РОССИЙСКАЯ АКАДЕМИЯ НАУК
РУССКОЕ ЭНТОМОЛОГИЧЕСКОЕ ОБЩЕСТВО

Чтения
памяти
Николая Александровича
Холодковского

Вып. 56 (1)

В.М. Гнездилов

Обзор семейства Issidae (Homoptera, Cicadina) европейской фауны

с замечаниями о строении яйцеклада фулгороидных цикадовых

Санкт-Петербург
2003

Гнездилов В.М. Обзор семейства Issidae (Homoptera, Cicadina) европейской фауны с замечаниями о строении яйцеклада фулгороидных цикадовых. **Чтения памяти Н.А. Холодковского. Вып. 56 (1).** СПб., 2003. 145 с.

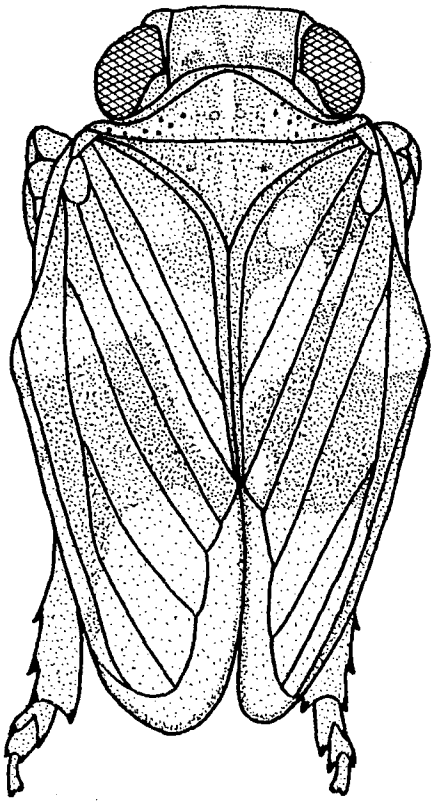
Gnezdilov V. M. Review of the family Issidae (Homoptera, Cicadina) of the European fauna with notes on the structure of ovipositor in planthoppers. **Meetings in memory of N.A. Cholodkovsky. Iss. 56 (1).** St-Petersburg, 2003. 145 p.

Редактор *С.Ю. Синёв*
Ответственный за издание *В.А. Кривохатский*

По постановлению Президиума Российской академии наук ежегодно в марте–апреле проводятся Чтения памяти выдающегося русского зоолога, почетного члена Русского энтомологического общества, профессора Николая Александровича Холодковского (1858–1921).

Настоящий выпуск содержит расширенное изложение доклада В.М. Гнездилова, выступившего на проводившихся 4 апреля 2003 г. 56-х Чтениях с сообщением о проведенной им ревизии цикадовых семейства Issidae (Homoptera, Cicadina) в объеме европейской фауны.

ISSN 1606-8858



Iberanum dlabolai Gnezdilov **gen. et sp. n.**

Предисловие

Предлагаемая работа представляет собой ревизию родов семейства Issidae Spinola, 1839 европейской фауны, проведенную на основе изучения признаков внешнего строения, включая строение гениталий самцов и самок. Представители семейства Issidae широко распространены в Европе, за исключением ее северных районов, однако отсутствие обобщающей работы, учитывающей современную трактовку родов, ограничивало изучение этой важной группы растительноядных насекомых. В результате проведенного исследования были составлены комплексные характеристики родов семейства Issidae с привлечением признаков внешней морфологии, строения гениталий самцов и строения яйцеклада. Широкое привлечение признаков строения яйцеклада позволило четко определить объем семейства Issidae s. str., установить систематическое положение большинства изученных таксонов и выяснить родственные отношения семейств фулгороидных цикадовых, традиционно сближаемых с семейством Issidae. Осуществление ревизии цикадовых семейства Issidae европейской фауны будет способствовать более интенсивному изучению мировой фауны, поскольку проведенное исследование позволило установить четкие критерии в определении ранга надвидовых таксонов. В работе описаны 30 родов семейства Issidae, включая 8 родов, а также 3 подрода и 4 вида как новые. Описаны яйцеклады представителей 8 других семейств фулгороидных цикадовых. Одним из достоинств работы является практически полный перевод систематической части (включая описания новых таксонов) на английский язык, что сделает ревизию доступной иностранным специалистам сразу после ее публикации.

Г.С. Медведев

В.М. Гнездилов

Обзор семейства Issidae (Homoptera, Cicadina) европейской фауны с замечаниями о строении яйцеклада фулгороидных цикадовых

СОДЕРЖАНИЕ

V. M. Gnezdilov

Review of the family Issidae (Homoptera, Cicadina) of the European fauna with notes on the structure of ovipositor in planthoppers

CONTENTS

Заключение

Фауна семейства Issidae Европы насчитывает 30 родов и 133 вида, из них 8 родов и 4 вида, а также 3 подрода описаны в настоящей работе как новые. Все европейские представители семейства относятся к трибе Issini, разделенной на три подтрибы: Issina, Hysteropterina, Agalmatiina. Подтриба Issina включает 2 рода, представленных в фауне Европы и объединяющих 13 видов. Подтриба Hysteropterina включает 24 рода, представленных в Европе, со 110 видами. В ее составе выделяются три группы родов: группа *Bubastia*, группа *Mycterodus* и группа *Kervillea*. Подтриба Agalmatiina объединяет 4 рода, отмеченных только в фауне Европы, с 10 видами. Бóльшая часть европейских видов Issidae приурочена к Средиземноморскому региону.

Признаки строения яйцеклада позволяют идентифицировать в пределах семейства Issidae таксономические группы надвидового ранга, а также дополняют представления о родственных связях в ряду фулгороидных цикадовых. Так, семейства Caliscelidae (с включением трибы Adenissini), Acanaloniidae и Issidae s. str. должны рассматриваться в качестве отдельных семейств. Трибу Bladinini необходимо исключить из состава семейства Issidae s. str. На основе признаков строения передней соединительной пластинки гонапофиза VIII семейство Issidae s. str. сближается с семейством Dictyopharidae. Семейство Caliscelidae по строению задней соединительной пластинки гонапофизов IX может быть сближено с семейством Dictyopharidae, тогда как по строению эндогонококсального отростка гонапофиза VIII и передней соединительной пластинки гонапофиза VIII – с семейством Fulgoridae. Семейства Nogodinidae, Acanaloniidae и Ricaniidae характеризуются целым рядом общих признаков гонапофизов VIII и IX. Семейства Flatidae и Tropiduchidae сближаются по признакам строения гонапофизов IX.

Summary

Notes on the structure of ovipositor in the planthoppers

In the present study, the families with fulgoroid-type of the ovipositor (sensu Bourgoin, 1993) were examined: Caliscelidae, Fulgoridae, Dictyopharidae, Nogodinidae, Acanaloniidae, Ricaniidae, Flatidae, Tropiduchidae. The nomenclature of the female genitalia is given after Scudder (1961), Emeljanov (1969), Bourgoin (1993), and Gnezdilov (2002).

According to previous view of Emeljanov (1990), the family Issidae (including Acanaloniidae and Bladininae) represents a sister group to "branch" of the families Nogodinidae – Ricaniidae – Flatidae – Tropiduchidae – Lophopidae – Eurybrachyidae. Recently, Emeljanov (1999) has proposed the family Acanaloniidae as a sister or daughter group of the family Nogodinidae. In one's turn, Yang and Chang (2000), using the features of the male genitalia, neared the family Issidae to the families Nogodinidae, Acanaloniidae, and Flatidae.

Present data on the ovipositor structure show that the family Issidae s. str. clearly differs from the families Flatidae and Tropiduchidae on the one hand, and from the families Nogodinidae, Acanaloniidae (with Tonginae and Trienopinae), and Ricaniidae, closely related in the ovipositor structure, on the other hand. The families Nogodinidae, Acanaloniidae, and Ricaniidae are characterized by a set of synapomorphies: first and second gonoplac lobes without visual borders; contour of gonapophyses IX resemles isosceles triangle (in dorsal view); distal parts of posterior connective laminae of gonapophyses IX straight; lateral fields of gonapophyses IX flat; median field of gonapophyses IX with notch distally; endogonocoxal process and anterior connective lamina of gonapophyse VIII narrow, the latter with homogeneous teeth, the apical and lateral groups of teeth indistinct.

The families Dictyopharidae and Issidae have the same pattern of anterior connective lamina of gonapophyse VIII with distinct apical and lateral groups of teeth.

The families Dictyopharidae and Caliscelidae share one synapomorphy: distal parts of posterior connective laminae of gonapophyses IX with a row of teeth on dorsal surface.

The families Fulgoridae and Caliscelidae share one synapomorphy: anterior connective lamina of gonapophyse VIII narrow, with group of teeth apically.

Till now the place of the tribe Bladinini Kirkaldy, 1907 is disputable (Fennah, 1978; Emeljanov, 1990, 1999). The tribe is characterized by the narrow anterior connective lamina of gonapophyse VIII similar to that in the families Fulgoridae and Caliscelidae. The tribe Bladinini must be excluded from the family Issidae, but the systematic position of this tribe is questionable; probably, it is related to the families Fulgoridae and Caliscelidae.

The families Flatidae and Tropiduchidae are distinguished by the massive, strongly sclerotized posterior connective laminae of gonapophyses IX.

Family **Caliscelidae** Amyot et Serville, 1843

Description. Gonoplacs flat, elongate, rounded or nearly triangular. First and second gonoplac lobes without visual borders or with notch. Proximal part of posterior connective laminae of gonapophyses IX prominent or weakly concave, with a pair of short processes. Distal parts of posterior connective laminae of gonapophyses IX straight or arched and turned to median line of lamina, with longitudinal row of large teeth (in most of the examined species) or without teeth. Lateral fields of gonapophyses IX flat or indistinct. Median field of gonapophyses IX with deep notch distally, flat or protruding proximally, with a pair of lobes proximally. Endogonocoxal process broad. Anterior connective lamina of gonapophyse VIII with 3–9 teeth.

Subfamily **Caliscelinae** Amyot et Serville, 1843

Gonoplacs elongated-rounded.

Tribe **Caliscelini** Amyot et Serville, 1843

Description. Proximal part of posterior connective laminae of gonapophyses IX weakly concave. Distal parts of posterior connective laminae of gonapophyses IX straight, with longitudinal row of large teeth dorsally. Anterior connective lamina of gonapophyse VIII with 3–4 teeth.

Examined species: *Caliscelis affinis* (Fieber, 1876); *Aphelonema (Peltonotellus) punctifrons* (Horváth. 1895).

Tribe **Adenissini** Dlabola, 1980

Description. Proximal part of posterior connective laminae of gonapophyses IX prominent. Distal parts of posterior connective laminae of gonapophyses IX enlarged, arched, without teeth, with a pair of long lateral processes (in dorsal view). Median field of gonapophyses IX strongly protruding proximally, with small teeth, distally with wide incision. Gonocoxa VIII with unprotruding hind margin. Endogonocoxal process relatively broad, with blunt apex. Anterior connective lamina of gonapophyse VIII narrow, with 3 rounded, flattened teeth apically and 3 long, awl-shaped teeth below.

Examined species: *Adenissus (Denissus) circularis* Dlabola, 1980.

Subfamily **Ommatidiotinae** Fieber, 1875

Gonoplacs with distinct dorso-caudal angles.

Tribe **Ommatidiotini** Fieber, 1875

Description. Proximal part of posterior connective laminae of gonapophyses IX with a pair of short processes. Distal parts of posterior connective laminae of gonapophyses IX weakly arched, with longitudinal row of long teeth dorsally. Median field of gonapophyses IX with wide incision distally and a pair of lobes proximally. Gonocoxa VIII with unprotruding hind margin. Apical group of anterior connective lamina of gonapophyse VIII with 4 teeth.

Examined species: *Ommatidiotus dissimilis* (Fallén, 1806).

Tribe **Augilini** Baker, 1915

Description. Distal parts of posterior connective laminae of gonapophyses IX enlarged (in lateral view), nearly parallel to each other, with longitudinal row of long, rounded teeth dorsally. Medial field of gonapophyses IX flat, with deep, wide incision. Hind margin of gonocoxa VIII weakly protruding. Apical group of anterior connective lamina of gonapophyse VIII with 9 rounded, flattened teeth.

Examined species: *Symplanella* sp.

Tribe **Bocrini** Emeljanov, 1999

Description. Gonoplacs fused medially, except their apices, covered with hair setae, dorso-caudal angles with short and thick setae. Distal parts of posterior connective laminae of gonapophyses IX straight, weakly turned to medial line, with longitudinal row of small teeth dorsally. Lateral fields of gonapophyses IX indistinct. Median field of gonapophyses IX with incision distally. Hind margin of gonocoxa VIII not protruding. Apical group of anterior connective lamina of gonapophyse VIII with 4 teeth (3 large and 1 small).

Examined species: *Bocra ephedrina* Emeljanov, 1999.

Family **Dictyopharidae** Spinola, 1839

Description. First and second gonoplac lobes not fused completely. Proximal part of posterior connective laminae of gonapophyses IX narrow, prominent. Distal parts of posterior connective lamina of gonapophyses IX straight, with a row of teeth dorsally. Median field of gonapophyses IX deeply notched. Lateral fields of gonapophyses IX flat. Hind margin of gonocoxa VIII lobe-shaped. Endogonocoxal process broad basally, narrowing apically. Anterior connective lamina of gonapophyse VIII with 3 apical teeth and 4 lateral teeth.

Examined species: *Dictyophara europaea* (Linnaeus, 1767).

Family **Fulgoridae** Latreille, 1807

Description. Gonoplacs relatively prominent, round, with long setae. Border between first and second gonoplac lobes in shape of deep notch. Proximal part of posterior connective laminae of gonapophyses IX flat. Distal parts of posterior connective laminae of gonapophyses IX weakly arched. Lateral fields of gonapophyses IX flat. Median field of gonapophyses IX with deep notch and a pair of lobes. Gonospiculum bridge fused with proximal part of posterior connective laminae. Hind margin of gonocoxa VIII weakly protruding. Endogonocoxal process broad, with widely rounded apex. Anterior connective lamina of gonapophyse VIII with 4 large, flattened teeth.

Examined species: *Hotinus candelarius* (Linnaeus, 1758).

Family **Nogodinidae** Melichar, 1898

Description. First and second gonoplac lobes without visual borders. Proximal part of posterior connective laminae of gonapophyses IX weakly concave. Distal parts of posterior connective laminae of gonapophyses IX straight, turned to median line. Lateral fields of gonapophyses IX flat. Median field of gonapophyses IX with longitudinal incision distally, without distinct lobes. Hind margin of gonocoxa VIII protruding proximally. Endogonocoxal process gradually narrowing apically; apex bilobed. Anterior connective lamina of gonapophyse VIII narrow, with 5 teeth.

Examined species: *Philbyella glareus* Dlabola et Heller, 1962; *Pisacha* sp.

Family **Acanaloniidae** Amyot et Serville, 1843

Description. First and second gonoplac lobes without visual borders. Distal parts of posterior connective laminae of gonapophyses IX straight, turned to median line. Lateral fields of gonapophyses IX flat. Endogonocoxal process narrow. Anterior connective lamina of gonapophyses IX narrow, with 8–10 teeth.

Subfamily **Acanaloniinae** Amyot et Serville, 1843

Description. Gonoplacs with tooth-like setae on the margin. Proximal part of posterior connective laminae of gonapophyses IX flat. Median field of gonapophyses IX with incision, without distinct lobes. Endogonocoxal process narrow, narrowing apically. Anterior connective lamina of gonapophyse VIII narrow, with 8 teeth.

Examined species: *Acanalonia ?pumila* Van Duze, 1908.

Subfamily **Trienopinae** Fennah, 1954

Description. Proximal part of posterior connective laminae of gonapophyses IX prominent. Hind margin of gonocoxa VIII not protruding. Endogonocoxal process narrow. Anterior connective lamina of gonapophyse VIII narrow, with 9 teeth.

Examined species: *Trienopa (Eriphyle) longifrons* (Walker, 1858).

Subfamily **Tonginae** Baker, 1927

Description. Gonoplacs flattened laterally, with tooth-like setae on the margin. Proximal part of posterior connective laminae of gonapophyses IX flat. Hind margin of gonocoxa VIII weakly protruding. Endogonocoxal process narrow. Anterior connective lamina of gonapophyse VIII narrow, with about 10 teeth; outside of lamina with 4 denticate keels.

Examined species: *Tonga westwoodi* (Signoret, 1862).

Family **Ricaniidae** Amyot et Serville, 1843

Description. Gonoplacs flattened laterally, with distinct dorso-caudal angles, with 2–3 rows of tooth-like setae marginally. Proximal part of posterior connective

laminae of gonapophyses IX prominent. Distal parts of posterior connective laminae of gonapophyses IX straight, turned to median line. Lateral fields of gonapophyses IX flat. Median field of gonapophyses IX deeply notched, with a pair of long lobes. Hind margin of gonocoxa VIII protruding proximally. Endogonocoxal process narrow. Anterior connective lamina of gonapophyse VIII narrow, with 11 teeth bearing keels.

Examined species: *Ricania japonica* Melichar, 1898.

Family **Flatidae** Spinola, 1839

Description. Gonoplacs with median fields of tooth-like setae. Proximal part of posterior connective laminae of gonapophyses IX prominent. Distal parts of posterior connective laminae of gonapophyses IX turned to median line. Lateral fields of gonapophyses IX flat. Medial field of gonapophyses IX with a pair of lobes distally. Hind margin of gonocoxa VIII protruding. Endogonocoxal process narrow. Anterior connective lamina of gonapophyse VIII broad basally, sharply narrowing apically, with single apical tooth and 3 weak lateral teeth.

Examined species: *Phromnia* sp.; *Phantia subquadrata* (Herrich-Schäffer, 1838).

Family **Tropiduchidae** Stål, 1866

Description. Gonoplacs more or less flat. Gonapophyses IX with broad base in shape of an isosceles triangle (in dorsal view). Proximal part of posterior connective laminae of gonapophyses IX prominent, with a pair of lateral hemisphaerical processes. Distal parts of posterior connective laminae of gonapophyses IX straight, turned to median line. Lateral fields of gonapophyses IX indistinct. Median field of gonapophyses IX with one pointed lobe distally. Hind margin of gonocoxa VIII not protruding. Endogonocoxal process narrow, gradually narrowing apically. Anterior connective lamina of gonapophyse VIII narrow, with numerous teeth.

Examined species: *Trypetimorpha occidentalis* Huang et Bourgoin, 1993.

Tribe **incertae sedis**

Tribe **Bladinini** Kirkaldy, 1907

Description. First and second gonoplac lobes without visual borders. Proximal part of posterior connective laminae of gonapophyses IX narrow and flat. Distal parts of posterior connective laminae of gonapophyses IX strongly arched, with long setae. Lateral fields of gonapophyses IX flat. Median field of gonapophyses IX with a pair of lobes distally, and with a pair of large lateral folded lobes. Hind margin of gonocoxa VIII weakly protruding. Endogonocoxal process broad. Anterior connective lamina of gonapophyse VIII with 5 teeth.

Examined species: *Bladina* sp.

Review of the European Issidae

The area of study is the European mainland up to the Urals, northern foothills of the Caucasus and the western margin of the Stavropol Hills, plus all the Mediterranean islands. The European fauna of Issidae includes the tribe Issini with three subtribes (Issina Spinola, Hysteropterina Melichar and Agalmatiina Gnezdilov), 30 genera and 133 species.

Key to the subtribes and genera of the tribe Issini of the European fauna

1 (4). Metope with transverse keel in upper part. Apex of endogonocoxal process of female bi- or trilobed. Anterior connective lamina of gonapophyse VIII with 1–2 teeth in lateral group (**Issina** s. str.).

2 (3). Arolium of pretarsus without notch, bears 4 dorso-lateral plates. Phallobase with long subapical lobe dorsally. Lateral fields of gonapophyse IX with hemispherical processes ..... **Latissus**

3 (2). Arolium of pretarsus with deep notch, bears 2 dorso-lateral plates. Phallobase with short subapical lobe dorsally or without subapical lobe. Lateral fields of gonapophyse IX flat ..... **Issus**

4 (1). Metope without transverse keel. Apex of endogonocoxal process weakly bilobed or without lobes. Anterior connective lamina of gonapophyse VIII with 2 or more teeth in lateral group.

5 (12). Median field of gonapophyses IX strongly protruding, without process or with process turned to the base of gonapophyses. Lobes of median field more or less fused (**Agalmatiina**).

6 (7). Metatarsomere I with 2 intermediate socle setae apically. Lateral fields of gonapophyses IX flat. Median field of gonapophyse IX with a large curved process turned to the base of gonapophyses ..... **Agalmatium**

7 (6). Metatarsomere I with 6–7 intermediate socle setae apically. Lateral fields of gonapophyses IX with processes. Median field of gonapophyse IX with relatively short process turned to the base of gonapophyse or without process.

8 (11). Gonoplacs with transverse protrudings or keels. Median field of gonapophyses IX with relatively short process turned to the base of gonapophyses. Metope more or less flat, with distinct median keel and very weak, sometimes indistinct sublateral keels.

9 (10). Metope with very weak sublateral keels. Hind wings rudimentary (0.25–0.30 times as long as fore wings). Apical group of anterior connective lamina of gonapophyse VIII includes 1 tooth. Gonocoxa VIII with lobe-shaped hind margin, which weakening distally ..... **Tingissus gen. n.**

10 (9). Metope with indistinct sublateral keels. Hind wings well developed (about 0.7 times as long as fore wings). Apical group of anterior connective lamina of gonapophyse VIII includes 3 teeth. Gonocoxa VIII with lobe-shaped hind margin, which not weakening distally ..... **Iberanum gen. n.**

11 (8). Gonoplacs without transverse protrudings or keels. Median field of gonapophyses IX without process. Metope prominent, with relatively distinct median and sublateral keels ..... **Clybeccus gen. n.**

12 (5). Median field of gonapophyses IX weakly protruding (lobes of field may be fused, forming a single lobe); if median field strongly protruding, the lobes not fused. Median field always without process turned to the base of gonapophyses (**Hysteropterina**).

13 (14). Fore wings with indistinct claval suture ..... **Pseudohemisphaerius**

14 (13). Fore wings with distinct claval suture.

15 (16). Dorso-lateral lobes of phallobase with apices forming a long sclerotized process turned down ..... **Granum gen. n.**

16 (15) Apices of dorso-lateral lobes of phallobase without long sclerotized process turned down.

17 (18). Female anal tube with median keel dorsally ..... **Alloscelis**

18 (17). Female anal tube without median keel dorsally.

19 (30). Median field of gonapophyses IX with single lobe.

20 (21). Gonoplacs with smooth transverse keels. Distal parts of the posterior connective lamina of gonapophyses IX weakly arched, with a pair of large teeth in bend places ..... **Falcidius**

21 (20). Gonoplacs without keels. Distal parts of the posterior connective laminae of gonapophyses IX arched or turned at angle, without large teeth in bend places.

22 (27). Fore wings with hypocostal plate.

23 (26). Distal parts of the posterior connective laminae of gonapophyse IX arched or turned at obtuse angle. Triangular sclerotized plate of gonapophyse VIII without process.

24 (25). Anterior margin of coryphe protruding obtuse-angulate. Capitulum of stylus strongly narrowing apically (in dorsal view). Distal parts of posterior connective laminae of gonapophyse IX weakly arched .. **Palmallorcus gen. n.**

25 (24). Anterior margin of coryphe convex, truncated medially. Capitulum of stylus wide, weakly narrowing apically (in dorsal view). Distal parts of posterior connective laminae of gonapophyses IX turned at obtuse angle ..... **Barbarissus gen. n.**

26 (23). Distal parts of posterior connective laminae of gonapophyses IX turned at right angle. Triangular sclerotized plate of gonapophyse VIII with large pigmented process ..... **Mulsantereum**

27 (22). Fore wings without hypocostal plate.

28 (29). Dorso-lateral lobes of phallobase enlarged apically, forming a collar around the phallotreme. Metatarsomere I with 6 intermediate socle setae apically. Median field of gonapophyses IX strongly flattened laterally. Anterior connective lamina of gonapophyse VIII with 5 teeth bearing keels in the lateral group; upper tooth very large and opposed to other teeth ..... **Libanissum**

29 (28). Dorso-lateral lobes of phallobase without collar around the phallotreme. Metatarsomere I with 2 intermediate socle setae apically. Median field of gonapophyses IX flattened dorso-ventrally. Anterior connective lamina of gonapophyse VIII with 2–3 equal teeth bearing keels in the lateral group ..... **Bubastia**

30 (19). Median field of gonapophyse IX with a pair of lobes.

31 (34). Median field of gonapophyse IX strongly protruding basally, with a pair of additional lobes.

32 (33). Gonoplac keels with even edges. Hind tibia with single large lateral tooth ... **Fieberium**

33 (32). Gonoplac keels with two teeth. Hind tibia with 2 lateral teeth ..... **Palaeolithium gen. n.**

34 (31). Median field of gonapophyses IX not protruding basally, without additional lobes.

35 (50). Median field of gonapophyses IX with flat apical lobes.

36 (41). Fore wings with broad hypocostal plate.

37 (40). Hind wings rudimentary. Hind tibia with 2 lateral teeth.

38 (39). Metope long, relatively narrow. Anterior margin of coryphe protruding angularly. Fore wings elongate, narrowing apically. Dorso-lateral lobes of phallobase without processes. Gonoplacs with protrudings basally. Distal parts of posterior connective laminae of gonapophyses IX turned at obtuse angle, with a pair of short teeth in bend places ..... **Conosimus**

39 (38). Metope more or less wide. Anterior margin of coryphe weakly convex. Fore wings barely narrowing apically, with widely rounded apices. Dorso-lateral lobes of phallobase with a pair of subapical processes. Gonoplacs without protrudings basally. Distal parts of posterior connective laminae of gonapophyses IX arched, without teeth in bend places ..... **Hysteropterum**

40 (37). Hind wings well developped. Hind tibia with single lateral tooth ..... **Bergevinium**

41 (36). Fore wings with narrow hypocostal plate or without plate.

42 (45). Metope with median and sublateral keels joining before upper margin of metope.

43 (44). Female anal tube elongate, narrowing apically (in dorsal view), curved (in lateral view). Anterior connective lamina of gonapophyse VIII with 3 distinct teeth in the apical group and 4–5 distinct teeth bearing keels in the lateral group. Surface of coryphe usually shagreened. Stylus with straight or convex hind margin ..... **Mycterodus**

44 (43). Female anal tube ovate (in dorsal view), not curved (in lateral view). Anterior connective lamina of gonapophyse VIII with 3 very smooth teeth in the apical group and 4 smooth teeth bearing keels in the lateral group. Surface of coryphe without microsculpture. Stylus with convex, hump-shaped hind margin ..... **Zopherisca**

45 (42). Metope with distinct median and sublateral keels joining at upper margin of metope or sublateral keels very weak, visible as traces.

46 (47). Stylus with strongly concave hind margin. Hind wings well developped (almost as long as fore wings) ..... **Latilica**

47 (46). Stylus with straight or weakly concave hind margin. Hind wings rudimentary.

48 (49). Aedeagus without ventral hooks. Apical processes of aedeagus enlarged (in lateral view). Dorso-lateral lobes of phallobase not fused dorso-apically. Metatarsomere I with a single intermediate socle seta apically ..... **Tshurtshurnella**

49 (48). Aedeagus with a pair of ventral hooks. Apical processes of aedeagus more or less narrow (in lateral view). Dorso-lateral lobes of phallobase fused in shape of collar dorso-apically. Metatarsomere I with 6–7 intermediate socle setae apically ..... **Hysterodus**

50 (35). Median field of gonapophyse IX with apical lobes approached and ringed like folds.

51 (52). Lateral parts of metope horn-shaped. Hind margin of abdominal sternum V with large projection ..... **Bootheca**

52 (51). Metope without horn-shaped processes. Hind margin of abdominal sternum V without large projection.

53 (58). Fore wings without hypocostal plate.

54 (55). Dorso-lateral lobes of phallobase strongly narrowing apically (in lateral view) or, if weakly narrowing, with additional apical processes ..... **Kervillea**

55 (54). Dorso-lateral lobes of phallobase wide, not narrowing or weakly narrowing apically (in lateral view), without additional apical processes.

56 (57). Metatarsomere I with 1–2 intermediate socle setae apically. Apical processes of aedeagus turned at obtuse angle (in lateral view) ..... **Scorlupella**

57 (56). Metatarsomere I with 5 intermediate socle setae apically. Apical processes of aedeagus arched (in lateral view) ..... **Rhissolepus**

58 (53). Fore wings with hypocostal plate ..... **Latematium**

Tribe **Issini** Spinola, 1839
Subtribe **Issina** Spinola, 1839

Genus ***Issus*** Fabricius, 1803
Type species *Cicada coleoptrata* Fabricius, 1781.

Diagnosis. Body elliptical or rhomboid (in dorsal view). Metope with distinct median keel and transverse keel apically; sublateral keels indistinct. Clypeus and metope separated by concavity. Fore wing without hypocostal plate; Radius, Mediana, and Cubitus anterior bifurcated (*R* 2, *M* 2, *CuA* 2). Hind wing well developed or more or less rudimentary. Hind tibia with 2 lateral teeth and 5–9 intermediate socle setae apically. Metatarsomere I as long as metatarsomeres II and III combined, with 6–7 intermediate socle setae apically. Pretarsal claws with 3–4 pairs of long setae. Arolium with deep notch, bears a pair of elongate dorso-lateral plates.

Male. Phallobase with short subapical lobe on dorsal side or without lobe. Dorso-lateral lobes of phallobase narrowing apically (in lateral view), with a pair of hemisphaerical processes above hook alveolae; ventral lobe long and broad, sometimes with relatively deep notch apically. Basal part of phallobase (below ventral lobe) in some species protruded like a keel (in lateral view). Aedeagus with a pair of ventral hooks directed to aedeagal base. Stylus capitulum narrowing apically (in dorsal view). Hind margin of stylus concave.

Female. Gonoplacs without keels. Distal parts of posterior connective laminae of gonapophyses IX arched or turned at obtuse angle. Lateral fields of gonapophyses IX flat. Median field of gonapophyses IX with a pair of lobes. Gonocoxa VIII with lobe-shaped hind margin. Endogonocoxal process bilobed or trilobed. Anterior connective lamina of gonapophyse VIII with 1 or 3 teeth bearing keels in the apical group and 2 teeth in the lateral group.

Remarks. In my opinion *Archissus* Sergel, 1986 (type species *Issus canariensis* Melichar, 1906) is a synonym of the *Issus* s. str.

Composition and distribution. 12 species are recorded from Europe: *Issus analis* Brullé, 1832; *I. bellardi* Melichar, 1906; *I. cinereus* (Olivier, 1791); *I. climacus* Fieber, 1876; *I. coleoptratus* (Fabricius, 1781); *I. fieberi* Melichar, 1906; *I. fissala* Fieber, 1876; *I. lauri* Ahrens, 1814; *I. muscaeformis* (Schrank, 1781); *I. pallipes* Lucas, 1853; *I. pospisili* Dlabola, 1958; *I. truncatus* Fieber, 1876 = *I. novaki* Dlabola, 1959 (Holzinger et al., 2003, syn.).

Genus ***Latissus*** Dlabola, 1974
Type species *Cicada dilatata* Geoffroy, 1785.

Diagnosis. Metope with distinct median keel and transverse keel apically; sublateral keels indistinct. Anterior margin of coryphe protrudes angularly (in dorsal view). Fore wing with hypocostal plate; *R* 2, *M* 2, *CuA* 2. Hind wing well developped. Hind tibia with 2 lateral teeth and 6–9 intermediate socle setae apically. Metatarsomere I with 6–8 intermediate socle setae apically. Arolium of pretarsus without notch, with 2 pairs of dorso-lateral plates. Pretarsal claws with 2 pairs of long setae.

Male. Phallobase dorsally with long, dorso-ventrally flattened subapical process. Both dorso-lateral lobes of phallobase with marginal process situated above hook alveolus; ventral lobe long, broad, with notch apically. Basal part of phallobase (below ventral lobe) sometimes protruded like a keel (in lateral view) ventrally. Aedeagus with a pair of ventral hooks turned to aedeagal base. Stylus capitulum narrowing apically (in dorsal view). Stylus with straight hind margin.

Female. Abdominal sternum VII with concave hind margin, which bears process medially. Anal tube elongate, with rounded apex (in dorsal view), weakly curved (in lateral view). Gonoplacs without keels. Distal parts of posterior connective laminae of gonapophyses IX turned at obtuse angle, with a pair of teeth in bend places. Lateral fields of gonapophyses IX protruding hemispherically. Median field of gonapophyses IX with a pair of lobes. Gonocoxa VIII with weakly protruding hind margin. Endogonocoxal process bilobed. Apical group of anterior connective lamina of gonapophyse VIII includes 3 teeth with keels; lateral group includes 2 large teeth with short keels (lower tooth bifurcated apically).

Composition and distribution. Monotypic genus. *Latissus dilatatus* (Geoffroy, 1785) is widely distributed in Mediterranean Region, also recorded from the Middle Europe.

Subtribe **Hysteropterina** Melichar, 1906

Genus ***Alloscelis*** Kusnezov, 1930
Type species *Hysteropterum vittifrons* Ivanoff, 1885.

Diagnosis. Metope with very weak median keel; sublateral keels distinct in upper part of metope and weakening before clypeus. Coryphe transverse. Fore wing without hypocostal plate; *R* 2, *M*3, *CuA* 1. Hind wing rudimentary. Hind tibia with 2 lateral teeth and 9–11 intermediate socle setae apically. Metatarsomere I with 2 intermediate socle setae apically.

Male. Anal tube with apical angles protruding like processes and rounded. Dorso-lateral lobes of phallobase with a pair of pointed lateral processes; ventral lobe broad, long, with notch apically. Aedeagus strongly sclerotized, bears a pair of lateral, lobe-shaped, rounded apically and turned down processes. Apical aedeagal processes narrowing apically, with broadening before apex (in lateral view), bear lateral appendages turned inside. Dorsal side of aedeagus with 2 awl-shaped crossing appendages. Hind margin of stylus concave before capitulum base. Capitulum of stylus wide, weakly narrowing apically; lateral tooth widely plate-shaped.

Female. Sternum VII with hind margin broadly concave. Anal tube elongate, pointed apically, with median keel dorsally. Anal column short (about 0.14 times as long as anal tube), broad. Gonoplacs without keels. Distal parts of posterior connective laminae of gonapophyses IX turned more or less at right angle. Lateral fields of gonapophyses IX with long processes. Medial field of gonapophyses IX with a pair of additional lobes perpendicular to field plane. Gonocoxa VIII with lobe-shaped hind margin in proximal part. Endogonocoxal process gradually narrowing apically; apical lobe simple, relatively short. Anterior connective lamina of gonapophyse VIII with 1 tooth (also small protuberance before apex) in the apical group and 5 teeth bearing keels in the lateral group.

Composition and distribution. Monotypic genus. *Alloscelis vittifrons* (Ivanoff, 1885) is recorded from the south of Russia and Ukraine.

Genus ***Fieberium*** Dlabola, 1980
Type species *Hysteropterum impressum* Fieber, 1877.
Lyrofrontium Dlabola, 1982, **syn. n.**
Type species *Hysteropterum paludum* Bergevin, 1918.

Diagnosis. Metope wide, with median and sublateral keels (sometimes weak) joining at upper margin of metope. Coryphe transverse; anterior margin weakly convex; posterior margin concave. Fore wing scarcely narrowing apically, with wide hypocostal plate; *R* 2, *M* 2–3, *CuA* 1. Hind wing rudimentary. Hind tibia

with single large lateral tooth (also additional small tooth may be present on one tibia or on both) and 5–8 intermediate socle setae apically. Metatarsomere I with 1–7 intermediate socle setae apically.

Male. Dorso-lateral lobes of phallobase with a pair of narrow long subapical processes; ventral lobe wide, long, with widely rounded apex. Aedeagus with a pair of long ventral hooks. Stylus with straight or convex hind margin; dorso-caudal angle narrowly rounded. Capitulum of stylus narrow, narrowing apically (in dorsal view); lateral tooth small plate-shaped.

Female. Gonoplacs with weak keels. Distal parts of posterior connective laminae of gonapophyses IX arched. Lateral fields of gonapophyses IX with large processes. Median field of gonapophyses IX protruding, with a pair of additional lobes perpendicular to field plane. Hind margin of gonocoxa VIII lobe-shaped. Endogonocoxal process narrowing apically. Anterior connective lamina of gonapophyse VIII with 1–3 teeth in the apical group and 2–3 teeth bearing keels in the lateral group.

Composition and distribution. The genus comprises 11 species distributed in Mediterranean. 2 species are recorded from Europe: *Fieberium impressum* (Fieber, 1877) and *F. pallidellum* (Matsumura, 1910).

Genus ***Palaeolithium*** Gnezdilov, **gen. n.**
Type species *Hysteropterum distinguendum* Kirschbaum, 1868.

Diagnosis. Metope with median and sublateral keels. Coryphe transverse; anterior margin convex. Scutellum with weak lateral keels. Fore wing with wide hypocostal plate; *R* 2, *M* 3, *CuA* 1. Hind wing rudimentary. Hind tibia with 2 lateral teeth and 5 intermediate socle setae apically. Metatarsomere I with 2 intermediate socle setae apically.

Male. Anal tube elongate, broadening apically, sides turned down. Anal column long (0.25-0.30 times as long as anal tube). Dorso-lateral lobes of phallobase with a pair of narrow, long, subapical processes; ventral lobe wide, long, with rounded apex. Aedeagus with a pair of long ventral hooks. Stylus with straight hind margin; dorso-caudal angle narrowly rounded. Capitulum of stylus long, narrowing apically; lateral tooth narrowly plate-shaped.

Female. Hind margin of abdominal sternum VII concave. Anal tube gradually narrowing apically; apex widely rounded. Anal column long (half as long as anal tube). Gonoplac keels with two teeth. Distal parts of posterior connective laminae of gonapophyses IX arched, with dentate margin. Lateral fields of gonapophyses IX with large processes. Median field strongly protruding, with a pair of additional lobes perpendicular to field plane. Hind margin of gonocoxa VIII lobe-shaped, mostly distally. Endogonocoxal process narrowing apically; apical lobe narrow; subapical lobe distinct. Anterior connective lamina of gonapophyse VIII with 3 teeth in the apical group and 2-3 teeth bearing high not smooth keels in the lateral group.

Remarks. Closely related to the genus *Fieberium* Dlabola, 1980 by the structure of gonapophyses IX; distinguished by gonoplac keels with two teeth and 2 lateral teeth of hind tibia.

Composition and distribution. Monotypic genus. *Palaeolithium distinguendum* (Kirschbaum, 1868), **comb. n.** (= *Hysteropterum straminum* Bergevin, 1915, **syn. n.**) is recorded from the West Mediterranean.

Genus ***Hysterodus*** Dlabola, 1980
Type species *Hysterodus sabzevaranus* Dlabola, 1980.

Diagnosis. Metope elongate, with median and sublateral (sometimes weak) keels joining at upper margin of metope. Coryphe square or transverse; anterior margin convex; posterior margin concave. Fore wing without hypocostal plate, sometimes strongly brachypterous; *R* 2, *M* 2–3, *CuA* 1. Hind wing rudimentary. Hind tibia with 2 lateral teeth and 4–8 intermediate socle setae apically. Metatarsomere I with 5–7 intermediate socle setae apically.

Male. Dorso-lateral lobes of phallobase fused dorsally, often with a pair of large lateral subapical processes and lobe-shaped dorsal comb; ventral lobe relatively short rounded apically. Aedeagus with a pair of long ventral hooks. Hind margin of stylus straight or concave; dorso-caudal angle widely rounded. Capitulum of stylus wide or narrow and long; lateral tooth widely plate-shaped.

Female. Distal parts of posterior connective laminae of gonapophyses IX arched. Lateral fields of gonapophyses IX more or less flat. Median field of gonapophyses IX with a pair of small lobes apically. Hind margin of gonocoxa VIII lobe-shaped (most developed proximally). Endogonocoxal process gradually narrowing apically; apical lobe narrow, simple. Anterior connective lamina of gonapophyse VIII with 3 teeth in the apical group and 2 teeth bearing keels in the lateral group.

Remarks. The genus related to the genus *Tshurtshurnella* Kusnezov, 1927 by the structure of the female gonapophyses IX.

Composition and distribution. 10 species are known from Iran and Middle Asia. Only 1 species in Europe – *Hysterodus bloetei* Dlabola, 1982 from Spain.

Genus ***Tshurtshurnella*** Kusnezov, 1927
Type species *Tshurtshurnella eugeniae* Kusnezov, 1927.

Diagnosis. Metope with median and sublateral (sometimes weak) keels. Coryphe transverse; anterior margin straight or convex (in dorsal view). Pronotum sometimes with distinct sensory pits arranged in three rows (*Tsh. eugeniae*) and with median keel. Fore wing without hypocostal plate; *R* 2, *M* 2, *CuA* 1. Hind wing rudimentary. Hind tibia with 2 lateral teeth and 5–8 intermediate socle setae apically. Metatarsomere I with single intermediate socle seta apically.

Male. Dorso-lateral lobes of phallobase relatively narrow or enlarged distally, usually with teeth or processes; ventral lobe long or reduced. Aedeagus without hooks. Apical processes of aedeagus with enlarged apices (in lateral view). Stylus massive, with straight hind margin and widely rounded dorso-caudal angle.

Female. Distal parts of posterior connective laminae of gonapophyses IX arched. Lateral fields of gonapophyses IX with short processes. Medial field of gonapophyses IX with a pair of lobes. Gonocoxa VIII with lobe-shaped hind margin, widened in proximal part. Endogonocoxal process gradually or sharply narrowing apically; apical lobe simple and short or long and narrow. Anterior connective lamina of gonapophyse VIII with 2–3 teeth in the apical group and 3 teeth bearing keels in the lateral group.

Composition and distribution. 9 species are recorded from Europe: *Tshurtshurnella armatissima* (Linnavuori, 1962); *T. campestre* (Lindberg, 1948); *T. despecta* (Linnavuori, 1965); *T. duffelsi* (Dlabola, 1975); *T. eugeniae* Kusnezov, 1927; *T. moreana* Dlabola, 1979; *T. peloponica* Dlabola, 1979; *T. pythia* Dlabola, 1979; *T. zelleri* (Kirschbaum, 1868).

Bubastia generic group

Genera: *Bubastia* Emeljanov, 1975; *Mulsantereum* Gnezdilov, 2002; *Falcidius* Stål, 1866; *Libanissum* Dlabola, 1980; *Palmallorcus* **gen. n.**; *Barbarissus* **gen. n.**

Genus ***Bubastia*** Emeljanov, 1975
Type species *Hysteropterum tauricum* Kusnezov, 1926.

Diagnosis. Metope with median and sublateral keels, the latter sometimes more or less weak. Coryphe transverse; anterior margin more or less straight or with strongly protruding lateral angles. Fore wing without hypocostal plate; *R* 2, *M* 3, *CuA* 1; veins well marked. Hind wing rudimentary. Hind tibia with 2 lateral teeth and 6-8 intermediate socle setae apically. Metatarsomere I with 2 intermediate socle setae apically.

Male. Dorso-lateral lobes of phallobase usually with a pair of subapical lateral processes; ventral lobe of phallobase long, broad. Aedeagus with a pair of ventral hooks. Stylus with hind margin straight or strongly concave. Capitulum of stylus broad, with additional tooth or narrow, without additional tooth (in dorsal view); lateral tooth widely plate-shaped.

Female. Distal parts of posterior connective laminae of gonapophyses IX turned at obtuse angle or arched. Lateral fields of gonapophyses IX with short or relatively long processes. Median field of gonapophyses IX with entire single lobe or single lobe notched apically. Hind margin of gonocoxa VIII weakly protruding or lobe-shaped. Endogonocoxal process gradually narrowing apically; apical lobe simple, relatively narrow. Anterior connective lamina of gonapophyse VIII with 3 teeth in the apical group and 2–3 teeth bearing keels in the lateral group.

Key for identification of subgenera of the genus *Bubastia*

1 (4). Capitulum of stylus broad (in dorsal view). Female anal tube more or less elongate. Gonocoxa VIII with weakly protruding hind margin.
2 (3). Capitulum of stylus broad, not narrowing apically, with additional tooth (in dorsal view). Female sternum VII relatively short. Female anal tube narrowing

apically. Median field of gonapophyses IX with entire single lobe ..... **Bubastia**
3 (2). Capitulum of stylus broad, narrowing apically, without additional tooth (in dorsal view). Female sternum VII relatively long. Female anal tube elongate, narrowing medially, truncate apically. Median field of gonapophyses IX with lobe notched apically ..... **Acrestia**
4 (1). Capitulum of stylus narrow (in dorsal view). Female anal tube strongly enlarged. Gonocoxa VIII with lobe-shaped hind margin ..... **Logvinenkoana**

Subgenus ***Bubastia*** s. str.
Type species *Hysteropterum tauricum* Kusnezov, 1926.

Composition. 15 species recorded from Europe: *Bubastia (Bubastia) corniculata* (Puton, 1890); *B. (B.) jankovici* Dlabola, 1980; *B. (B.) josifovi* Dlabola, 1980; *B. (B.) lindskogi* Dlabola, 1985; *B. (B.) ludviki* Dlabola, 1979; *B. (B.) lukia* Dlabola, 1984; *B. (B.) montandonica* Dlabola, 1984; *B. (B.) novalis* (Logvinenko, 1975); *B. (B.) obsoleta* (Fieber, 1877); *B. (B.) saskia* Dlabola, 1984; *B. (B.) spartica* Dlabola, 1982; *B. (B.) suturale* (Fieber, 1877); *B. (B.) taurica* (Kusnezov, 1926); *B. (B.) thaidis* Dlabola, 1987; *B. (B.) thessalica* Dlabola, 1980.

Subgenus ***Acrestia*** Dlabola, 1980
Type species *Bubastia quadracuta* Dlabola, 1980.

Composition. 4 species recorded from Europe: *Bubastia (Acrestia) ephialtes* (Linnavuori, 1971); *B. (A.) olympica* Dlabola, 1982; *B. (A.) quadracuta* Dlabola, 1980; *B. (A.) sakisi* Dlabola, 1984.

Subgenus ***Logvinenkoana*** Gnezdilov, 2002
Type species *Hysteropterum pictifrons* Melichar, 1906.

Composition. The subgenus includes 4 species distributed in Transcaucasia.

Genus ***Mulsantereum*** Gnezdilov, 2002
Type species *Hysteropterum maculifrons* Mulsant et Rey, 1855.

Diagnosis. Metope with distinct median and sublateral keels joining at upper margin of metope and weakening in lower part of metope. Coryphe transverse (2.6 times as wide as long); anterior margin angularly protruding; posterior margin concave. Pronotum 1.5 times as long as coryphe. Fore wing about twice as long as wide, gradually narrowing apically, with broad hypocostal plate; *R* 2, *M* 3, *CuA* 1; longitudinal veins well marked. Hind wing rudimentary. Hind tibia usually with 2 lateral teeth and 7–9 intermediate socle setae apically. Metatarsomere I with 7–8 intermediate socle setae apically.

Male. Anal tube narrow basally and apically. Dorso-lateral lobes of phallobase with a pair of triangular lateral subapical processes; ventral lobe long, relatively broad, rounded apically. Aedeagus with a pair of long ventral hooks.

Stylus with convex hind margin. Capitulum of stylus wide (in dorsal view); lateral tooth widely plate-shaped.

Female. Sternum VII with widely concave hind margin. Anal tube with more or less parallel sides and concave apex. Anal column short (0.20–0.25 times as long as anal tube), broad. Distal parts of posterior connective laminae of gonapophyses IX turned at right angle. Lateral fields of gonapophyses IX with long processes. Median field of gonapophyses IX with single lobe. Hind margin of gonocoxa VIII lobe-shaped proximally. Endogonocoxal process gradually narrowing apically; apical lobe simple. Triangular sclerotized plate of gonapophyse VIII with large pigmented process at the base of anterior connective lamina. Both apical and lateral group of anterior connective lamina of gonapophyse VIII includes 3 teeth with keels.

Composition and distribution. Monotypic genus. *Mulsantereum maculifrons* (Mulsant et Rey, 1855) is distributed in West Mediterranean.

Genus ***Falcidius*** Stål, 1866
Type species *Issus apterus* Fabricius, 1794.

Diagnosis. Metope with median keel weakening in its lower part; sublateral keels indistinct. Coryphe transverse; anterior margin convex; posterior margin concave. Pronotum with median keel. Scutellum sometimes with median keel. Fore wing with hypocostal plate or without plate; *R* 2–3, *M* 2–3, *CuA* 1; covered with net of veins. Hind wing rudimentary. Hind tibia with 2 lateral teeth and 5–7 intermediate socle setae apically. Metatarsomere I with 1–4 intermediate socle setae apically.

Male. Dorso-lateral lobes of phallobase not narrowing apically, fused in shape of collar; ventral lobe long, relatively broad. Aedeagus with a pair of ventral hooks strongly curved and turned to ventral side of the penis. Stylus with concave hind margin.

Female. Gonoplacs with weak transverse keels. Distal parts of posterior connective laminae of gonapophyses IX arched, with a pair of large teeth in bend places. Lateral fields of gonapophyses IX with long processes. Median field of gonapophyses IX with single lobe. Hind margin of gonocoxa VIII weakly protruding or lobe-shaped distally. Endogonocoxal process narrowing apically; apical lobe simple. Anterior connective lamina of gonapophyse VIII with 3 teeth bearing keel in the apical group and 2 large teeth bearing keels in the lateral group.

Remarks. The generic description given above is a characteristic of the genus *Falcidius* s. str., including the following species: *F. apterus* (Fabricius, 1794); *F. bergevini* Lindberg, 1963; *F. chlorizans* (Rey, 1891); *F. diphtheriopsis* Bergevin, 1919; *F. doriae* (Ferrari, 1884); *F. duffelsicus* Dlabola, 1982; *F. juniperi* (Bergevin, 1915); *F. limbatus* (A. Costa, 1864), **comb. n.**; *F. maroccanus* Bergevin, 1923.

Hysteropterum limbatum was described from Sicily and treated as a junior synonym of *Cercopis apterus* for a long time (Metcalf, 1958). Examination of

material from Sicily allows me to restore *Falcidius limbatus* as a valid name for an endemic species, which differs from *F. apterus* in the less curved hooks of aedeagus, weakly concave hind margin of stylus and capitulum of stylus not narrowing apically.

"Falcidius" abruzicus Dlabola, 1983, *Hysteropterum novaki* Wagner, 1962 and *H. oculatum* Linnavuori, 1965 [both transferred to *Falcidius* by Dlabola (1983)], according to the structure of the male genitalia do not belong to the genus *Falcidius* s.str.

Composition and distribution. 2 species recorded from Europe: *Falcidius apterus* (Fabricius, 1794); *F. limbatus* (A. Costa, 1864), **comb. n.**

Genus ***Libanissum*** Dlabola, 1980
Type species *Hysteropterum talhouki* Dlabola, 1974.

Diagnosis. Metope with distinct median keel (sometimes smoothed) and traces of sublateral keels. Coryphe transverse; anterior margin convex; posterior margin concave. Fore wing without hypocostal plate; *R* 2, *M* 3, *CuA* 1. Hind wing rudimentary. Hind tibia with 2 lateral teeth and 7–8 intermediate socle setae apically. Metatarsomere I with 6 intermediate socle setae apically.

Male. Dorso-lateral lobes of phallobase enlarged apically, in shape of collar around phallotrema, with a pair of relatively narrow processes under collar; ventral lobe long, broad, widely rounded apically. Aedeagus with a pair of long ventral hooks. Hind margin of stylus more or less straight. Capitulum of stylus narrowing apically (in dorsal view); lateral tooth narrowly plate-shaped.

Female. Gonoplacs without keels. Distal parts of posterior connective laminae of gonapophyses IX arched. Lateral fields of gonapophyses IX with short processes. Median field of gonapophyses IX strongly flattened laterally, with single lobe. Hind margin of gonocoxa VIII weakly protruding. Endogonocoxal process narrowing apically; apical lobe simple, narrow. Anterior connective lamina of gonapophyse VIII with 3 teeth bearing keel in the apical group and 5 teeth bearing keels (upper tooth very large and opposed to other teeth) in the lateral group.

Composition and distribution. 2 species recorded from the European Mediterranean: *Libanissum malickyi* Dlabola, 1989 and *L. talhouki* (Dlabola, 1974).

Genus ***Palmallorcus*** Gnezdilov, **gen. n.**
Type species *Hysteropterum balearicum* Dlabola, 1982.

Diagnosis. Metope with distinct median keel; sublateral keels distinct in upper part, but almost invisible in lower part. Median and sublateral keels joining at upper margin of metope. Coryphe transverse; anterior margin protruding at obtuse angle; posterior margin concave. Fore wing relatively flat, more or less oval, narrowing apically (1.7 times as long as wide), with narrow hypocostal plate; *R* 2, *M* 3, *CuA* 1. Hind wing rudimentary. Hind tibia with 2 lateral teeth and 8 intermediate socle setae apically. Metatarsomere I with 8 intermediate socle setae apically.

Male. Anal tube strongly enlarged medially, truncate at apex. Sides of anal tube turned down; ventral side protruding. Anal column short (0.12 times as long as anal tube). Penis strongly curved (in lateral view). Dorso-lateral lobes of phallobase long, with a pair of short, wide subapical processes; ventral lobe relatively long (almost reaching apices of dorso-lateral lobes), broad, slightly narrowing before truncate apex. Aedeagus with a pair of ventral hooks. Hind margin of stylus convex, hump-shaped. Capitulum of stylus strongly narrowing apically (in dorsal view); lateral tooth widely plate-shaped.

Female. Hind margin of sternum VII concave. Anal tube broad and convex (in lateral view), with apex truncate (in dorsal view). Anal column short (0.2 times as long as anal tube). Gonoplacs without keels. Distal parts of posterior connective laminae of gonapophyses IX weakly arched, with dentate margin. Lateral fields of gonapophyses IX with long processes. Median field of gonapophyses IX with single lobe. Hind margin of gonocoxa VIII lobe-shaped (especially proximally). Endogonocoxal process narrowing apically; apical lobe weakly bifurcated. Both apical and lateral group of anterior connective lamina of gonapophyse VIII includes 3 teeth.

Remarks. The genus is included in the *Bubastia* generic group according to the single lobe on median field of gonapophyses IX. Relationships of the genus within this group remain vague. It is distinguished by the complex of the following features: anterior margin of coryphe protruding at obtuse angle; fore wing with narrow hypocostal plate; capitulum of stylus strongly narrowing apically; gonoplacs without keels; distal parts of posterior connective laminae of gonapophyses IX weakly arched.

Composition and distribution. Monotypic genus. *Palmallorcus balearicus* (Dlabola, 1982), **comb. n.**, is recorded from the Balearic Islands and Cyprus.

Genus ***Barbarissus*** Gnezdilov, **gen. n.**
Type species *Issus punctulatus* Rambur, 1840.

Diagnosis. Metope almost as long as wide, with median and sublateral keels joining at upper margin of metope. Sublateral keels not reaching the clypeus. Coryphe transverse (twice as wide as long); anterior margin convex, truncate medially; posterior margin concave. Scutellum longer than pronotum. Fore wing oval, with narrow hypocostal plate; *R* 2, *M* 3, *CuA* 1; veins well marked. Hind wing rudimentary. Hind tibia with 2 lateral teeth and 7–8 intermediate socle setae apically. Metatarsomere I with 7–8 intermediate socle setae apically.

Male. Anal tube elongate, narrowing basally and apically. Anal column short (0.2 times as long as anal tube). Penis weakly curved (in lateral view). Dorso-lateral lobes of phallobase with a pair of wide semicircular subapical processes; ventral lobe long and wide. Aedeagus with a pair of long ventral hooks, which are flattened, sharply narrowing before apices. Hind margin of stylus slightly convex; dorso-caudal angle widely rounded. Capitulum of stylus wide, weakly narrowing apically; lateral tooth widely plate-shaped.

Female. Hind margin of sternum VII concave. Anal tube elongate (twice as long as wide), with rounded apex. Anal column short (0.25 times as long as anal tube). Gonoplacs without keels. Distal parts of posterior connective laminae of gonapophyses IX turned at obtuse angle. Lateral fields of gonapophyses IX with long processes. Median field of gonapophyses IX with single lobe. Hind margin of gonocoxa VIII lobe-shaped, especially proximally. Endogonocoxal process narrowing apically; apical lobe narrow, simple. Anterior connective lamina of gonapophyse VIII with 3 teeth in the apical group and 2 teeth and 3 keels (lower keel weak) in the lateral group

Composition and distribution. Monotypic genus. *Barbarissus punctulatus* (Rambur, 1840), **comb. n.**, is recorded from the Mediterranean regions of the Iberian Peninsula and NW Africa.

Remarks. The genus is included in the *Bubastia* generic group according to the single lobe on the median field of gonapophyses IX. Relationships of the genus within this group remain vague. It is distinguished by the complex of the following features: anterior margin of coryphe convex, truncate medially; fore wing with narrow hypocostal plate; capitulum of stylus wide, weakly narrowing apically; gonoplacs without keels; distal parts of posterior connective laminae of gonapophyses IX turned at obtuse angle.

Genus ***Granum*** Gnezdilov, **gen. n.**
Type species *Hysteropterum pooti* Dlabola, 1989.

Diagnosis. Body streamline, grain-shaped (in dorsal view). Metope with distinct median and sublateral keels joining at upper margin of metope. Coryphe transverse; anterior margin convex; posterior margin concave. Pronotum with weak median keel. Scutellum with median and lateral grooves. Fore wing with narrow hypocostal plate; *R* 2, *M* 2, *CuA* 1; longitudinal veins well marked. Hind wing rudimentary. Hind tibia with 2 lateral teeth and 6 intermediate socle setae apically. Metatarsomere I with 2 intermediate socle setae apically.

Male. Anal tube broadening apically; sides turned down; apex with notch. Anal column long (0.3 times as long as anal tube). Penis strongly curved. Dorso-lateral lobes of phallobase long, with apices forming a long turned down process and margins collar-shaped apically; ventral lobe wide basally, sharply narrowing apically. Aedeagus with a pair of long ventral hooks, which are strongly curved and crossed on dorsal side of penis. Hind margin of stylus concave at the base of capitulum. Capitulum of stylus narrow, narrowing apically; lateral tooth narrowly plate-shaped.

Female. Unknown.

Remarks. The genus related to the genus *Falcidius* Stål, 1866 by the structure of penis, distinguished by streamline, grain-shaped body, distinct sublateral keels of metope, and by long turned down process of phallobase.

Composition and distribution. Monotypic genus. *Granum pooti* (Dlabola, 1989), **comb. n.**, is recorded only from Spain.

Genus ***Hysteropterum*** Amyot et Serville, 1843

Type species *Issus immaculatus* Herrich-Schäffer, 1836 (non Fabricius, 1794) = *Issus reticulatus* Herrich-Schäffer, 1835.

Diagnosis. Body stumpy. Metope with median and sublateral keels (sometimes weak basally and apically), joining at upper margin of metope. Coryphe transverse (3-4 times as wide as long); anterior margin weakly convex; posterior margin concave. Fore wing prominent, slightly narrowing to a widely rounded apex; hypocostal plate wide; veins very distinct; *R* 2, *M* 3–4, *CuA* 1. Hind wing rudimentary. Hind tibia with 2 lateral teeth and 6–8 intermediate socle setae apically. Metatarsomere I with 2–7 intermediate socle setae apically.

Male. Anal tube long, narrowing basally and apically; apex with notch. Anal column long. Dorso-lateral lobes of phallobase with a pair of subapical processes; ventral lobe long and wide, narrowing apically. Aedeagus with a pair of wide long ventral hooks, narrowing apically. Apical processes of aedeagus broad, weakly narrowing apically. Hind margin of stylus convex. Capitulum of stylus narrow, weakly narrowing apically; lateral tooth widely plate-shaped.

Female. Hind margin of sternum VII concave. Anal tube wide or elongate, sometimes convex (in lateral view); apex rounded, with weak notch (in dorsal view). Anal column long (about 0.3–0.5 times as long as anal tube). Gonoplacs without keels. Distal parts of posterior connective laminae of gonapophyses IX arched. Lateral fields of gonapophyses IX with short processes. Median field of gonapophyses IX with a pair of lobes. Hind margin of gonocoxa VIII lobe-shaped. Endogonocoxal process gradually narrowing apically; apical lobe short, simple. Anterior connective lamina of gonapophyse VIII with 3 teeth bearing keel in the apical group and 3–4 teeth bearing keels in the lateral group.

Composition and distribution. The genus *Hysteropterum* s. str. comprises 6 species distributed in the Mediterranean and Central Europe: *Hysteropterum albaceticum* Dlabola, 1983; *H. alciranum* **sp. n.**; *H. alicantium* Dlabola, 1986; *H. vasconicum* **sp. n.**; *H. reticulatum* (Herrich-Schäffer, 1835) = *H. schaefferi* Metcalf, 1958 (Holzinger et al., 2003, syn.); *H. tkalcui* Dlabola, 1980, **comb. n.** (from *Falcidius*). The generic position of species from other regions of the World, which were included in *Hysteropterum* up to now, must be revised on the basis of contemporary treatment of the genus, accepted in this paper.

Hysteropterum alciranum Gnezdilov, **sp. n.**

Diagnosis. Fore wing with net of transverse veins apically. Metatarsomere I with 6 intermediate socle setae apically.

Coloration. Coryphe, pronotum, and scutellum yellowish brown, with dark brown dots. Fore wing reddish brown, with light brown veins and pink field between 2 dark brown bands. Ventral side and legs yellowish brown.

Male. Anal tube elongate, widening apically. Anal column long (half as long as anal tube). Dorso-lateral lobes of phallobase concave before apices, so outer margin looks like narrow lobe (in lateral view); ventral lobe long, almost reaching

apices of dorso-lateral lobes, narrowing apically. Aedeagal hooks sharply narrowing apically.

Female. Unknown.

Body length: 3.12 mm.

Remarks. The male genitalia of this species were already figured (Dlabola, 1980, figs 287–297) under the name *Hysteropterum reticulatum* H.-S. New species is distinguished by coloration of fore wings and subapical concavity on dorso-lateral lobes of phallobase.

Material. Holotype, ♂: Spain, Valencia Prov., Alcira (Moróder) [HNHM].

Hysteropterum vasconicum Gnezdilov, **sp. n.**

Diagnosis. Metope almost as long as wide. Median keel of metope weak apically. Coryphe transverse, 3–3.5 times as wide as long. Pronotum 1.4–1.7 times as long as coryphe. Scutellum 1.6–1.7 times as long as pronotum. Fore wing with net of transverse veins apically. Hind tibia with 6–7 intermediate socle setae apically. Metatarsomere I with 2–3 intermediate socle setae apically.

Coloration. General coloration yellowish brown; fore wing, including veins, paler, in female covered with brown dots and with a pair of large light spots: between *R* and *CuA* in basal part and between *R* and *M* in apical part. Head covered with dark brown dots. Pronotum with 2–3 rows of dark brown dots. Metope with a pair of large yellow spots apically. Legs yellowish brown with brown spots and stripes. Abdominal tergites black (males). Abdominal sternites yellow with brown spots at seta bases. Genital segments yellow.

Male. Anal tube more or less oval, with distinct notch apically. Anal column long (half as long as anal tube). Dorso-lateral lobes of phallobase with a pair of semicircular subapical processes; ventral lobe long and wide, with rounded apex. Aedeagal hooks sharply narrowing apically. Stylus with widely rounded dorso-caudal angle. Capitulum of stylus gradually narrowing apically.

Female. Hind margin of sternum VII widely concave. Anal tube long and convex (in lateral view), with large lateral lobes basally (in dorsal view). Apex of anal tube truncate, with weak notch. Anal column long (0.3–0.5 times as long as anal tube). Endogonocoxal process with distinct subapical lobe. Anterior connective lamina of gonapophyse VIII with 4 teeth bearing keels in the lateral group.

Body length: males – 3.3–3.6 mm; female – 3.9 mm.

Material. Holotype, ♂: S. France, Pyrénées Orientales, Conigou Mt., 12-16.VI.[19]24 (Zerny) [NHMW]. Paratypes: 2 ♂ and 1 ♀, with the same label [NHMW].

Species ***incertae sedis***:

"Hysteropterum" algiricum (Lucas, 1849) does not belong to the genus *Hysteropterum* s. str., because of hind tibia with only 1 lateral tooth (Lucas, 1849, fig. 9 f); the records of this species from Tunisia (Linnavuori, 1971) and Pantelleria Island of Italy (D'Urso & Guglielmino, 1995) belong to a new species (Gnezdilov et al., in press).

"Hysteropterum" nevadense Linnavuori, 1957
"Hysteropterum" pallidum Melichar, 1906
"Hysteropterum" phaeophleps Fieber, 1877
"Hysteropterum" subangulare Rey, 1891 does not belong to the genus *Hysteropterum* s. str., because of metope without sublateral keels (Rey, 1891).

Mycterodus generic group

Genera: *Mycterodus* Spinola, 1839; *Zopherisca* Emeljanov, 2001; *Conosimus* Mulsant et Rey, 1855; *Latilica* Emeljanov, 1971; *Bergevinium* **gen. n.**

Genus ***Mycterodus*** Spinola, 1839
Type species *Issus nasutus* Herrich-Schäffer, 1835 = *Cercopis immaculata* Fabricius, 1794.

Diagnosis. Metope with median and sublateral keels (sometimes smoothed). Median and sublateral keels joining before upper margin of metope. Coryphe from transverse to elongate; anterior margin angulate. Surface of coryphe usually shagreened. Fore wing with narrow hypocostal plate; *R* 2, *M* 2-3, *CuA* 1. Hind wing well developed or rudimentary. Hind tibia with 2 lateral teeth and 6–10 intermediate socle setae apically. Metatarsomere I longer than metatarsomere II, but not longer than metatarsomeres II and III combined. Metatarsomere I with 1–5 intermediate socle setae apically. Arolium of pretarsus with one pair of dorso-lateral plates. Pretarsal claws with 2–3 pairs of long setae.

Male. Dorso-lateral lobes of phallobase with dentate processes or comb or without processes and comb; ventral lobe more or less long or small, sometimes absent. Aedeagus with a pair of ventral hooks or without hooks. Aedeagal phallotrema with collar formed by projections of apical aedeagal processes, or without collar. Stylus with straight or convex hind margin.

Female. Hind margin of sternum VII widely concave, with process medially, or straight and without process. Anal tube elongate and convex (in lateral view), narrowing apically (in dorsal view). Gonoplacs without keels. Distal parts of posterior connective laminae of gonapophyses IX arched or turned at obtuse angle. Lateral fields of gonapophyses IX with long or short processes. Median field of gonapophyses IX with a pair of lobes. Hind margin of gonocoxa VIII almost not protruding or lobe-shaped. Apical lobe of endogonocoxal process bifurcate or simple. Anterior connective lamina of gonapophyse VIII with 3 teeth in the apical group and 4--5 teeth bearing keels in the lateral group.

Key to subgenera of the genus *Mycterodus*

1 (6). Aedeagus with a pair of ventral hooks.
2 (5). Hind wings well developed.
3 (4). Body more or less widely oval (in dorsal view). Male phallobase with 4 and more longitudinal dentate combs ..... **Comoporodus**

4 (3). Body elongate (in dorsal view). Male phallobase with only 2 longitudinal dentate combs ..... **Semirodus**
5 (2). Hind wings rudimentary ..... **Mycterodus**
6 (1). Aedeagus without ventral hooks.
7 (8). Dorso-lateral lobes of phallobase with a row of teeth and a pair of long hook-shaped processes ..... **Aegaeum** subgen. n.
8 (7). Dorso-lateral lobes of phallobase without a row of teeth and hook-shaped processes.
9 (10). Coryphe without median keel. Ventral lobe of phallobase short or absent. Lateral fields of gonapophyses IX with short processes. Median field of gonapophyses IX with a pair of broad apical lobes. Hind margin of gonocoxa VIII lobe-shaped ..... **Aconosimus**
10 (9). Coryphe with median keel. Ventral lobe of phallobase long, very narrow. Lateral fields of gonapophyses IX with long processes. Median field of gonapophyses IX with a pair of narrow apical lobes. Hind margin of gonocoxa VIII almost not protruding ..... **Montissus** subgen. n.

Subgenus ***Mycterodus*** s. str.
Type species *Issus nasutus* Herrich-Schäffer, 1835 = *Cercopis immaculata* Fabricius, 1794.

Composition and distribution. 15 species recorded from Europe: *Mycterodus (Mycterodus) aspernatus* Gnezdilov, 2001; *M. (M.) confusus* Stål, 1861 = *M. carpathicus* Logvinenko, 1974 (Holzinger et al., 2003, syn.); *M. (M.) cuniceps* Melichar, 1906; *M. (M.) denticulatus* Lindberg, 1948; *M. (M.) drosopoulosi* Dlabola, 1982; *M. (M.) etruscus* Dlabola, 1980; *M. (M.) immaculatus* (Fabricius, 1794); *M. (M.) intricatus* Stål, 1861; *M. (M.) lapaceki* Dlabola, 1984; *M. (M.) orthocephalus* Ferrari, 1885; *M. (M.) rhynchophysus* Logvinenko, 1967; *M. (M.) rostratulus* Emeljanov, 1964; *M. (M.) sarmaticus* Logvinenko, 1967; *M. (M.) serbicus* Dlabola, 1980; *M. (M.) sulcatus* Fieber, 1876.

Subgenus ***Semirodus*** Dlabola, 1987
Type species *Mycterodus pallens* Stål, 1861.

Composition and distribution. 3 species distributed in the East Mediterranenan: *Mycterodus (Semirodus) idomeneus* Dlabola, 1985; *M. (S.) pallens* Stål, 1861; *M. (S.) colossicus* Dlabola, 1987.

Subgenus ***Comoporodus*** Koçak, 1982
Type species *Mycterodus batumus* Dlabola, 1958.

Composition and distribution. 2 species recorded from Europe: *Mycterodus (Comoporodus) mutuus* Logvinenko, 1968; *M. (C.) ovifrons* (Puton, 1890).

Subgenus ***Aegaeum*** Gnezdilov, **subgen. n.**
Type species *Hysteropterum lesbicum* Dlabola, 1981.

Diagnosis.Large, similar to members of the subgenus *Mycterodus* s. str. Metope with distinct median keel, continuing on postclypeus; sublateral keels distinct only in its upper part, reaching lower margin of eyes. Coryphe transverse; anterior margin obtusely angulate. Scutellum with a pair of lateral keels and median groove. Fore wing elongate, with relatively wide hypocostal plate; *R* 2, *M* 3, *CuA* 1. Hind wing well developed. Hind tibia with 6–7 intermediate socle setae apically. Metatarsomere I with 4 (3+1) intermediate socle setae apically.

Male. Dorso-lateral lobes of phallobase with a row of teeth and a pair of long hook-shaped processes.

Female. Sternum VII widely concave. Distal parts of posterior connective laminae of gonapophyses IX turned at obtuse angle, with a pair of large teeth in bend places. Lateral fields of gonapophyses IX with short processes. Median field of gonapophyses IX bulging. Hind margin of gonocoxa VIII lobe-shaped. Endogonocoxal process sharply narrowing apically; apical lobe weakly bifurcate. Anterior connective lamina of gonapophyse VIII with 3 teeth in the apical group and 4 teeth (2 teeth bearing keels) in the lateral group.

Composition and distribution. 1 species recorded from Europe: *Mycterodus (Aegaeum) lesbicus* (Dlabola, 1981), **comb. n.**

Subgenus ***Montissus*** Gnezdilov, **subgen. n.**
Type species *Mycterodus batathen* Gnezdilov, **sp. n.**

Diagnosis. Metope with distinct median keel, continuing on postclypeus and sublateral keels, weak basally and apically. Coryphe with median keel; anterior margin angulate. Pronotum with median keel. Scutellum with a pair of lateral keels and median groove. Hind wing rudimentary. Hind tibia with 6–7 intermediate socle setae apically. Metatarsomere I with 1 intermediate socle setae apically.

Male. Phallobase with long, strongly narrow ventral lobe. Aedeagus without ventral hooks. Dorsal side of aedeagus with a pair of longitudinal folds turned ventrally. Dorso-lateral lobes of phallobase rest against longitudinal folds of aedeagus. Stylus with straight hind margin. Capitulum of stylus sharply narrowing apically; lateral tooth widely plate-shaped.

Female. Distal parts of posterior connective laminae of gonapophyses IX arched. Lateral fields of gonapophyses IX with long projections. Median field of gonapophyses IX with a pair of narrow lobes apically. Hind margin of gonocoxa VIII almost unprotruding. Endogonocoxal process narrowing apically; apical lobe short, simple. Lateral group of anterior connective lamina of gonapophyse VIII includes 4 large teeth with keels.

Composition and distribution.The subgenus comprises 2 species – the type species from North Western Caucasus, and *M. (M.) bernhaueri* Dlabola, 1997 from Turkey.

Mycterodus batathen Gnezdilov, **sp. n.**

Diagnosis. Metope with distinct median keel continuing on postclypeus and sublateral keels, the latter weak basally and apically. Coryphe 1.3 times as long as wide; anterior margin protruding angularly. Pronotum with median keel. Scutellum with lateral keels and median groove. Hind tibia with 6–7 intermediate socle setae. Metatarsomere I with a single intermediate socle seta apically.

Coloration. Upper side brown. Metope with a pair of light yellow spots. Clypeus with median light yellow stripe. Apex of rostrum dark brown. Well pigmented female with median keel of coryphe, pronotum, and scutellum yellowish brown and metope dark brown, with yellowish brown median and sublateral keels. Abdominal tergites black. Ventral side of body from yellowish brown to brown. Legs of well pigmented female with longitudinal brown stripes. Socle setae of hind legs and claws dark brown.

Male. Anal tube elongate, slightly enlarged medially, with weak notch apically. Anal column short (as long as anal tube). Dorso-lateral lobes of phallobase short, with a pair of semicircular cavities at upper margin and a pair of deep, wedge-shaped lateral cavities; ventral lobe long, very narrow. Aedeagus without ventral hooks. Ventral side of aedeagus slightly concave apically, phallotrema heart-shaped (in dorsal view), with two tooth-like processes. Dorsal side of aedeagus with a pair of longitudinal folds turned ventrally. Dorso-lateral lobes of phallobase rest against longitudinal folds of aedeagus. Stylus with straight hind margin. Capitulum of stylus sharply narrowing apically; lateral tooth widely plate-shaped.

Female. Anal tube more or less elongate, parallel-sided, truncate at apex. Anal column long (about half as long as anal tube). Proximal part of posterior connective laminae of gonapophyses IX almost flat. Distal parts of posterior connective laminae of gonapophyses IX arched. Endogonocoxal process narrowing apically; apical lobe short, simple. Lateral group of anterior connective lamina of gonapophyse VIII includes 4 large teeth with keels.

Body length: males – 4.9 mm, females – 5.2–5.5 mm.

Remarks. New species closely related to *M. bernhaueri* Dlabola, 1997 by the structure of male genitalia; distinguished by more elongate anal tube and dorso-lateral lobes of phallobase weakly concave apically and concave ventral margins.

Material. Holotype, ♂: Russia, Krasnodar Territory, Sheskharis vill., near Novorossiysk, Markotkh mountain range, Grushevy pass, 8.IX.2001 (V.V. Neimorovets) [ZIN]. Paratypes: 1 ♂ and 3 ♀, with the same label [ZIN].

Subgenus ***Aconosimus*** Dlabola, 1983
Type species: *Conosimus goricus* Dlabola, 1958.

Composition and distribution. Several species distributed in the Caucasus, Iran and Asia Minor. The subgeneric assignment of some species transferred to the subgenus up to now (Dlabola, 1997) remains vague. The subgenus, probably, absent in Europe.

Species ***incertae sedis***:
"Mycterodus" wittmeri Dlabola, 1974

Genus ***Zopherisca*** Emeljanov, 2001
Type species *Issus tendinosus* Spinola, 1839.

Diagnosis. Metope with median and sublateral keels joining before upper margin of metope. Coryphe a little wider than long; anterior margin weakly protruding, obtuse-angulate. Fore wing without hypocostal plate; *R* 2, *M* 3, *CuA* 1. Hind wing well developped. Hind tibia with 2 lateral teeth and 7–9 intermediate socle setae apically. Metatarsomere I with 7–8 intermediate socle setae apically.

Male. Dorso-lateral lobes of phallobase well sclerotized, with a pair of tooth-like projections apically (*Z. tendinosa*); ventral lobe relatively long, narrowing apically. Aedeagus well sclerotized, without ventral hooks. Stylus with strongly convex hind margin. Capitulum of stylus rnot narrowing apically (in dorsal view); lateral tooth widely plate-shaped.

Female. Gonoplacs without keels. Distal parts of posterior connective laminae of gonapophyses IX arched, with hemispherical broadenings before apices. Lateral fields of gonapophyses IX with processes. Median field of gonapophyses IX with a pair of lobes. Hind margin of gonocoxa VIII lobe-shaped only proximally. Endogonocoxal process narrowing apically. Anterior connective lamina of gonapophyse VIII with 3 strongly smoothed teeth in the apical group and 4 smoothed teeth bearing keels in the lateral group.

Remarks. The genus related to *Mycterodus* Spinola, 1839 by metope with median and sublateral keels joining before upper margin of metope.

Composition and distribution. 2 species in the East Mediterranean and Eastern Europe: *Zopherisca penelopae* (Dlabola, 1974) and *Z. tendinosa* (Spinola, 1839).

Genus ***Conosimus*** Mulsant et Rey, 1855
Type species *Conosimus coelatus* Mulsant et Rey, 1855.

Diagnosis. Body elongate-oval (in dorsal view). Metope long, relatively narrow, with distinct median and sublateral keels joining at upper margin of metope. Sublateral keels of metope joining at acute angle. Coryphe transverse or elongate and narrow; anterior margin protruding angularly; posterior margin concave. Pronotum with strongly convex anterior margin. Fore wing elongated, narrowing apically, with wide hypocostal plate; *R* 2, *M* 3, *CuA* 1. Hind wing rudimentary. Hind tibia with 2 lateral teeth and 7–9 intermediate socle setae apically. Metatarsomere I with 6–8 intermediate socle setae apically.

Male. Dorso-lateral lobes of phallobase without processes; ventral lobe long and wide, widely rounded at apex. Aedeagus with a pair of long ventral hooks. Hind margin of stylus straight or weakly convex. Capitulum of stylus wide, strongly narrowed before apex; lateral tooth widely plate-shaped.

Female. Gonoplacs with protrudings basally. Distal parts of posterior connective laminae of gonapophyses IX turned at obtuse angle, with a pair of short teeth in bend places. Lateral fields of gonapophyses IX with short processes. Median field of gonapophyses IX with a pair of short lobes. Hind margin of gonocoxa VIII protruding in a wide lobe. Endogonocoxal process narrowing apically; apical lobe simple. Anterior connective lamina of gonapophyse VIII with 3 teeth in the apical group and 4 teeth bearing keels in the lateral group.

Composition and distribution. 5 species in the Mediterranean; 3 species are recorded from Europe: *Conosimus coelatus* Mulsant et Rey, 1855; *C. horvathi* (Soós, 1976); *C. malfanus* Dlabola, 1987.

Genus ***Latilica*** Emeljanov, 1971
Type species *Latilica emeljanovi* Logvinenko, 1975.

Diagnosis. Metope with median and sublateral keels joining at upper margin of metope. Coryphe transverse; anterior margin protruding at obtuse angle or convex. Fore wing without hypocostal plate; *R* 2–3, *M* 3, *CuA* 1. Hind wing well developed (almost as long as fore wing). Hind tibia with 2 lateral teeth and 5 intermediate socle setae apically. Metatarsomere I with 6 intermediate socle setae apically. Arolium of pretarsus without notch, with 2 pairs of dorso-lateral plates. Claws with two pairs of long setae.

Male. Anal tube elongate (in dorsal view). Dorso-lateral lobes of phallobase with a pair of claw-like apical projections and a pair of elongate subapical processes; ventral lobe wide, with narrow apex. Aedeagus with a pair of long ventral hooks. Stylus with strongly concave hind margin.

Female. Gonoplacs with transverse protrudings. Distal parts of posterior connective laminae of gonapophyses IX turned at obtuse angle. Lateral fields of gonapophyses IX with short processes. Median field of gonapophyses IX with a pair of lobes. Hind margin of gonocoxa VIII lobe-shaped. Endogonocoxal process gradually narrowing apically; apical lobe with weak bifurcation. Anterior connective lamina of gonapophyse VIII with 3 teeth in the apical group and 3–4 teeth (3 teeth bearing keels) in the lateral group.

Composition and distribution. 4 species are recorded from Europe: *Latilica antalyica* (Dlabola, 1986), **comb. n.**; *L. emeljanovi* Logvinenko, 1975; *L. maculipes* (Melichar, 1906); *L. quercus* (Lindberg, 1948), **comb. n.**

Genus ***Bergevinium*** Gnezdilov, **gen. n.**
Type species *Hysteropterum gravesteini* Dlabola, 1975.

Diagnosis. Metope with median and sublateral keels joining at upper margin of metope. Coryphe transverse; anterior margin protruding at obtuse angle; posterior margin concave. Fore wing elongate, not narrowing apically, widely rounded at apex, with wide hypocostal plate; *R* 2, *M* 3, *CuA* 1. Hind wing well developed. Hind tibia with single lateral tooth and 7–8 intermediate socle setae apically. Metatarsomere I with 7 intermediate socle setae apically.

Male. Dorso-lateral lobes of phallobase long, with a pair of triangular lateral subapical processes; ventral lobe long and wide, broadening to rounded apex. Aedeagus with a pair of long ventral hooks. Stylus with more or less straight hind margin; dorso-caudal angle narrowly rounded. Capitulum of stylus narrow, not narrowing to widely rounded apex (in dorsal view); lateral tooth narrowly plate-shaped.

Female. Gonoplacs without keels. Distal parts of posterior connective laminae of gonapophyses IX arched, with a pair of long teeth in bend places. Lateral fields of gonapophyses IX with short and wide processes. Median field of gonapophyses IX with a pair of large lobes. Hind margin of gonocoxa VIII protruding in a large lobe widened distally. Endogonocoxal process gradually narrowing apically; apical lobe simple; subapical lobe short. Anterior connective lamina of gonapophyse VIII with 3 teeth in the apical group and 3 teeth bearing keels in the lateral group.

Remarks. The genus is included in the *Mycterodus* generic group according to the ovipositor structure; distinguished by single tooth of hind tibia.

Composition and distribution. 5 species in the West Mediterranean; 3 species are recorded from Europe: *Bergevinium gravesteini* (Dlabola, 1975), **comb. n.**; *B. angulare* (Fieber, 1877), **comb. n.**; *B. malagense* (Matsumura, 1910), **comb. n.** Two other species here trasferred from *Hysteropterum* are known from Northern Africa: *B. lividum* (Bergevin, 1923), **comb.n.** (from Marocco) and *B. trapezoidale* (Bergevin, 1917), **comb.n.** (from Algeria).

Kervillea generic group

Genera: *Kervillea* Bergevin, 1918; *Latematium* Dlabola, 1979; *Rhissolepus* Emeljanov, 1971; *Scorlupella* Emeljanov, 1971; *Bootheca* Emeljanov, 1964.

Genus ***Kervillea*** Bergevin, 1918
Type species *Kervillea ancyrana* Bergevin, 1918 = *Hysteropterum placophorum* Horváth, 1905.

Diagnosis. Metope with median keel only or with distinct median keel and weak sublateral keels. Coryphe transverse. Fore wing without hypocostal plate; *R* 2-3, *M* 2, *CuA* 1. Hind wing rudimentary. Hind tibia with 2–3 lateral teeth and 5–7 intermediate socle setae apically. Metatarsomere I with 2–7 intermediate socle setae apically. Arolium of pretarsus with weak notch or without notch, bears one pair of dorso-lateral plates. Claws with 2–3 pairs of long setae.

Male. Apical angles of anal tube usually in shape of short processes. Dorso-lateral lobes of phallobase long and wide, sometimes strongly narrowed apically; ventral lobe narrowing apically or massive, with widely rounded apex. Aedeagus without ventral hooks or with a pair of short hooks.

Female. Distal parts of posterior connective laminae of gonapophyses IX strongly arched. Lateral fields of gonapophyses IX with processes. Median field of gonapophyses IX with lobes approached and ringed like folds. Hind margin of gonocoxa VIII weakly protruding proximally or lobe-shaped. Endogonocoxal process gradually or sharply narrowing apically; apical lobe simple, short or elongate.

Both apical and lateral group of anterior connective lamina of gonapophyse VIII with 3 teeth bearing keel.

Key to the subgenera of the genus *Kervillea*

1 (4). Metope with median keel only. Metatarsomere I with 4–7 intermediate socle setae apically. Ventral lobe of phallobase narrowing apically. Aedeagus without ventral hooks.
2 (3). Apical processes of aedeagus wide and well sclerotized (in lateral view). Hind margin of gonocoxa VIII weakly protruding proximally ..... **Kervillea**
3 (2). Apical processes of aedeagus strongly narrowing and weakly sclerotized (in lateral view). Hind margin of gonocoxa VIII lobe-shaped ..... **Falcidiopsis**
4 (1). Metope with distinct median keel and weak sublateral keels. Metatarsomere I with 2 intermediate socle setae apically. Ventral lobe of phallobase massive, with widely rounded apex. Aedeagus with a pair of short ventral hooks ..... **Corymbius**

Subgenus ***Kervillea*** s. str.
Type species *Kervillea ancyrana* Bergevin, 1918 = *Hysteropterum placophorum* Horváth, 1905.

Composition and distribution. 12 species in the East Mediterranean, Asia Minor, Central and Eastern Europe. 6 species are recorded from Europe: *Kervillea (Kervillea) basiniger* (Dlabola, 1982); *K. (K.) conspurcata* (Spinola, 1839); *K. (K.) coronata* (Logvinenko, 1977); *K. (K.) nervosa* (Fieber, 1877), **comb. n.** (transferred from the genus *Hysteropterum* on the base of external morphology only; type specimen, female according to the original description, lacks the genital segments); *K. (K.) scoleogramma* (Fieber, 1877); *K. (K.) syriaca* (Melichar, 1906).

Subgenus ***Falcidiopsis*** Kusnezov, 1930, **stat. n.**
Type species *Falcidiopsis kirgisorum* Kusnezov, 1930.

Composition and distribution. Monotypic subgenus. *Kervillea (Falcidiopsis) kirgisorum* (Kusnezov, 1930), **comb. n.** (= *Hysteropterum pygmaeum* Vilbaste, 1961, **syn. n.**) distributed in Kazakhstan, Ukraine and South Russia (Kalmykia). *Kervillea beysehirica* (Dlabola, 1983) described from Turkey, probably, also belongs to this subgenus.

Subgenus ***Corymbius*** Gnezdilov, 2002
Type species *Quadrastylum tekirdagicum* Dlabola, 1982.

Composition and distribution. 5 species in Asia Minor and East Mediterranean (Gnezdilov, 2002a); 2 species are recorded from Europe: *Kervillea (Corymbius) insulana* (Dlabola, 1982) and *K. (C.) tekirdagica* (Dlabola, 1982).

Genus ***Rhissolepus*** Emeljanov, 1971
Type species *Hysteropterum ergenense* Becker, 1865.

Diagnosis. Metope with distinct median keel only, sometimes with traces of sublateral keels. Coryphe transverse. Fore wing without hypocostal plate; *R* 2, *M* 2, *CuA* 1. Hind wing rudimentary. Hind tibia with 2 lateral teeth and 5 intermediate socle setae apically. Metatarsomere I with 5 intermediate socle setae apically. Arolium of pretarsus without notch, with a pair of dorso-lateral plates. Claws with a pair of setae.

Male. Anal tube more or less elongate, broadening to truncate apex (in dorsal view); apical angles turned down (in lateral view). Anal column long (about 0.3 times as long as anal tube). Dorso-lateral lobes of phallobase wide, weakly narrowing apically, without processes; ventral lobe long and wide; rounded apex with notch. Aedeagus without ventral hooks. Apical processes of aedeagus weakly narrowing (in lateral view). Hind margin of stylus weakly concave. Capitulum of stylus weakly narrowing apically (in dorsal view).

Female. Hind margin of abdominal sternum VII convex medially. Anal tube convex (in lateral view), narrowing medially (in dorsal view). Anal column long (about 0.3 times as long as anal tube). Gonoplacs without keels. Distal parts of posterior connective laminae of gonapophyses IX arched. Lateral fields of gonapophyses IX with short processes. Median field of gonapophyses IX with lobes approached and ringed like folds. Hind margin of gonocoxa VIII lobe-shaped, mostly proximally. Endogonocoxal process gradually narrowing apically; apical lobe short, simple. Anterior connective lamina of gonapophyse VIII with 3 teeth in the apical group and 3 teeth bearing keels in the lateral group.

Remarks. The genus related to *Scorlupella* Emeljanov, 1971 by the structure of penis.

Composition and distribution. Monotypic genus known from south of Russia (Astrakhanskaya Prov.) and from Kazakhstan.

Species ***incertae sedis***:
"Rhissolepus" aspinosus Dlabola, 1982.

Genus ***Scorlupella*** Emeljanov, 1971
Type species *Issus discolor* Germar, 1821.

Diagnosis. Metope with median keel only. Coryphe transverse (3–4 times as wide as long); anterior margin weakly convex or straight; posterior margin concave. Fore wing without hypocostal plate; *R* 2, *M* 2–3, *CuA* 1–2. Hind wing rudimentary. Hind tibia with 2 lateral teeth and 5–7 intermediate socle setae apically. Metatarsomere I with 1–2 intermediate socle setae apically.

Male. Anal tube elongate. Dorso-lateral lobes of phallobase not narrowing apically, fused dorsally. Dorso-caudal part of phallobase sometimes protruding in unsclerotized and unpigmented sack; ventral lobe long, gradually narrowing apically.

Aedeagus without ventral hooks. Hind margin of stylus concave. Capitulum of stylus weakly narrowing apically; lateral tooth widely plate-shaped.

Female. Gonoplacs without keels. Distal parts of posterior connective laminae of gonapophyses IX arched or turned at obtuse angle. Lateral fields of gonapophyses IX with short processes. Median field of gonapophyses IX with lobes approached and ringed like folds. Hind margin of gonocoxa VIII protruding into a lobe. Endogonocoxal process gradually narrowing apically; apical lobe simple, short and wide. Anterior connective lamina of gonapophyse VIII with 3 teeth in the apical group and 3 teeth bearing keels in the lateral group.

Composition and distribution. 9 species in Asia Minor, Caucasus, and the Crimea; 4 species are recorded from Europe: *Scorlupella discolor* (Germar, 1821); *S. medea* Logvinenko, 1978; *S. montana* (Becker, 1865); *S. pulchella* (Ivanoff, 1885), **comb. n.** (from *Hysteropterum*).

Genus ***Latematium*** Dlabola, 1979
Type species *Hysteropterum latifrons* Fieber, 1877.

Diagnosis. Metope wide, median and sublateral keels indistinct or with weak median keel. Coryphe transverse, with median groove; anterior margin convex or angulate; posterior margin concave. Pronotum almost as long as coryphe, narrow, with weak median keel (sometimes indistinct). Fore wing broadening apically, with wide hypocostal plate; *R* 2, *M* 3–5, *CuA* 1. Hind wing rudimentary. Hind tibia with 2 lateral teeth and 5–6 intermediate socle setae apically. Metatarsomere I with 4–6 intermediate socle setae apically.

Male. Anal tube gradually broadening apically, apical angles in shape of wide processes turned down or anal tube narrowing basally and apically. Penis weakly curved (in lateral view). Dorso-lateral lobes of phallobase narrow, with a pair of processes or without processes; ventral lobe long and wide, without additional lobes or trilobed apically. Aedeagus without ventral hooks or with a pair of short curved hooks. Apical processes of aedeagus pointed, not lobed or bilobed. Hind margin of stylus concave or more or less straight; dorso-caudal angle acute or widely rounded. Capitulum of stylus long and wide or long and narrow; lateral tooth widely plate-shaped.

Female. Gonoplacs without keels. Distal parts of posterior connective laminae of gonapophyses IX turned at obtuse angle. Lateral fields of gonapophyses IX with long processes. Median field of gonapophyses IX with lobes approached and ringed like folds. Hind margin of gonocoxa VIII lobe-shaped (widened proximally). Endogonocoxal process gradually narrowing apically; apical lobe short, simple. Anterior connective lamina of gonapophyse VIII with 3 teeth in the apical group and 2–3 teeth bearing keels in the lateral group.

Composition and distribution. 5 species in the East Mediterranean, Asia Minor, Central and East Europe.

Key to subgenera of the genus *Latematium*

1 (2). Fore wing with indistinct veins. Male anal tube broadening apically, apical angles in shape of wide processes turned down. Dorso-lateral lobes of phallobase without processes. Ventral lobe of phallobase long and wide, without additional lobes. Aedeagus without ventral hooks. Apical processes of aedeagus not lobed. Hind margin of stylus more or less straight; dorso-caudal angle acute. Capitulum of stylus long and narrow, not narrowing apically (in dorsal view) ..... **Latematium**

2 (1). Fore wing with distinct veins. Male anal tube narrowing basally and apically, without processes. Dorso-lateral lobes of phallobase with a pair of narrow weakly sclerotized subapical processes. Ventral lobe of phallobase trilobed apically. Aedeagus with a pair of short ventral hooks. Apical processes of aedeagus bilobed. Hind margin of stylus concave; dorso-caudal angle widely rounded. Capitulum of stylus long and wide, weakly narrowing apically (in dorsal view) ..... **Atticus** subgen. n.

Subgenus ***Latematium*** s. str.
Type species *Hysteropterum latifrons* Fieber, 1877.

Composition and distribution. 2 species in South Eeastern Europe: *Latematium (Latematium) latifrons* (Fieber, 1877); *L. (L.) cygnetis* (Fieber, 1877), **comb. n.** (from *Falcidius*).

Subgenus ***Atticus*** Gnezdilov, **subgen. n.**
Type species *Latematium graecicum* Dlabola, 1982.

Diagnosis. Coryphe transverse, anterior margin weakly convex. Metope wider than clypeus, with weak median keel. Pronotum narrow; anterior margin convex, with median keel. Scutellum with a pair of lateral keels, sometimes with median keel as well. Fore wing wide, widening caudad, with long, relatively wide hypocostal plate; *R* 2, *M* 3–5. *CuA* 1; numerous transversal veins; longitudinal and transversal veins very distinct. Hind wing rudimentary. Hind tibia with 5–6 intermediate socle setae apically. Metatarsomere I with 6 intermediate socle setae apically.

Male. Anal tube narrowing basally and apically, without processes. Dorso-lateral lobes of phallobase narrowing apically, with a pair of narrow weakly sclerotized subapical processes. Ventral lobe of phallobase covered with small teeth, long and wide, trilobed apically (central lobe wide and notched apically, lateral lobes narrow). Aedeagus with a pair of short, strongly curved, ventral hooks. Apical processes of aedeagus narrow and bilobed. Hind margin of stylus concave; dorso-caudal angle widely rounded. Capitulum of stylus long and wide, weakly narrowing apically (in dorsal view).

Composition and distribution. Monotypic subgenus distributed in Greece.

Species ***incertae sedis***:
"Latematium" cypriacum Dlabola, 1982.

Genus ***Bootheca*** Emeljanov, 1964
Type species *Lusanda taurus* Oshanin, 1870.

Diagnosis. Lateral parts of metope horn-shaped. Median keel of metope indistinct; sublateral keels distinct and joining at upper margin of metope. Coryphe transverse, with median groove. Scutellum with median groove. Fore wing without hypocostal plate; *R* 2, *M* 3, *CuA* 1; transverse veins well marked. Hind wing rudimentary. Hind tibia with 2 lateral teeth and 6–7 intermediate socle setae apically. Metatarsomere I with 6–7 intermediate socle setae apically.

Male. Anal tube broadening apically; apex with deep notch. Anal column short. Dorso-lateral lobes of phallobase narrowing to claw-like apices, with a pair of triangular subapical processes; ventral lobe wide and long, strongly narrowing apically. Aedeagus with a pair of short ventral hooks. Apical processes of aedeagus strongly narrowing (in lateral view). Hind margin of stylus deeply concave at the base of capitulum. Capitulum of stylus not narrowing apically, with rounded apex; lateral tooth widely plate-shaped.

Female. Hind margin of abdominal sternum V with large projection (probably, male anal tube rests against this projection during copulation). Hind margin of abdominal sternum VII concave. Anal tube elongate, slaightly narrowing medially; apex with notch (in dorsal view). Anal column long (about 0.3 times as long as anal tube). Gonoplacs without keels. Distal parts of posterior connective laminae of gonapophyses IX turned at obtuse angle. Lateral fields of gonapophyses IX with short processes. Median field of gonapophyses IX with lobes approached and ringed like folds. Hind margin of gonocoxa VIII protruding into a lobe (widened proximally). Endogonocoxal process sharply narrowing apically; apical lobe short, simple. Both apical and lateral groups of anterior connective lamina of gonapophyse VIII with 3 teeth bearing keel.

Composition and distribution. Monotypic genus recorded only from Eastern and South-Eastern Europe (Ukraine, Moldova, Bulgaria).

Genus ***Pseudohemisphaerius*** Melichar, 1906
Type species *Hysteropterum piceum* Puton, 1884.

Diagnosis. Metope with weak median keel only, continuing on postclypeus. Coryphe transverse (4 times as wide as long), with median groove; anterior margin convex. Scutellum with median groove. Fore wing hemispherical, with net of veins, without hypocostal plate; claval suture indistinct. Hind wing rudimentary. Hind tibia with 2 lateral teeth and 5–6 intermediate socle setae apically. Metatarsomere I with 6–7 intermediate socle setae apically.

Male. Anal tube long, broadening to apex (in dorsal view); apical angles turned down (in lateral view). Anal column short (0.25 times as long as anal tube).

Dorso-lateral lobes of phallobase narrowing apically; apical parts of lobes in shape of large teeth; lateral margins dentate; ventral lobe sharply narrowing apically. Apical dorsal part of penis phallobase in shape of unsclerotized and unpigmented sack. Aedeagus without ventral hooks. Hind margin of stylus concave; dorso-caudal angle narrowly rounded. Capitulum of stylus weakly narrowing apically; lateral tooth widely plate-shaped.

Female. Hind margin of abdominal sternum VII concave, with process medially. Anal tube elongate and weakly convex (in lateral view), slightly narrowing to widely rounded apex (in dorsal view). Anal column short (0.25 times as long as anal tube), broadening apically. Gonoplacs without keels. Distal parts of posterior connective laminae of gonapophyses IX turned at obtuse angle, with dentate margin. Lateral fields of gonapophyses IX with large processes. Median field of gonapophyses IX with a pair of additional lobes perpendicular to field plane. Hind margin of gonocoxa VIII protruding into a lobe (widened proximally). Endogonocoxal process gradually narrowing apically; apical lobe simple, narrow; subapical lobe short. Anterior connective lamina of gonapophyse VIII with 3 teeth in the apical group and 3 teeth bearing keels in the lateral group.

Remarks. The genus related to *Kervillea* Bergevin, 1918 by the structure of male genitalia; distinguished by indistinct claval suture of fore wing and a pair of additional lobes of median field of gonapophyses IX.

Composition and distribution. Monotypic genus recorded only from Greece.

Subtribe **Agalmatiina** Gnezdilov, 2002

Genus ***Clybeccus*** Gnezdilov, **gen. n.**
Type species *Hysteropterum declivum* Dlabola, 1986.

Diagnosis. Metope convex, with relatively distinct median and sublateral keels joining at upper margin of metope. Coryphe transverse; anterior margin convex; posterior margin concave. Coryphe and pronotum of subequal length. Anterior margin of pronotum sometimes elevated like a keel, excepting median line. Scutellum twice as long as pronotum. Fore wing relatively flat, 1.3–1.4 times as long as wide, widely rounded apically, with broad hypocostal plate; *R* 2, *M* 3, *CuA* 1. Hind wing rudimentary. Hind tibia with 2 lateral teeth and 8 intermediate socle setae apically. Metatarsomere I with 6–7 intermediate socle setae apically.

Male. Anal tube more or less oval, truncate apically; lateral margins turned down. Anal column short (0.15–0.20 times as long as anal tube). Penis turned at right angle (in lateral view). Dorso-lateral lobes of phallobase long, with a pair of narrow lateral subapical processes; ventral lobe long, relatively narrowing basally, enlarged and rounded apically. Aedeagus with a pair of long ventral hooks, gradually narrowing apically. Stylus with weakly convex hind margin. Capitulum of stylus elongate, not narrowing to widely rounded apex (in dorsal view); lateral tooth widely plate-shaped.

Female. Sternum VII with concave hind margin. Anal tube elongate and weakly convex (in lateral view), truncate apically (in dorsal view). Anal column relatively long (0.3 times as long as anal tube), narrow. Gonoplacs without keels. Distal parts of posterior connective laminae of gonapophyses IX weakly arched. Lateral fields of gonapophyses IX with broad and long processes. Median field of gonapophyses IX strongly convex, with fused lobes. Gonocoxa VIII with lobe-shaped hind margin weakening in distal part. Endogonocoxal process gradually narrows to apex; apical lobe weakly bifurcate; subapical lobe large. Anterior connective lamina of gonapophyse VIII with 3 teeth in the apical group and 4 large teeth bearing keels in the lateral group.

Composition and distribution. Monotypic genus. *Clybeccus declivum* (Dlabola, 1986), **comb. n.** is distributed in West Mediterranean.

Remarks. The genus takes rather isolated position in the subtribe, because of the following features: metope convex, with relatively distinct median and sublateral keels; penis turned at right angle; gonoplacs without keels; lateral fields of gonapophyses IX with broad and long processes; medial field of gonapophyses IX without process turned to the base of gonapophyses.

Genus ***Tingissus*** Gnezdilov, **gen. n.**
Type species *Hysteropterum tangirum* Matsumura, 1910.

Diagnosis. Metope with distinct median keel and very weak sublateral keels. Coryphe transverse; anterior margin convex; posterior margin concave. Fore wing with broad hypocostal plate; *R* 2, *M* 3, *CuA* 1. Hind wing rudimentary (0.25–0.30 times as long as fore wing). Hind tibia with 2 lateral teeth and 8–10 intermediate socle setae apically. Metatarsomere I with 6–7 intermediate socle setae apically.

Male. Anal tube more or less oval (in dorsal view), lateral margins turned down. Anal column short. Penis arched (in lateral view). Dorso-lateral lobes of phallobase with a pair of large, triangular subapical processes; ventral lobe long and broad. Aedeagus with a pair of long, pointed ventral hooks. Hind margin of stylus straight. Capitulum of stylus narrowing apically (in dorsal view); lateral tooth widely plate-shaped.

Female. Sternum VII with hind margin sharply concave. Anal tube elongate, slightly narrowing apically (in dorsal view). Anal column relatively short (0.25–0.30 times as long as anal tube). Gonoplacs with transverse keels. Distal parts of posterior connective laminae of gonapophyses IX turned at obtuse angle, with a pair of weak teeth in points of bend. Lateral fields of gonapophyses IX with short processes. Median field of gonapophyses IX forming a relatively short appendage, turned to the base of gonapophyses, with a pair of short lobes apically. Gonocoxa VIII with lobe-shaped hind margin, weakening in distal part. Endogonocoxal process narrowing apically. Anterior connective lamina of gonapophyse VIII with 1 tooth in apical group and with 4 teeth bearing keels in lateral group.

Remarks. Closely related to *Agalmatium* Emeljanov, 1971 by the structure of gonapophyses IX; distinguished by the following features: metatarsomere I with 6–7 intermediate socle setae apically; distal parts of posterior connective laminae of gonapophyses IX turned at obtuse angle; lateral fields of gonapophyses IX with short processes; median field of gonapophyses IX forming a relatively short appendage; anterior connective lamina of gonapophyse VIII with 1 tooth in the apical group.

Composition and distribution. Monotypic genus. *Tingissus tangirus* (Matsumura, 1910), **comb. n.** is recorded from North Morocco and South Portugal.

Genus ***Iberanum*** Gnezdilov, **gen. n.**

Type species *Iberanum dlabolai* **sp. n.**

Diagnosis. Metope with distinct median keel; sublateral keels indistinct. Coryphe transverse; anterior margin protruding angularly; posterior margin concave. Fore wing elongate (twice as long as wide), widely rounded apically, with broad hypocostal plate; *R* 2, *M* 2–4, *CuA* 1. Hind wing well developed (about 0.7 times as long as fore wing). Hind tibia with 2 lateral teeth and 7–9 intermediate socle setae apically. Metatarsomere I with 7 intermediate socle setae apically.

Male. Anal tube elongate, narrowing basally and before truncate apex. Anal column short (0.2 times as long as anal tube) and narrow. Dorso-lateral lobes of phallobase long, not narrowing apically (in lateral view), with a pair of apical unpigmented teeth and a pair of triangular subapical processes with dentate margin; ventral lobe of phallobase relatively long, broadened apically. Aedeagus with a pair of long ventral hooks, not reaching the base of aedeagus. Stylus with straight hind margin; dorso-caudal angle widely rounded. Capitulum of stylus elongate, narrow, almost not narrowing to truncated apex (in dorsal view); lateral tooth weakly plate-shaped.

Female. Sternum VII with hind margin sharply concave. Anal tube approximately rectangular, with rounded angles, weakly convex (in lateral view), slightly narrowing apically (in dorsal view). Anal column short. Gonoplacs with transverse protrudings. Distal parts of posterior connective laminae of gonapophyses IX weakly arched and with dentate margin. Lateral fields of gonapophyses IX with short processes. Medial field of gonapophyses IX forming a relatively short appendage, turned to the base of gonapophyses, with a pair of short lobes apically. Hind margin of gonocoxa VIII protruding into a lobe widened distally. Endogonocoxal process sharply narrowing before apex; apical lobe long and narrow. Anterior connective lamina of gonapophyse VIII with 3 teeth in the apical group and 3 teeth bearing keels in the lateral group.

Remarks. Closely related to *Agalmatium* Emeljanov, 1971 by the structure of gonapophyses IX; distinguished in the following features: hind wing well developed; metatarsomere I with 7 intermediate socle setae apically; lateral fields of gonapophyses IX with short processes; medial field of gonapophyses IX forming a relatively short appendage. Differs from the closely related *Tingissus* gen. n. in features mentioned in the key.

Composition and distribution. Monotypic genus recorded from North Spain.

Iberanum dlabolai Gnezdilov, **sp. n.**

Diagnosis. General coloration brownish yellow, with dark brown spots on fore wings. Apices of clypeus and rostrum dark. Metope with dark brown traces of sensory pits. Coryphe with a pair of dark brown bean-like spots before posterior margin. Pronotum with a pair of dark brown dots medially. Scutellum with a pair of dark brown spots on its upper angles. Fore wings with dark longitudinal veins. Femur and tibia with longitudinal dark brown stripes. Socle setae of hind legs dark brown.

Body length: male – 4.6 mm; female – 5.1 mm.

Material. Holotype, ♂: Spain, Navarra, Yesa, 4 km E Pamplona, 400 m, 23.VI.1986 (J.P. Duffels) [ZMAN]. Paratype: 1 ♀, with the same label [ZMAN].

Remarks. The tipe specimens were indicated by Dlabola (1989) as *Hysteropterum tangirum* Matsumura.

Genus ***Agalmatium*** Emeljanov, 1971

Type species *Cercopis grylloides* Fabricius, 1794 = *Fulgora flavescens* Olivier, 1791.

Diagnosis. Metope with distinct median keel; sublateral keels indistinct. Fore wing with broad hypocostal plate; *R* 2, *M* 3, *CuA* 1. Hind wing rudimentary. Hind tibia with 2 lateral teeth. Metatarsomere I as long as metatarsomere II, with 2 intermediate socle setae apically. Pretarsal claws with 3 pairs of long setae. Arolium of pretarsus with a pair of elongated dorso-lateral plates.

Male. Anal tube elongate, apical angles turned down, often in shape of processes (dorsal and lateral view). Dorso-lateral lobes of phallobase wide, with a pair of short subapical processes; ventral lobe relatively long, widely rounded apically. Aedeagus with a pair of long ventral hooks turned to aedeagal base. Stylus with hind margin concave.

Female. Gonoplacs with transverse keels. Distal parts of posterior connective laminae of gonapophyses IX arched. Lateral fields of gonapophyse IX flat. Median field of gonapophyses IX forming a large process, turned to the base of gonapophyses, with a pair of short lobes apically. Hind margin of gonocoxa VIII lobe-shaped, protruding as a process distally. Endogonocoxal process gradually narrowing to apex; apical lobe narrow. Anterior connective lamina of gonapophyse VIII with 3 teeth in the apical group and 2–3 teeth bearing 4–5 keels in the lateral group.

Composition and distribution. 6 species are recorded from Europe: *Agalmatium abruptum* (Bergevin, 1920); *A. bilobum* (Fieber, 1977); *A. costale* (Matsumura, 1910); *A. curtulum* (Melichar, 1906); *A. flavescens* (Olivier, 1791); *A. melanophleps* (Fieber, 1877), **comb. n.** (transferred from *Hysteropterum*). Most of them are restricted to the Mediterranean Region, and only 2 species are also known from Central Europe.

Species ***incertae sedis***:

"Agalmatium" corsicum Dlabola, 1982 does not belong to the genus *Agalmatium* s. str., because of hind tibia with only 1 lateral tooth (Dlabola, 1982).

Литература

Ануфриев Г.А., Емельянов А.Ф. 1988. Подотряд Cicadinea (Auchenorrhyncha) – цикадовые // *Определитель насекомых Дальнего Востока СССР. Равнокрылые и полужесткокрылые.* **2**: 12-495.

Байрямова В. 1991. Състав и разпространение на видовете от семейство Issidae (Homoptera, Auchenorrhyncha) в България // *Acta zool. Bulg.*, **41**: 58-62.

Байрямова В. 1992. Проучвания върху цикадната фауна (Homoptera, Auchenorrhyncha) на Родопите // *Acta zool. Bulg.*, **44**: 44-56.

Вильбасте Ю. 1961. Новые цикадовые (Homoptera: Cicadina) из окрестностей Астрахани // *Изв. АН Эстонской ССР*, Биол. сер., **10** (4): 315-331.

Гнездилов В.М. 2000. К познанию фаунистических комплексов цикадовых (Homoptera, Cicadina) основных растительных формаций северо-западного Кавказа // *Энтомол. обозр.*, **79** (4): 794-811.

Гнездилов В.М. 2002. Морфология яйцеклада представителей подсем. Issinae (Homoptera, Cicadina, Issidae) // *Энтомол. обозр.*, **81** (3): 605-626.

Емельянов А.Ф. 1969. Реклассификация носаток подсемейства Orgeriinae Палеарктической фауны (Homoptera, Dictyopharidae) // *Энтомол. обозр.*, **48** (2): 324-339.

Емельянов А.Ф. 1971. Новые роды цикадовых фауны СССР из семейств Cixiidae и Issidae (Homoptera, Auchenorrhyncha) // *Энтомол. обозр.*, **50** (3): 619-627.

Емельянов А.Ф. 1982. Строение и эволюция лапок у носаток (Homoptera, Dictyopharidae) // *Энтомол. обозр.*, **61** (3): 501-516.

Емельянов А.Ф. 1990. Опыт построения филогенетического древа фулгороидных цикадовых (Homoptera, Cicadina) // *Энтомол. обозр.*, **69** (2): 353-356.

Иванов И. 1885. Список кобылок, Cicadina, окрестностей Купянска, с таблицами для различения родов и видов этих насекомых // *Тр. Общ-ва испыт. природы Импер. Харьк. унив.*, **19**: 1(83)-76(158).

Логвиненко В.Н. 1974. Обзор цикадовых рода *Mycterodus* Spin. (Homoptera, Issidae) фауны СССР // *Энтомол. обозр.*, **53** (4): 830-852.

Логвиненко В.Н. 1975a. Обзор видов цикадовых рода элуропсис – *Aeluropsis* Em. (Auchenorrhyncha, Issidae) // *Вестн. зоол.*, **1**: 56-61.

Логвиненко В.Н. 1975b. Fulgoroidea // *Фауна Украины*, **20** (2): 1-287.

Bourgoin T. 1993. Female genitalia in Hemiptera Fulgoromorpha, morphological and phylogenetic data // *Ann. Soc. ent. Fr. (N.S.)*, **29** (3): 225-244.

Costa A. 1864. Generi e specie d'Insetti della Fauna Italiana // *Ann. Mus. zool. Napoli*, **2**: 128-138.

Dlabola J. 1958. Records of leafhoppers from Czechoslovakia and South European countries // *Acta faun. ent. Mus. Nat. Pragae*, **3**: 7-15.

Dlabola J. 1979. *Tshurtshurnella*, *Bubastia* and andere verwandte Taxone (Auchenorrhyncha, Issidae) // *Acta ent. bohemosl*, **66** (4): 266-286.

Dlabola J. 1980. Tribus-Einteilung, neue Gattungen und Arten der subf. Issinae in der eremischen zone (Homoptera, Auchenorrhyncha) // *Acta Mus. nat. Pragae*, **36**B (4): 173-247.

Dlabola J. 1982. Fortsetzung der Erganzungen zur Issiden-Taxonomie von Anatolien, Iran und Griechenland (Homoptera, Auchenorrhyncha) // *Acta Mus. nat. Pragae*, **38**B (3): 113-169.

Dlabola J. 1983. Neue mediterrane, meistens anatolische Issiden (Homoptera, Auchenorrhyncha) // *Acta ent. bohemoslov.*, **80**: 114-136.

Dlabola J. 1984. Typenrevision einiger mediterraner bzw. nordafrikanischer *Hysteropterum* (s.l.) (Auchenorrhyncha – Issidae) // *Acta faun. ent. Mus. nat. Pragae*, **17** (195): 27-67.

Dlabola J. 1985. Neue mediterrane, eremische und ostafrikanische issidentaxone (Hom., Auchenorrhyncha) // *Acta Mus. nat. Pragae*, **40**B (3-4): 217-243.

Dlabola J. 1986. Neue Arten der fulgoromorphen Zikaden – Familien vom Mittelmeergebiet und Nahen Osten // *Acta Mus. nat. Pragae*, **42**B (3-4): 169-196.

Dlabola J. 1987. Zur Tribus – Einteilung der Issinae und berchreibung von drei neuen taxa (Homoptera, Issidae) // *Acta ent. Mus. nat. Pragae*, **42**: 61-71.

Dlabola J. 1989. Neue Issiden und andere Zikadenarten des Mediterraneums und vom Zuliegenden Eremial (Homoptera, Auchenorrhyncha) // *Acta Mus. nat. Pragae*, **45**B (1): 21-59.

Dlabola J. 1997. Mycterodus verwandte Taxone und sieben neue Zikadenarten (Homoptera, Auchenorrhyncha) // *Acta ent. Mus. nat. Pragae*, **44** [1995]: 301-319.

Dmitriev D.A. 1999. Some interesting records of Cicadina (Homoptera) from the Voronezh and neighbouring provinces // *Zoosyst. Ross.*, **8** (1): 83-84.

D'Urso V. & Guglielmino A. 1995. Homoptera, Auchenorrhyncha. *In*: Arthropoda di Lampedusa, Linosa e Pantelleria (Canale di Sicilia, Mar Mediterraneo) // *Naturalista sicil.*, **19** (Suppl.): 279-301.

Emeljanov A.F. 1999. Notes on delimitation of families of the Issidae group with description of a new species of Caliscelidae belonging to a new genus and tribe (Homoptera, Fulgoroidea) // *Zoosyst. Ross.*, **8** (1): 61-72.

Fennah R.G. 1954. The higher classification of the family Issidae (Homoptera: Fulgoroidea) with descriptions of new species // *Trans. Roy. ent. Soc. Lond.*, **105** (19): 455-474.

Fennah R.G. 1978. The higher classification of the Nogodinidae (Homoptera, Fulgoroidea) with the description of a new genus and species // *Entomologist's mon. Mag.*, **113** [1977]: 113-119.

Fieber F.-X. 1877. Les Cicadines d'Europe. Pt. 2 // *Rev. Mag. Zool.*, Ser. 3., **5**: 1-39.

Gnezdilov V.M. 2002a. Notes on the genus *Kervillea* Bergevin, 1918 (Hemiptera, Fulgoromorpha, Issidae) // *Denisia 04, zugleich Katalogue des OÖ. Landesmuseums, N. F*, **176**: 147-154.

Gnezdilov V.M. 2002b. New species of the genus *Tshurtshurnella* Kusnezov, 1927 (Homoptera, Cicadina, Issidae) from Turkey and Lebanon // *Russian Entomol. J.*, **11** (3): 233-240.

Gnezdilov V.M. 2003. A new tribe of the family Issidae (Homoptera, Cicadina) with comments on the family as a whole // *Zoosyst. Ross.*, **11** (2), (in press).

Gnezdilov V.M., Guglielmino A. & V. D'Urso. A new genus and new species of the family Issidae (Homoptera, Cicadina) from the West Mediterranean Region // *Russian Entomol. J.* (in press).

Gruev B. 1973. Über zwei Arten der Familie Issidae in Bulgarien (Homoptera, Auchenorrhyncha) // *Folia ent. Hung. S.N.*, **26** (Suppl.): 71-74.

Haupt H. 1929. Neueinteilung der Homoptera – Cicadina nach phylogenetisch zu Wertenden Merkmalen // *Zool. Jbh. (Jena)*, **58**: 173-286.

Holzinger W.E., Kammerlander I. & H. Nickel. 2003. *The Auchenorrhyncha of Central Europe. Fulgoromorpha, Cicadomorpha excl. Cicadellidae*. **1**. Leiden, Brill Academic Publishers. 673 pp.

Kusnezov V. 1926. Beschreibung der neuen *Hysteropterum*-Arten (Homoptera) // *Rev. Russ. d'Ent.*, **20**: 280-283.

Kusnezov V. 1930. Eine neue Issiden-Gattung und Art // *Wien. entomol. Zeit.*, **47** (2): 98.

Linnavuori R. 1971. A leafhopper material from Tunisia, with remarks on some species of the adjacent countries // *Ann. Soc. ent. Fr. (N.S.)*, **7** (1): 57-73.

Lucas H. 1849. Histoire naturelle des animaux articulés. Insectes // *Exploration scientifique de l'Algérie*, **3-4**: 1-527 and atlas.

Matsumura S. 1910. Neue Cicadinen aus Europa und dem Mittelmeergebiet // *J. Coll. sci. Tokyo*, **27** (18): 1-38.

Melichar L. 1896. *Cicadinen (Hemiptera-Homoptera) von Mittel-Europa.* Berlin, Verlag von Felix L. Dames. 364 pp., 12 pls.

Melichar L. 1906. Monographie der Issiden (Homoptera) // *Abh. zool.-bot. Ges. Wien*, **3** (4): 1-327.

Metcalf Z.P. 1958. Issidae. Fulgoroidea // *General catalogue of the Homoptera*, **4**: 1-561.

Muir F. 1930. On the classification of the Fulgoroidea // *Ann. Mag. nat. Hist.*, Ser. 10, **6**: 461-478.

Nast J. 1987. The Auchenorrhyncha (Homoptera) of Europe // *Ann. Zool.*, **40** (15): 535-661.

O'Brien L.B. & Wilson S.W. 1985. Planthopper systematics and external morphology // *The leafhoppers and planthoppers*. New York, J. Wiley & Sons: 61-102.

Ossiannilsson F. 1978. The Auchenorrhyncha (Homoptera) of Fennoscandia and Denmark. Fulgoromorpha // *Fauna ent. scand.*, **7** (1): 1-222.

Puton A. 1884. Hemiptères nouveaux // *Rev. Ent.*, **3**: 85-88.

Rey C. 1891. Observations sur quelques Hémiptères – Homoptères et descriptions d'espèces nouvelles ou peu connues // *Rev. Ent.*, **10**: 240-256.

Remane R. 1985. Vorläufige Anmerkungen zur Evolution und Speziation der Gattung *Issus* F. auf den Mittelatlantischen Inseln (Kanaren, Madeira) (Homoptera Auchenorrhyncha Fulgoromorpha Issidae) // *Marburger Ent. Publ.*, **1** (10): 1-168.

Scudder G.G.E. 1961. The comparative morphology of the insect ovipositor // *Trans. Roy. ent. Soc. Lond.*, **113** (2): 25-40.

Sergel R. 1986a. Notes on the evolution of the fulgoroid genus *Issus* Fabricius and the establishing of two subgenera (Homoptera: Auchenorrhyncha: Fulgoroidea: Issidae) // *Biol. Z.*, **1** (1): 40-57.

Sergel R. 1986b. Wing-reduction and body size of Canarian issid species: effects of island situation and milieu of their habitat // *Biol. Z.*, **1** (1): 84-89.

Yang C.-T., Chang T.-Y. 2000. *The external male genitalia of Hemiptera (Homoptera – Heteroptera).* Taichung, Shih Way Publishers. 746 pp.

Yeh W.-B., Yang Ch.-Tu & Hui Cho-Fat. 1998. Phylogenetic relationships of the Tropiduchidae-group (Homoptera: Fulgoroidea) of planthoppers inferred through nucleotide sequences // *Zool. Stud.*, **37** (1): 45-55.

BLANK

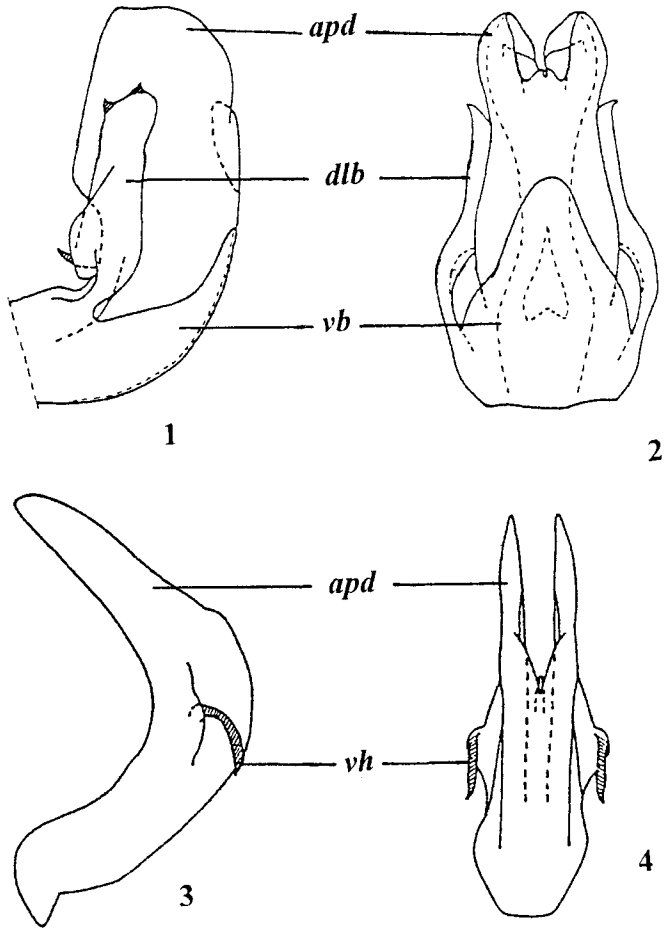
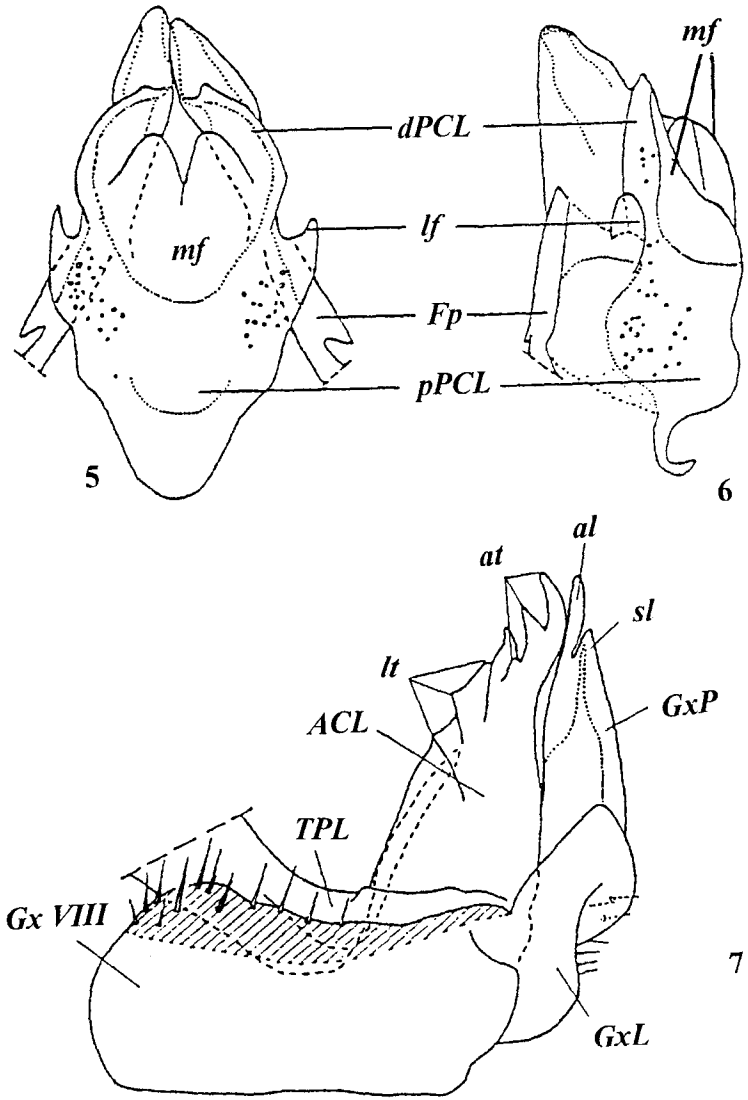


Рис. 1–4. Пенис Issidae, общая схема (по Gnezdilov, 2002a,b, с изменениями). 1, 2 – *Tshurtshurnella eugeniae* Kusn. (1 – вид сбоку, 2 – вид снизу); 3, 4 – *Kervillea (Corymbius) tekirdagica* (Dlabola) (3 – вид сбоку, 4 – вид снизу); *dlb* – дорсо-латеральные лопасти фаллобазы; *vb* – вентральная лопасть фаллобазы; *apd* – апикальные отростки эдеагуса; *vh* – вентральные крючки эдеагуса.

Figs. 1–4. Penis of the Issidae, general scheme (after Gnezdilov, 2002a,b, with changes). 1, 2 – *Tshurtshurnella eugeniae* Kusn. (1 – lateral view, 2 – ventral view); 3, 4 – *Kervillea (Corymbius) tekirdagica* (Dlabola) (3 – lateral view, 4 – ventral view); *dlb* – dorso-lateral lobes of phallobase; *vb* – ventral lobe of phallobase; *apd* – apical processes of aedeagus; *vh* – ventral hooks of aedeagus.

Рис. 5–7. Яйцеклад Issidae, общая схема (по Гнездилов, 2002).
5, 6 – *Hysteropterum reticulatum* (H.-S.), гонапофизы IX (5 – сверху, 6 – сбоку); 7 – *Rhissolepus ergenense* (Becker), гонапофиз VIII, снизу; *Gx VIII* – гонококса VIII; *GxP* – эндогонококсальный отросток; *al* – апикальная лопасть эндогонококсального отростка; *sl* – субапикальная лопасть эндогонококсального отростка; *GxL* – эндогонококсальная лопасть; *ACL* – передняя соединительная пластинка гонапофиза VIII; *at* – апикальные зубцы передней соединительной пластинки; *lt* – латеральные зубцы передней соединительной пластинки; *TPL* –треугольная пластинка гонапофиза VIII; *pPCL* – проксимальная часть задней соединительной пластинки гонапофиза IX; *dPCL* – дистальная часть задней соединительной пластинки гонапофиза IX; *Fp* – полозок задней соединительной пластинки гонапофиза IX; *mf* – медиальное поле гонапофиза IX; *lf* – латеральное поле гонапофиза IX.

Figs. 5–7. Ovipositor of the Issidae, general scheme (after Гнездилов, 2002).
5, 6 – *Hysteropterum reticulatum* (H.-S.), gonapophyses IX (5 – dorsal view, 6 – lateral view); 7 – *Rhissolepus ergenense* (Becker), gonapophyse VIII, ventral view; *Gx VIII* – gonocoxa VIII; *GxP* – endogonocoxal process; *al* – apical lobe of endogonocoxal process; *sl* – subapical lobe of endogonocoxal process; *GxL* – endogonocoxal lobe; *ACL* – anterior connective lamina of gonapophyse VIII; *at* – apical teeth of anterior connective lamina; lt – lateral teeth of anterior connective lamina; *TPL* – triangular sclerotized plate of gonapophyse VIII; *pPCL* – proximal part of posterior connective lamina of gonapophyse IX; *dPCL* – distal part of posterior connective lamina of gonapophyse IX; *Fp* – posterior fibula of gonapophyse IX; *mf* – median field of gonapophyse IX; *lf* – lateral field of gonapophyse IX.



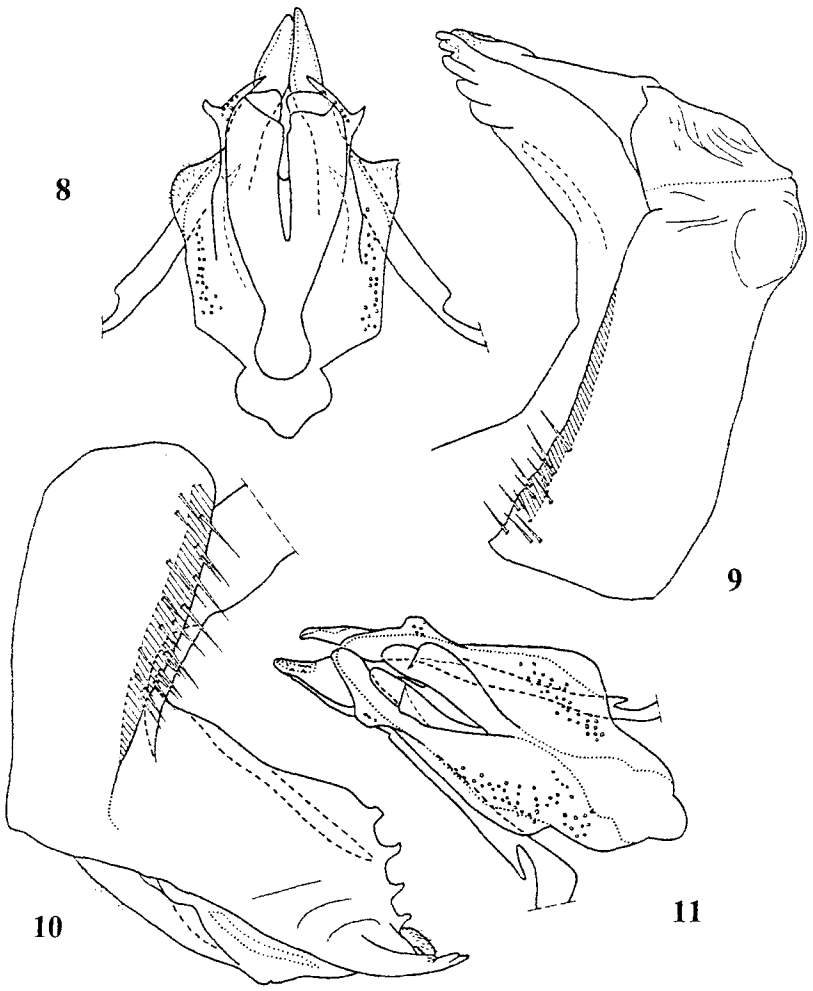


Рис. 8–11. Яйцеклад.
8, 9 – *Gergithus yayeyamensis* Hori (Япония, о-ва Рюкю) (8 – гонапофизы IX, сверху, 9 – гонапофиз VIII, снизу); 10, 11 – *Thionia sp.* (Mexico, San Jose) (10 – гонапофиз VIII, снизу, 11 – гонапофизы IX, сверху).

Figs. 8–11. Ovipositor.
8, 9 – *Gergithus yayeyamensis* Hori (Japan, Ryukyu) (8 – gonapophyses IX, dorsal view, 9 – gonapophyse VIII, ventral view); 10, 11 – *Thionia sp.* (Mexico, San Jose) (10 – gonapophyse VIII, ventral view, 11 – gonapophyses IX, dorsal view).

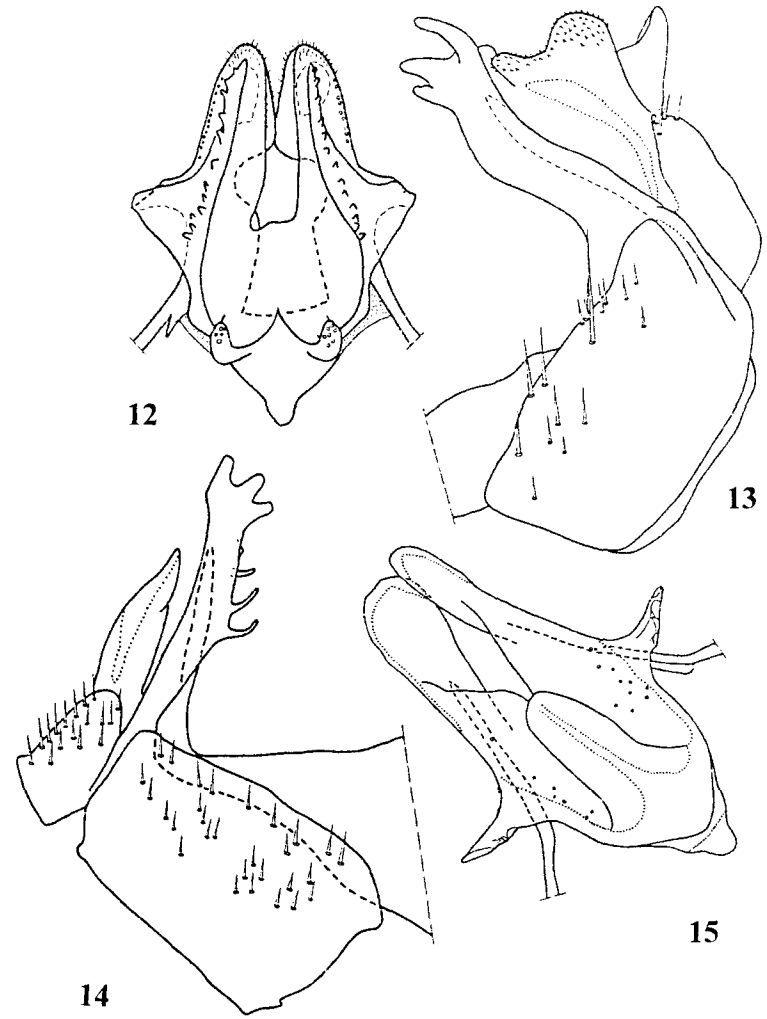


Рис. 12–15. Яйцеклад.
12, 13 – *Caliscelis affinis* (Fieb.) (12 – гонапофизы IX, сверху, 13 – гонапофиз VIII, снизу); 14, 15 – *Adenissus (Denissus) circularis* Dlab. (14 – гонапофиз VIII, снизу, 15 – гонапофизы IX, сверху).

Figs. 12–15. Ovipositor.
12, 13 – *Caliscelis affinis* (Fieb.) (12 – gonapophyses IX, dorsal view, 13 – gonapophyse VIII, ventral view); 14, 15 – *Adenissus (Denissus) circularis* Dlab. (14 – gonapophyse VIII, ventral view, 15 – gonapophyses IX, dorsal view).

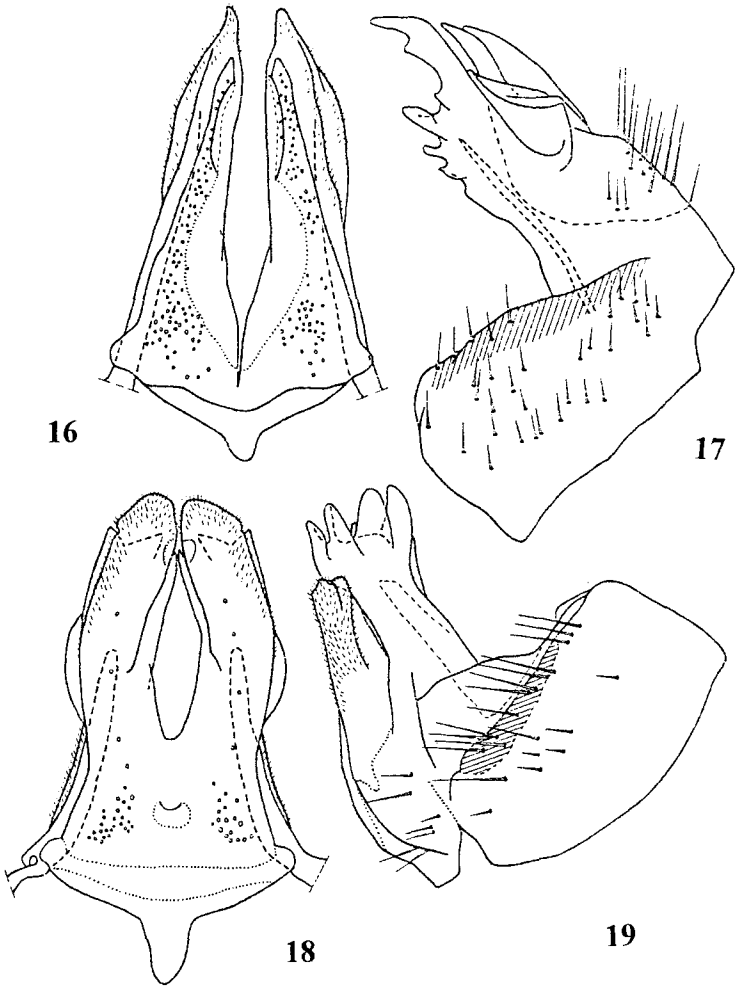


Рис. 16–19. Яйцеклад.
16, 17 – *Dictyophara europaea* (L.) (16 – гонапофизы IX, сверху, 17 – гонапофиз VIII, снизу); 18, 19 – *Hotinus candelarius* (L.) (18 – гонапофизы IX, сверху, 19 – гонапофиз VIII, снизу).

Рис. 16–19. Ovipositor.
16, 17 – *Dictyophara europaea* (L.) (16 – gonapophyses IX, dorsal view, 17 – gonapophyse VIII, ventral view); 18, 19 – *Hotinus candelarius* (L.) (18 – gonapophyses IX, dorsal view, 19 – gonapophyse VIII, ventral view).

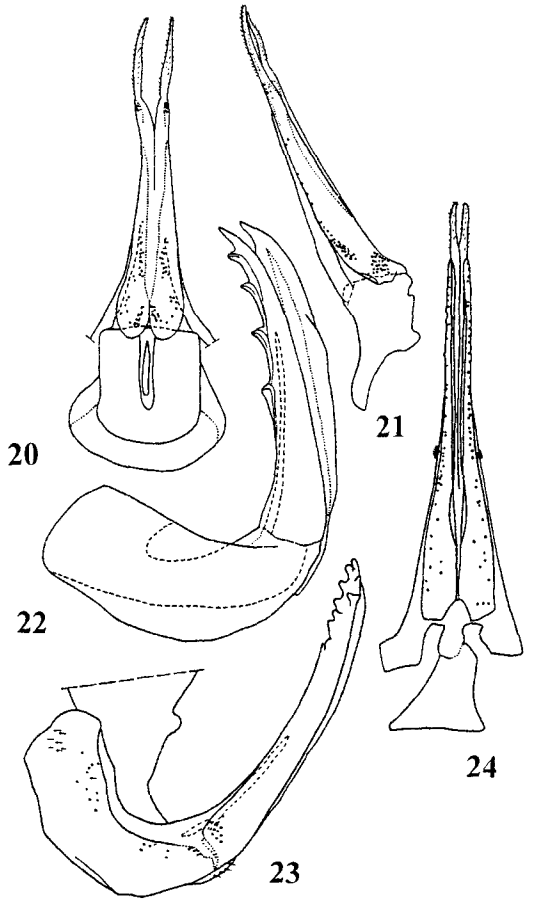


Рис. 20–24. Яйцеклад.
20–22 – *Philbyella glareus* Dlab. & Heller (20 – гонапофизы IX, сверху, 21 – то же, сбоку, 22 – гонапофиз VIII, снизу); 23, 24 – *Trienopa (Eriphyle) longifrons* (Walker) (23 – гонапофиз VIII, снизу, 24 – гонапофизы IX, сверху).

Figs. 20–24. Ovipositor.
20–22 – *Philbyella glareus* Dlab. & Heller (20 – gonapophyses IX, dorsal view, 21 – same, lateral view, 22 – gonapophyse VIII, ventral view); 23, 24 – *Trienopa (Eriphyle) longifrons* (Walker) (23 – gonapophyse VIII, ventral view, 24 – gonapophyses IX, dorsal view).

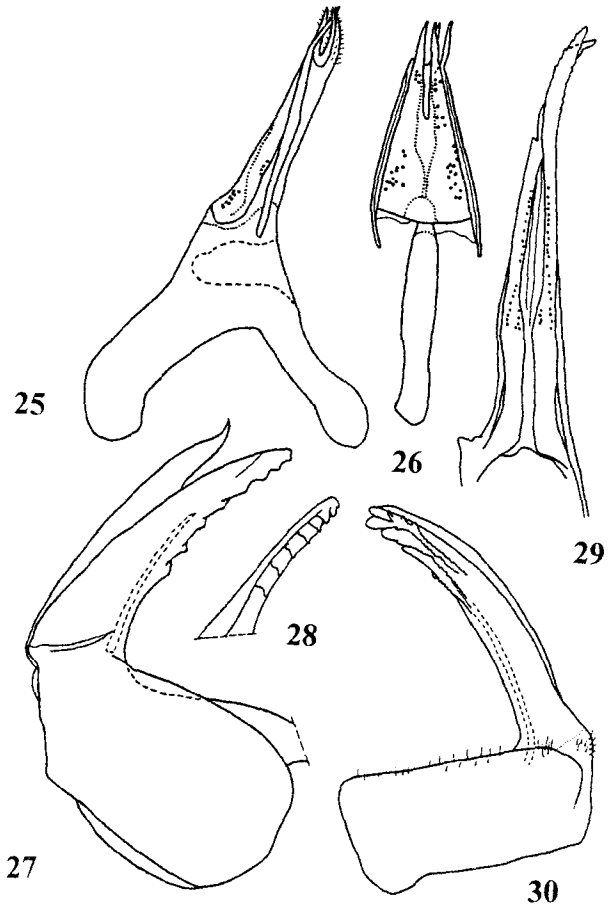


Рис. 25–30. Яйцеклад.
25–28 – *Acanalonia ?pumila* V.D. (25 – гонапофизы IX, сбоку, 26 – то же, сверху, 27 – гонапофиз VIII, снизу, 28 – вершина передней соединительной пластинки); 29–30 – *Tonga westwoodi* (Sign.) (29 – гонапофизы IX, сверху, 30 – гонапофиз VIII, снизу).

Figs. 25–30. Ovipositor.
25–28 – *Acanalonia ?pumila* V.D. (25 – gonapophyses IX, lateral view, 26 – same, dorsal view, 27 – gonapophyse VIII, ventral view, 28 – apex of anterior connective lamina); 29–30 – *Tonga westwoodi* (Sign.) (29 – gonapophyses IX, dorsal view, 30 – gonapophyse VIII, ventral view).

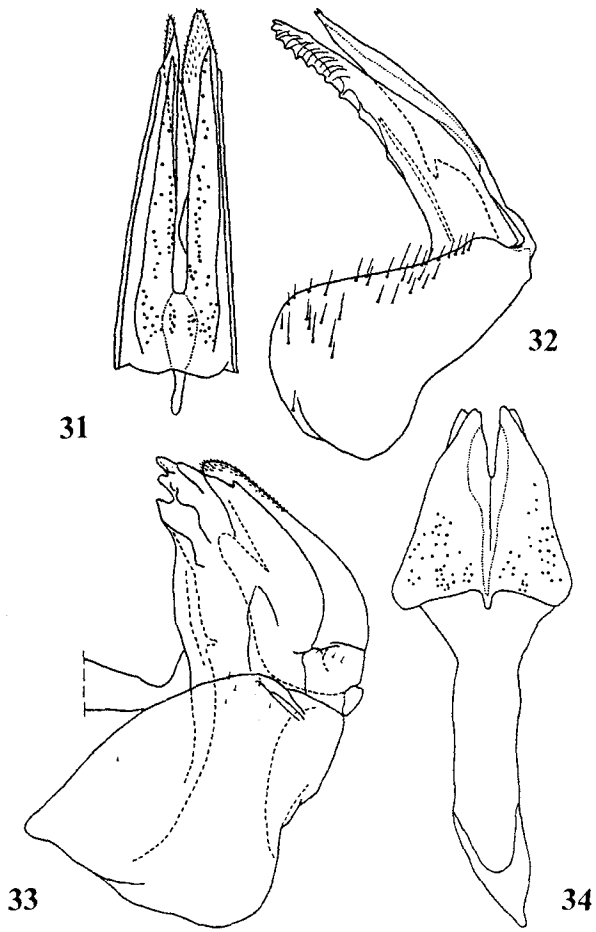


Рис. 31–34. Яйцеклад.
31, 32 – *Ricania japonica* Mel. (31 – гонапофизы IX, сверху, 32 – гонапофиз VIII, снизу); 33, 34 – *Phantia subquadrata* (H.-S.) (33 – гонапофиз VIII, снизу, 34 – гонапофизы IX, сверху).

Figs. 31–34. Ovipositor.
31, 32 – *Ricania japonica* Mel. (31 – gonapophyses IX, dorsal view, 32 – gonapophyse VIII, ventral view); 33, 34 – *Phantia subquadrata* (H.-S.) (33 – gonapophyse VIII, ventral view, 34 – gonapophyses IX, dorsal view).

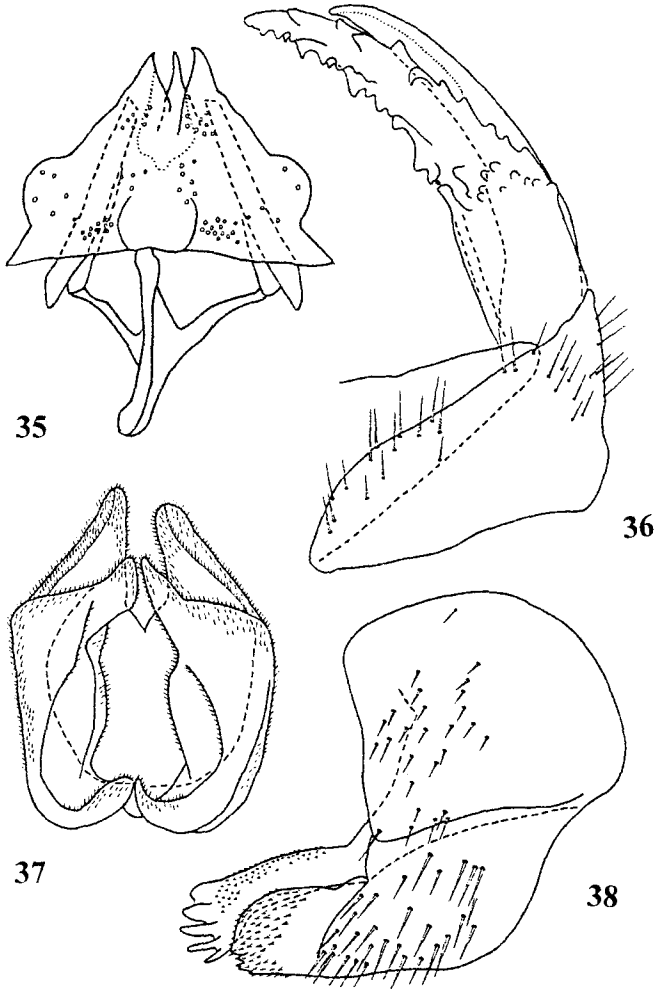


Рис. 35–38. Яйцеклад.
35, 36 – *Trypetimorpha occidentalis* Huang et Bourgoin (35 – гонапофизы IX, сверху, 36 – гонапофиз VIII, снизу); 37, 38 – *Bladina* sp. (37 – гонапофизы IX, сверху, 38 – гонапофиз VIII, снизу).

Figs. 35–38. Ovipositor.
35, 36 – *Trypetimorpha occidentalis* Huang et Bourgoin (35 – gonapophyses IX, dorsal view, 36 – gonapophyse VIII, ventral view); 37, 38 – *Bladina* sp. (37 – gonapophyses IX, dorsal view, 38 – gonapophyse VIII, ventral view).

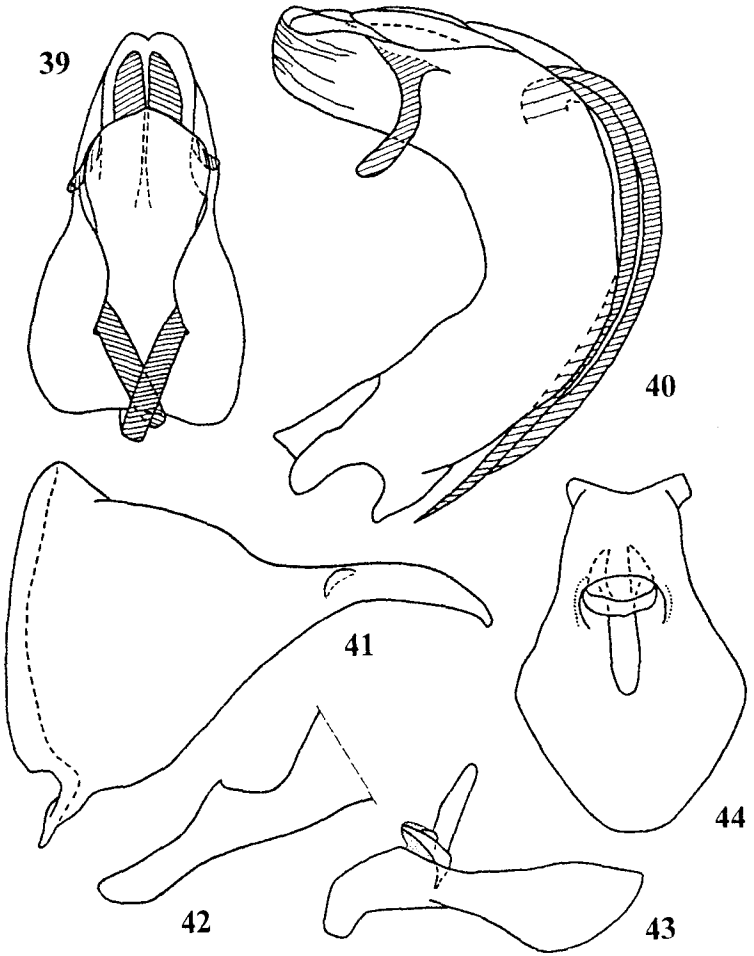


Рис. 39–44. *Fieberium impressum* (Fieb.), самец.
39 – пенис, снизу; 40 – то же, сбоку; 41 – стилус, сбоку; 42 – головка стилуса, сверху; 43 – анальная трубка, сбоку; 44 – то же, сверху.

Figs. 39–44. *Fieberium impressum* (Fieb.), male.
39 – penis, ventral view; 40 – same, lateral view; 41 – stylus, lateral view; 42 – capitulum of stylus, dorsal view; 43 – anal tube, lateral view; 44 – same, dorsal view.

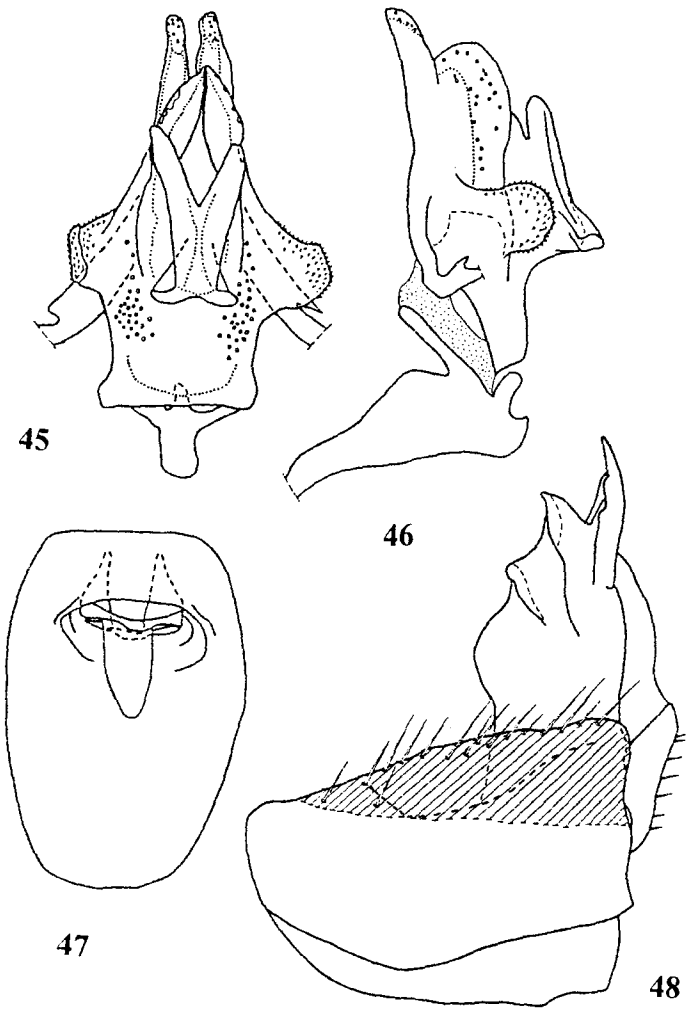


Рис. 45–48. *Fieberium impressum* (Fieb.), самка.
45 – гонапофизы IX, сверху; 46 – то же, сбоку; 47 – анальная трубка, сверху; 48 – гонапофиз VIII, снизу.

Figs. 45–48. *Fieberium impressum* (Fieb.), female.
45 – gonapophyses IX, dorsal view; 46 – same, lateral view; 47 – anal tube, dorsal view; 48 – gonapophyse VIII, ventral view.

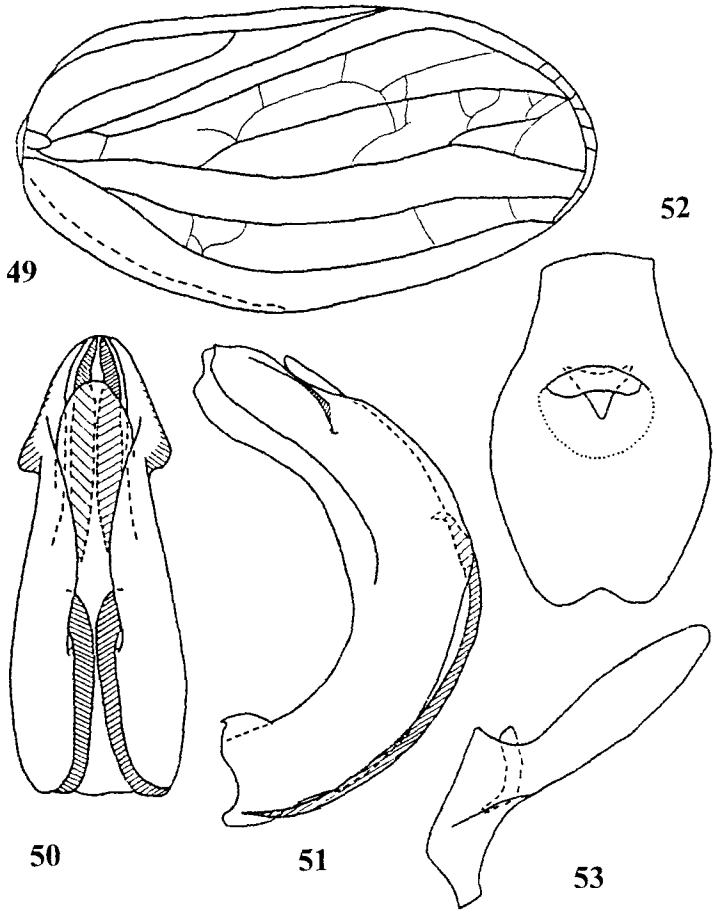


Рис. 49–53. *Mulsantereum maculifrons* (M. et R.).
49 – переднее крыло; 50 – пенис, снизу; 51 – то же, сбоку; 52 – анальная трубка самца, сверху; 53 – то же, сбоку.

Figs. 49–53. *Mulsantereum maculifrons* (M. et R.).
49 – fore wing; 50 – penis, ventral view; 51 – same, lateral view; 52 – male anal tube, dorsal view; 53 – same, lateral view.

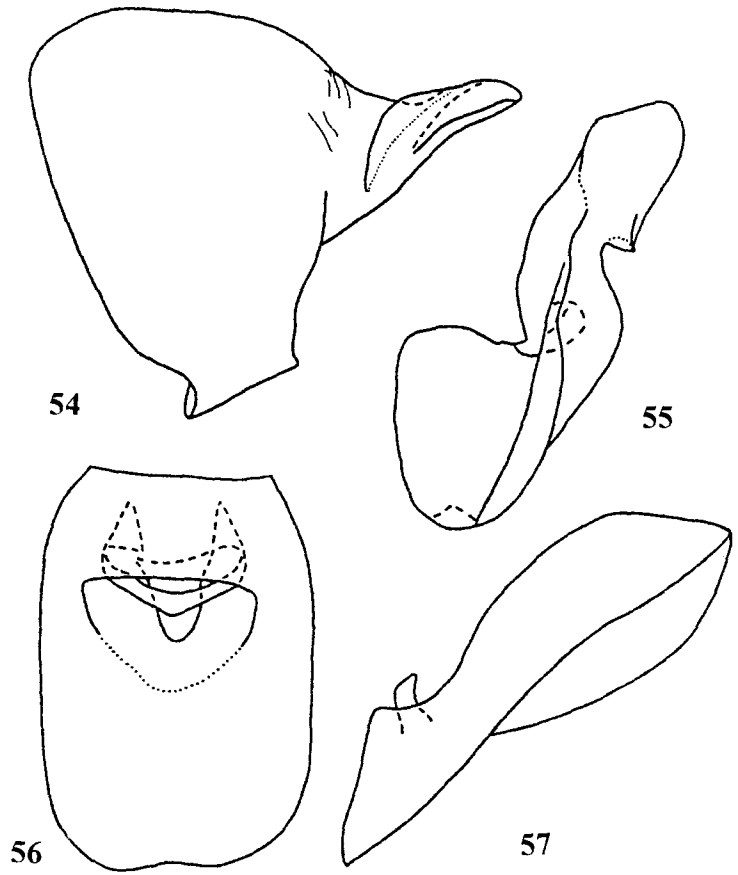


Рис. 54–57. *Mulsantereum maculifrons* (M. et R.).
54, 55 – самец (54 – стилус, сбоку; 55 – то же, сверху); 56, 57 – самка (56 – анальная трубка, сверху; 57 – то же, сбоку).

Figs. 54–57. *Mulsantereum maculifrons* (M. et R.).
54, 55 – male (54 – stylus, lateral view; 55 – same, dorsal view); 56, 57 – female (56 – anal tube, dorsal view; 57 – same, lateral view).

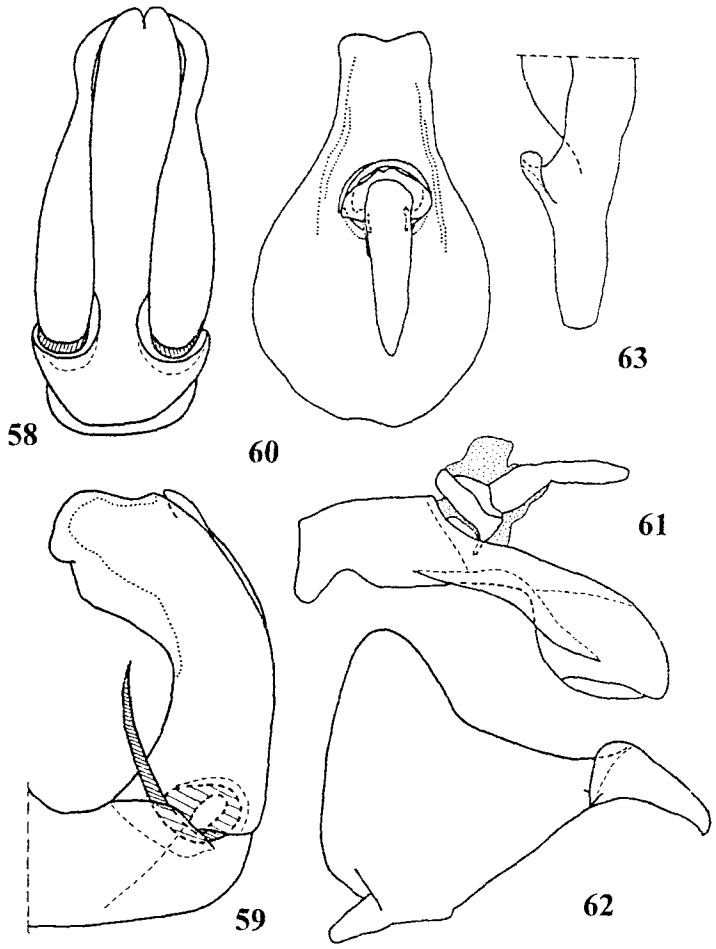


Рис. 58–63. *Falcidius limbatus* (A. Costa), самец.
58 – пенис, снизу; 59 – то же, сбоку; 60 – анальная трубка, сверху; 61 – то же, сбоку; 62 – стилус, сбоку; 63 – головка стилуса, сверху.

Figs. 58–63. *Falcidius limbatus* (A. Costa), male.
58 – penis, ventral view; 59 – same, lateral view; 60 – anal tube, dorsal view; 61 – same, lateral view; 62 – stylus, lateral view; 63 – capitulum of stylus, dorsal view.

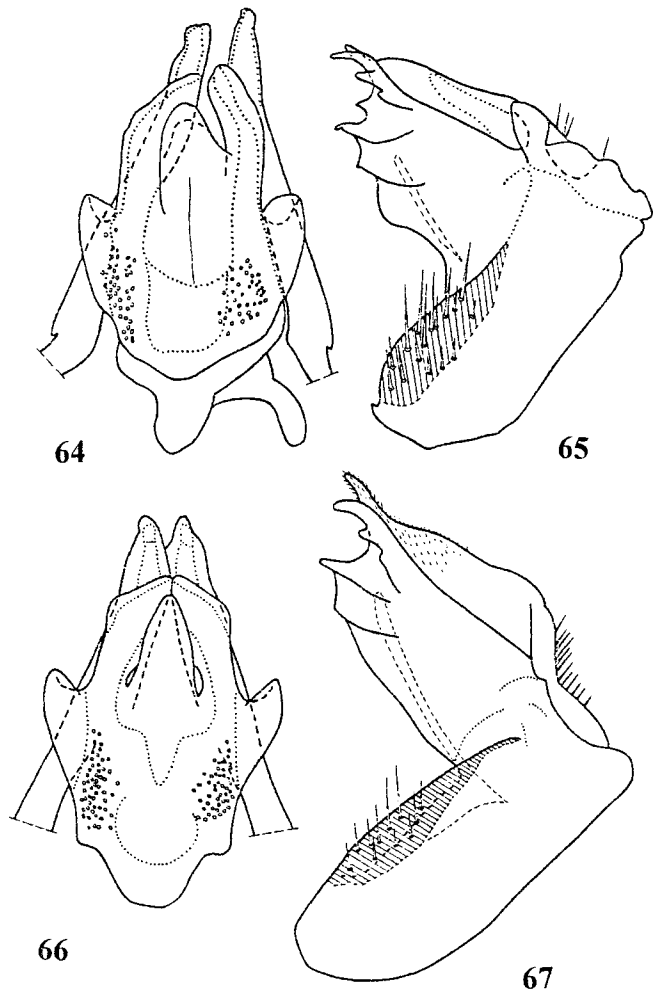


Рис. 64–67. Яйцеклад.
64, 65 – *Palmallorcus balearicus* (Dlab.) (64 – гонапофизы IX, сверху, 65 – гонапофиз VIII, снизу); 66, 67 – *Barbarissus punctulatus* (Rambur) (66 – гонапофизы IX, сверху, 67 – гонапофиз VIII, снизу).

Figs. 64–67. Ovipositor.
64, 65 – *Palmallorcus balearicus* (Dlab.) (64 – gonapophyses IX, dorsal view, 65 – gonapophyse VIII, ventral view); 66, 67 – *Barbarissus punctulatus* (Rambur) (66 – gonapophyses IX, dorsal view, 67 – gonapophyse VIII, ventral view).

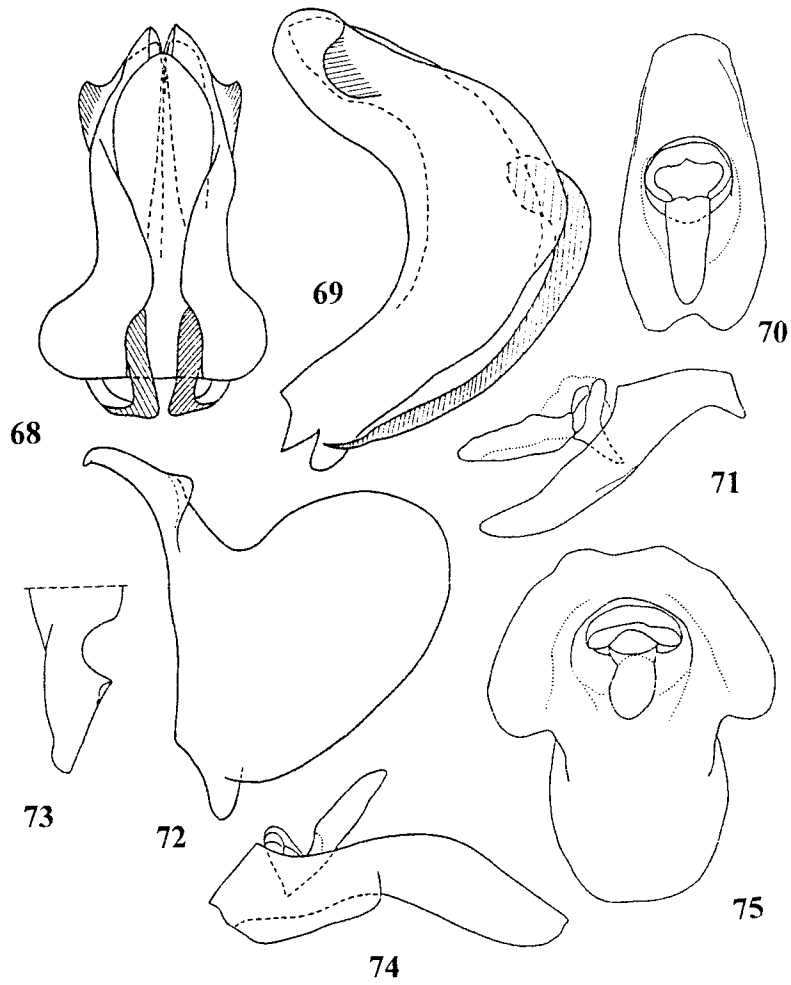


Рис. 68–75. *Hysteropterum vasconicum* sp. n.
68–73 – самец (68 – пенис, снизу; 69 – то же, сбоку; 70 – анальная трубка, сверху; 71 – то же, сбоку; 72 – стилус, сбоку; 73 – головка стилуса, сверху); 74–75 – самка (74 – анальная трубка, сбоку; 75 – то же, сверху).

Figs. 68–75. *Hysteropterum vasconicum* sp. n.
68–73 – male (68 – penis, ventral view; 69 – same, lateral view; 70 – anal tube, dorsal view; 71 – same, lateral view; 72 – stylus, lateral view; 73 – capitulum of stylus, dorsal view); 74–75 – female (74 – anal tube, lateral view; 75 – same, dorsal view).

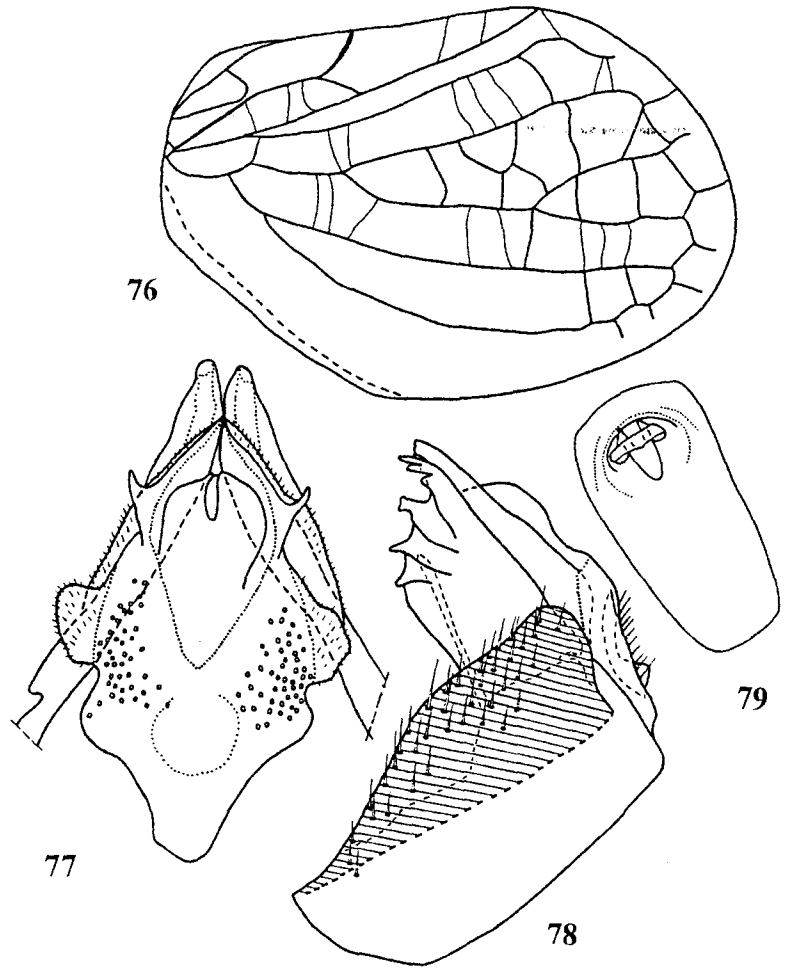


Рис. 76–79. Hysteropterina.
76 – *Hysteropterum reticulatum* (H.-S.), переднее крыло; 77–79 – *Bergevinium gravesteini* (Dlab.), самка (77 – гонапофизы IX, сверху, 78 – гонапофиз VIII, снизу, 79 – анальная трубка, сверху).

Figs. 76–79. Hysteropterina.
76 – *Hysteropterum reticulatum* (H.-S.), fore wing; 77–79 – *Bergevinium gravesteini* (Dlab.), female (77 – gonapophyses IX, dorsal view, 78 – gonapophyse VIII, ventral view, 79 – anal tube, dorsal view).

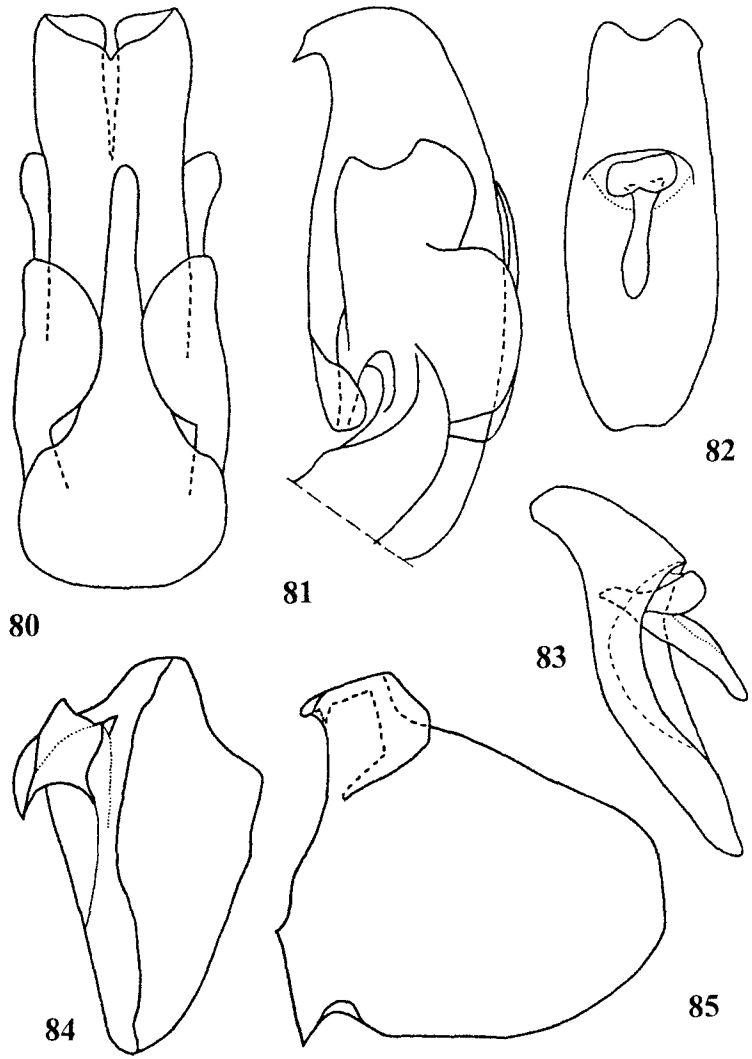


Рис. 80–85. *Mycterodus batathen* sp. n., самец.
80 – пенис, снизу; 81 – то же, сбоку; 82 – анальная трубка, сверху; 83 – то же, сбоку; 84 – стилус, сверху; 85 – то же, сбоку.

Figs. 80–85. *Mycterodus batathen* sp. n., male.
80 – penis, ventral view; 81 – same, lateral view; 82 – anal tube, dorsal view; 83 – same, lateral view; 84 – stylus, dorsal view; 85 – same, lateral view.

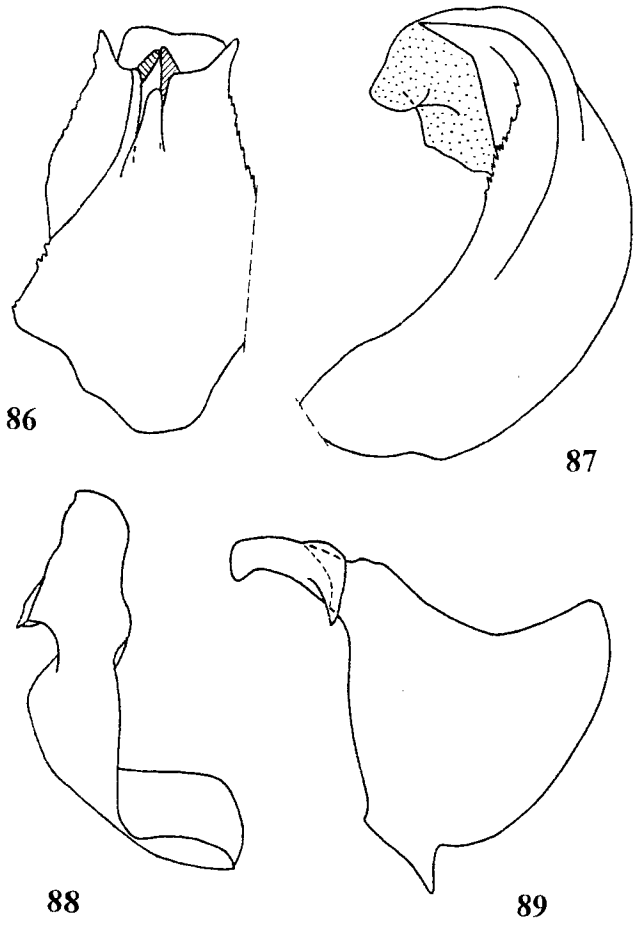


Рис. 86–89. *Pseudohemisphaerius piceus* (Put.), самец.
86 – пенис, снизу; 87 – то же, сбоку; 88 – стилус, сверху; 89 – то же, сбоку.

Figs. 86–89. *Pseudohemisphaerius piceus* (Put.), male.
86 – penis, ventral view; 87 – same, lateral view; 88 – stylus, dorsal view; 89 – same, lateral view.

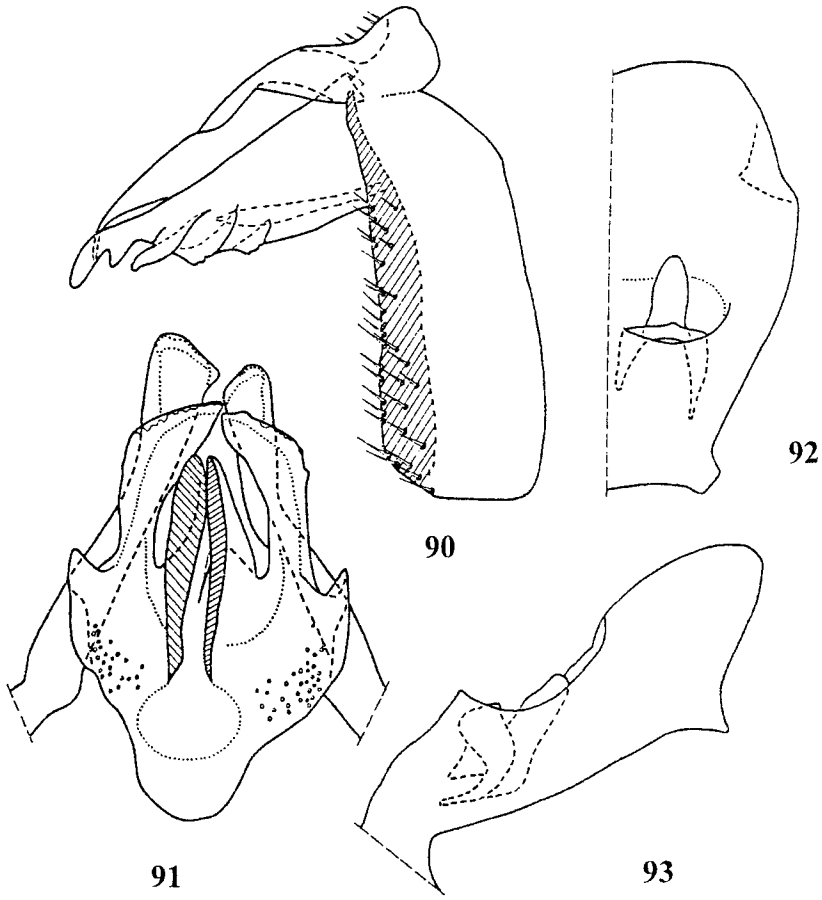


Рис. 90–93. *Pseudohemisphaerius piceus* (Put.).
90–91 – самка (90 – гонапофиз VIII, снизу, 91 – гонапофизы IX, сверху); 92–93 – самец (92 – анальная трубка, сверху; 93 – то же, сбоку).

Figs. 90–93. *Pseudohemisphaerius piceus* (Put.).
90–91 – female (90 – gonapophyse VIII, ventral view, 91 – gonapophyses IX, dorsal view); 92–93 – male (92 – anal tube, dorsal view; 93 – same, lateral view).

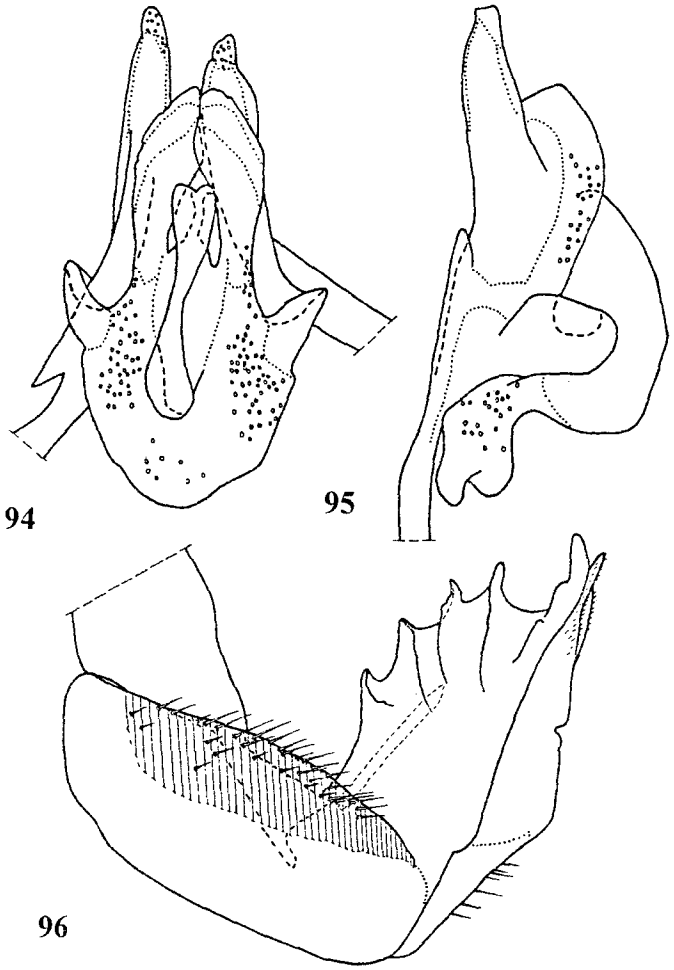


Рис. 94–96. *Clybeccus declivum* (Dlab.), яйцеклад.
94 – гонапофизы IX, сверху; 95 – то же, сбоку; 96 – гонапофиз VIII, снизу.

Figs. 94–96. *Clybeccus declivum* (Dlab.), ovipositor.
94 – gonapophyses IX, dorsal view; 95 – same, lateral view; 96 – gonapophyse VIII, ventral view.

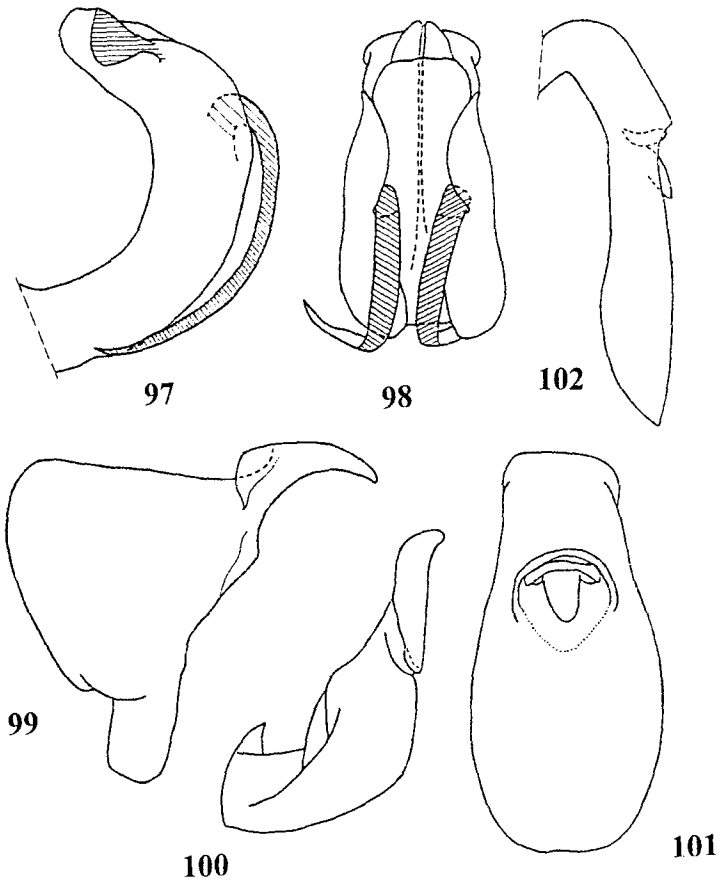


Рис. 97–102. *Tingissus tangirus* (Mats.), самец.
97 – пенис, сбоку; 98 – то же, снизу; 99 – стилус, сбоку; 100 – то же сверху; 101 – анальная трубка, сверху; 102 – то же, сбоку.

Figs. 97–102. *Tingissus tangirus* (Mats.), male.
97 – penis, lateral view; 98 – same, ventral view; 99 – stylus, lateral view; 100 – same, dorsal view; 101 – anal tube, dorsal view; 102 – same, lateral view.

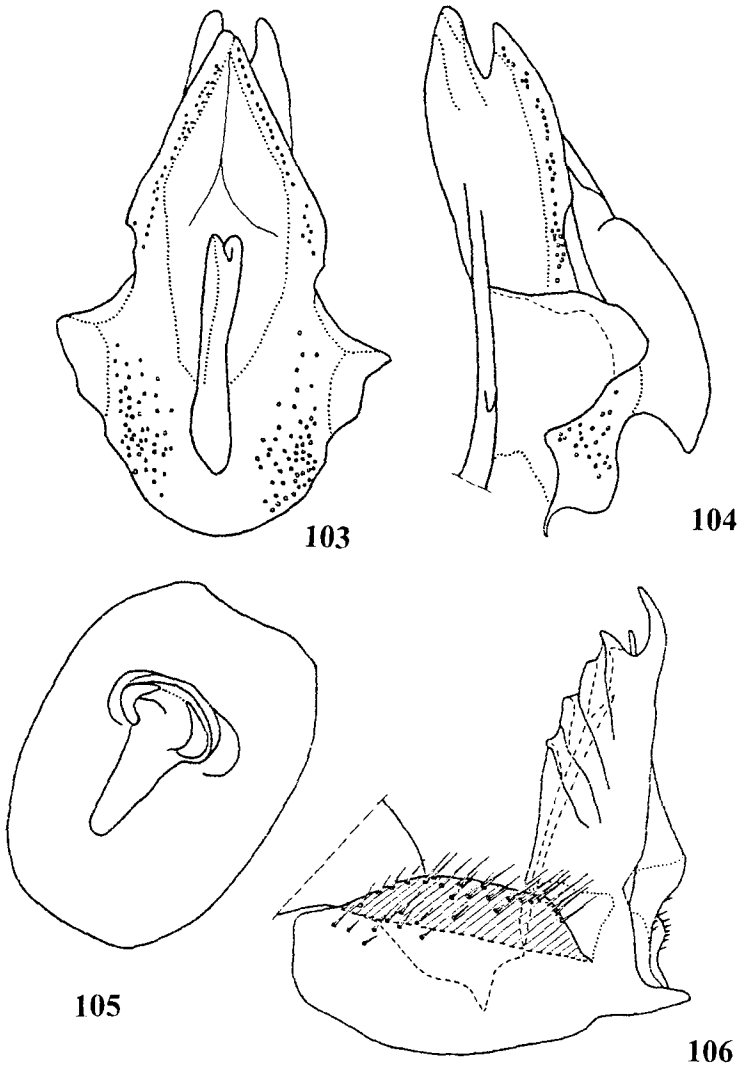


Рис. 103–106. *Tingissus tangirus* (Mats.), самка.
103 – гонапофизы IX, сверху; 104 – то же, сбоку; 105 – анальная трубка, сверху; 106 – гонапофиз VIII, снизу.

Figs. 103–106. *Tingissus tangirus* (Mats.), female.
103 – gonapophyses IX, dorsal view; 104 – same, lateral view; 105 – anal tube, dorsal view; 106 – gonapophyse VIII, ventral view.

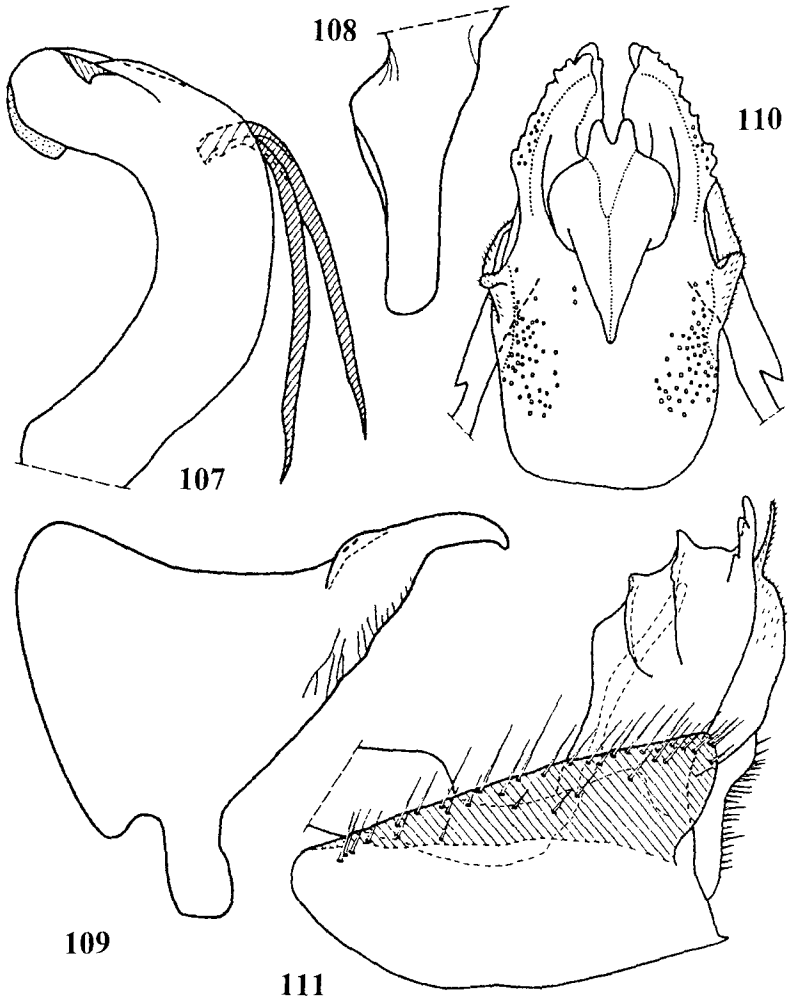


Рис. 107–111. *Iberanum dlabolai* gen. et sp. n.
107 – пенис, сбоку; 108 – головка стилуса, сверху; 109 – стилус, сбоку; 110 – гонапофизы IX, сверху; 111 – гонапофиз VIII, снизу.

Figs. 107–111. *Iberanum dlabolai* gen. et sp. n.
107 – penis, lateral view; 108 – capitulum of stylus, dorsal view; 109 – stylus, lateral view; 110 – gonapophyses IX, dorsal view; 111 – gonapophyse VIII, ventral view.

Владимир Михайлович Гнездилов

ОБЗОР СЕМЕЙСТВА ISSIDAE (HOMOPTERA, CICADINA) ЕВРОПЕЙСКОЙ ФАУНЫ С ЗАМЕЧАНИЯМИ О СТРОЕНИИ ЯЙЦЕКЛАДА ФУЛГОРОИДНЫХ ЦИКАДОВЫХ

Чтения памяти Н.А. Холодковского. Вып. 56 (1).
Доклад на пятьдесят шестых ежегодных чтениях
4 апреля 2003 г.

Утверждено к печати
Президиумом
Русского энтомологического общества
4.04.2003

Изготовитель оригинал-макета *В.А. Кривохатский*

Подписано к печати 29.04.2003
Гарнитура Times.
Формат 60x84 1/16. Печ. л. 9. Тираж 300 экз.

Зоологический институт РАН, 199034, СПб., Университетская наб., 1