between antennal fossae; ocelli of normal size, diameter of lateral ocellus equal to distance from ocellus to eye, ocellar triangle distinctly elevated. Surface of head and clypeus with exception of apex densely punctured by superficial punctures, of frons and vertex slightly shagreen, of temples with superficial punctures, shining.

T h o r a x : Collar of pronotum short, with straight front margin, transverse furrow deep, narrow; epomiae weak. Mesonotum moderately convex, of equal length and breadth; notauli weak, marked in front third; surface of mesonotum with dense superficial punctures, without microsculpture; subalarum normal, high, but not sharpened; speculum punctured by big smoothed punctures; area of mesopleural fovea moderately impressed; sternauli slightly impressed up to middle of mesopleurae; mesopleurae without sharp bend at lower part; surface of mesopleurae wrinkly-punctured, without microsculpture, shining; scutellum moderately elevated, laterally carinated up to postscutellum, its horizontal part slightly convex with sparse smoothed punctures, without microsculpture. Hind margin of metanotum with sharp triangular projections opposite lateral longitudinal carinae. Propodeum from lateral gradually slanted to hind coxae; horizontal part two times shorter than length of area posteromedia in middle; fields of propodeum distinct, all carinae, with exception of costulae, developed, coxal carina very slight; area basalis deep; area superomedia quadrangular, transversal, some narrowed in front and high elevated above lateral fields; area dentipara at apex without denticle; spiracles of moderate size, equal 0,4 breadth of field at place of spiracle, elongated, two times longer than width. Surface of propodeum slightly wrinkled, without microsculpture; metapleurae densely punctured by smoothed punctures.

L e g s : Slender. Claws thin, at apex sharply curved almost at right angle.

W i n g s : Areolet quadrangular, almost symmetrical (external vein of base some longer than internal); stigma long, dark; radius slightly curved, almost straight, long, bent only at apex; radial cell rather long and broad; nervulus interstitial; ramulus expressed; veins dark, membrane of wing hyaline. Length of front wing equal to body length.

A b d o m e n : Abdomen from above broadly-oval compressed dorso-ventrally; second tergite transversal, 1,2 times wider than length; apical tergites not hidden, ovipositor from above distinctly protrude. Petiolus of first tergite distinctly flattened at base; first tergite from lateral with gradual passage to postpetiolus; lateral carinae of petiolus sharp, interspace between them with transversal wrinkles; from above petiolus rather gradually, but distinctly broadened to postpetiolus; middle field of postpetiolus slightly elevated, not carinated, wider than lateral fields; surface of postpetiolus irregularly-wrinkled

slightly shining. Gastrocoeli transverse, oblique, shallow; thyridia distinct, large, near base of second tergite, 2,5 times wider than interval between them, laterally reach to borders of tergite; lunulae very weak, but distinct; surface of second and third tergites coriaceous, slightly shining, other tergites smooth, shining. Hypopygium from lateral strongly elongated and pointed, with slight fold in middle.

C o l o r a t i o n : Body mainly ferruginous-red, only vertex, horizontal part of propodeum and first tergite darkened. Internal orbits, spots on vertex, stripes on external orbits, hind corners of pronotum and subalarum yellow.

S i z e : Body length: 7,3; front wing: 7,4; flagellum: 7,4 mm.

26. *Lamprojoppa* CAMERON

Lamprojoppa CAMERON 1901 - Ann. Mag. Nat. Hist. (7) 7: 482.

Type species: *Lamprojoppa caerulea* CAMERON.

D i s t r i b u t i o n : Oriental Region.

I n t r o d u c t i o n :

It is difficult to agree with synonymisation of genus *Lamprojoppa* CAMERON with *Platylabus* WESMAEL (TOWNES 1961) or even with transferring it as the subgenus (RASNITSYN 1981). A lot of characters, namely triangle from lateral scutellum with strong conical elevation on horizontal surface, contour of propodeum, elongated and broadened in front area superomedia with cellular sculpture and high elevated above lateral fields, strongly developed apophyses (not peculiar to the genus *Platylabus*), absence of coxal carina, front wings, equal by length to length of a body, all these characters are typical rather to the genus *Pachyjoppa* CAMERON. Costulae, even and slightly, but are expressed, second tergite medially is with slight, but distinct impression. Therefore, we consider this genus as independent in accordance to the original conceptions.

M o r p h o l o g y :

F l a g e l l u m : Bristle-shaped, with white semiannulus, widened and flattened ventrally beyond middle, strongly attenuated and pointed toward apex. Flagellum approximately equal by length to front wing.

H e a d : Head contour from front uniformly narrowed downwards, genae long, eyes large; temples from above strongly almost straightly narrowed behind eyes, long. Occipital carina very high, sharp, meeting with hypostomal carina far before mandible base, abscissula very long; mandibles strongly narrowed behind base with lower tooth moved inside; clypeus transversal, strongly convex, with straight front margin and slightly rounded lateral corners, separated from middle field of face by impression; antennal cavities very deep, with strong narrow tooth between antennal fossae; ocellar triangle slightly expressed. Face and clypeus wrinkly-punctured, shining.

T h o r a x : Transverse furrow of pronotum not interrupted by keel; pronotal ridge not thickened; pronotal base gradually uniformly rounded. Mesonotum strongly convex, longer than width, notauli developed to middle and presented by transversal ribs, surface of mesonotum densely and delicate punctured, shining; subalarum thin, sharp, very high; sternauli developed up to middle of mesopleurae; scutellum high elevated above postscutellum, laterally carinated, from lateral triangle, with conical elevation on horizontal surface. Hind margin of metanotum with triangular projections. Propodeum of broken type; basal area very deep; area superomedia very long, high elevated above

lateral fields; costulae weak, areae dentiparae impressed, comparatively flat, with long apophyses; coxal carina absent; spiracles large, long, slit-shaped. Surface shining, without microsculpture.

L e g s : Long and slender.

W i n g s : Areolet quadrangular, slightly asymmetrical; nervulus interstitial. Front wing almost equal to body length.

A b d o m e n : From above broadly-oval, flattened; sheath of ovipositor slightly protrude behind apex of abdomen. Petiolus flattened, long, from lateral with angular transform to postpetiolus, dorsolateral carina sharp; from above petiolus sharply broadened to postpetiolus; middle field distinctly limited and elevated above lateral fields. Gastrocoeli very deep, oblique; thyridia many wider than interval, closed to base of tergite; interval with slight longitudinal impression; lunulae distinct. Hypopygium flat without longitudinal fold.

C o l o r a t i o n : Metallic blue, with white pattern developed in different degree.

S i z e : 10-15 mm.

***Lamprojoppa caerulea* CAMERON (Plate 50)**

Lamprojoppa caerulea CAMERON 1901 - Ann. Mag. Nat. Hist. (7) 7: 483, ♀.

Platylabus caeruleus: HEINRICH 1974 - Ann. Zool. Warszawa 32: 112, ♀.

F e m a l e

F l a g e l l u m : Bristle-shaped with 41 segments, with white annulus on segments 10-14, beyond white annulus widened and flattened ventrally, strongly attenuated and pointed toward apex, basal segments moderately long, first segment 2,4 times longer than width at apex, segment 19 square laterally. Flagellum 1,1 times shorter than the front wing and 1,3 times shorter than body length.

H e a d : Head contour from front gradually uniformly narrowed downwards, transversal, 1,3 wider than height; genae with slightly sinuous contour, eyes large, genae long, 2,5 times shorter height of eye; head contour from above transversal, 1,8 times wider than length. Vertex from lateral straightly slanting behind hind ocelli to occipital carina; temples from above strongly, almost straightly narrowed behind eyes, from lateral long, in middle only 1,2 times shorter than longitudinal diameter of eye, parallel to hind margin of eye; occipital carina very high, sharp, almost not impressed to hind ocelli and far not reach level of eyes; occipital carina meeting with hypostomal carina far from mandible base, abscissula very long; genae 1,5 times longer than the mandible base width; mandibles strongly narrowed behind base, lower tooth moved inside; clypeus transversal, strongly convex, bent at rather distinct angle to middle field of face with straight front margin and slightly rounded lateral corners, separated from middle field by broad impression; clypeal foveae large, deep; labrum long, rounded in front; middle field of face rather broad, high elevated above lateral fields; antennal cavities very deep, laterally reach margins of eyes, without rounded lateral tubercles and with strong narrow tooth between antennal fossae; margins of frons high elevated above face surface; frons from front ocellus with strong longitudinal impression, conjugating with antennal cavities; ocelli of normal size, diameter of lateral ocellus equal to distance from ocellus to eye; ocellar triangle moderately elevated. Face and clypeus densely wrinkly-punctured, shining, frons wrinkled, antennal cavities polished.

T h o r a x : Collar of pronotum long, transverse furrow of pronotum broad, shallow. Mesonotum strongly convex, longer than width, notauli developed up to middle and presented by transversal ribs, surface of mesonotum densely and delicate punctured, shining without microsculpture; subalarum thin, sharp, very high; speculum strongly convex with sparse big smoothed punctures, shining; area of mesopleural fovea very broad and deep; sternauli in a form of narrow impression up to middle of mesopleurae; mesopleurae with angular lower part; surface of mesopleurae strongly longitudinally-wrinkled, shining, without microsculpture, scutellum high elevated above postscutellum, laterally carinated, from lateral triangle, with conically elevated horizontal surface with sparse delicate punctures. Hind margin of metanotum with strong triangle projections opposite lateral longitudinal carinae. Propodeum with sharp division on horizontal and vertical surface; horizontal part equal by length to area posteromedia in middle; basal area very deep; area superomedia very long and narrow with cellular surface, high elevated above lateral fields; costulae weak, moved backwards far behind middle; coxal carina absent and presented in a form of transversal ribs; areae dentiparae impressed, comparatively flat with very strong lateral carinae and wrinkles, with long apophyses at apex; area spiraculifera strongly cellular; spiracles of propodeum large, long, slit-shaped, 3,5(from outside)-5(inside) times longer than width, equal 0,7 breadth of area spiraculifera at place of spiracle. Surface of propodeum shining, without microsculpture; metapleurae wrinkled.

L e g s : Long and slender. Claws long sharply curved.

W i n g s : Areolet quadrangular, slightly asymmetrical (external vein of base some longer than internal); stigma narrow, dark; radius slightly sinuous, long; nervulus interstitial; ramulus very long; membrane of wing hyaline, veins dark. Front wing only just shorter (almost equal) than body length.

A b d o m e n : From above broadly-oval, flattened, second tergite shorter than breadth at apex, apex of abdomen flattened; sheath of ovipositor slightly protrude behind apex of abdomen. Petiolus flattened, long, from lateral with angular transform to postpetiolus, dorsolateral carina sharp, ventrolateral weak, but distinct, surface between them strongly wrinkled, with ribs; from above petiolus sharply broadened to postpetiolus; middle field distinctly limited and elevated above more narrow lateral fields, slightly wrinkled, shining; distance between spiracles equal to distance from spiracles to apex. Gastrocoeli very deep, closed to base of tergite, oblique; thyridia distinct, broad, many wider than interval; interval with slight longitudinal impression; lunulae distinct, of moderate size; second tergite delicate coriaceous, slightly shining, sharply separated from tergite 3. Hypopygium flat without longitudinal fold, with rounded apex, slightly impressed ventrally.

C o l o r a t i o n : Metallic blue, with white pattern developed in different degree: semiannulus on flagellum, narrow stripes on facial, frontal orbits and genae.

S i z e : Body length: 11,9; front wing: 10,4; flagellum: 9,1 mm.

27. *Pachyjoppa* CAMERON

Pachyjoppa CAMERON 1901 - Ann. Mag. Nat. Hist. 7: 174-175.

Type species: *Pachyjoppa tibialis* CAMERON.

Platylabus: TOWNES 1961 - Cat. Reclass. Indo-Austr. Ichn.: 395-396 (part).

Pachyjoppa: HEINRICH 1974 - Ann. Zool. Wars. 32 (8): 136.

Type species: *Pachyjoppa tibialis* CAMERON.

Distribution: Oriental Region (Burma, India). 1 species.

Introduction:

The genus is characterized by large size, slanted temples, triangle from lateral scutellum with blunt, pointed backwards elevation on horizontal surface, by propodeum with area superomedia strongly elevated above lateral fields, strong and bent upwards apophyses, deep and broad gastrocoeli with narrow interval, yellow coloration of body and wings with darkened apices. The ratio of front wings length and length of a body characteristic for the tribe reaches in *Pachyjoppa* extreme expression, length of a front wing is equal to a body length. Habitually it reminds *Lamprojoppa* CAMERON i.e. slanted temples, straight from above and very high occipital carina, morphology of a clypeus as of *Lamprojoppa* strongly protrude in front relative to face surface, very large antennal cavities reaching the level of front ocellus with sharply elevated front margins of antennal fossae, triangle from lateral scutellum and morphology of propodeum (high elevated and elongated area superomedia, bent upwards apophyses, absence of coxal carina and large slit-shaped spiracles). It is differed from *Lamprojoppa* practically by broad clypeus, absence of sharp notauli and traces of costula and by yellow color of body with darkened apices of front wings.

Morphology:

Flagellum: Of female bristle-shaped, beyond middle almost not widened, very slightly flattened ventrally and gradually attenuated toward apex, without white annulus. Flagellum by length shorter than front wing and approximately equal to body length. Flagellum of males without tyloides.

Head: Head contour from front almost square, genae long, slightly narrowed to mandibles; from above contour rounded, slightly transversal. Occipital carina sharp, from above not impressed to hind ocelli, meeting with hypostomal carina far from mandible base; mandibles with form character to tribe; clypeus large, strongly convex with straight front margin and broadly rounded lateral corners, transversal, strongly protrude in front relative to surface of face (cf. *Lamprojoppa* CAMERON); middle field very slightly elevated above lateral fields; antennal cavities very large, deep with distinct sharp tooth between antennal fossae; ocellar triangle elevated. Surface of clypeus with big superficial punctures.

Thorax: Transverse furrow of pronotum not interrupted by keel; pronotal ridge not thickened; pronotal base gradually sinuous, with very acute apex. Mesonotum moderately convex, longer than width; notauli not developed, surface of mesonotum very densely punctured, slightly shining; subalarum high, thin; sternauli absent; lower part of mesopleurae with angular bend to ventral one; scutellum very high with sharp lateral carinae, with blunt, pointed backwards elevation on horizontal surface. Hind margin of metanotum with triangular projections. Propodeum sharply angle-shaped; horizontal part some shorter than length of area posteromedia in middle; carinae of propodeum developed, with exception of costulae and coxal carina; area superomedia high elevated above lateral fields, long, widened in front, with cellular surface (cf. *Lamprojoppa* CAMERON); area dentipara at apex with strong apophysis bent upwards; first pleural area situated almost at horizontal plane; spiracles large, slit-shaped. Surface of propodeum very densely punctured with cellular sculpture, matt.

Legs : Long and strong.

Wings : Areolet quadrangular asymmetrical; radius sharply curved at apex; radial cell narrow and long; nervulus postfurcal; membrane of wing intensively yellow, apex of front wings darkened.

Abdomen : Uniformly longish-oval; second tergite transverse; sheath of ovipositor only just protrude. Petiolus flattened, long, from lateral with sharp bend to postpetiolus and strong lateral carinae, from above gradually broadened to postpetiolus; postpetiolus long, middle field not limited, shining. Gastrocoeli deep, triangle; thyridia weak; lunulae absent; second tergite in middle densely and roughly punctured, slightly shining. Hypopygium from below strongly pointed, with longitudinal fold in middle.

Coloration : Body and wings yellow, apex of front wings darkened.

Size : 12-16 mm.

***Pachyjoppa tibialis* CAMERON (Plate 51)**

Pachyjoppa tibialis CAMERON 1901 - Ann. Mag. Nat. Hist. 7: 375, ♀.

Pachyjoppa tibialis: HEINRICH 1974 - Ann. Zool. Wars. 32 (8): 136-137, ♀, ♂.

Female

Flagellum : Bristle-shaped, with 38 segments, almost not widened beyond middle, very slightly flattened ventrally and gradually attenuated toward apex, without white annulus; basal segments moderately long, segments 1-11 with oblique apex, first segment 3,8 times longer than width at apex, segment 18 square laterally. Flagellum 1,2 times shorter than the front wing and approximately equal to body length.

Head : Head contour from front almost rectangular, slightly transversal, 1,2 times wider than height; genae slightly narrowed toward mandibles, long, 3,7 times shorter height of eye; head contour from above rounded, slightly transversal, only 1,5 times wider than length. Vertex behind hind ocelli gradually slanted from lateral to very high occipital carina; temples from above straightly narrowed behind eyes, from lateral not narrowed downwards, long, equal by length to longitudinal diameter of eye in middle; occipital carina from above almost straight, not impressed to hind ocelli, meeting with hypostomal carina far from mandible base; genae very long, but only just longer than mandible base width; mandibles with form character to tribe, sharply narrowed from base to middle, from middle to apex parallel sided; clypeus strongly convex with straight front margin and broadly rounded lateral corners, transversal, strongly protrude in front relative to face surface, not separated from face by distinct suture; clypeal foveae very deep, large, rounded; labrum long, protrude from under clypeus, wide, rounded; middle field of face expressed, but very slightly elevated above lateral fields; antennal cavities very large, deeply impressed, almost reach margins of eyes, with rounded tubercles laterally and with distinct sharp tooth between antennal fossae, front margins of antennal fossae high elevated; ocelli of moderate size, relatively slightly convex, diameter of lateral ocellus 1,4 times less than distance from ocellus to eye; ocellar triangle expressed. Surface of clypeus with big superficial punctures, interspaces less than diameter of punctures, without microsculpture, middle field of face superficially wrinkled, middle fields sparse delicate punctured, shining.

T h o r a x : Collar of pronotum short, transverse furrow shallow. Mesonotum moderately convex, slightly longer than width; notauli not developed, marked by only just visible impressions at base; surface of mesonotum very densely punctured with very slight shine; subalarum high, narrow; speculum with sparse punctures, shining; area of mesopleural fovea broadly and deeply impressed; sternaui absent; lower part of mesopleurae with angular bend; mesopleurae longitudinally striated; scutellum very high, with sharp lateral carinae, sharply abrupt to postscutellum, its horizontal part with blunt, pointed backwards elevation, punctured by big smoothed punctures, shining; vertical part extremely densely wrinkly-punctured, without microsculpture. Hind margin of metanotum with distinct triangular projections. Propodeum from lateral sharply angle-shaped; horizontal part some shorter than length of area posteromedia in middle; propodeum with distinct areas; carinae of propodeum developed, with exception of costulae and coxal carinae; area superomedia high elevated above lateral fields, elongated, widened in front, with cellular surface; areae dentiparae at apex with apophysises strongly bend upwards; first pleural area with large slit-shaped spiracles, equal 0,5 breadth of area at place of spiracle, strongly broadened and situated almost at horizontal plane. Horizontal part of propodeum very densely punctured, with cellular sculpture, matt; metapleurae very densely punctured, slightly shining.

L e g s : Long, but rather strong. Claws long, slightly curved.

W i n g s : Areolet quadrangular, asymmetrical (external vein of base longer than internal, a external vein of apex shorter than internal); stigma narrow, but broad at base; radius sharply curved at apex (strongly sinuate), long; radial cell narrow and long; nervulus postfurcal; ramulus long; stigma and all veins yellow, membrane of wing intensively yellow, apex of front wings darkened. Length of front wing equal to body length.

A b d o m e n : From above uniformly longish-oval; second tergite shorter than breadth at apex; apical tergites not hidden, distinctly visible from above; sheath of ovipositor from above only just protrude. Petiolus flattened, long, from lateral with sharp bend to postpetiolus and strong lateral carinae, interspace between them with strong ribs, sternite also with very strong ribs; from above petiolus gradually broadened to postpetiolus; postpetiolus long, distance between spiracles less than distance from spiracles to apex of tergite; middle field not limited; postpetiolus shining with only just visible rugosity. Gastrocoeli deep, short, triangle; thyridia not distinct, closed to base of tergite, interval punctured; lunulae absent; second tergite in middle densely and roughly punctured, intervals narrower than punctures, slightly shining; tergite 3 more delicate punctured shining, 4th with sparse punctures; tergites 2-3 sharply separated. Hypopygium from below strongly pointed, with longitudinal fold in middle.

C o l o r a t i o n : Body completely yellow, wings yellowish; black: flagellum, apex of hind femora, hind tibiae and tarsi; apex of front wings darkened.

S i z e : Body length: 12,3; front wing: 13,2; flagellum: 11,0 mm.

28. *Pristicerops* HEINRICH

Pristicerops HEINRICH 1962 - Synopsis Nearct. Ichn. Stenop.: 786-787.

Type species: *Platylabus bakeri* DAVIS.

Pristicerops: HEINRICH 1974 - Ann. Zool. Wars. **32** (8): 165.

Distribution: Holarctic (Temperate Zone) and Oriental Regions (highland).

Introduction:

Representatives of the genus are characterized by the elongated spiracles, absence of the apophyses or distinct teeth, proportionally comparatively large head relatively to other parts of body, complete set carination of propodeum with developed costulae. Gastrocoeli are not deep, with distinct thyridia, considerably narrower than interval. A body is with a reach yellow pattern. A length of flagellum is approximately equal to a body and to front wings length.

Morphology:

Flagellum: Long and slender, not widened or slightly widened beyond middle and flattened ventrally, gradually attenuated toward apex with white annulus. Flagellum approximately equal by length to front wing and to body length. Flagellum of males without white annulus and with pronounced elongated narrow or longish-oval light-colored tyloides, in front at apical part with slight notches between segments, but not serrate as *Pristicerus* GRAVENHORST not flattened and not widened beyond middle.

Head: Head contour from front narrowed downwards. Temples from above behind eyes sharply roundly narrowed backwards, from lateral almost parallel to hind margin of eye. Occipital carina meeting with hypostomal carina on considerable distance from mandible base, before place of meeting curved anteriorly, so, that part of hypostomal carina visible from lateral; mandibles gradually narrowed from base to apex, lower tooth slightly moved inside; clypeus convex, with form character to tribe, with straight front margin and rounded lateral corners; middle field of face only just protrude, narrow; antennal cavities deep, with distinct tooth between antennal fossae; ocellar triangle only just elevated.

Thorax: Transverse furrow of pronotum not interrupted by keel; pronotal ridge not thickened; epomia strong; pronotal base abruptly curved. Mesonotum moderately convex, approximately of equal length and breadth; notauli not developed or only just marked at base; surface of mesonotum densely punctured, without microsculpture; subalarum rather high and thick, not sharpened; sternali not developed, in form of slight impressions at base; scutellum high elevated above postscutellum, strongly slanted, carinated laterally up to apex. Hind margin of metanotum with triangle projections. Propodeum from lateral gradually slanting backwards, but not shortened; set of carinae complete; area superomedia of equal length and breadth or wider than length; carinae of area dentipara at apex widened, but not forming distinct apophyses or teeth; spiracles elongated, of moderate size. Surface of propodeum wrinkly-punctured, shining.

Legs: Long and slender, more strong of females.

Wings: Areolet quadrangular; nervulus interstitial. Length of front wing only just shorter than body length.

Abdomen: Abdomen longish-oval; second tergite slightly transverse; ovipositor from above slightly protrude. First tergite from lateral without sharp bend; petiolus flattened at base, laterally carinated by sharp carinae; from above petiolus uniformly broadened to postpetiolus; middle field of postpetiolus slightly elevated, not carinated. Gastrocoeli not deep, rather long; thyridia distinct, narrower than interval; lunulae not big, distinct; tergites 2 and 3 densely punctured. Hypopygium of female from lateral triangle, slightly compressed from sides, without longitudinal fold.

C o l o r a t i o n : Head and thorax with yellow pattern; tergites of abdomen mainly with yellow apical stripes.

S i z e : 7,5-8,5 mm.

***Pristicerops infractorius* (LINNAEUS) (Plate 52)**

Ichneumon infractorius LINNAEUS 1761 - Fauna Svec.: 398.

Pristicerops infractorius: RASNITSYN 1981 - Opred. Faune SSSR 3 (3): 552.

F e m a l e

F l a g e l l u m : Long and slender, with 37 segments, not widened or slightly widened and slightly flattened ventrally beyond middle, gradually attenuated toward apex with white annulus on segments (8)9-12; basal segments moderately long, first segment 3,7 times longer than width at apex laterally, segments up to white annulus distinctly differentiated. Flagellum 1,1 times longer than the front wing and 1,2 times shorter than body length.

H e a d : Head contour from front narrowed downwards (genae moderately strongly narrowed toward mandibles base), 1,3 times wider than height; malar space 4 times shorter height of eye; head considerably large, transversal, 2 times wider than length. Vertex straightly slanting from ocelli to sharp, low occipital carina; temples from above behind eyes sharply roundly narrowed backwards, from lateral almost parallel to hind margin of eye, temples length at middle 1,3 times shorter than longitudinal diameter of eye; occipital carina gradually concave to hind ocelli, far not reach level of eyes and hind ocelli, meeting with hypostomal carina on considerable distance from mandible base, before place of meeting curved anteriad, so, that part of hypostomal carina visible from lateral; malar space equal to mandible base width; mandibles gradually narrowed from base to apex, lower tooth slightly move inside; clypeus convex with straight front margin and rounded lateral corners, moderately convex, separated from middle field by slight impression, two times wider than length; clypeal foveae deep, narrow; labrum rather long and wide, rounded in front; middle field of face only just protrude, narrow, in middle 1,5 times shorter lateral fields; antennal cavities deep, far not reach front ocellus level, but almost reach margins of eyes, without roundish tubercles laterally and with distinct, but slight tooth between antennal fossae; ocelli of normal size, diameter of lateral ocellus equal to distance from ocellus to eye; ocellar triangle only just elevated. Clypeus with big punctures, face wrinkly-punctured, face and clypeus strongly shining without microsculpture, frons smooth, shining.

T h o r a x : Collar of pronotum rather long with straight front margin, transverse furrow shallow, narrow. Mesonotum moderately convex, approximately of equal length and breadth; notauli only just marked at base; surface of mesonotum densely punctured (intervals narrower than punctures), shining, without microsculpture; apices of prepectal carinae reach front margin of mesopleurae; subalarum rather high and thick, not sharpened; speculum with rather big punctures; area of mesopleural fovea rather broadly and deeply impressed; mesopleural suture rather deeply impressed, straight, interrupted by thin transversal ribs; sternaui not developed, only just marked at base in form of slight impressions; lower part of mesopleurae with distinct, but not sharp bend; surface of mesopleurae densely punctured, to wrinkled at lower half, shining, with white pubescence; scutellum high elevated above postscutellum, strongly slanted, from lateral trian-

gle, carinated laterally up to apex, its horizontal part with distinct uniform punctures. Hind margin of metanotum with triangle projections opposite lateral longitudinal carinae. Propodeum from lateral gradually slanting backwards, horizontal part approximately 1,8 times shorter than area posteromedia in middle; set of propodeum carinae complete; area superomedia of equal length and breadth or wider than length, rounded in front and narrowed backwards, hexagonal, costulae at middle of area superomedia; carinae of areae dentiparae at apex widened, but not forming distinct apophyses or teeth; spiracles elongated, 2,2-3,3 times longer than width, of moderate size, equal 0,5 of breadth of field at place of spiracle. Surface of propodeum wrinkly-punctured, shining, with white pubescence; metapleurae with big punctures, shining.

L e g s : Long and slender. Claws thin, not great, slightly and uniformly curved.

W i n g s : Areolet quadrangular, asymmetrical (external veins longer than internal); stigma normal, light; radius slightly sinuous, long; radial cell long and broad; nervulus interstitial; ramulus developed, but slightly; membrane of wing slightly yellowish, veins light. Length of front wing only 1,1 shorter than body length.

A b d o m e n : Abdomen from above longish-oval; second tergite at apex 1,2 times wider than length; apical tergites not hidden; ovipositor from above slightly protrude. First tergite from lateral gradually curved, without sharp bend; petiolus flattened at base, laterally carinated by sharp carinae, interspace between them with slight wrinkles; from above petiolus uniformly, but distinctly broadened to postpetiolus; middle field slightly elevated, not carinated, broad with sparse smoothed punctures and smooth shining surface. Gastrocoeli not deep, rather long; thyridia distinct, oblique, considerably narrower than interval (breadth of interval vary in considerably extent); lunulae not big, but distinct; tergites 2 and 3 densely punctured, surface of second tergite strongly, of third dully shining with developed microsculpture, 4th tergite with slight microsculpture, other smooth. Hypopygium of female from lateral triangle, slightly compressed from sides, practically without longitudinal fold.

C o l o r a t i o n : Body black, with reach yellow-white pattern on head, thorax and apical stripes on tergites of abdomen. Legs, with exception of hind coxae, of reddish-brown color.

S i z e : Body length: 7,8; front wing: 7,0; flagellum: 7,0 mm.

M a l e

Flagellum without white annulus with distinct longish-oval light tyloides on segments 10-16, in front at apical part with slight notches between segments, but not serrate as *Pristiceros*, not flattened ventrally and not widened beyond middle; legs more slender than of females; scutellum more gradually slanted; abdomen of male more narrow and long. Males more reachly marked by light-colored (white or slightly yellow) pattern.

29. *Pristiceros* GRAVENHORST

Pristiceros GRAVENHORST 1829 - Ichn. Europ., 1: 635.

Type species: *Pristiceros serrarius* GRAVENHORST.

Pristiceros: HEINRICH 1962 - Synopsis Nearct. Ichn. Stenop.: 783-784.

Distribution: Holarctic.

Introduction :

The genus is characterized by specific morphology of the male's flagellum. The segments beyond middle are deeply excised and connected by the narrow cord. The similarity morphology of flagellum, but expressed in a considerably lesser degree is marked in the males of African genus *Spanophatnus* CAMERON and in a Holarctic *Pristicerops* HEINRICH. The fields of propodeum are full; the first tergite of abdomen is gradually curved, without sharp bend. The gastrocoeli are deep, rectangular or almost triangle with thyridia equal to interval between them.

Morphology :

Flagellum : Of females bristle-shaped, long and slender, flattened ventrally beyond middle and slightly widened, strongly attenuated toward apex. Flagellum of males sharply serrate from segment 8, segments apically deeply cut with broad cavity between segments. Flagellum shorter than front wing and body length; at males of type species with large oval tyloides on white segments.

Head : Head contour gradually narrowed downwards; temples from above roundly and moderately narrowed behind eyes, long; occipital carina meeting with hypostomal carina before mandible base; mandibles gradually narrowed behind base, with form character to tribe; clypeus sharply separated from face by suture, strongly convex and with uniformly rounded front margin; middle field of face only just elevated, rather wide; antennal cavities deep with slight tooth between antennal fossae; ocellar triangle expressed, but slightly elevated.

Thorax : Transverse furrow of pronotum not interrupted by keel; pronotal ridge not thickened; epomiae developed; pronotal base gradually sinuously curved, hind angle strongly acute. Mesonotum strongly convex, only just longer than width; notauli only just marked at base; surface of mesonotum very densely punctured, without microsculpture; subalarum high, thick, not sharpened; sternauli practically absent; scutellum rather high elevated, laterally sharply carinated. Hind margin of metanotum with triangular projections. Propodeum from lateral short, without sharp division to horizontal and vertical parts, almost triangle; all carinae of propodeum developed, including coxal carina; basal area short and deep; areae dentiparae at apices without teeth (or with very slight teeth-like projections), spiracles large, slit-shaped. Surface of propodeum wrinkled, without microsculpture; propodeum of male with white pubescence.

Legs : Long and slender.

Wings : Areolet quadrangular; radius almost straight, long; nervulus interstitial. Front wing shorter than body length.

Abdomen : From above narrow, longish-oval; second tergite equal of length and breadth. First tergite long, without distinct bend; petiolus at base slightly flattened; laterally carinated by strong carinae; from above petiolus gradually and uniformly broadened to postpetiolus; middle field of postpetiolus sharply elevated, its surface slightly irregularly wrinkled. Gastrocoeli moderately deep, rather short; thyridia distinct, almost perpendicular to longitudinal axis of a body, wider than interval; lunulae not big, distinct.

Coloration : Female of type species with red-brown basic color of abdomen. Males uniformly black with yellowish internal orbits, traces of white or yellowish pattern along front margin and at hind corners of pronotum, yellowish spot on scutellum, often with spots at hind corners of propodeum. Legs mainly dark-brown.

Size : 11-12 mm.

***Pristicerus serrarius* GRAVENHORST (Plate 53)**

Pristicerus serrarius GRAVENHORST 1829 - Ichneum. Eur. **1**: 635, ♀, ♂.

Pristicerus serrarius: HEINRICH 1934 (1936) - Polskie Pismo Entomol. **13** (1-4): 41, ♀, ♂.

M a l e

F l a g e l l u m : Long, with 40 segments, with white annulus (semiannulus) on segments (11)12-(16)18, sharply serrate from segment 8; apically segments deeply cut with broad cavity between segments; first segment 2,6 times longer than width at apex laterally; white segments with large oval tyloides. Flagellum 1,2 times shorter than the front wing and 1,6 times shorter than the body length.

H e a d : Head contour from front transversal, 1,4 times wider than height, gradually narrowed downwards; lower part of temples from the front visible almost to middle of eye; genae from front 5,2 times sorter height of eye; from above head contour slightly narrowed backwards, 1,9 times wider than length. Vertex from lateral gradually sloping to sharp and rather high occipital carina; temples from above roundly and moderately narrowed behind eyes, long, equal to longitudinal diameter of eye at middle, from side parallel to hind margin of eye; occipital carina from above gradually impressed to hind ocelli, far not reach level of eyes, at bottom meeting with hypostomal carina before mandible base; malar space shorter than mandible base width; mandibles gradually narrowed behind base; clypeus sharply separated from face by suture, with strongly convex and uniformly rounded front margin, 2,6 times wider than length; clypeal foveae deep, narrow; labrum very short, wide, with straight front margin; middle field of face only just elevated, rather wide, 1,6 times narrower than lateral fields in middle; antennal cavities deep, but short, not reach front ocellus level and margins of eyes, without rounded tubercles laterally and slight tooth between antennal fossae; ocelli of normal size, diameter of lateral ocellus equal to distance from ocellus to eye; ocellar triangle expressed, but slightly elevated. Surface of clypeus punctured by big punctures, lateral fields very densely punctured, middle field wrinkly-punctured, head surface shining, only middle field partially with microsculpture.

T h o r a x : Collar of pronotum long, from above with straight front margin, transverse furrow shallow; epomiaae only just marked. Mesonotum strongly convex, only just longer than width; notauli only just marked at base; lateral margin of mesonotum behind tegulae strongly widened; surface of mesonotum very densely punctured, shining, without microsculpture; subalarum high, thick, not sharpened; speculum practically not expressed, wrinkly-punctured; area of mesopleural fovea narrowly and deeply impressed; mesopleural suture deep, straight, interrupted by sharp ribs; sternauli practically absent; lower part of mesopleurae without sharp bend; surface of mesopleurae very densely punctured to slightly wrinkled, shining, without microsculpture, with slight white pubescence at area of speculum and mesopleural carina; scutellum rather high elevated, laterally sharply carinated; its horizontal part uniformly convex, punctured by sparse punctures, shining. Hind margin of metanotum with triangle projections opposite lateral longitudinal carinae. Propodeum from lateral rather short, without sharp division to horizontal and vertical parts, almost triangle; horizontal part 2 times shorter than length of area posteromedia in middle; all carinae of propodeum developed, including coxal carina; basal area short and deep; area superomedia rectangular (hexagonal), transversal, costulae before middle; area dentipara at apex without tooth (or very slight tooth-like projection); spiracles large, equal 0,7 breadth of field at place of spiracle, slit-shaped, three and

more times longer than width. Surface of propodeum wrinkled, without microsculpture; metapleurae densely punctured, shining; propodeum of male with white pubescence.

L e g s : Long and slender. Claws thin, at upper third curved almost at right angle.

W i n g s : Areolet quadrangular almost symmetrical; stigma narrow with wide base, dark; radius slightly sinuous, almost straight, long; nervulus interstitial; ramulus from short to long; membrane of wing hyaline, veins dark. Length of front wing 1,4 shorter than body length.

A b d o m e n : From above narrow, longish-oval, in middle almost parallel sided; second tergite of equal length and breadth. First tergite long, without distinct bend on border of petiolus and postpetiolus; petiolus at base slightly flattened; laterally carinated by strong carinae, interspace between them with sharp transverse ribs; from above petiolus gradually and uniformly broadened to postpetiolus; middle field of postpetiolus sharply elevated, wider than lateral fields; its surface slightly irregularly wrinkled. Gastrocoeli moderately deep, rather short; thyridia distinct, almost perpendicular to longitudinal axis of a body, laterally reach to borders of tergite; interval only just visible less than breadth of thyridia; lunulae not big, distinct; surface of interval and front third of tergite cellular, other part of second tergite, with exception of smooth stripe at apex densely wrinkly-punctured slightly shining; tergites 3-4 very densely punctured and with developed microsculpture; other tergites with more sharp punctures, shining. Hypopygium of male with straight, only just rounded apex, without longitudinal fold.

C o l o r a t i o n : Uniformly black with yellowish internal orbits, traces of white or yellowish pattern along front margin and at hind corners of pronotum, yellowish spot on scutellum, often with spots at hind corners of propodeum. Legs mainly dark-brown.

S i z e : Body length: 11,5; front wing: 8,4; flagellum: 7,0 mm.

F e m a l e

Flagellum of females bristle-shaped, long and slender, flattened ventrally beyond middle and slightly widened, sharply attenuated toward apex. Female with red-brown basic color of abdomen.

30. *Dentilabus* HEINRICH

Dentilabus HEINRICH 1974 - Ann. Zool. Wars. **32** (8): 147-149.

Type species: *Platylabus variegatus* WESMAEL.

Distribution : Palaearctic and Oriental Regions (highland). 5 species from Burma.

I n t r o d u c t i o n :

The genus is similar to *Platylabus* WESMAEL in morphology of broad and deep gastrocoeli with very narrow interval between them and with very large thyridia. In contrast to *Platylabus* temples just behind eyes are sharply strongly narrowed backwards; propodeum is comparatively long; areae dentiparae are with very strong teeth; the second tergite of abdomen at base in middle is with distinct longitudinal impression. In the affined genus *Lamprojoppa* CAMERON second tergite is with similar gastrocoeli and thyridia and in middle also with a longitudinal impression; propodeum is with apophyses. However, scutellum of *Lamprojoppa* is sharply different, triangle from lateral, with conical elevation on horizontal surface.

M o r p h o l o g y :

F l a g e l l u m : Of females very slender, long, bristle-shaped, not widened and not flattened ventrally beyond middle. Flagellum appreciably longer than front wing. Flagellum of males without distinct tyloides.

H e a d : Head contour from front roundish; temples from above very strongly and more straightly than at *Platylabus* narrowed backwards; occipital carina meeting with hypostomal carina not reaching mandible base; mandibles narrow, with form character to tribe, strongly and gradually narrowed from base to apex; clypeus strongly convex with almost straight front margin; antennal cavities small, deeply impressed with strong tooth between antennal fossae.

T h o r a x : Transverse furrow of pronotum not interrupted by keel; pronotal ridge not thickened; epomia weak; pronotal base from lateral almost straight. Mesonotum strongly convex, of equal length and breadth; notauli practically absent; surface of mesonotum very densely wrinkly-punctured with developed microsculpture; subalarum thin, not sharpened; sternauli in form of very slight impression up to middle of mesopleurae; scutellum convex, from above triangle, laterally carinated up to apex, its horizontal part uniformly convex. Hind margin of metanotum with triangular projections. Propodeum from lateral oblong; horizontal part of propodeum and area dentipara comparatively long; all carinae of propodeum, except of costulae (sometimes costula very slightly marked), distinct; areae dentiparae with very strong teeth, almost apophyses; spiracles of propodeum longish-oval, rather long.

L e g s : Long and slender.

W i n g s : Areolet quadrangular, slightly asymmetrical; nervulus interstitial. Front wing shorter than body length.

A b d o m e n : Abdomen longish-oval, second tergite slightly transverse; sheath of ovipositor only just visible protrude. First tergite from lateral with gradual bend to postpetiolus; petiolus broad and flattened at base; dorsolateral and ventrolateral carinae sharp; middle field of postpetiolus slightly expressed, not carinated. Gastrocoeli very deep, short, laterally reach to borders of tergite; thyridia sharp, many wider than interval between them, slightly oblique; interval with strong longitudinal impression; lunulae very distinct, large; second and third tergites very densely punctured. Hypopygium from lateral pointed, compressed.

C o l o r a t i o n : Head and thorax more or less richly marked by white; tergites of abdomen mainly with white bands and white apical pattern on last tergite, rarely monochromatic.

***Dentilabus variegatus* (WESMAEL) (Plate 54)**

Platylabus variegatus WESMAEL 1844 - Nouv. Mém. Acad. Sci. Bruxelles **28**: 156, ♂.

Dentilabus variegatus: HEINRICH 1974 - Ann. Zool. Wars. **32** (8): 147.

F e m a l e

F l a g e l l u m : Very slender, long, with 32 segments, not widened and not flattened ventrally beyond middle, gradually attenuated toward apex, with white semiannulus on segments 7-10; basal segments strongly elongated, first segment laterally 4 times longer than width at apex, all segments longer than wide. Flagellum 1,4 times longer than the front wing and 1,1 times longer than body length.

H e a d : Head contour from front roundish, only just transversal, 1,2 times wider than height; genae from front uniformly narrowed downwards; head contour from above rather thick, 1,7 times wider than length. Vertex from lateral behind hind ocelli gradually slanting down to occipital carina; temples from above very strongly roundly narrowed behind eyes, moderately long, 1,8 times shorter than longitudinal diameter of eye in middle, from side parallel to hind margin of eye; occipital carina low, gradually and slightly impressed to hind ocelli far not reach level of eyes, meeting with hypostomal carina not reaching mandible base, lower part of hypostomal carina distinctly visible from lateral; malar space equal to mandible base width; mandibles narrow, strongly and gradually narrowed from base to apex; clypeus strongly convex, only 1,5 times wider than length, with practically straight (slightly gradually rounded) front margin, separated from face by slight impression; clypeal foveae deep, narrow; labrum short, rounded, to all breadth of front margin; middle field of face slightly convex, only just elevated above lateral fields; in middle approximately equal by length to lateral fields; antennal cavities small, deeply impressed, reach margins of eyes and far not reach front ocellus level, with expressed lateral tubercles and strong tooth between antennal fossae; ocelli of normal size, diameter of lateral ocellus some less than distance to eye; ocellar triangle moderately elevated, but not clearly expressed. Surface of face and clypeus with big punctures, shining, without microsculpture; frons above antennal cavities superficially wrinkly-punctured.

T h o r a x : Collar of pronotum short; transverse furrow shallow, narrow. Mesonotum strongly convex, of equal length and breadth; notauli practically absent or only just marked at base in form of very slight impressions; surface of mesonotum very densely wrinkly-punctured with developed microsculpture, with only just shine; subalarum thin, but not sharpened; prepectal carina at apex not reach level of pronotum middle, atrophied at upper part; speculum with big punctures slightly shining; area of mesopleural fovea deep, rather narrow; sternauli in form of very slight impression up to middle of mesopleurae; mesopleurae at bottom without sharp bend; surface of mesopleurae densely wrinkly-punctured slightly shining and with developed delicate white pubescence; scutellum convex, from above triangle, laterally carinated up to apex; horizontal part of scutellum uniformly convex with big sparse punctures, without microsculpture. Hind margin of metanotum with triangle projections opposite lateral longitudinal carinae. Propodeum from lateral gradually slanted, practically without angular bend; horizontal part of propodeum 1,5 shorter than length area posteromedia in middle; all carinae of propodeum, except of costulae (sometimes very slightly marked) distinct; basal area short, deep; area superomedia quadrangular, rounded in front, only just shorter than breadth; areae dentiparae with very strong teeth, almost apophyses; spiracles elongated, 3-4 times longer than width, rather large (of moderate size, equal 0,4-0,5 breadth of field at place of spiracle). Horizontal surface of propodeum roughly wrinkly-punctured, without microsculpture, shining; metapleurae wrinkly-punctured.

L e g s : Long and slender. Claws long and thin without sharp bend at apex.

W i n g s : Areolet quadrangular, slightly asymmetrical (external vein of base some longer than internal); stigma long, narrow, light; radius slightly sinuous, long; nervulus interstitial; ramulus distinct; membrane of wing hyaline, veins slightly darkened. Front wing 1,3 times shorter than body length.

A b d o m e n : From above longish-oval, second tergite slightly-transversal, apical ter-

gites not hidden and clearly visible from above; sheath of ovipositor only just visible protrude. First tergite from lateral with gradual, but distinct bend to postpetiolus; petiolus broad and flattened at base; dorsolateral and ventrolateral carinae sharp; dorsomedian carina merge with dorsolateral above middle of tergite; surface between lateral carinae of petiolus cellular-wrinkled; postpetiolus from above rectangular, flattened, with slightly expressed, but distinctly elevated middle field, laterally not carinated; lateral fields narrower than middle field; distance between spiracles more than distance from spiracles to apex; surface of middle field slightly irregularly-wrinkled. Gastrocoeli very deep, short, laterally reach to borders of tergite; thyridia sharp, many wider than interval between them, slightly oblique; interval with strong longitudinal impression, wrinkled; lunulae very distinct, large; second and third tergites very densely punctured (interspaces narrower than punctures), apical tergites slightly shining with very delicate superficial punctures, coriaceous. Hypopygium from lateral pointed, compressed.

C o l o r a t i o n : Body black with reach white (yellowish) pattern: spots on vertex and internal orbits, upper corners of pronotum, subalarum, scutellum and postscutellum, bands on apex tergites 1-6 and 7th dorsally completely. Legs mainly ferruginously-red, coxae and trochanters 1 of all legs dark (black).

S i z e : Body length: 7,8; front wing: 6,0; flagellum: 8,5 mm.

31. *Lissolaboides* HEINRICH

Lissolaboides HEINRICH 1974 - Ann. Zool. Wars. **32** (8): 182-183.

Type species: *Lissolaboides flavorufus* HEINRICH.

Distribution: Oriental Region (Northern Burma).

I n t r o d u c t i o n :

The genus is characterized by transverse, slightly convex clypeus, sharp carinae of a propodeum, with exception of slightly expressed coxal carina, by elongated hexagonal area superomedia, large elongated spiracles of propodeum, by strongly asymmetrical quadrangular areolet of the front wings, by narrow stigma and long radial cell of front wings and by long and rather narrow abdomen with distinct gastrocoeli and very sharp thyridia on the second tergite.

M o r p h o l o g y :

F l a g e l l u m : Of female thin, bristle-shaped, more than 40 segments, slightly widened beyond middle and flattened ventrally, strongly attenuated and pointed toward apex. Flagellum approximately equal by length to front wing.

H e a d : Head contour moderately narrowed downwards, genae strongly and roundly oblique; temples long, gradually narrowed behind eyes. Occipital carina meeting with hypostomal carina on some distance from mandible base; mandibles uniformly narrowed from base to apex, with strong teeth; clypeus transversal, from slightly convex to almost not convex (at *L. major* HEINRICH), at type species with straight thinned front margin and rounded lateral corners; antennal cavities moderately impressed with slight tubercle between antennal fossae; ocellar triangle distinctly elevated. Face and clypeus with dense punctures, without microsculpture.

T h o r a x : Transverse furrow of pronotum not interrupted by keel; pronotal ridge not thickened; pronotal base gradually sinuously curved. Mesonotum strongly convex, longer than width, notauli marked only at base; surface of mesonotum with dense punctures;

subalarum thick, not sharpened; sternali absent; scutellum high elevated above postscutellum, from lateral strongly slanting backwards, laterally carinated, horizontal part strongly convex with sparse punctures, apical part of scutellum with longitudinal wrinkles. Hind margin of metanotum with triangular projections. Propodeum short, angle-shaped; horizontal part, approximately equal to sloping one; all carinae of propodeum, with exception of coxal developed, sharp; area superomedia hexagonal, narrowed in front and from costulae backwards; areae dentiparae with expressed teeth; spiracles large, elongated. Surface of propodeum shining; metapleurae punctured.

L e g s : Moderately slender, long.

W i n g s : Areolet quadrangular, strongly asymmetrical; nervulus interstitial; stigma narrow. Front wing shorter than body length.

A b d o m e n : From above long, broadening to apex of second tergite and from it uniformly narrowed backwards; second tergite with equal length and width at apex; apical tergites not hidden; ovipositor sheath slightly protrude. Petiolus only just wider than height at base, from lateral gradually curved; lateral carinae distinct; from above petiolus uniformly broadened to postpetiolus with practically not expressed middle field. Gastrocoeli slightly impressed, thyridia sharp, oblique, far removed from base of tergite; lunulae practically not expressed; tergites 2-3 shining with coriaceous sculpture, without punctures; lateral margins of apical tergites bent-under. Hypopygium slightly pointed, practically without longitudinal fold.

C o l o r a t i o n : Head, thorax and abdomen mainly from light-red basic color with very reach yellow and partially black pattern, to basic black color, with extremely reach yellow pattern, including abdomen.

S i z e : 11 mm.

***Lissolaboides flavorufus* HEINRICH (Plate 55)**

Lissolaboides flavorufus HEINRICH 1974 - Ann. Zool. Wars. **32** (8): 184-185, ♀.

F e m a l e

F l a g e l l u m : Of female slender, bristle-shaped, with 42 segments, slightly widened beyond middle and flattened ventrally, strongly attenuated and pointed toward apex, with white annulus on segments 8-12; basal segments moderately long, first segment 3,7 times longer than width at apex. Flagellum approximately equal by length to front wing and 1,3 times shorter than body length.

H e a d : Head contour from front moderately narrowed downwards, transversal, 1,3 wider than height; genae strongly and gradually roundly oblique, long from front; head contour from above transversal, 2 times wider than length. Vertex from lateral straightly and gradually sloping to not high but sharp occipital carina; temples long, in middle 1,4 times sorter than longitudinal diameter of eye, from above gradually narrowed behind eyes with slightly curved contour, from lateral relatively wide, downwards only just visible widened, practically parallel to hind margin of eye; occipital carina slightly angularly impressed to hind ocelli, far not reach level of eyes and hind ocelli; hypostomal carina meeting with occipital carina on some distance from mandible base; malar space some more than mandible base width; mandibles uniformly narrowed from base to apex, lower tooth strong; clypeus transversal, 2,5 times wider than height, not strongly convex, with straight thinned front margin and rounded lateral corners, separated from face by

impression, clypeus more elevated than lateral fields (see from lateral); clypeal foveae deep, of moderate size; labrum short, broad, only just protrude from under clypeus; middle field of face only just expressed, narrow, narrower than lateral fields in middle; antennal cavities moderately impressed, laterally reach margins of eyes, but not reach front ocellus level, with lateral tubercles and slight tubercle between antennal fossae; ocelli large, diameter of lateral ocellus 1,3 times less than distance from ocellus to eye; ocellar triangle distinctly elevated. Face and clypeus with dense punctures, without microsculpture; antennal cavities and frons polished; face slightly shining.

T h o r a x : Collar of pronotum moderately long, transverse furrow deep. Mesonotum strongly convex, longer than width, notauli marked at base; surface of mesonotum with dense punctures, with slightly shining lateral lobes; subalarum thick, not sharpened; mesopleural fovea deep, area around it broadly impressed, comparatively of area of speculum; mesopleurae densely superficially wrinkly-punctured, including area of speculum, without microsculpture; lower part of mesopleurae with angular bend; sternauli absent; scutellum high elevated above postscutellum, from lateral strongly slanting backwards, laterally carinated, horizontal part strongly convex with sparse punctures, apical part of scutellum with longitudinal wrinkles. Hind margin of metanotum with strong triangle projections opposite lateral longitudinal carinae. Propodeum short, angle-shaped; horizontal part, including area basalis approximately equal to length of area posteromedia in middle; all carinae of propodeum, with exception of coxal (presented by transversal ribs), developed; area basalis long, area superomedia hexagonal, narrowed in front and from costulae backwards, its surface smooth, costulae at middle of area superomedia; areae dentiparae with expressed teeth at apices; area spiraculifera with transversal ribs; spiracles large, elongated, 2-3 times longer than width (equal 0,6 breadth of area spiraculifera at place of spiracle). Surface of propodeum shining; metapleurae punctured, intervals wider than punctures.

L e g s : Moderately slender, rather long. Claws long, narrow, slightly and gradually curved.

W i n g s : Areolet quadrangular, asymmetrical (external intercubitus considerably longer than internal); stigma narrow, dark; radius slightly sinuous; nervulus interstitial; ramulus only just marked; membrane of wing hyaline. Front wing 1,3 times shorter than body length.

A b d o m e n : From above elongated, broadened to apex of second tergite and from it uniformly narrowed backwards; second tergite with equal length to width at apex; apices of ovipositor sheath visible from above. Petiolus only just wider than height at base, from lateral gradually curved; lateral carinae distinct, surface between them wrinkled; from above petiolus gradually broadened to postpetiolus, middle field of postpetiolus practically not expressed, smooth, shining, lateral fields narrower than middle field, with very slight superficial rugosity; distance between spiracles equal to distance from spiracles to apex, or only just less. Gastrocoeli slightly impressed, thyridia distinct, far removed from base of tergite, oblique; interval many wider than thyridia; lunulae practically not expressed, only in form of trace some different by sculpture; tergites 2-3 shining with coriaceous sculpture, without punctures; other tergites smooth, shining; lateral margins of apical tergites bent-under. Hypopygium slightly pointed, practically without longitudinal fold, not overlap ovipositor.

C o l o r a t i o n : Main color of head, thorax and abdomen light-red (brown) with very reach yellow and slight black pattern.

S i z e : Body length: 11,5; front wing: 9,0; flagellum: 8,5 mm.

32. *Tropicolabus* HEINRICH (according to HEINRICH 1962)

Tropicolabus HEINRICH 1959 - Ent. News **70**: 216.

Type species: *Platylabus foxi* DAVIS.

Tropicolabus: HEINRICH 1962 - Syn. Nearct. Ichn. Stenop.: 14, 754-755.

Distribution: Nearctic.

I n t r o d u c t i o n :

The genus is relative to *Platylabus* WESMAEL being different by the very long, partially curved upwards apophyses of propodeum. The gastrocoeli are transverse, extremely broad and deep, with very narrow interval. This character evidently distinguishes *Tropicolabus* from the two other genera of the tribe with the projecting apophyses (*Ambloplitis* HEINRICH and *Afrectopius* HEINRICH). Type species *Tropicolabus* is distinguished moreover by unusual sculpture of mesonotum, mainly smooth and shiny, distinctly punctured only in front part and by morphology of propodeum with unusually projecting carinae and extremely rough reticulate-rugose sculpture. Scutellum is highly elevated above postscutellum, almost perpendicularly raised from basal furrow and than long and abruptly slanting to postscutellum; its lateral carinae are unusually projecting; spiracles of the propodeum are elongated.

M o r p h o l o g y :

M a l e

F l a g e l l u m : Black with white annulus; scape yellow ventrally.

H e a d : Yellow; black: antennal cavities, middle part of face broadly, ocellar triangle and occiput.

T h o r a x : Mesonotum mainly smooth and shining, distinctly punctured only in front part; scutellum high elevated above postscutellum, almost perpendicularly raised from basal furrow and than with long steep slant to postscutellum, laterally carinated by projecting carinae; all propodeum extremely roughly reticulate rugose; carinae of propodeum extremely sharply elevated; area superomedia of equal length and breadth, approximately hexagonal, slightly narrowed in front; spiracles of propodeum longish-oval or elongated. Black with extremely reach yellow color; yellow: collar of pronotum, margin and base of pronotum broadly, subalarum, spot on tegula, longitudinal stripes on mesonotum.

L e g s : Light-red; segments 1 and 2 of hind tarsi white; apex of hind tibiae and segments 3-5 of hind tarsi black; coxae and trochanters white; base of hind trochanters and coxae ventrally at base, dorsally of apex and laterally red.

A b d o m e n : Gastrocoeli very deep and extremely broad, with very narrow interval; postpetiolus sharply separated from petiolus, with projecting longitudinal carinae with rough wrinkle sculpture; tergites 2 and 3 very densely and roughly sculptured, dull. Tergites 1-3 saturated black, 4-7 red; petiolus and oblong apical bands of all tergites yellow.

33. *Spanophatnus* CAMERON

Spanophatnus CAMERON 1905 - Rec. Albany Mus., Grahamstown **I**: 230-231.

Type species: *Spanophatnus ruviceps* CAMERON.

Spanophatnus: HEINRICH 1967 - Ichn. Stenop. of Africa **2**: 425-426.

Distribution: South Africa. 5 species.

Introduction :

The roughly and densely wrinkly-punctured sculpture of all the body, including strongly sclerotized tergites 2-4, distinctly convex clypeus (as characteristically for the tribe), propodeum with atrophied area superomedia and costulae, developed hind transverse carina and only just marked lateral carinae of horizontal part are characteristic to this genus. Males of the species of genus have serrated flagellum, character for only the genus *Pristicerus* GRAVENHORST. Unusually rough sculpture of the anterior tergites is distinguished more sharply *Spanophatnus* from *Pristicerus* and also from *Neurylabia* HEINRICH. Additionally it differed from them by the form of the clypeus and mandibles.

Morphology :

Flagellum : Bristle-shaped, beyond middle slightly flattened ventrally, practically not widened. Flagellum of males (*S. guillarmodi* HEINRICH) without tyloides in contrast to *Pristicerus*; distinctly serrate (most visible from lateral and by lighting of object from below).

Head : Head contour from front strongly narrowed downwards, behind eyes from above sharply and smoothly narrowed. Occipital carina meeting with hypostomal carina before mandible base, abscissula approximately 2-3 times longer than mandible base width and distinctly lamellate, although only just high; genae at place of meeting occipital and hypostomal carinae (carinal junction) forming not great impression; mandibles moderately long and slender, normal, with short lower tooth; clypeus moderately convex, transversal, with thinned, almost straight front margin and oblique lateral margins, distinctly separated from middle field of face by impression; middle field of face distinct, but slightly elevated above lateral fields; antennal cavities moderately deep, small with sharp narrow tooth between antennal fossae; ocellar triangle only just elevated. Surface of clypeus roughly wrinkly-punctured, surface of face roughly-wrinkled, without microsculpture.

Thorax : Transverse furrow of pronotum not interrupted by keel; pronotal ridge rather strongly swollen; pronotal base smooth, gradually uniformly curved. Mesonotum strongly convex, of equal length and breadth; notauli only just marked at base; surface of mesonotum roughly and densely punctured; subalarum thick; sternali not expressed; scutellum strongly roundly convex, laterally carinated up to apex. Hind margin of metanotum smooth, without prominences. Propodeum from lateral rounded; horizontal and declivous surface divided by apical transverse carina, other transverse carinae not developed; from longitudinal carinae only carina metapleuralis developed; both parts of propodeum very roughly irregularly reticulate-rugose, horizontal part without distinct areas; spiracles large, slit-shaped, elongated or longish-oval. Horizontal and lateral parts of propodeum roughly reticulate-rugose.

Legs : Slender, moderately long.

Wings : Areolet from pentagonal narrow in front, to quadrangular; nervulus interstitial or very slightly antefurcal; radius almost straight with curved apex; ramulus sometimes very long. Front wing shorter than body length.

Abdomen : Broadly-oval, sixth and seventh tergites only just visible from above; second tergite transverse; ovipositor not protrude behind apex of abdomen. Petiolus strongly flattened, in middle approximately two times wider than height; from lateral

carinated by only ventrolateral carina and only just developed only at base dorsolateral carina, gradually transform to postpetiolus; from above uniformly broadened to postpetiolus; middle field not expressed, surface of postpetiolus wrinkly-punctured. Gastrocoeli slightly impressed, small, triangle, thyridia expressed; tergites 2-4 strongly sclerotized, roughly longitudinally wrinkly-punctured. Hypopygium rather short, compressed from sides, with fold and membranous apex.

C o l o r a t i o n : From completely black, to considerably red thorax and metallic blue abdomen.

***Spanophatnus bicinctorius* (THUNBERG) (Plate 56)**

Ichneumon bicinctorius THUNBERG 1822 - Mém. Acad. Imp. Sci. St. Pétersburg **8**: 278, ♀.

Spanophatnus bicinctorius: HEINRICH 1967 - Ichn. Stenop. of Africa **2**: 428-429, 432, ♀.

F e m a l e

F l a g e l l u m : Slender, bristle-shaped, beyond middle slightly flattened ventrally and practically not widened, with 32 segments, gradually attenuated toward apex, with white annulus on segments 8-11; segments of flagellum distinctly differentiated; basal segments moderately long, first segment 3,3 times longer than width at apex. Flagellum 1,2 times shorter than front wing and 1,5 times shorter than body length.

H e a d : Head contour from front strongly, almost straightly narrowed downwards; 1,5 times wider than length; internal margins of eyes parallel, genae almost linearly oblique, malar space 3 times shorter than height of eye; from above head contour transversal, 2 times wider than length. Vertex behind ocelli from lateral gradually oblique to moderately high occipital carina; temples from above behind eyes sharply roundly narrowed, from lateral at upper part short, temples length at middle 2,7 times shorter than longitudinal diameter of eye, widened downwards; occipital carina from above only just impressed to hind ocelli, far not reach level of eyes and hind ocelli, meeting with hypostomal carina not reaching mandible base, abscissula approximately 2-3 times longer than mandible base width and distinctly lamellate, but only moderately high; genae at place of meeting occipital and hypostomal carinae (carinal junction) forming not great impression; genae longer than mandible base width; mandibles narrowed behind base with small lower tooth strongly moved inside; clypeus moderately convex, transversal, 2,3 times wider than length, with impressed and thinned, almost straight front margin and oblique lateral margins, distinctly separated from middle field of face by impression; clypeal foveae deep, rounded; labrum not protrude from under clypeus; middle field of face very narrow, in middle 1,5 times narrower than lateral fields, slightly elevated above lateral fields; antennal cavities moderately deep, small, not reach borders of eyes and far not reach front ocellus level, with wrinkled surface, without visible lateral tubercles and with sharp narrow tooth between antennal fossae; ocelli of small size, diameter of lateral ocellus 2 times less than distance from ocellus to eye; ocellar triangle only just elevated. Surface of clypeus roughly wrinkly-punctured, surface of face roughly-wrinkled; frons and vertex densely and roughly wrinkly-punctured; head surface, with exception of malar space, without microsculpture.

T h o r a x : Collar of pronotum moderately long, transverse furrow deep. Mesonotum strongly convex, of equal length and breadth; notauli practically absent; surface of meso-

notum roughly and densely punctured (intervals narrower than punctures), slightly shining; subalarum thick not sharpened; area of speculum also sculptured practically as other part of mesopleurae, only just expressed; front part of mesopleurae opposite mesopleural fovea convex in form of knoll; area of mesopleural fovea slightly impressed; sternauli not expressed; surface of mesopleurae roughly wrinkly-punctured; scutellum strongly roundly convex, laterally carinated up to apex, its surface with big rough punctures. Hind margin of metanotum smooth, without prominences. Propodeum from lateral rounded; horizontal and declivous surfaces divided by apical transversal carina, other transverse carinae not developed; from longitudinal carinae only carina metapleurals developed, thus coxal area not limited; spiracles of propodeum large, almost slit-shaped (2,5-3 times longer than width), equal by length approximately 0,8 of breadth of area spiraculifera at place of spiracle. Horizontal and lateral parts of propodeum roughly reticulate-rugose, area posteromedia roughly punctured.

L e g s : Slender, moderately long. Claws small, narrow, strongly bend at apex.

W i n g s : Areolet pentagonal, narrow at base almost symmetrical (external vein of base only slightly longer than internal); stigma broad, dark; radius straight, at apex strongly curved, long; nervulus interstitial or very slightly antefurcal; ramulus long; membrane of wing hyaline, veins dark. Front wing 1,3 times shorter than body length.

A b d o m e n : Broadly-oval from above, from forth tergite sharply narrowed backwards and pointed, sixth and seventh tergites only just visible from above, second tergite transversal, shorter than breadth at apex; ovipositor not protrude behind apex of abdomen. Petiolus flattened, in middle approximately two times wider than height, from lateral with only ventrolateral carina expressed and slightly developed only at base dorsolateral carina, with slightly wrinkly-punctured lateral surface (without expressed ribs), from lateral gradually transform to postpetiolus; from above uniformly broadened to postpetiolus; dorsal carinae of postpetiolus of first tergite not expressed same as middle field, its surface slightly uniformly convex, irregularly superficially wrinkly-punctured. Gastrocoeli slightly impressed and short, small, triangle, thyridia expressed, narrow, two times narrower than interval between them, situated near base of second tergite; spiracles in middle of second tergite, lunulae distinct, large; tergites 2-4 strongly sclerotized, densely longitudinally wrinkly-punctured, without microsculpture. Hypopygium compressed from sides, with longitudinal fold and membranous apex.

C o l o r a t i o n : Body black with white pattern: subalarum, scutellum, broad white stripes (bands) on apex of tergites 1-3 of abdomen and small spot at apex of 4th; external orbits of eyes dark-red; legs with exception of coxae and trochanters brown-red.

S i z e : Body length: 8,5; front wing: 6,6; flagellum: 5,7 mm.

34. *Neeurylabia* HEINRICH

Neeurylabia HEINRICH 1967 - Ichn. Stenop. of Africa 2: 423-424.

Type species: *Amblyteles spilopterus* MORLEY.

Distribution: Africa.

I n t r o d u c t i o n :

The type species has a number of the distinct characters. It has distinctly widened and flattened petiolus of Platylabini, characteristic to the tribe morphology of the abdomen and elevated and carinated scutellum. The other structural characters, mainly

form of clypeus and morphology of mandibles, contravene the relationship with Platylabini.

Morphology of the head to a great extent does not correspond to the tribe diagnosis. Clypeus is moderately convex at base with impressed apex and thinned straight front margin. It reminds rather the clypeus of *Eurylabus* WESMAEL and not corresponds to characters of the tribe. Mandibles are rather strong, narrowed behind base with rather large flat teeth, situated in the same plane. Their form does not correspond to the form character to the tribe.

Femora and tarsi are unusually strong; tarsi of all the legs especially hind are thickened (among Platylabini, legs with similar ratherish morphology, are only in Australian *Neolevansa* GAULD).

Gastrocoeli practically not expressed, that also reminds Eurylabini.

In spite of morphology of a clypeus, proportions of a body (ratio of a wings, body and flagellum length) all other characters testify for evidence of belonging to the tribe Platylabini. More over, clypeus somewhat similar of morphology is characteristic also to Central American *Abzaria* CAMERON possessing also by similar morphology of propodeum with the reduced carinae. It is differed from *Spanophatnus* CAMERON by the form of clypeus, mandibles and by the sculpture of front tergites of abdomen.

M o r p h o l o g y :

F l a g e l l u m : Of females bristle-shaped, slender, ventrally slightly flattened behind middle, but not widened, with elongated basal segments. Flagellum some longer than front wing and practically equal to body length. Flagellum of males with white annulus, cylindrical segments, not nodose, with long row of unusually long tyloides.

H e a d : Genae and temples swollen; temples from above firstly sharply widened behind eyes, then strongly roundly narrowed; clypeus wide, elevated at base, impressed apically, with thin apical margin, thus rather concave than convex apically; mandibles strong, with form not character to tribe, that even more expressed at males.

T h o r a x : Transverse furrow of pronotum not interrupted by keel; pronotal ridge not swollen; epomia not expressed; pronotal base with slight break above front coxae. Mesonotum convex, almost of equal length and breadth, strongly punctured; notauli only just marked basally, practically absent; speculum atrophied; scutellum rather short, strongly elevated above postscutellum, strongly convex, densely and roughly punctured, laterally and at apex carinated. Hind margin of metanotum with small projections. Propodeum short, gradually and abruptly slanting backwards almost from base, very densely wrinkly-punctured, with reticulate-rugose slanted part, matt; carinae of propodeum reduced with exception of carinae metapleurales; spiracles elongated. Surface of metapleurae more rarely punctured, shining between punctures.

L e g s : Femora and tarsi unusually strong.

W i n g s : Areolet quadrangular; membrane of wing hyaline, apices of front wings deeply darkened.

A b d o m e n : First tergite distinctly flattened at base, from lateral gradually transform to postpetiolus without distinct bend; dorsolateral and ventrolateral carinae only just expressed; postpetiolus without expressed middle field; spiracles of postpetiolus far

removed from its apex. Gastrocoeli practically not expressed, presented by difficulty recognizable oblique lateral impression, thyridia absent; seventh tergite from above triangle, long. Hypopygium from below flat, triangle, not overlap sheath of ovipositor.

C o l o r a t i o n : Head rusty-red, thorax in considerable extent black, or with predominance of rusty-red coloration, abdomen black with red.

S i z e : Large species: 12-14 mm.

***Neeurylabia spiloptera* (MORLEY) (Plate 57)**

Amblyteles spilopterus MORLEY 1919. Proc. Zool. Soc. London: 158.

Neeurylabia spiloptera: HEINRICH 1967. Ichn. Stenop. of Africa, 2: 424-425.

F e m a l e

F l a g e l l u m : Slender, bristle-shaped, behind middle slightly flattened, practically not widened, with 46-segments, uniformly attenuated and strongly pointed to apex, with white semiannulus on 10-12 segments; segments distinctly differentiated; basal segments moderately long, first segment 3,5 times longer than width at apex; all segments elongated. Flagellum 1,2 times longer than front wing and practically equal to body length.

H e a d : Head contour from front slightly, roundly narrowed downwards, slightly transversal, 1,2 times wider than length; internal margins of eyes almost parallel, slightly widened downwards; genae almost roundly narrowed, in front visible almost up to middle of eye, malar space 3 times shorter than height of eye; from above head contour transversal, 1,7 times wider than length. Vertex behind ocelli from lateral gradually and sharply oblique to occipital carina; temples from above behind eyes sharply swollen, from lateral slightly broadened downwards, temples length at middle 1,4 times longer than longitudinal diameter of eye at middle; occipital carina from above practically not impressed to hind ocelli, straight, far not reach level of eyes and hind ocelli, meeting with hypostomal carina not reaching mandible base, abscissula approximately 2,7 times shorter than mandible base width; malar space equal to mandible base width; mandibles rather strong, narrowed behind base, from above strongly curved, with rather large flat teeth, situated in same plane, upper tooth considerably longer than lower, with sharp margins, not quite correspond to form character to tribe; clypeus moderately convex at base with impressed apical part and thinned, straight front margin (resemble to clypeus of *Eurylabus*), transversal, 2,6 times wider than length, distinctly separated from middle field of face by impression; clypeal foveae very deep, elongated; labrum not protrude from under clypeus; middle field of face very narrow, in middle 1,4 times narrower than lateral fields, slightly elevated above lateral fields; antennal cavities very deep, small, not reach borders of eyes and far not reach front ocellus level, with strongly developed, large lateral tubercles and with sharp, narrow tooth between antennal fossae; margins of antennal fossae thick, high elevated above lateral fields of face; ocelli of normal size, diameter of lateral ocellus 1,7 times less than distance from ocellus to eye; ocellar triangle distinctly elevated. Head surface with rough sculpture, of clypeus at base roughly wrinkly-punctured, middle field of face roughly wrinkly-punctured by merged punctures, matt, lateral fields densely punctured by big punctures, without microsculpture; temples and genae densely punctured, shining.

T h o r a x : Collar of pronotum rather short, transverse furrow narrow, only just expressed. Mesonotum moderately convex, of equal length and breadth; notauli practically absent; surface of mesonotum roughly and densely punctured (intervals narrower than punctures) to slightly wrinkled, slightly shining; subalarum moderately narrow not sharpened; area of speculum practically not expressed only more rarely punctured in contrast to other part of mesopleurae, shining; area of mesopleural fovea broadly impressed, mesopleural fovea sharp, deep; lower part of mesopleurae without sharp bend; sternauli not expressed; mesopleural suture interrupted by slight transversal ribs; surface of mesopleurae densely punctured to wrinkle-punctured at lower part; scutellum strongly roundly convex, from above with rounded contour along hind border, laterally sharply carinated up to apex and along hind border, its surface with big punctures, shining. Hind margin of metanotum with small triangle projections curved downwards. Propodeum from lateral rounded; horizontal and declivous parts separated only by rudiment of apical transverse carina and by wrinkling of different degree, other transverse carinae not developed; from carinae only carina metapleuralis developed, thus coxal area not limited; spiracles of propodeum large, elongated (1,4-1,5 times longer than width). Horizontal part and lateral sides of propodeum roughly reticulate-rugose, sculpture of sloping part more rough.

L e g s : Femora and tarsi unusually strong; tarsi of all legs, especially hind, thickened (legs of similar morphology of Australian *Neolevansa* GAULD). Claws not great, narrow, gradually curved.

W i n g s : Areolet quadrangular, of females almost petiolate, almost symmetrical (external vein of apex some longer than internal); stigma narrow, light; radius almost straight, at apex slightly curved; radial cell moderately long; nervulus slightly postfurcal; ramulus long; membrane of wing hyaline, veins dark, apices of front wings deeply darkened. Front wing 1,3 times shorter than body length.

A b d o m e n : Longish-oval from above, at middle part parallel sided, seventh tergite from above triangle, far protrude, second tergite transversal, 1,2 times shorter than breadth at apex; ovipositor not protrude behind apex of abdomen. First tergite distinctly flattened at base, from lateral gradually transform to postpetiolus without distinct bend; dorsolateral and ventrolateral carinae of petiolus expressed very slightly with slight irregular wrinkles between them; from above petiolus uniformly broadened to postpetiolus; dorsal carinae of postpetiolus of first tergite not expressed same as a middle field; spiracles removed from one another on distance equal or less distance from them to hind margin of tergite; surface of postpetiolus slightly uniformly convex, shagreen. Gastrocoeli practically not expressed, presented by difficulty recognizable oblique lateral impression, thyridia absent; lunulae distinct, large; tergites 2 and 3 densely punctured with developed microsculpture, tergite 4 coriaceous, shining, other polished. Hypopygium from below flat, triangle, not overlap sheath of ovipositor.

C o l o r a t i o n : Body mainly ferruginous with black. Head completely ferruginous; pronotum, mesonotum, subalarum and scutellum mainly of basic color, mesopleurae and propodeum black; abdomen ferruginous except of black tergites 4-8. Legs of basic color with exception of darkened hind femur.

S i z e : Body length: 11,0; front wing: 8,2; flagellum: 10,0 mm.

Male

Flagellum uniformly attenuated to apex with densely coalescent segments, ferruginous with white semiannulus on segments 13-16(17) and large longish-oval white tyloides on segments 11-22. Genae and temples more strongly swollen, almost completely visible from front, mandibles even more massive than of females. The others characters are similar to female. Head with considerable presence of light-yellow coloration, abdomen more darkened, apex of sixth tergite with white narrow stripe, and tergites 7-8 white dorsally.

35. *Heinrichiellus* nom.nov.

Heinrichia TERESHKIN 1996, Entomofauna **17** (5): 89-96.

Type species: *Heinrichiellus hildegardae* (TERESHKIN)

Distribution: East Palaearctic.

Introduction:

Originally *Heinrichiellus* was described as a genus with vague systematic position (TERESHKIN 1996). But, habitually, it is more close to the tribe Platylabini, in spite of absence of flattened at the base petiolus. Habitually it differs from other genera of the tribe by very slender elongated body, unusually slender and long legs and by slender flagellum, exceeding the body length and the length of front wing. Besides, it has, roundly from above head with strongly convex clypeus, long genae, lacking antennal cavities and extremely long and thin maxillary palps, mesonotum with sharp sternaui, developed on all length of mesopleurae and high elevated scutellum, propodeum with strongly developed, long and pointed apophyses deviating perpendicularly from surface of propodeum, by long but not flattened petiolus, by the gastrocoeli in form of longitudinal furrow with thyridia in a form of point. All these signs place the genus in special position on-comparison with others Platylabini. Flagellum of male is without tyloides.

Such characters, as slender and long bristle-shaped flagellum, convex clypeus, form of mandibles, high elevated scutellum, morphology of propodeum, peculiarities of the abdomen morphology with character hypopygium, let alone the small size and habitual similarity, testify to belonging of the genus to the tribe Platylabini. Therefore, such character as high and not flattened at base petiolus, not fitting in Platylabini characteristic, can not prevail all listed characters. Especially as, the analyses of the characters of the genera of a world fauna in a comparative aspect shows presence of many exceptions from the set of tribal characters (morphology of clypeus, presence of tyloides of males and other (see above)), including the absence of fattened base of petiolus of *Apaeleticus* WESM. first of all of *Hypomecus* WESM. Therefore, attribution of the genus to the tribe Platylabini may be considered as quite reasonable.

Morphology:

Flagellum: Of females and males bristle-shaped, very long and slender; Flagellum of males without tyloides.

Head: From above rounded; temples long, narrowed behind eyes; mandibles narrow, lower tooth small, situated approximately in same plane with upper one; antennal cavities not expressed; clypeus strongly convex, transversal.

Thorax: Pronotal ridge not thickened, epomia distinct; pronotal base from lateral

strongly sinuous. Mesonotum convex, matt; notauli strongly developed; sternaui sharp, reach to middle coxae; scutellum high elevated above postscutellum, carinated laterally and from behind. Hind margin of metanotum with triangle projections. Propodeum gradually slanted to hind coxae practically from area basalis; all carinae, with exception of lateral carinae of area posteromedia sharp; areae dentiparae with very strongly developed sharpened apophyses practically perpendicular to surface of propodeum; spiracles of propodeum long.

W i n g s : Areolet pentagonal; front wings long, narrow, 1,3 times shorter than body.

L e g s : Extremely long and thin.

A b d o m e n : First tergite straight from lateral; petiolus very long, rounded in cross-section, not flattened, approximately of equal breadth and height; lateral carinae of petiolus not developed; middle field of postpetiolus slightly expressed. Gastrocoeli slightly impressed, in form of longitudinal groove; thyridia punctiform, far removed from base of second tergite; hypopygium compressed from lateral with longitudinal fold in middle.

C o l o r a t i o n : Basic color of body black or dark-brown.

S i z e : 5,5-7,5 mm

***Heinrichiellus hildegardae* (TERESHKIN) (Plate 58)**

Heinrichia hildegardae TERESHKIN 1996 - Entomofauna **17** (5): 90-96, ♀, ♂.

D i s t r i b u t i o n : Russia, Far East, Primorye.

F e m a l e , M a l e

F l a g e l l u m : Flagellum bristle-shaped, very long and slender, gradually attenuated toward apex, with 38 segments, beyond middle slightly widened, with white annulus on segments (7)8-11(12) of females and on 14-16 of males; basal segments very long, first segment 7 times longer than width at apex laterally, square from lateral segments absent. Flagellum 1,2 times longer than the front wing. Flagellum of males without tyloides.

H e a d : Head contour from front rectangular, only just transversal, only 1,1 times wider than height, slightly linearly narrowed downwards, internal margins of eyes parallel; genae from front very long, equal almost 0,5 height of eye, straightly narrowed downwards; head contour from above thick, rounded 1,6 times wider than length of males and only 1,3 of females. Vertex roundly curved to occipital carina; temples from above very strongly roundly narrowed behind eyes, long, 1,4-1,6 times shorter than longitudinal diameter of eye in middle, from side parallel to hind margin of eye; occipital carina sharply expressed all round, from above gradually and slightly impressed to hind ocelli far not reach level of eyes, almost straight, meeting with hypostomal carina far from mandible base; malar space many times longer than mandible base width; mandibles narrow, gradually narrowed from base to apex, lower tooth small, situated approximately in same plane with upper one; clypeus strongly convex, transversal, 1,8 times wider than length with straight front margin, separated from middle field of face by impression; clypeal foveae large and deep; labrum very narrow, triangle, protrude from under clypeus; maxillary palps with very thin and long segments; middle field of face distinctly limited, slightly elevated, narrow, in middle only just narrower than lateral fields; antennal cavities not expressed, with distinct tooth between antennal fossae; antennal fossae large with front margins high elevated above lateral fields of face; ocelli small, ocellar triangle not elevated. Surface of clypeus slightly shining, with sparse small punctures; middle field of face matt with developed microsculpture.

T h o r a x : Collar of pronotum long, its dorsal part from front almost straight. Mesonotum strongly convex, completely matt; notauli strongly developed, deep, sharp up to middle of mesonotum; surface of mesonotum with rough sculpture; subalarum normal not sharpened; area of mesopleural fovea moderately and broadly impressed; sternaui distinct, sharp, practically reach middle coxae; surface of mesopleurae with microsculpture, slightly shining; middle furrow of mesosternum (mesosulcus) very deep, strongly broadened backwards; postpectal carina absent; scutellum high elevated above postscutellum, of both sex carinated laterally and from behind, dorsal surface of scutellum practically not convex. Hind margin of metanotum with triangle projections opposite lateral longitudinal carinae. Propodeum from lateral gradually slanted to hind coxae practically from area basalis; set of carinae of propodeum complete, with exception of lateral carinae of apical area, carinae high; area basalis long; area superomedia of females long, hexagonal, 1,3 times longer than width, of males practically square, costulae before its middle; areae dentiparae at apex with very strongly developed sharpened apophyses practically perpendicular to surface of propodeum; coxal carina developed; spiracles three times longer than width.

L e g s : Very long and slender; of males hind femora long, sharply narrowed at base and at apex, at middle uniformly thickened.

W i n g s : Areolet big, pentagonal with wide base, asymmetrical (external vein of base considerably shorter than internal); stigma narrow, dark; radius straight, long; nervulus interstitial or slightly postfurcal; ramulus slightly marked; membrane of wing hyaline, veins dark; nervellus of hind wing interrupted at hind third, discoidella pigmented. Front wings 1,3 times shorter than body length.

A b d o m e n : First tergite from lateral practically straight with only just visible bend to postpetiolus; petiolus very long, rounded in cross-section, not flattened, with approximately equal breadth and height, petiolus of males at base only just visible higher than breadth; petiolus long, four times longer than width at base; lateral carinae of petiolus practically not developed; from above petiolus rather sharply broadened to rectangular postpetiolus; middle field of postpetiolus expressed slightly, three times wider than lateral fields. Gastrocoeli slightly impressed, in form of longitudinal groove; thyridia punctiform, far removed from base of second tergite; lunulae large, distinct; tergite 2 with dense microsculpture, almost matt, with only just visible punctures, tergite 3 matt; tergites 3-6 laterally bent-under. Sternites of abdomen in most part not sclerotized; hypopygium angle-shaped with longitudinal fold in middle; sheath of ovipositor slightly protrude behind apex.

C o l o r a t i o n : Basic color of body black or dark-brown; of females face black, clypeus with white spots laterally; front coxae with small white spot dorsally; 6th tergite of abdomen with white spot, 7th completely white. White coloration of males presented more broadly: frontal orbits, face, with exception of middle field, clypeus and genae completely, collar and pronotal base and corners of upper margins of pronotum, subalarum, apex of scutellum, tergite 7 and paramerae, front coxae and trochanters completely, and also 2-4th segments of hind tarsi.

S i z e : Body length: 7,2-7,5; front wing: 5,5-6,2 mm.

36. *Abzaria* CAMERON

Abzaria CAMERON 1885 - Biologia Centrali-Americana. Insecta. Hymenoptera 1: 201.

Type species: *Abzaria latipetiolaris* CAMERON.

Distribution: Neotropical (Mexico) Region, 1 species.

Introduction:

The genus is characterized by specific morphology of the head: lateral margins of the frons are limited by high elevation and there are two lamellar protuberances between antennal cavities. These characters simultaneously are not registered in others genera of Platylabini. Only elevated lateral margins of frons are recorded at *Notoplatylabus* HEINRICH genus. Propodeum is strongly shortened, transversal; the fields of horizontal part are absent; apical transverse carina at corners on place of the apophyses is lamellate broadened (as of *Pyramidophorus*). Abdomen is with strong constrictions between segments (as of *Rugosculpta* (tribe Ichneumonini)). First tergite is unusually broad, equal by breadth to propodeum between the lamellate projections at apex, sharply narrowed only at the very base. The segments of tarsi of all the legs are flattened ventrally and uniformly covered by very dense short bristles. Gastrocoeli are only just impressed and situate near the base of second tergite, thyridia absent. Lunulae on second tergite of abdomen are completely absent, even in a form of trace. Surface of a body is smooth, polished, without microsculpture.

Morphology:

Flagellum: Of female bristle-shaped, with white annulus, beyond white annulus slightly widened and flattened ventrally, gradually attenuated toward apex; segments of flagellum distinctly differentiated; basal segments moderately elongated. Flagellum by length approximately equal to front wing and shorter than body length.

Head: Head contour narrowed downwards, genae long; occipital carina meeting with hypostomal carina not reaching mandible base; mandibles with very long upper tooth; clypeus transversal, slightly convex with straight front margin and rounded lateral corners; antennal cavities deeply impressed, laterally limited by high elevations; frons between antennal fossae with strong and sharp interantennal tubercle, between antennal cavities with two high plastic projections; ocellar triangle strongly expressed, limited laterally by deep cavities. Surface of head polished.

Thorax: Collar of pronotum normal; transverse furrow of pronotum not interrupted by keel; pronotal ridge not thickened; pronotal base smooth, gradually, uniformly curved. Mesonotum moderately convex, notauli only marked at base; subalarum thick; sternali completely absent; scutellum slightly convex, smooth, not carinated laterally, gradually sloping from scuto-scutellar furrow to postscutellum. Hind margin of metanotum without triangle projections. Propodeum strongly shortened, transverse; areas of horizontal part not limited by carinae; apical transverse carina lamellate broadened at place of apophyses; coxal carina developed; spiracles slit-shaped. Surface of propodeum polished.

Legs: Long and strong. Segments of tarsi of all legs ventrally flattened. Claws thin, smooth.

Wings: Areolet quadrangular. Front wing shorter than body length.

Abdomen: Longish-oval, strongly sclerotized, segments divided by deep constriction, apical tergites not hidden, visible from above. First tergite extremely broadened, laterally carinated; postpetiolus by breadth equal to distance between lamellate projections at apex of propodeum. Gastrocoeli only just visible impressed only at base of second tergite, thyridia absent; lunulae absent; surface of abdomen shining, polished. Hypopygium triangle with rounded apex, without fold.

S i z e : Large ichneumon flies, 13 mm.

C o l o r a t i o n : Black-yellow coloration, with predominance of yellow.

***Abzaria latipetiolaris* CAMERON (Plate 59)**

Abzaria latipetiolaris CAMERON 1885 - Biologia Centrali-Americana. Insecta 1: 201, ♂.

F e m a l e

F l a g e l l u m : Slender, bristle-shaped, with 41 segments and with white annulus on segments 7-14, beyond white annulus slightly widened and flattened ventrally, gradually attenuated toward apex; segments of flagellum clearly separated (differentiated); basal segments moderately elongated, first segment 2,8 times longer than width at apex. Flagellum by length approximately equal to front wing and 1,4 times shorter than body length.

H e a d : Head contour from front narrowed downwards, slightly transversal, 1,3 times wider than height; genae long, slightly sinuous; head contour from above transversal, 2 times wider than length. Vertex from lateral obliquely abrupt just after hind ocelli to occipital carina; temples behind eyes from above convex, strongly sinuously narrowed, from lateral 1,8 shorter than longitudinal diameter of eye at middle, parallel to hind margin of eye; occipital carina high, sharp all round, angularly impressed from above, far not reach level of eyes and hind ocelli; occipital carina meeting with hypostomal carina not reaching mandible base; malar space equal to mandible base width; mandibles with very long upper tooth; clypeus transversal, slightly convex (on height of middle field of face), with straight front margin and slightly rounded lateral corners, apex of clypeus slightly impressed, clypeus separated from face by slight impression; clypeal foveae comparatively small; labrum far protrude from under clypeus, equal by breadth to clypeus front margin, roundly triangle; middle field of face very slightly elevated above lateral fields, in middle narrower than lateral fields; antennal cavities deeply impressed, laterally limited by high elevations, laterally without tubercles and with strong sharp tubercle between antennal fossae; frons between antennal cavities with two high plastic projections; ocelli comparatively small, diameter of lateral ocellus 2,6 times less than distance from ocellus to eye; ocelli high elevated, ocellar triangle strongly expressed, limited laterally by deep cavities. Surface of face and clypeus with delicate punctures, shining; surface of frons, temples and occiput smooth, polished, occiput with sparse deep punctures.

T h o r a x : Collar of pronotum long, transverse furrow slightly impressed. Mesonotum moderately convex, longer than width, notauli only as slight impressions at base; surface of mesonotum smooth, shining; subalarum thick, not sharpened; speculum smooth shining; mesopleural fovea very deep, with broad impression around it; sternauli completely absent; mesopleurae smooth, shining only with sparse shallow punctures at lower part; prepectal carina high; scutellum slightly convex, smooth, not carinated laterally, gradually slanting from scuto-scutellar furrow to postscutellum. Hind margin of metanotum smooth without triangle projections. Propodeum strongly shortened, transversal; horizontal part shorter than length of area posteromedia in middle; areas of horizontal part not limited by carinae; area posteroexterna and third pleural area merged, or only just visible separated; apical transverse carina lamellate broadened at place of apophyses; coxal carina developed; spiracles large, slit-shaped, 2,4-3,6 times longer than width. Surface of propodeum without traces of microsculpture, polished.

L e g s : Long and strong. Segments of tarsi of all legs ventrally flattened and uniformly covered by very dense short bristles. Claws thin, strongly curved.

W i n g s : Areolet quadrangular, symmetrical; stigma narrow, dark; radius slightly curved; nervulus interstitial, strongly curved; ramulus long; veins dark; membrane of wing hyaline, yellowish. Front wing 1,3 times shorter than body length.

A b d o m e n : From above longish-oval, strongly sclerotized, segments divided by deep constriction, apical tergites not hidden, visible from above. First tergite extremely broadened, short and thick, laterally carinated; petiolus sharply narrowed just only at base, postpetiolus by breadth equal to distance between lamellate projections at apex of propodeum; middle field of postpetiolus only just elevated; postpetiolus smooth, shining with large wrinkles and punctures. Gastrocoeli only just visible impressed just only at base of second tergite, thyridia absent; lunulae absent; surface of abdomen shining with big punctures, punctures on second tergite medially merge to large shining longitudinal wrinkles. Hypopygium triangle with rounded apex, without fold from below.

C o l o r a t i o n : Of black-yellow coloration. Yellow: face completely, fronto-vertical orbits, temples almost completely; front margin of pronotum, large spots along its upper margin; two stripes on mesonotum, tegula, subalarum, mesopleurae almost completely, mesosternum completely, scutellum completely, upper parts of mesopleurae; propodeum very richly; all segments of abdomen apically broadly and laterally yellow. Legs red-yellow; yellow: coxae and trochanters of front and middle legs completely, hind coxae richly, femora of front legs completely.

S i z e : Body length: 13,4; front wing: 10,5; flagellum: 9,7 mm.

37. *Pyramidophorus* TISCHBEIN

Pyramidophorus TISCHBEIN 1882 - Stettiner Entom. Zeitung **43**: 484.

Type species: *Pyramidophorus flavoguttatus* TISCHBEIN.

Platylabus: TOWNES et al. 1965 - Cat. Reclass. East. Pal. Ichn.: 515. (*Pyramidophorus* as synonym of *Platylabus* WESMAEL).

Pyramidophorus: HEINRICH 1978 - East. Pal. Ichn.: 80.

Distribution: Palaearctic.

I n t r o d u c t i o n :

The unique peculiarities of morphology and the parasitizing on Sphingidae indicate an independent status of this genus. Therefore after G. HEINRICH (1978), it is impossible to agree with synonymization of *Pyramidophorus* and *Platylabus*. Flagellum with extremely lot of the segments, uncharacteristic for *Platylabus* clypeus, approximately same height with middle field and gradually turning into middle field of face (as *Hoplismenina*), slightly uniformly narrowed mandibles, strongly developed axillary tongue, not carinated pyramidal scutellum, propodeum with cellular sculpture and not developed fields, pectinate at basal part claws of females tarsi, presence of specific broadenings on apices of areae dentiparae, and also quadrangular asymmetrical areolet and large size (to 19-20 mm), indicate about specific place of *Pyramidophorus* among the genera of the tribe.

M o r p h o l o g y :

F l a g e l l u m : Of females bristle-shaped, slender, gradually attenuated toward apex, very slightly flattened ventrally, with white (yellow) annulus; with more than 50 segments. Flagellum shorter than the front wing and body length.

H e a d : Head contour almost rectangular, only just wider than height, genae roundly narrowed downwards; contour from above slightly transversal. Temples from above long, gradually roundly narrowed behind eyes; occipital carina from lateral parallel to hind margin of eye, meeting with hypostomal carina on considerable distance from mandible base; mandibles massive, gradually narrowed from base to apex with strong teeth; clypeus slightly separated from middle field of face, transversal, slightly uniformly convex, approximately same height with middle field, with straight front margin and distinct sharp lateral corners, gradually turn into middle field of face; clypeus and middle field of face high elevated above lateral fields; antennal cavities very deep with very strong, high narrow tooth (almost keel) between antennal fossae; ocellar triangle not elevated. Head surface dull with superficial punctures.

T h o r a x : Transverse furrow of pronotum not interrupted by keel; pronotal ridge not thickened; epomiae strong, but short; pronotal base sharply sinuous. Mesonotum moderately convex, distinctly longer than width; notauli not expressed; axillary tongue very strongly developed; surface of mesonotum very densely punctured, to wrinkle-punctured on middle lobe, with developed microsculpture; considerable part of prepectus visible from side; subalarum extraordinary thick; sternauli practically absent; scutellum from lateral triangle with rounded apex, not carinated laterally. Hind margin of metanotum with triangular projections. Propodeum from lateral roundly-convex; horizontal part of propodeum shorter than length of area posteromedia in middle; carinae of propodeum reduced, distinctly developed only carina metapleuralis; area superomedia marked by cellular structure and high elevated above lateral fields; apices of areae dentiparae with blunted transversal projections (resembling projections of *Abzaria* CAMERON); spiracles large, long and broad. Surface of propodeum, with exception of metapleurae, cellular-wrinkled.

L e g s : Slender. Claws large, thickened and of females pectinate at basal part.

W i n g s : Wings in comparison with other genera comparatively narrow. Areolet irregularly quadrangular, strongly asymmetrical; nervulus postfurcal.

A b d o m e n : Abdomen broadly-oval, sheath of ovipositor from above not protrude; second tergite sharply transverse. Petiolus strongly broadened and flattened at base, laterally with sharp carinae; from lateral with gradual bend to postpetiolus, from above strongly and sharply broadened to postpetiolus. Gastrocoeli deep, only just oblique, thyridia distinct, closed to base of tergite, wider than interval between them; lunulae absent; middle part of second tergite with dense punctures; punctuation of tergite 3 superficial, on other tergites only just expressed. Hypopygium long, completely overlap slit of ovipositor, with cut apex, flat, without longitudinal fold.

C o l o r a t i o n : Black with numerous yellow spots.

S i z e : 19-20 mm.

***Pyramidophorus flavoguttatus* TISCHBEIN (Plate 60)**

Pyramidophorus flavoguttatus TISCHBEIN 1882 - Stettiner Entom. Zeitung **43**: 484, ♀.

Pyramidophorus flavoguttatus: HEINRICH 1978- Eastern Palaearctic Ichneumoninae: 80, ♂.

F e m a l e

F l a g e l l u m : Bristle-shaped, with 51 segments, slender, gradually attenuated toward apex, very slightly flattened ventrally, with white (yellow) annulus on segments (7)8-

12(13); basal segments moderately elongated, first segment 2,6 times longer than width at apex laterally. Flagellum 1,2 times shorter than the front wing and 1,3 times shorter than body length.

H e a d : Head contour from front almost rectangular, 1,3 times wider than height, genae roundly narrowed downwards, long, temples from front visible almost to middle of eye; malar space 3,5 times shorter than height of eye; from above contour slightly transversal, 1,6 times wider than length. Vertex from lateral gradually oblique to high occipital carina; temples from above long, gradually roundly narrowed behind eyes, from lateral at middle equal by length to longitudinal diameter of eye; occipital carina from above almost not impressed to ocelli, straight, from lateral parallel to hind margin of eye, meeting with hypostomal carina on considerable distance from mandible base; malar space approximately equal to mandible base width; mandibles massive, gradually narrowed from base to apex, with strong teeth; clypeus slightly separated from middle field of face, transversal, 1,9 times wider than length, slightly uniformly convex, approximately same height with middle field and gradually turn into middle field of face, corners of clypeus not rounded, sharp, front margin straight; labrum very long, wide, triangle; clypeus and middle field of face high elevated above lateral fields; clypeal foveae big, deep; middle field of face sharply limited, in middle 1,3 times narrower than lateral fields; antennal cavities very deep, reach level of front ocellus and not reach borders of eyes, without lateral tubercles and with very strong, high and narrow tooth (almost keel) between antennal fossae; margins of antennal fossae high elevated above face surface; ocelli of normal size, diameter of lateral ocellus 2,2 times less than distance from ocellus to eye; ocellar triangle not elevated. Head surface dull with big superficial punctures, more sparse on clypeus.

T h o r a x : Collar of pronotum long; transverse furrow of pronotum narrow and deep. Mesonotum moderately convex, long, 1,3 times longer than width; notauli not expressed, only in form of only just visible impressions at base of mesonotum; surface of mesonotum very densely punctured, to wrinkle-punctured on middle lobe, dull with developed microsculpture; prepectal carina very strongly curved backwards and considerable part of prepectus (epicnemium) visible from side; subalarum extraordinary thick; speculum shining with very big punctures; area of mesopleural fovea very deeply impressed; mesopleural suture straight, deep, interrupted by strong ribs; sternauli practically absent, only in form of very slight impressions at base; lower part of mesopleurae with distinct bend; surface of mesopleurae at upper half densely punctured, at lower wrinkly-punctured to irregularly-wrinkled, without microsculpture; scutellum from lateral triangle (slanted from apex to postscutellum), with rounded apex, not carinated laterally; surface of scutellum with sparse superficial punctures, intervals between punctures with coriaceous sculpture. Hind margin of metanotum with triangle, curved downwards projections. Propodeum from lateral roundly-convex, without break; horizontal part of propodeum 1,5 times shorter than length of area posteromedia in middle; carinae, limiting basal area, area superomedia, coxal area and costulae not developed; area superomedia marked by cellular structure and high elevated above lateral fields; areae dentiparae apically with blunted transversal projections; only carina metapleuralis distinctly developed; spiracles large, long and broad, equal 0,6 breadth of field at place of spiracle, length of spiracles 1,8-2,3 times longer than width. Surface of propodeum, with exception of metapleurae, cellular-wrinkled; metapleurae with big punctures to wrinkled, without microsculpture.

L e g s : Slender. Claws large, thickened and pectinate at basal part, apically slightly uniformly curved.

W i n g s : Areolet irregularly quadrangular, strongly asymmetrical (external vein of base considerably longer than internal); stigma narrow, dark; radius slightly sinuous, long; radial cell long and narrow; nervulus postfurcal; ramulus, long; membrane of wing hyaline, veins dark. Length of front wing almost equal to body length.

A b d o m e n : Abdomen from above broadly-oval, apical tergites not hidden, sheath of ovipositor from above not protrude; second tergite transversal, 1,5 times shorter than length in middle. Petiolus strongly broadened and flattened at base, laterally with sharp carinae and strong cellular sculpture between them; from lateral with gradual bend to postpetiolus, from above strongly and sharply broadened to postpetiolus; middle field of postpetiolus practically not expressed and not elevated above lateral fields, with sparse delicate not uniform punctures; surface of postpetiolus with slightly coriaceous sculpture. Gastrocoeli deep, slightly oblique; thyridia distinct, closed to base of tergite, 2,5 times wider than interval between them; lunulae practically absent; interval between thyridia with rough cellular structure, middle part of second tergite with dense punctures and slight microsculpture, apical part of tergite with sparse delicate punctures, slightly coriaceous and slightly shining; punctuation of tergite 3 superficial, on other tergites only just expressed. Hypopygium long, completely overlap slit of ovipositor, with cut apex, flat, without longitudinal fold; apex of ovipositor sheath from lateral only just protrude.

C o l o r a t i o n : Female black with numerous yellow spots; yellow: frontal and facial (broadly) orbits, external orbits (broadly), clypeus, upper margins of pronotum (broadly) and small spots on sides apically, spot on mesonotum, subalarum completely, spots on prepectus and large spots on mesopleurae, scutellum completely and postscutellum, spots on sides of metathorax, apex of metapleurae, large spots at area of apophyses, apical spots at corners of tergites 1-7 of abdomen, on all coxae, apices of femora and tibiae, tarsi of all legs yellow.

S i z e : Body length: 19,5; front wing: 17,4; flagellum: 14,5 mm.

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Legends to color plates

(1) imago; (2) head from above; (3) head from front; (4) propodeum; (5) segments 1-2 of abdomen; (6) tyloides on flagellum of male; (7) mandible; (8) mesonotum from above (*Platybirmania*); (9) area superomedia of male (*Ectopius*); (10) scutellum from above; (11) scutellum from lateral; (12) collar of pronotum from lateral (*Ctenocalus*); (13) collar of pronotum from above (*Compsophorus*); (14) prothorax from above (*Clypeodromus*); (15) apex of abdomen from above (*Neopyga*); (16) claws of tarsi; (17) maxillary palp (*Cratolaboides*); (18) thorax from above (*Notoplatylabus*).

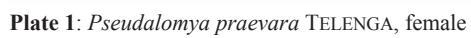




Plate 2: *Clypeodromus thyridialis* TERESHKIN, female, male



Plate 3: *Eurylabus torvus* WESMAEL, female



Plate 4: *Coticheresiarches dirus* (WESMAEL), male

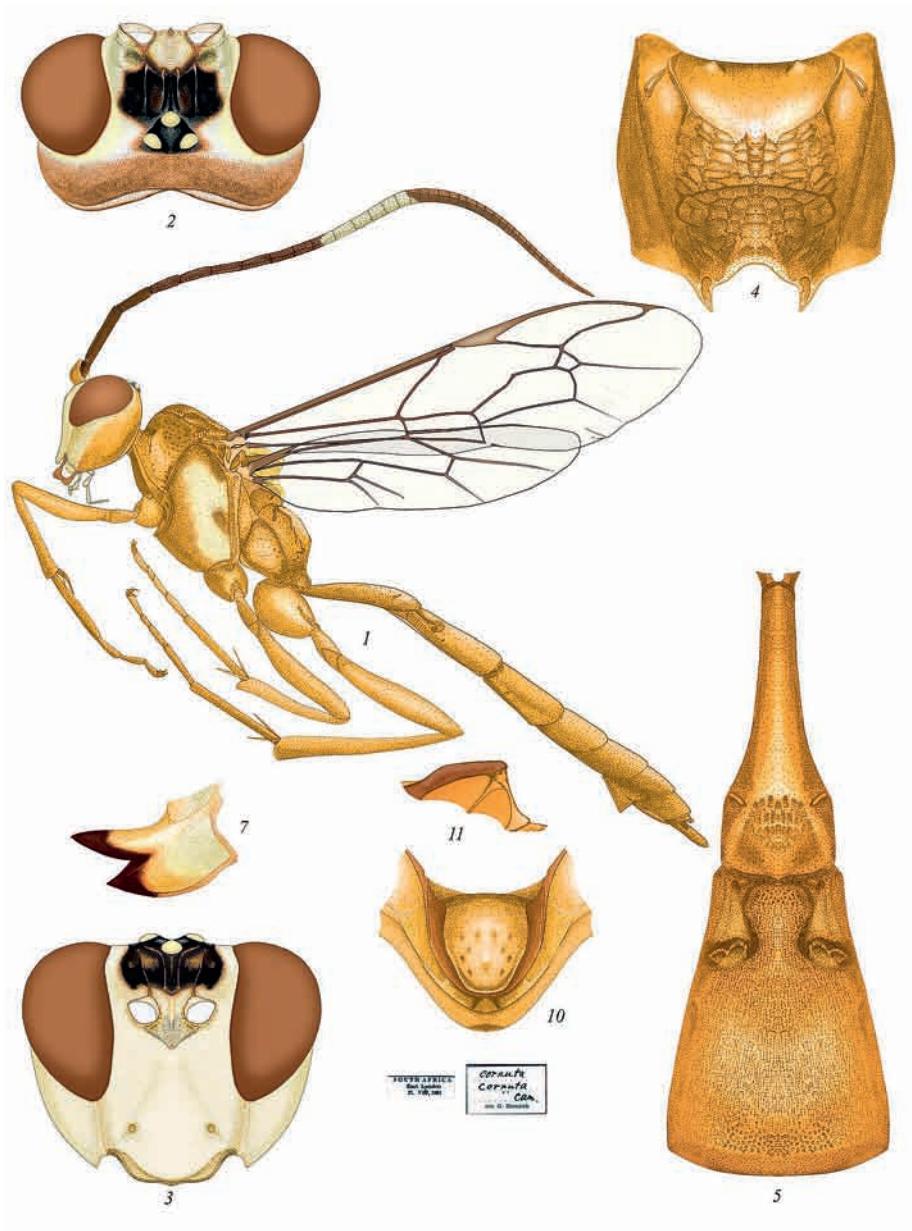


Plate 5: *Ceratojoppa cornuta* CAMERON, female



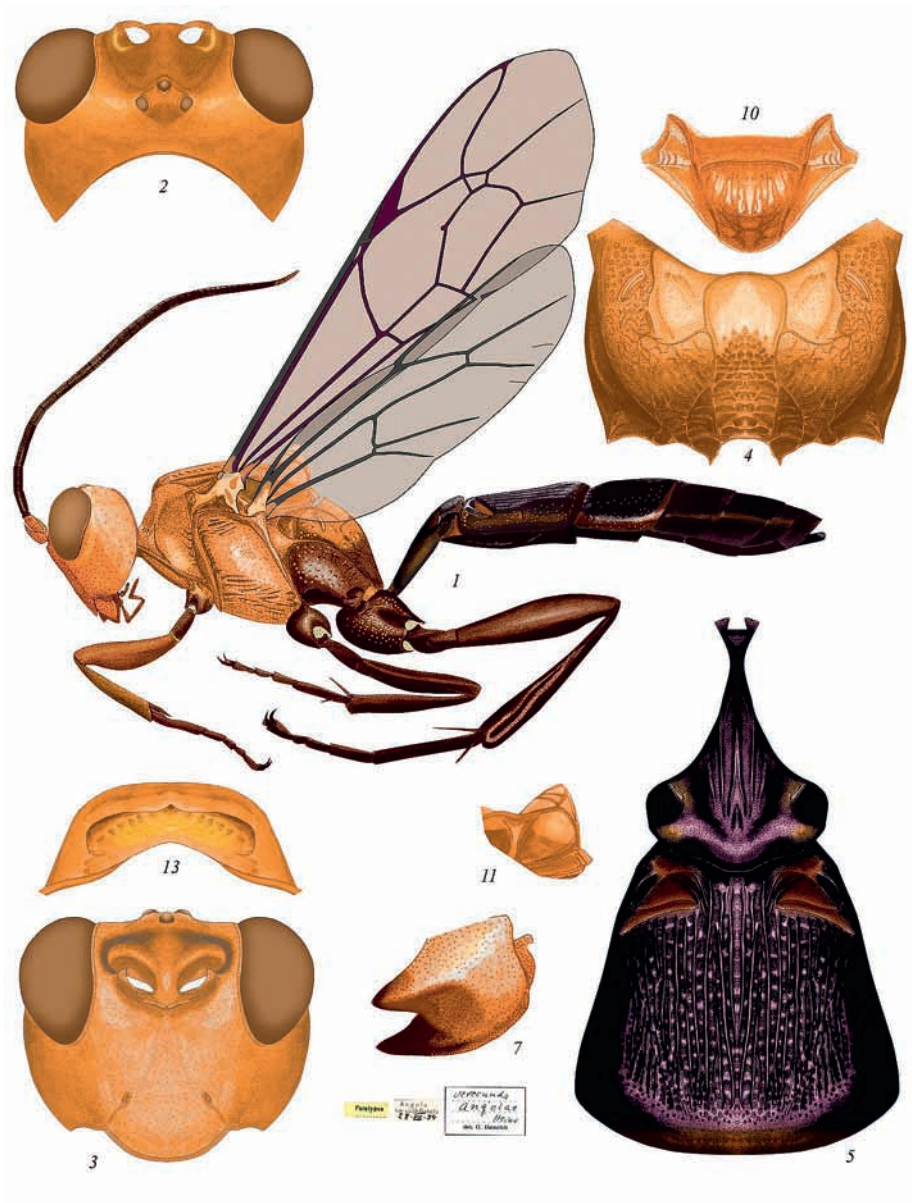


Plate 7: *Compsophorus (Epijoppa) verecundus angolae* (HEINRICH), female



Plate 8: *Ischnojoppa luteator* (FABRICIUS), female

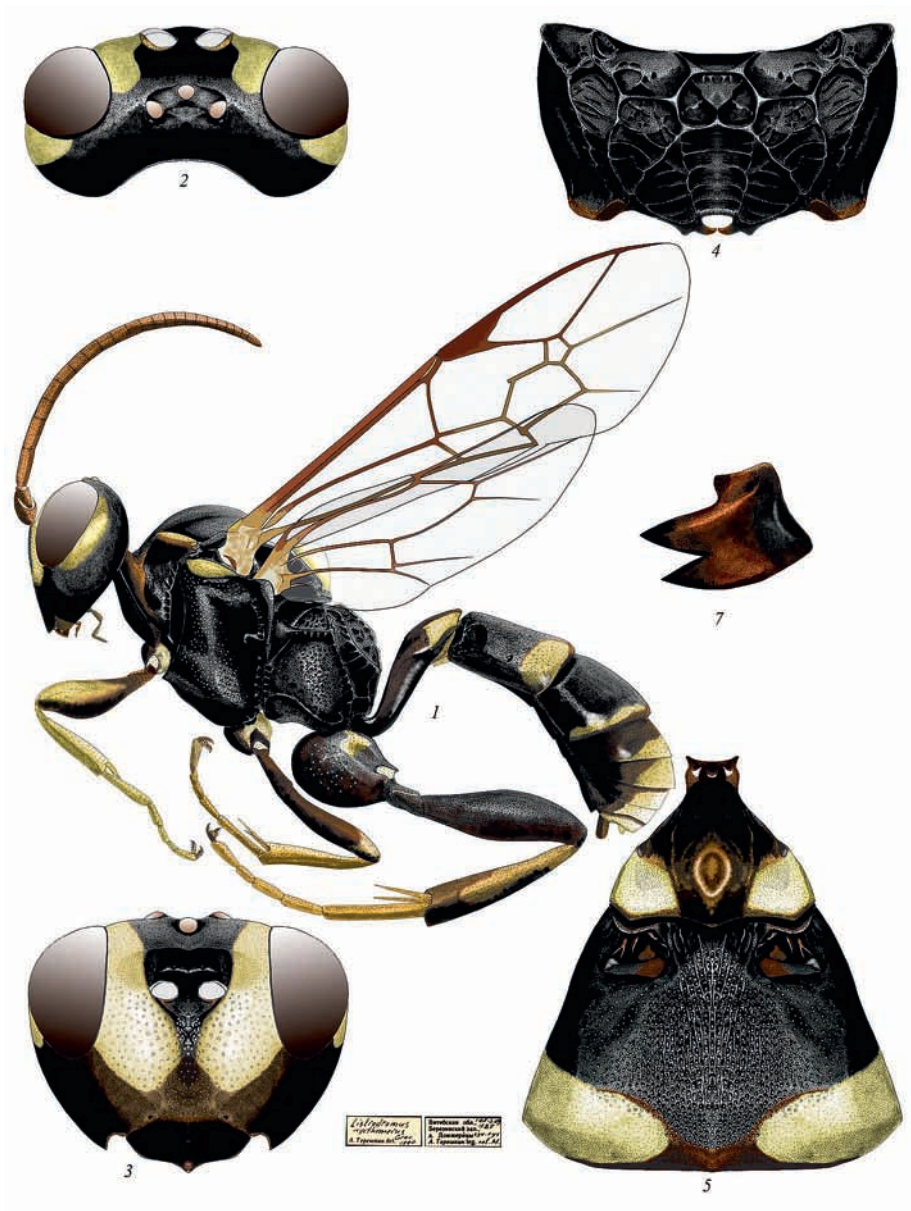


Plate 9: *Listrodromus nycthemerus* (GRAVENHORST), female



Plate 10: *Oedisephalus variegatus* (SZÉPLIGETI), female

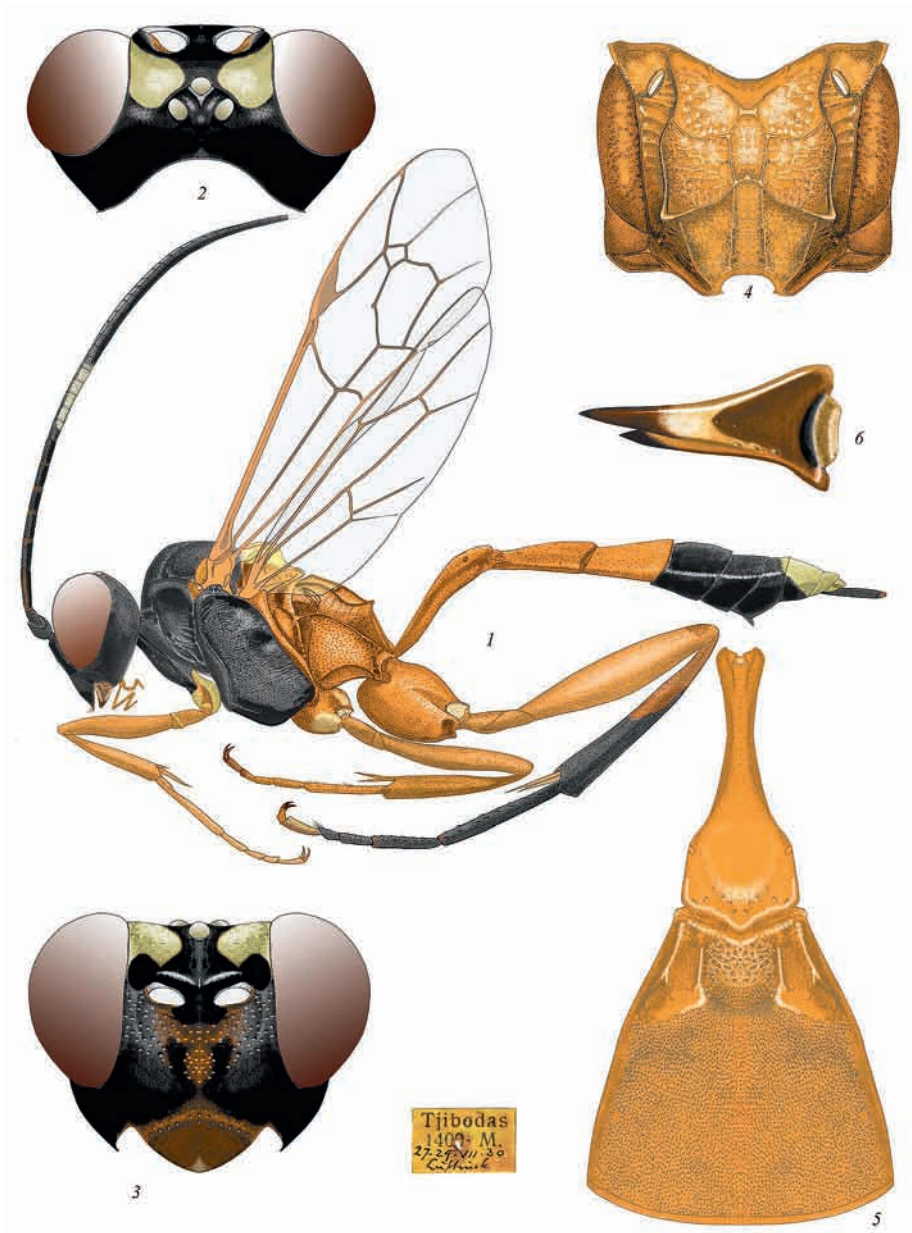


Plate 11: *Eccoptosage brevispinosa* (TOSQUINET), female



Plate 12: *Goedartia alboguttata* (GRAVENHORST), female





Plate 14: *Hymenura nigra* (HEINRICH), female



Plate 15: *Ichneumon extensorius* LINNAEUS, female

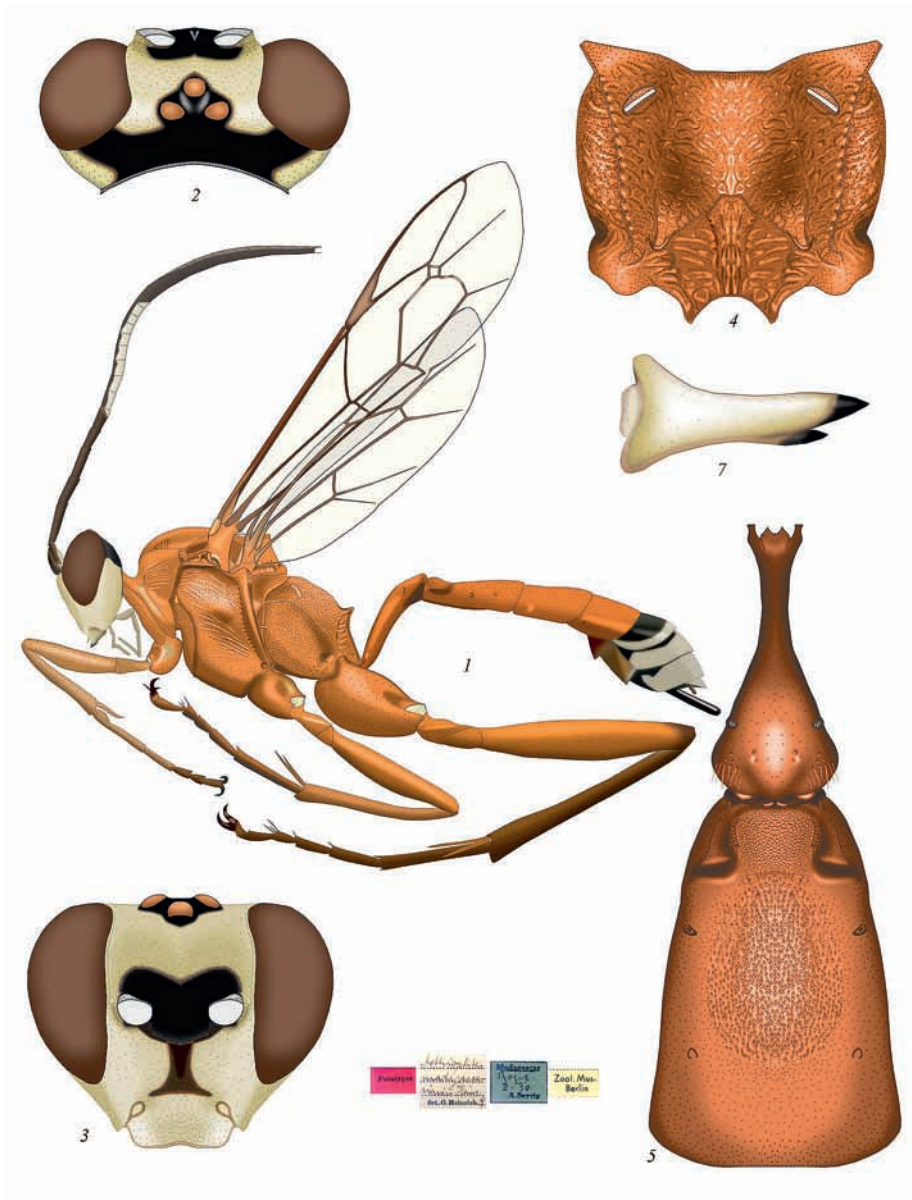


Plate 17: *Aethioplites madagascariensis* HEINRICH, female



Plate 18: *Hoplismenus pica* WESMAEL, female

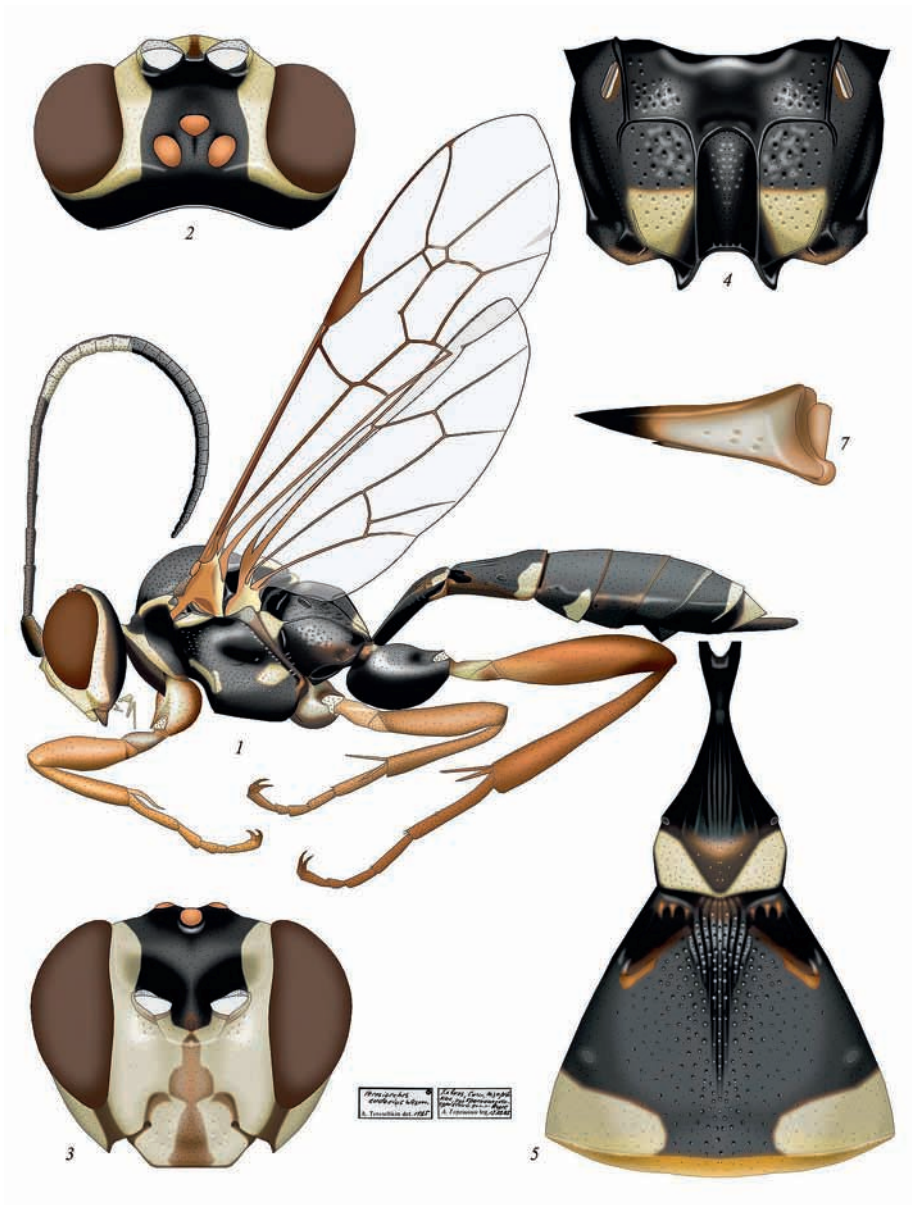


Plate 19: *Heresiarches eudoxius* (WESMAEL), female

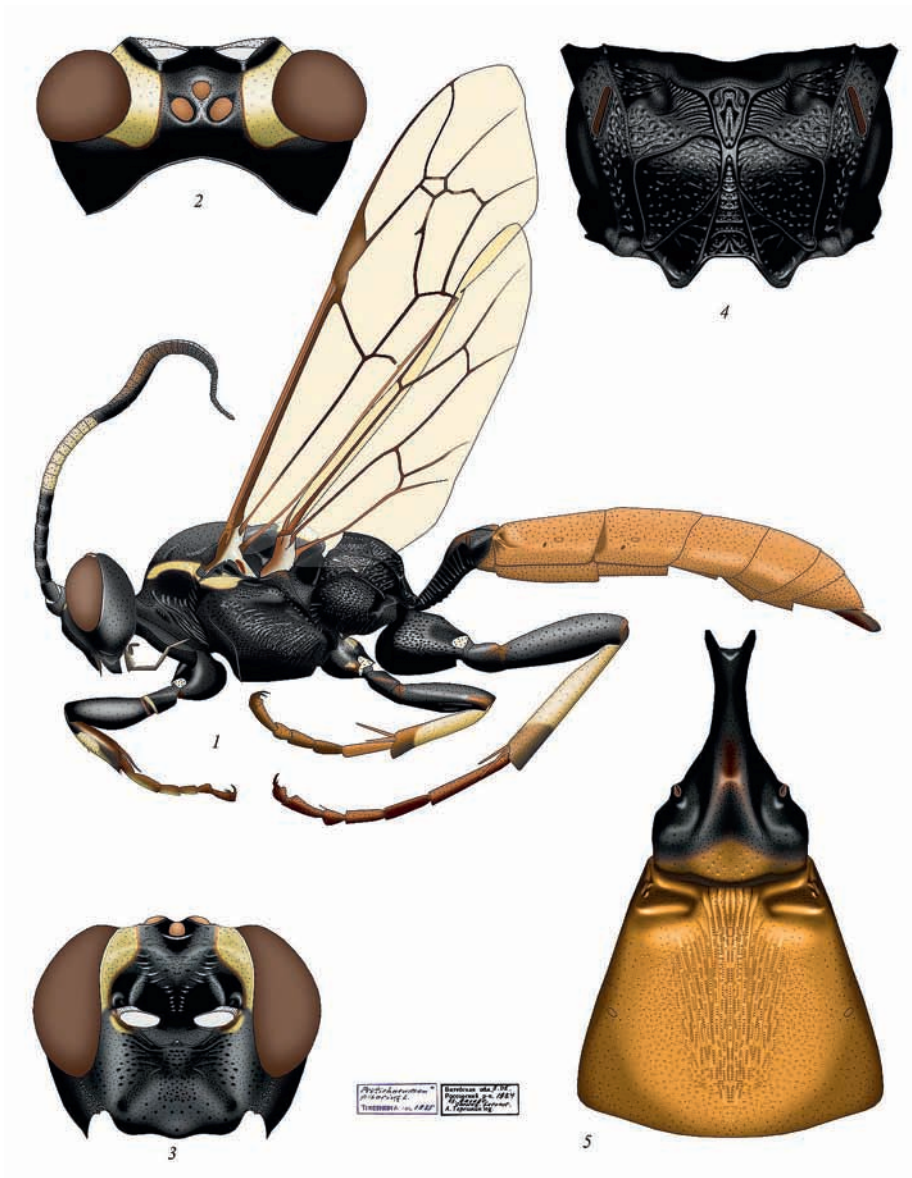


Plate 20: *Protichneumon pisorius* (LINNAEUS), female

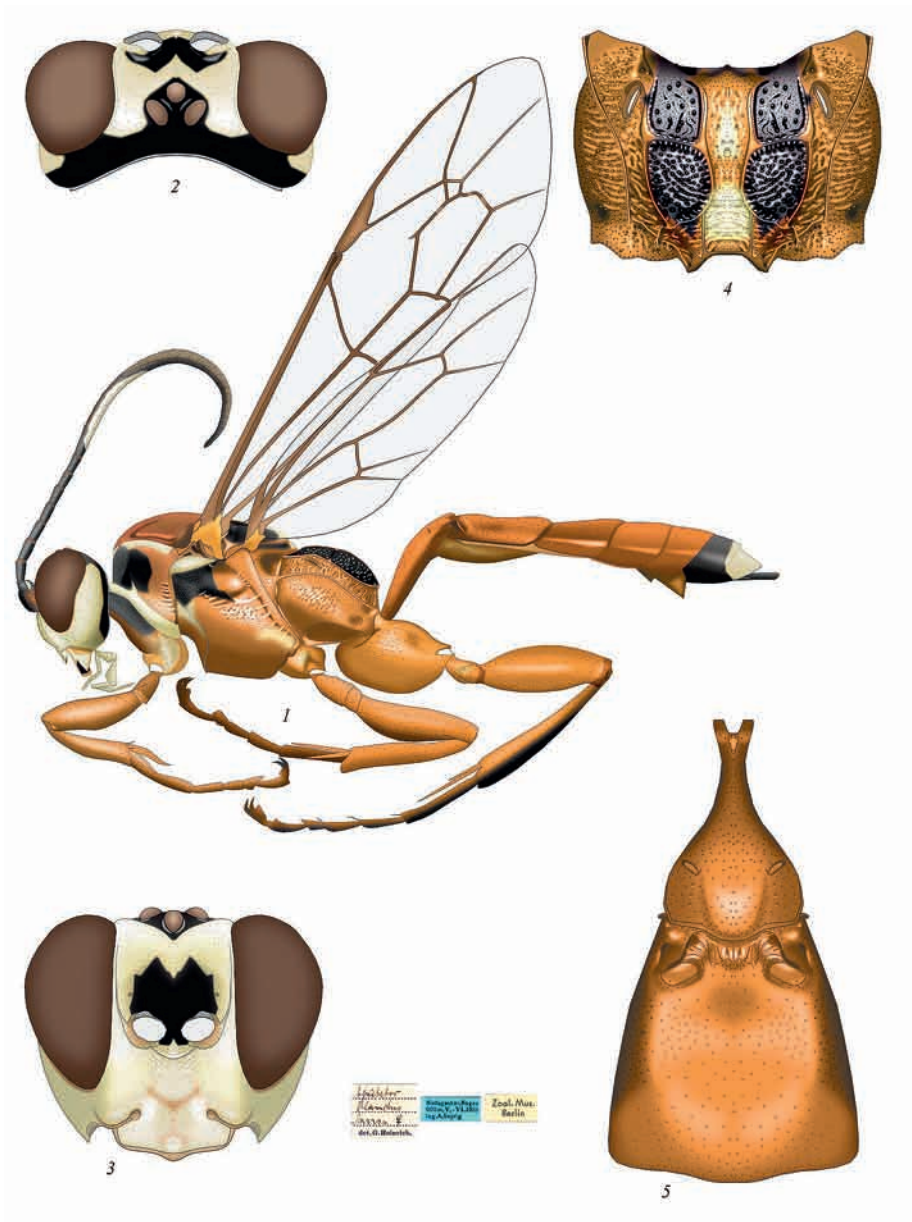


Plate 21: *Apatetor blandus* SAUSSURE, female

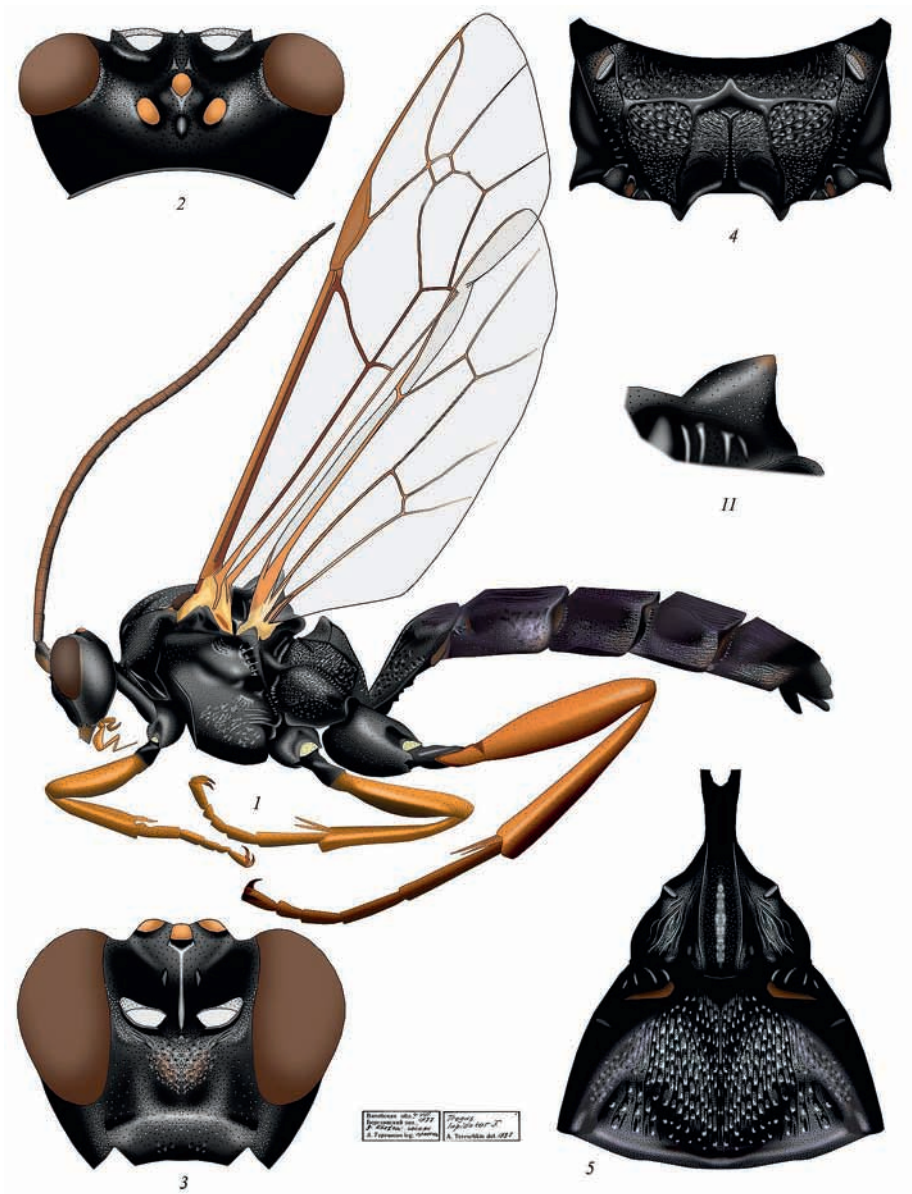


Plate 23: *Trogus lapidator* (FABRICIUS), female



Plate 24: *Apaeleticus bellicosus* WESMAEL, female



Plate 25: *Ectopoides brevicornis* (KRIECHBAUMER), male



Plate 26: *Ectopius rubellus* (GMELIN), female, male

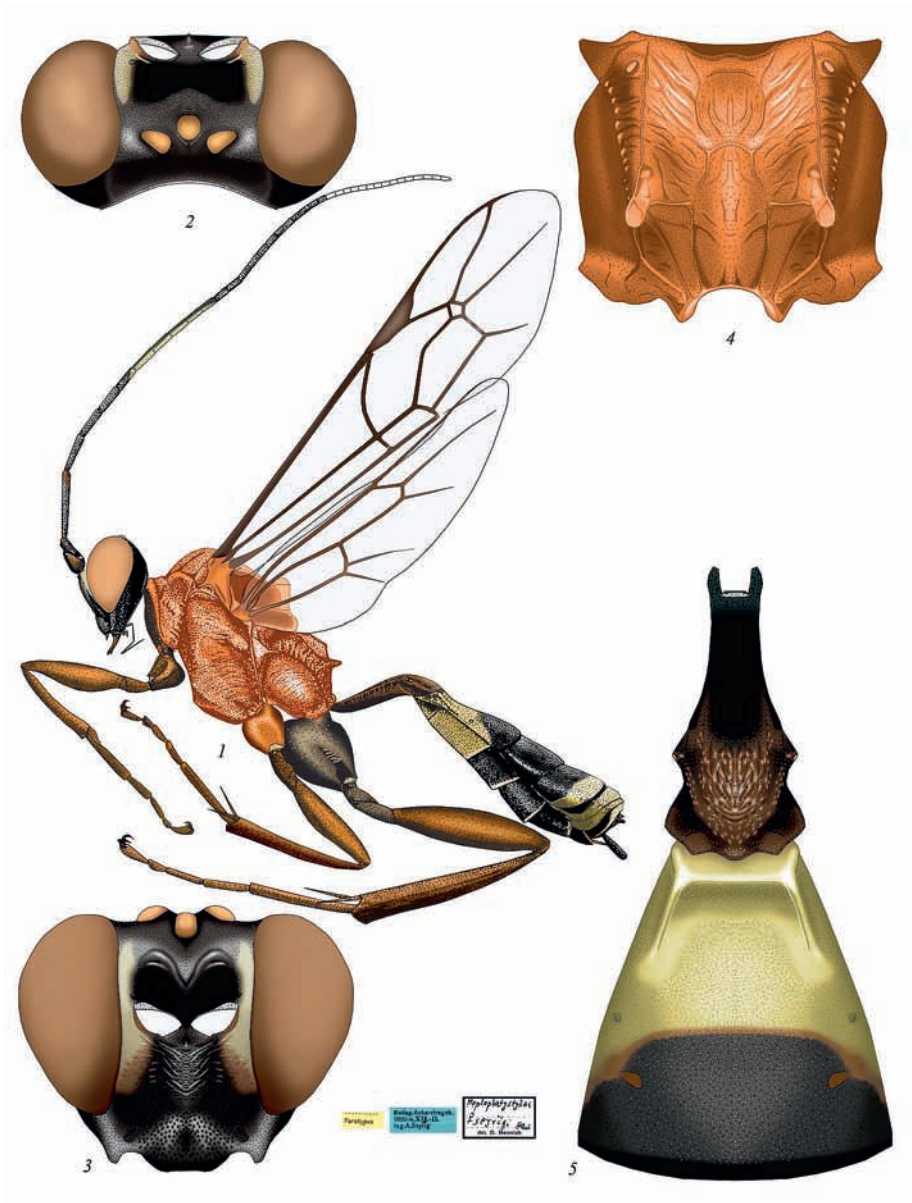


Plate 27: *Afrectopius seyrigi* (HEINRICH), female



Plate 28: *Cyclolabus nigricollis* (WESMAEL), female



Plate 29: *Cyclolabellus pertenuis* HEINRICH, female

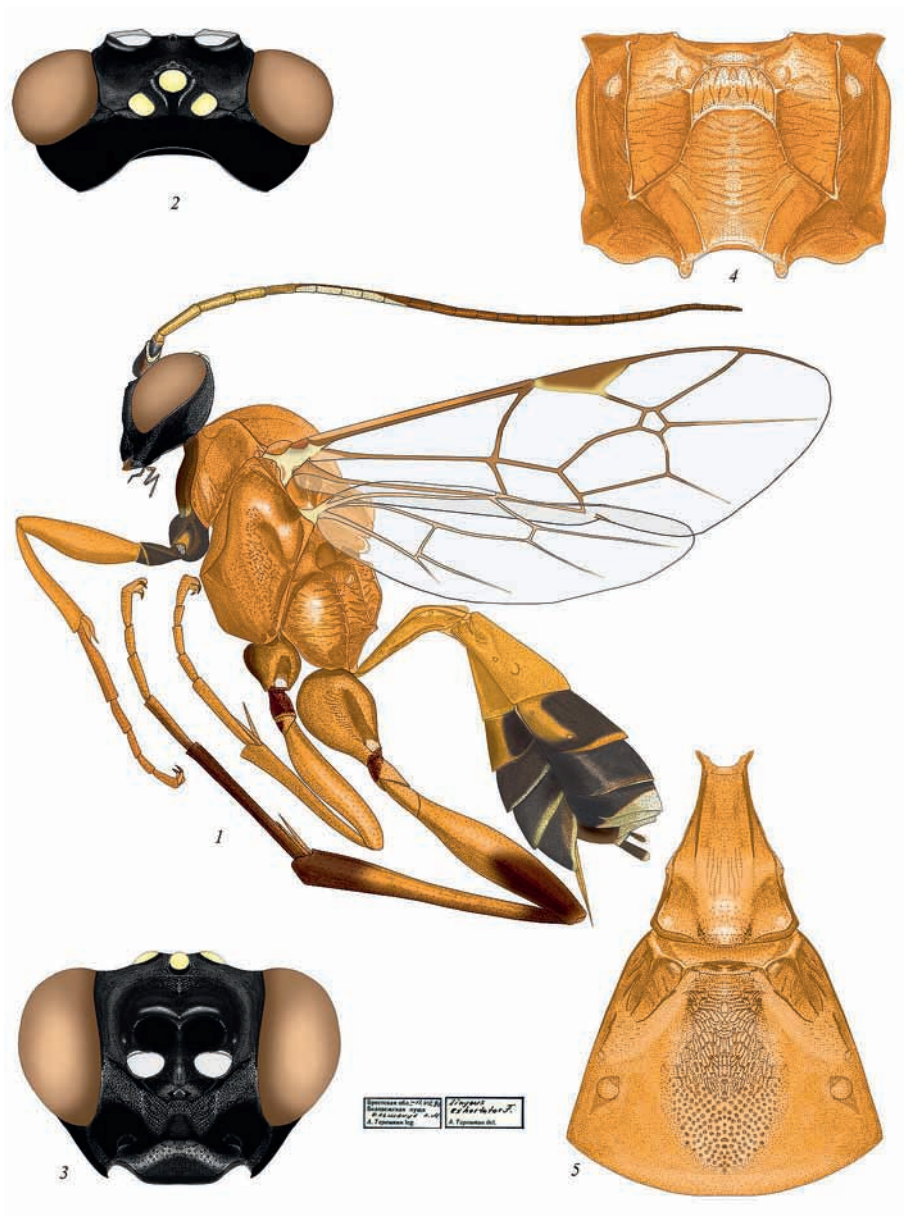


Plate 30: *Linytus exhortator* (FABRICIUS), female

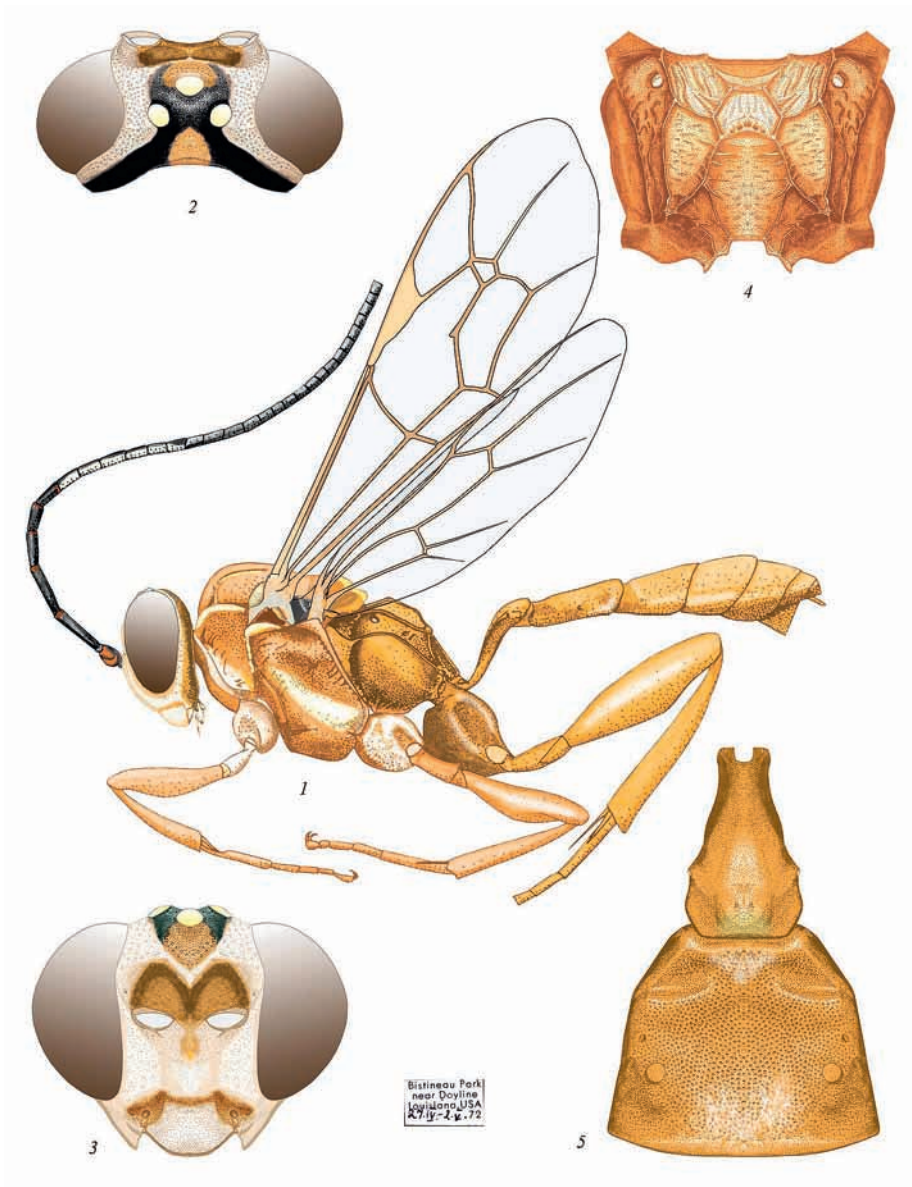


Plate 31: *Neolinyx michaelis* HEINRICH, female

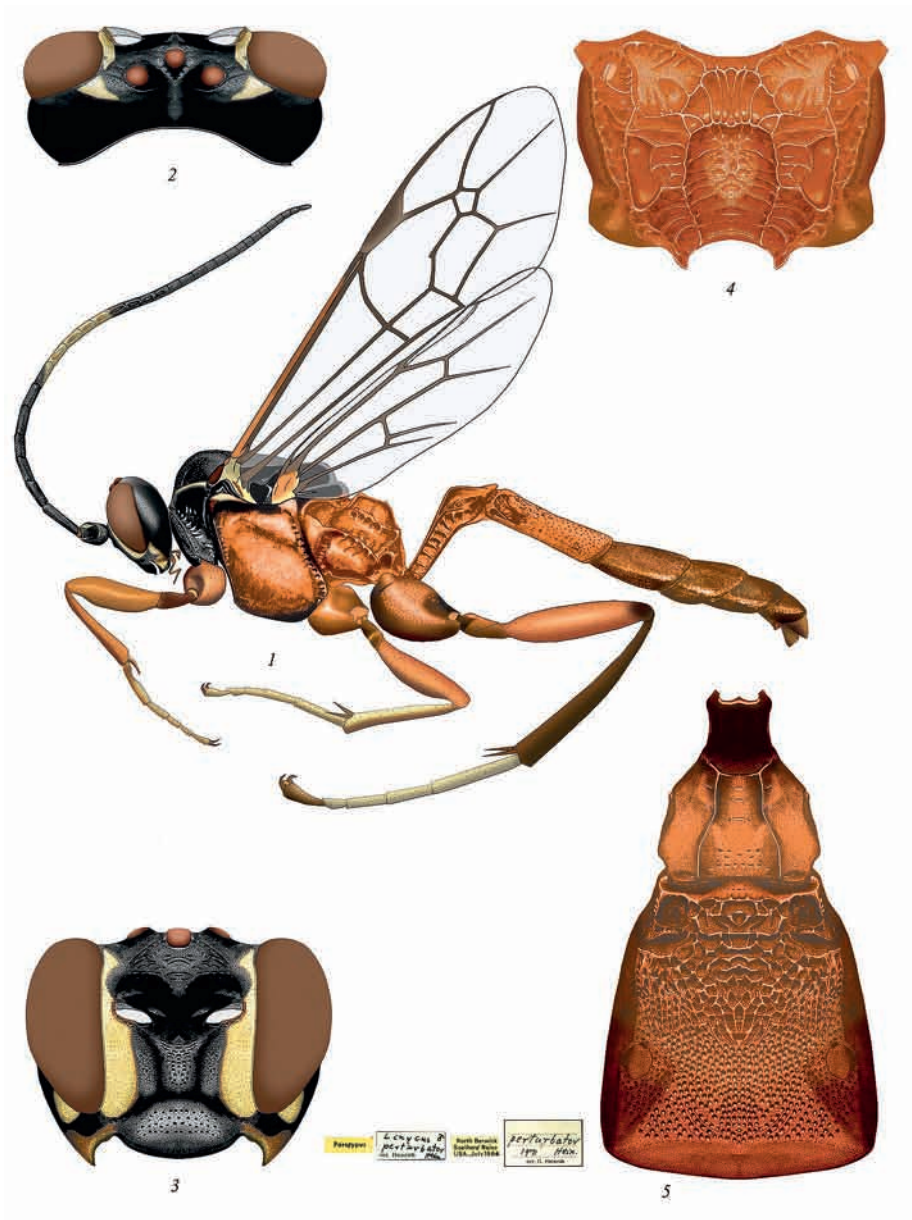


Plate 32: *Carlsonia perturbator* (HEINRICH), male

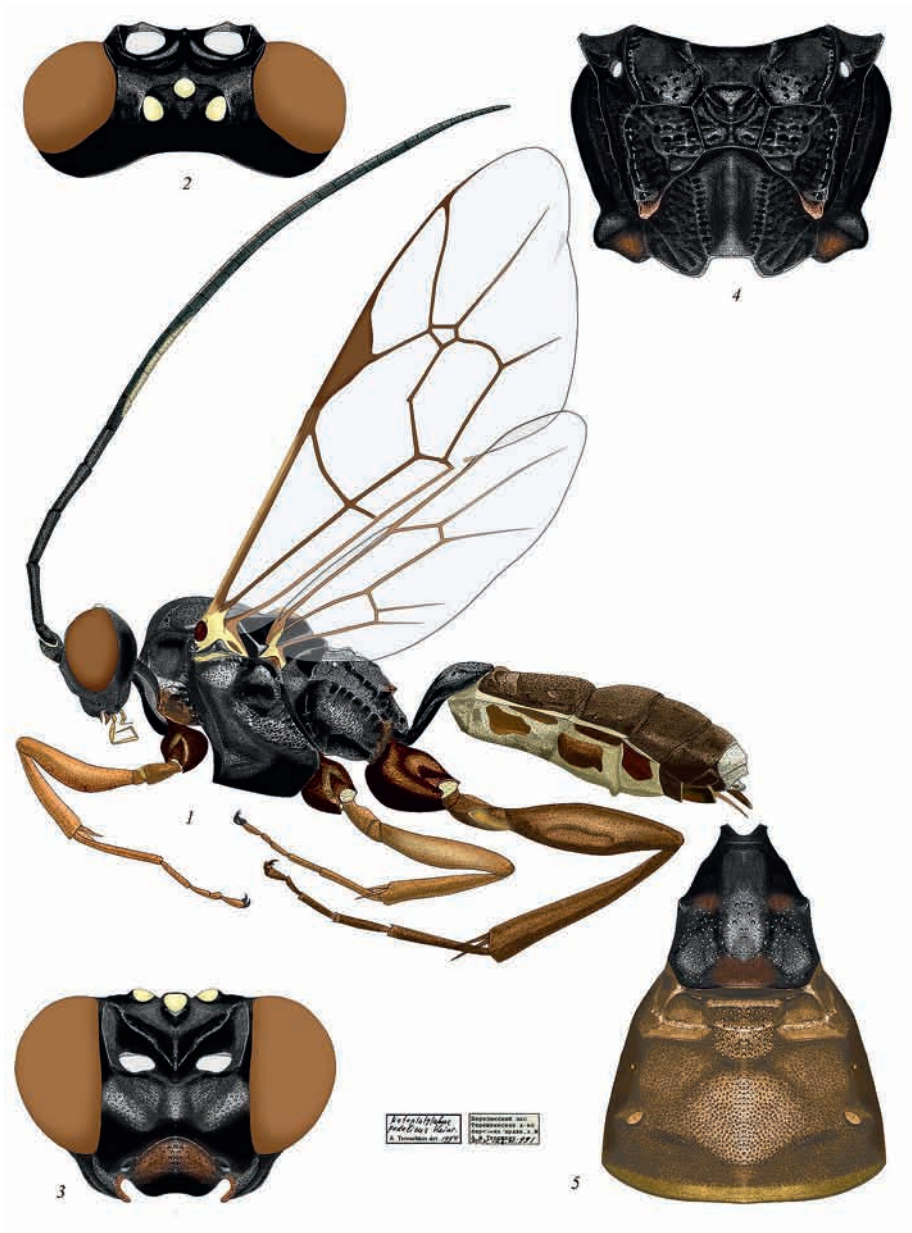


Plate 33: *Notoplatylabus podolicus podolicus* HEINRICH, female



Plate 34: *Notoplatylabus podolicus conterranius* TERESHKIN, male

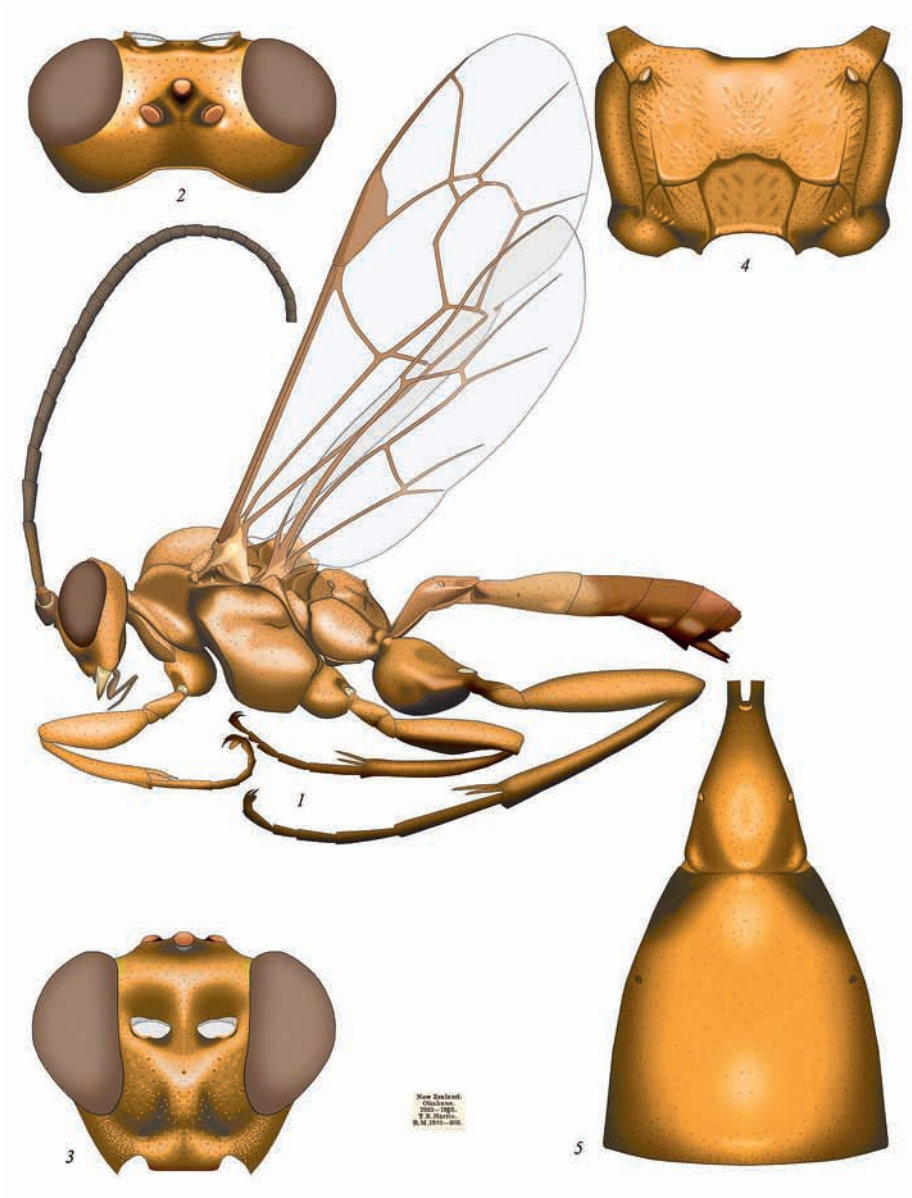


Plate 35: *Levansa decoratoria* (FABRICIUS), female



Plate 36: *Cratolaboides palpalis* nov.sp., female



Plate 37: *Pagarenes erythropus* CAMERON, female



Plate 38: *Clypeolabus curtitarsis* HEINRICH, female



Plate 39: *Hirtolabus alienoris* HEINRICH, female



Plate 40: *Rhyssolabus bassicus* (Tischbein), female

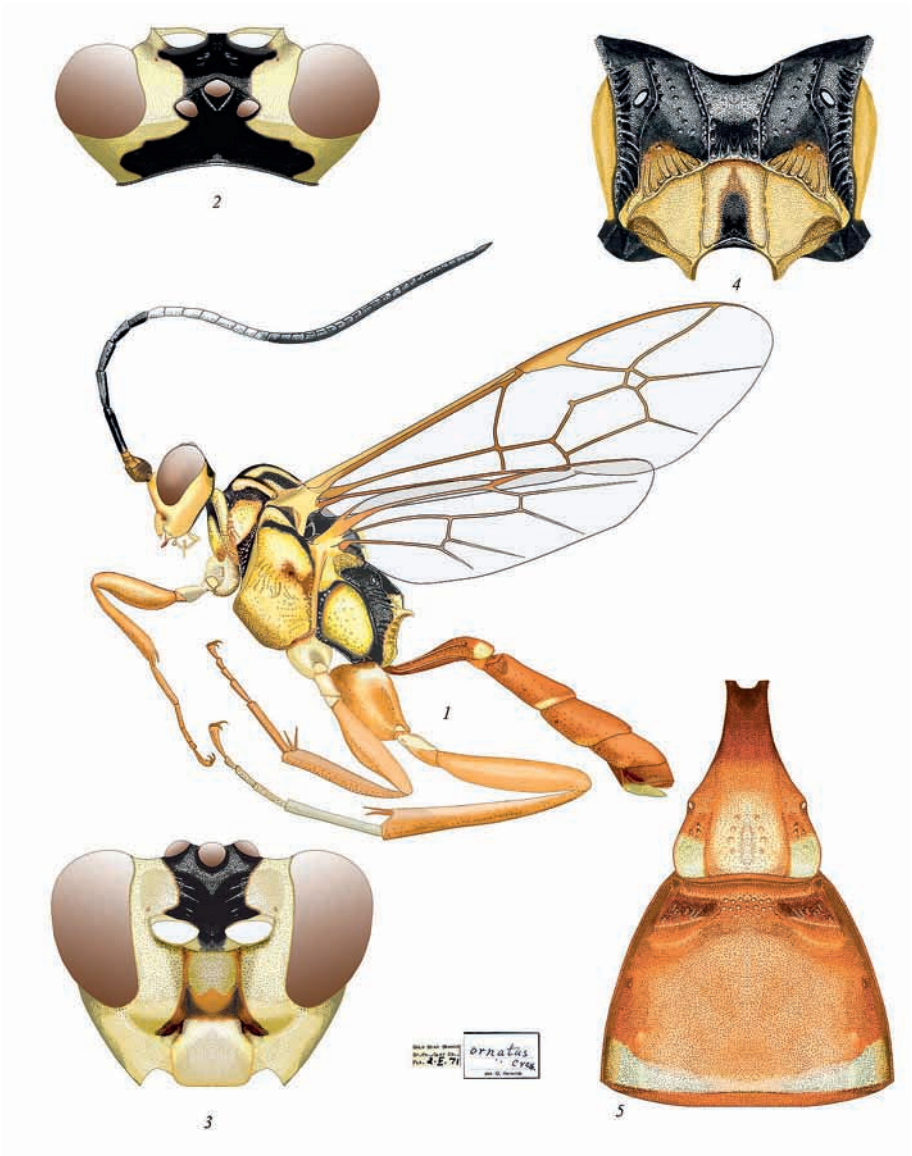


Plate 41: *Ambloplisus ornatus* (CRESSON), female

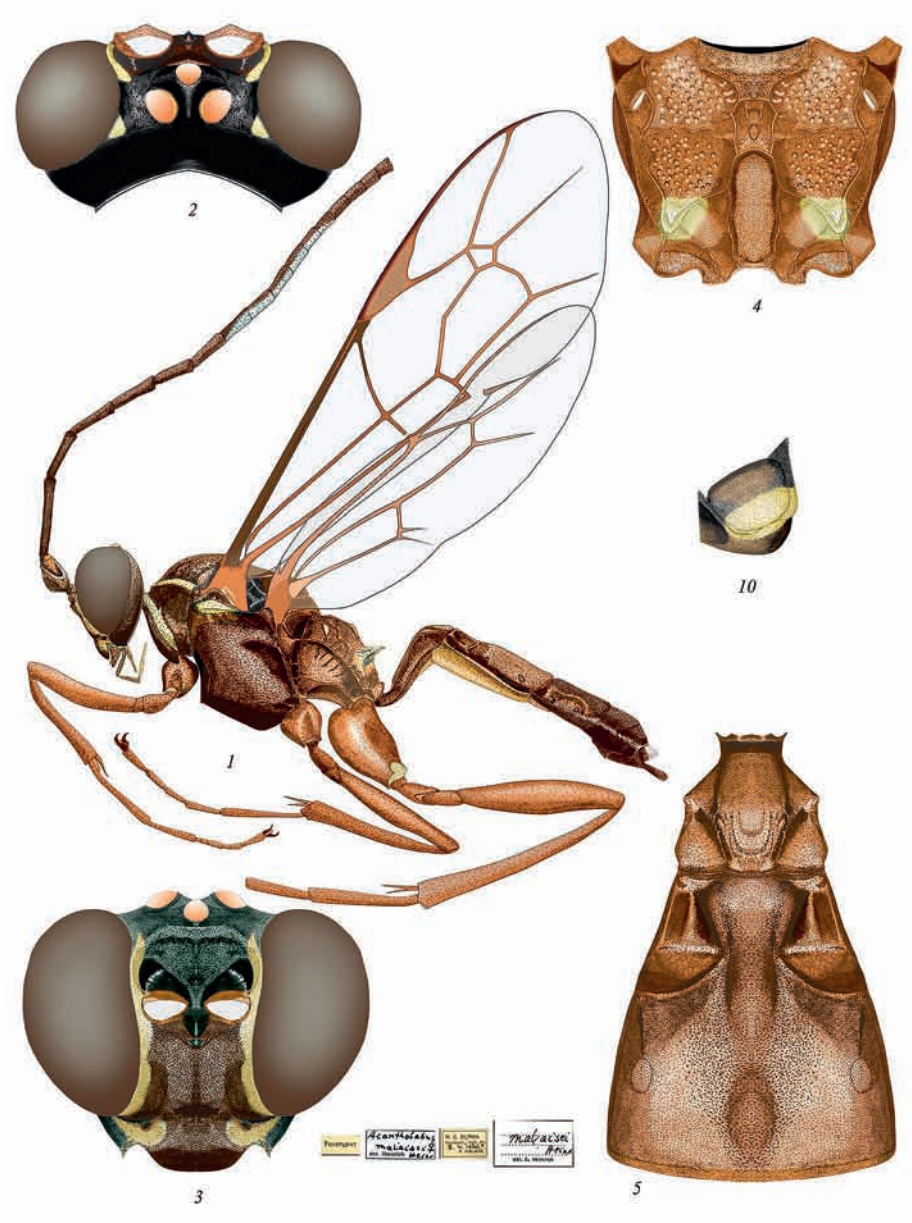


Plate 42: *Acantholabus malaisei* HEINRICH, female

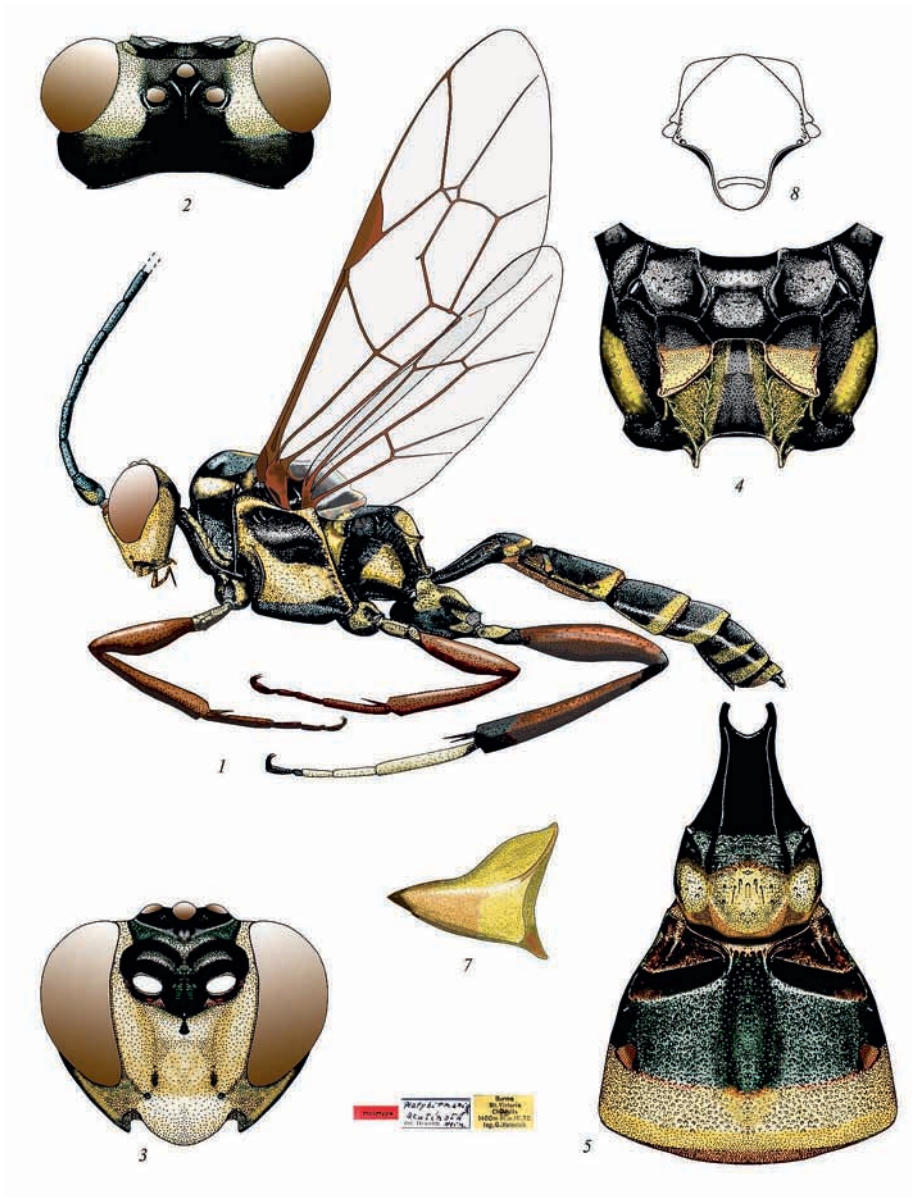


Plate 43: *Platybirmania acutinota* HEINRICH, male



Plate 44: *Cratolabus insulindicus* (HEINRICH), female



Plate 45: *Poecilostictus cothurnatus* GRAVENHORST, female, male

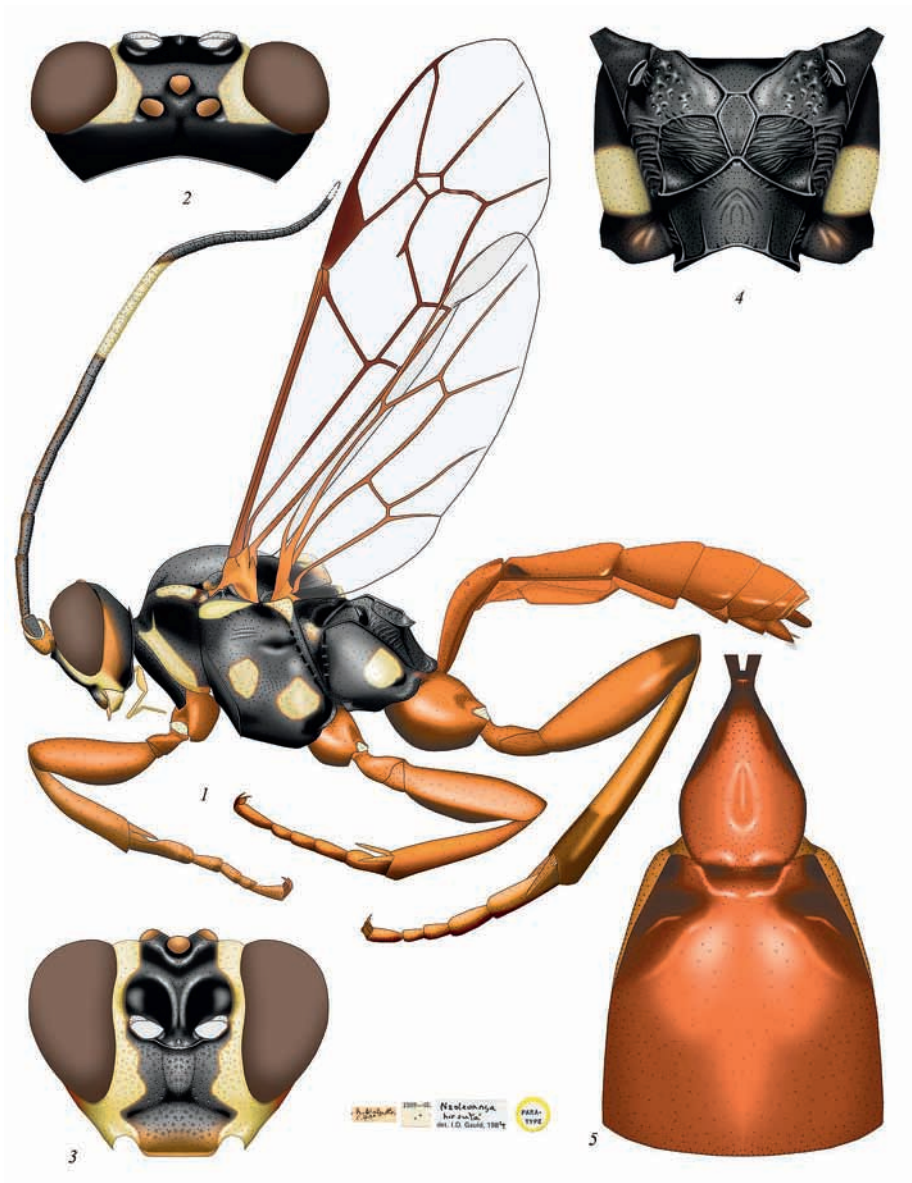


Plate 46: *Neolevansa hirsuta* GAULD, female



Plate 47: *Hypomecus quadriannulatus* (GRAVENHORST), female, male

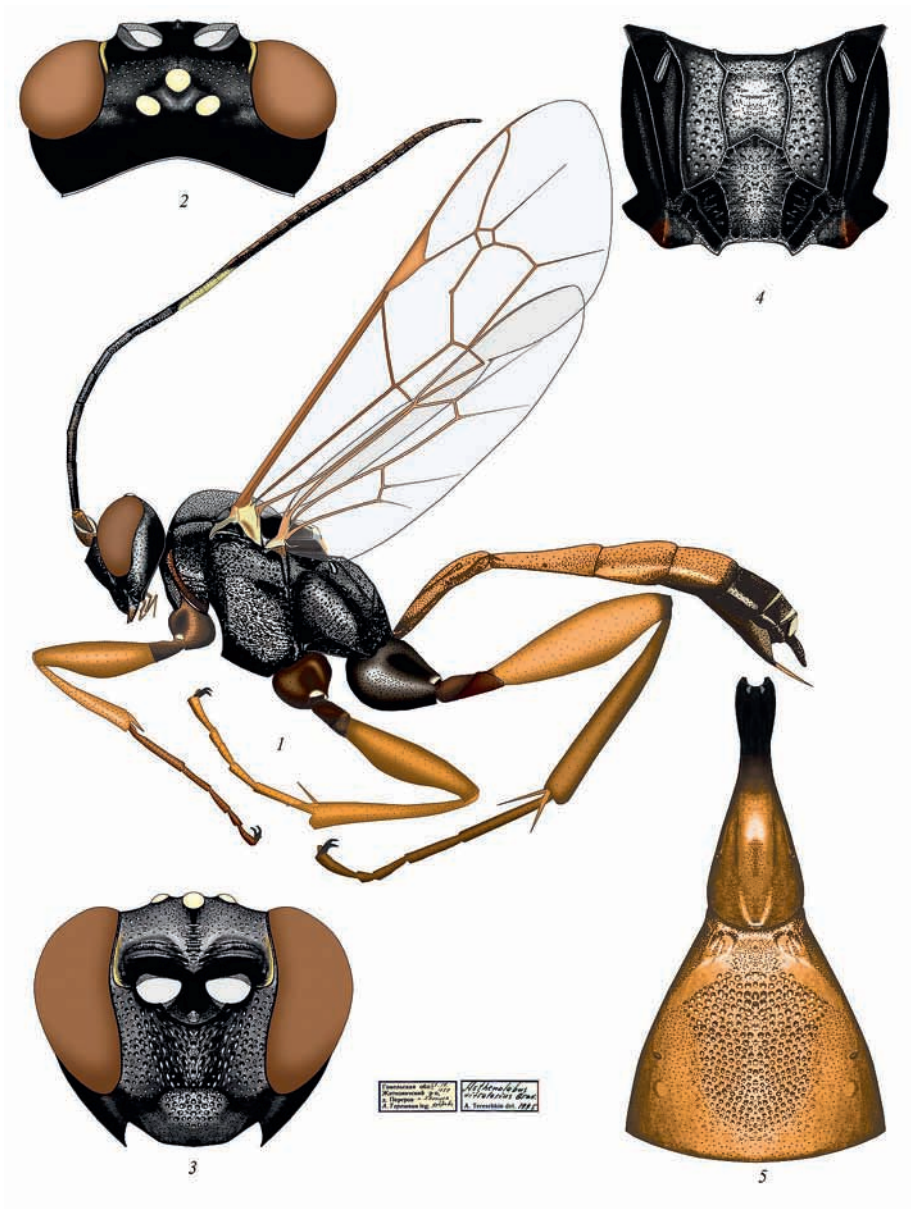


Plate 48: *Asthenolabus vitratorius* (GRAVENHORST), female



Plate 49: *Platylabus rufus* WESMAEL, female

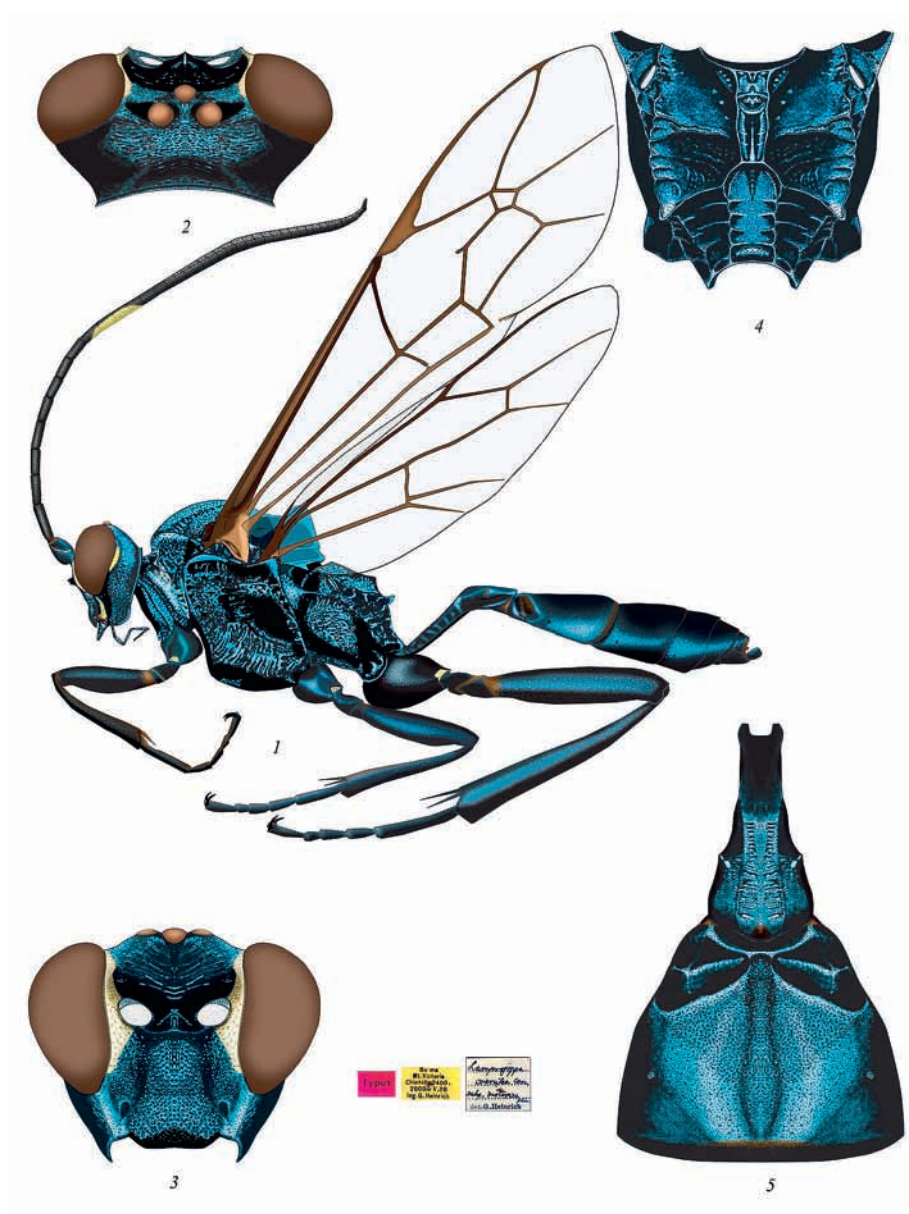


Plate 50: *Lamprojoppa caerulea* CAMERON, female

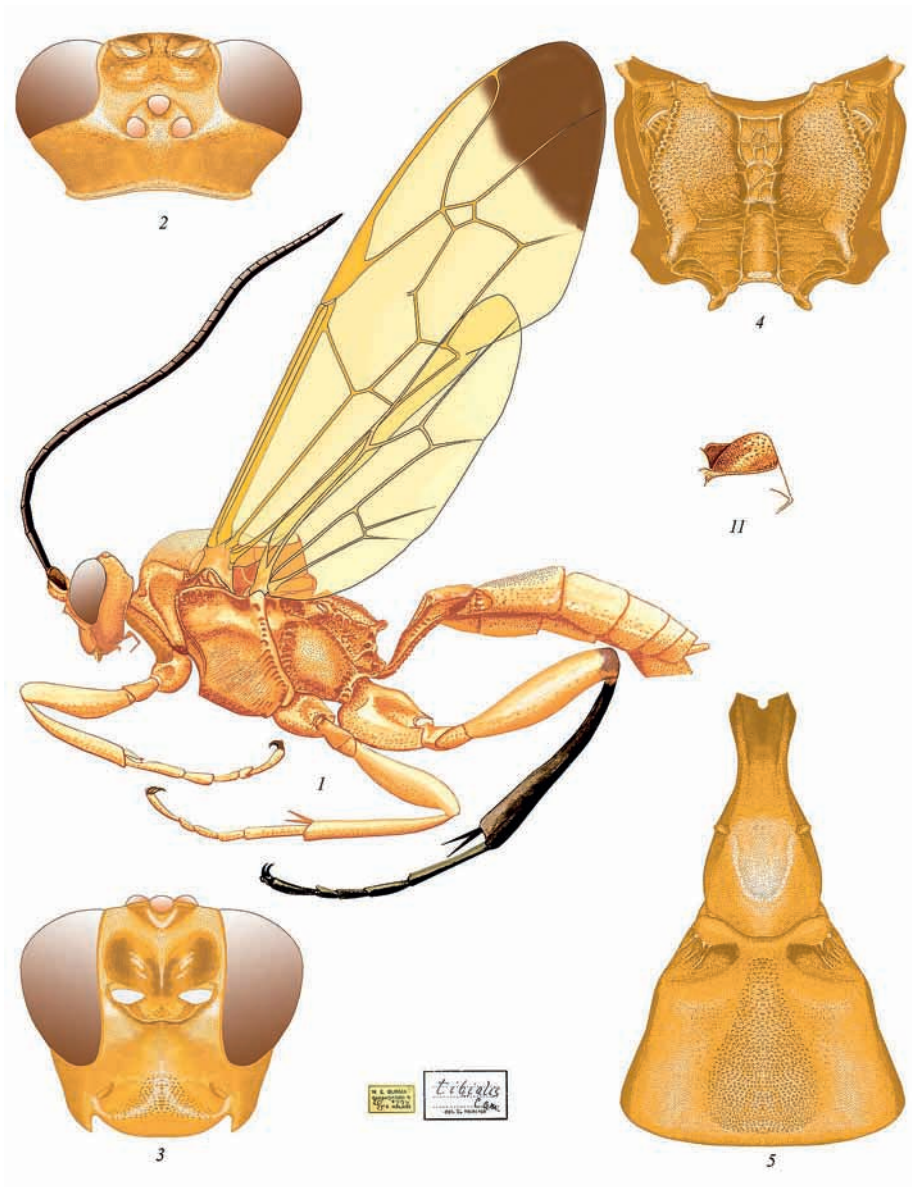


Plate 51: *Pachyjoppa tibialis* CAMERON, female



Plate 52: *Pristicerops infractorius* (LINNAEUS), female, male



Plate 53: *Pristiceros serrarius* GRAVENHORST, male



Plate 54: *Dentilabus variegatus* (WESMAEL), female



Plate 55: *Lissolaboides flavorufus* HEINRICH, female

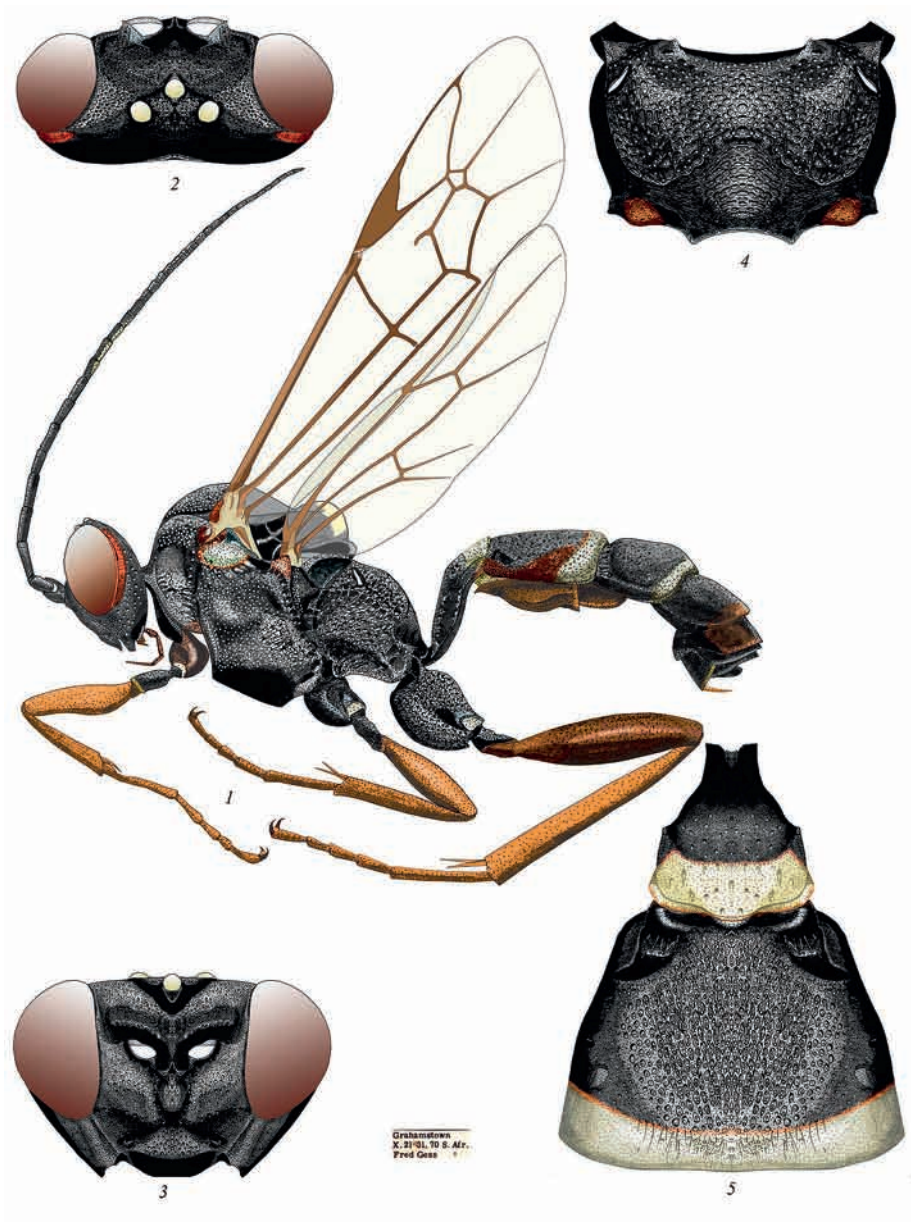


Plate 56: *Spanophatnus bicinctorius* (THUNBERG), female

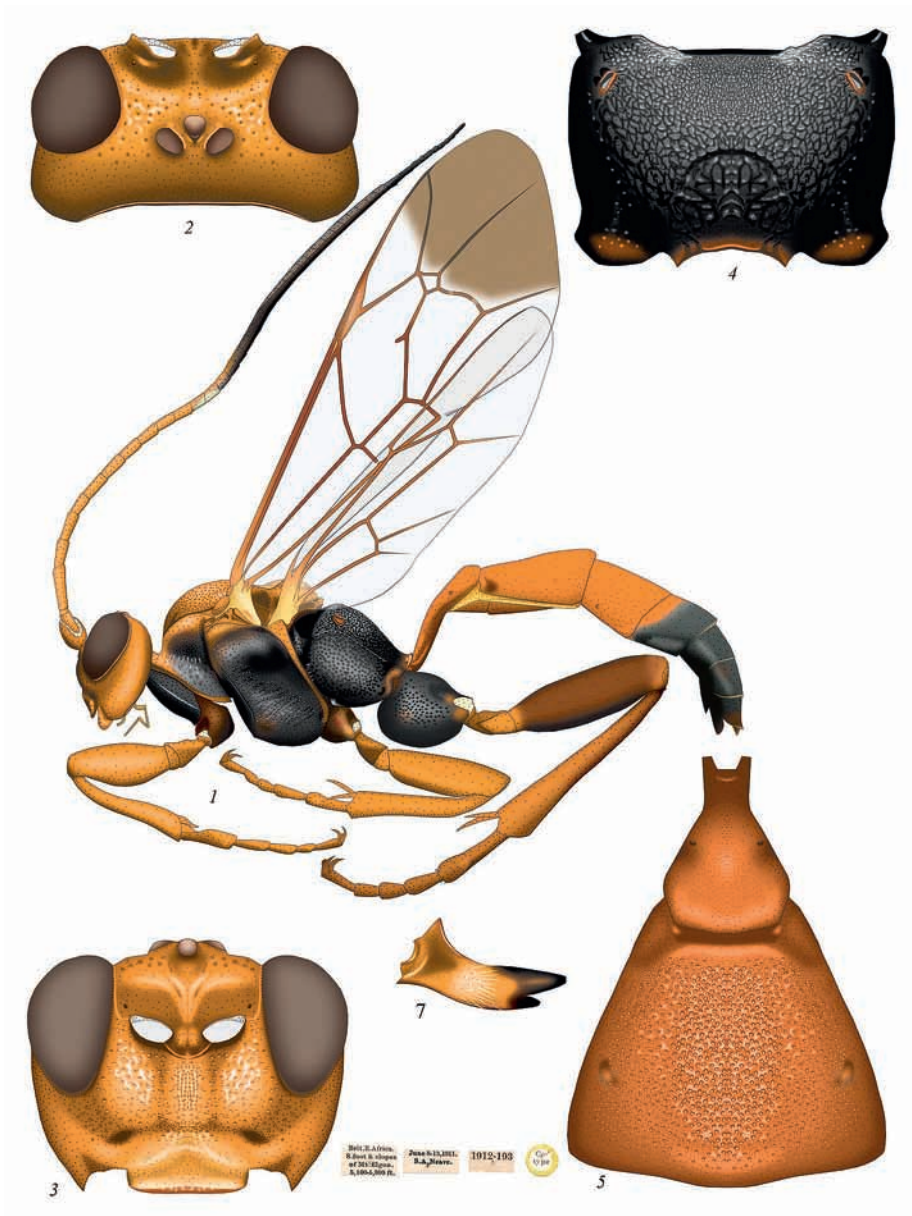


Plate 57: *Neeurylabia spilopectera* (MORLEY), female

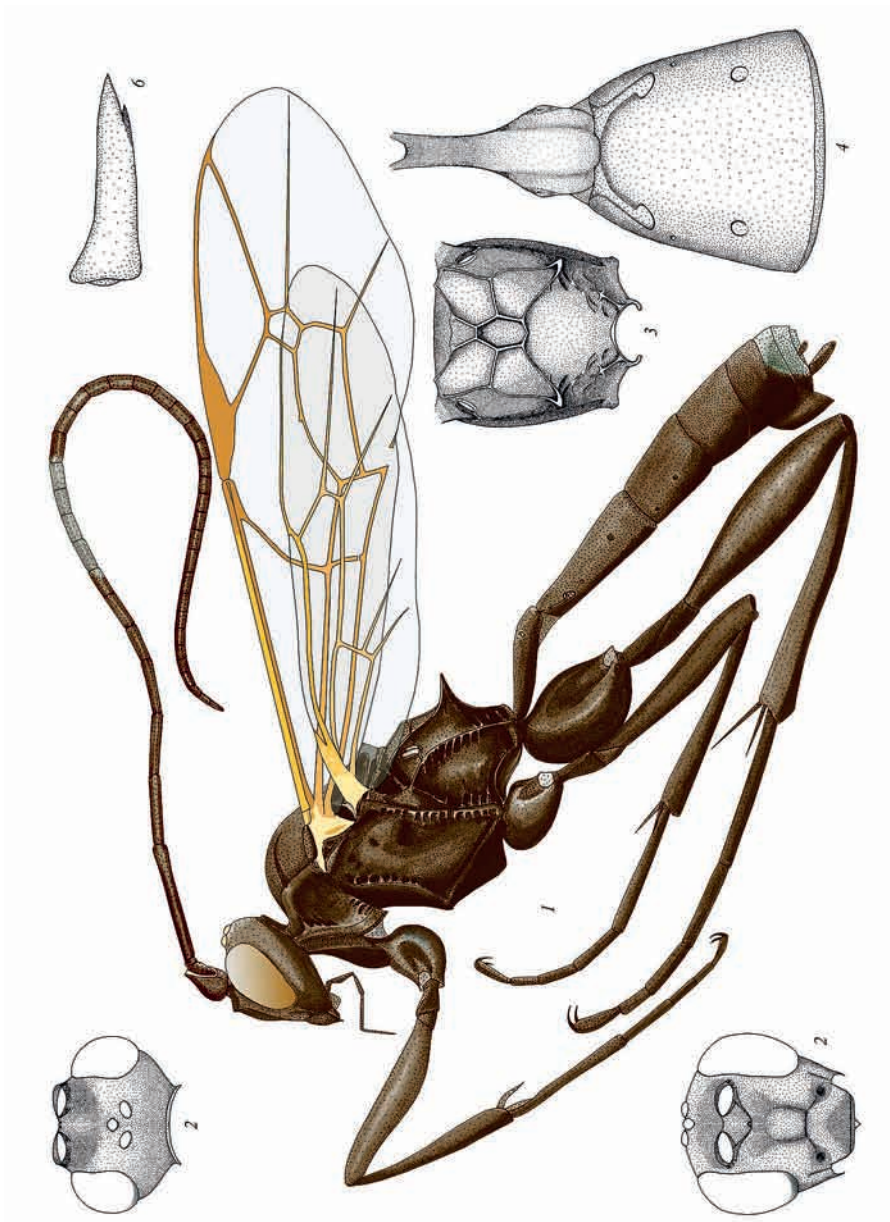


Plate 58: *Heinrichiellus hildegardae* (TERESHKIN), female

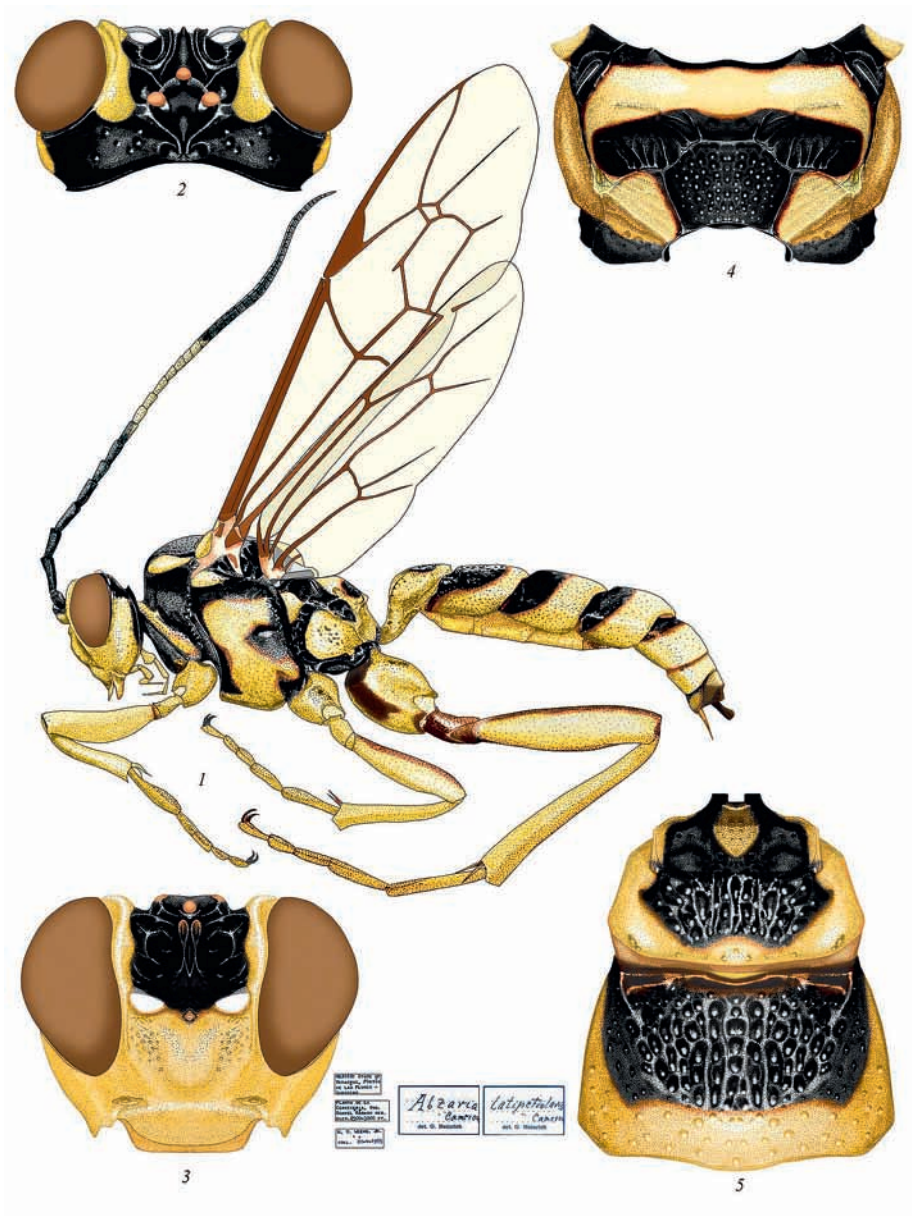


Plate 59: *Abzaria latipetiolaris* CAMERON, female



Plate 60: *Pyramidophorus flavoguttatus* TISCHBEIN, female