POLSKIE PISMO ENTOMOLOGICZNE
BULLETIN ENTOMOLOGIQUE DE POLOGNE

Tom XXX Wrocław 1960 Nr 17

Materiały do znajomości *Cochylidae (Lepidoptera)*. Część II. Rodzaje palearktycznych *Cochylidae*

Studies on the *Cochylidae (Lepidoptera)*. Part II. The genera of the Palearctic *Cochylidae*

napisał

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N. Obraztsov in 1945 began the discussion on the correctness of the family name of *Phaloniidae*. He proposed *Aetheinae* as the correct name of this family. In 1950 the same author gave a subsequent name made on a basis of an „oldest" name, namely *Agapetidae*. Obraztsov uses this name till 1956; in this year in the paper on the genus *Cochylidia* Obr. he uses the name *Phaloniidae* again.

According to the nomenclatorical rules (Paris, 1948) the valid name of a family is the oldest name of it and not a name based on the oldest genus. This oldest name is *Cochylidi* Guenée (1845), and the name *Cochylidae* is proposed to be considered as a correct name of *„Phaloniidae"*.

The synonymy is as follows:

Cochylidi Guenée, 1845, Ann. Soc. Ent. France, (2), 3. Typus familiae: *Cochylis* Treit., 1829.

Lozoperidae Wilkinson, 1859, Brit. Tortr. Typus familiae: *Lozopera* Steph., 1829.

Conchylidae Meyrick, 1882, Proc. Linn. Soc. N. S. Wales, 6. Typus familiae: *Conchylis* Lederer, 1859.

Phaloniidae Meyrick, 1895, Handb. Brit. Lep. Typus familiae: *Phalonia* Hübner, 1825.

Commophilidae Durrant, 1918, Nov. Zool., 25. Typus familiae: *Commophila* Hübner, 1825.

Aetheinae Obraztsov, 1945, Zschrft. Wien. Ent. Ges., 30. Typus familiae: *Aethes* Billberg, 1820.

Agapetidae Obraztsov, 1950, Entomological News, 61. Typus familiae: *Agapeta* Hübner, 1825.

The recent systematics of the family *Cochylidae* (=*Phaloniidae*) have been generally based on the external characters of the moths. The first genus belonging to *Cochylidae* was erected in 1820 by Billberg. It was *Aethes* Billb. established for *Pyralis smeathmanniana* F. In the years 1822 till 1826 Hübner described several new genera based chiefly on the coloration and the shape of the wings of the moths. In 1829 Stephens erected several further genera of *Cochylidae*. Some of them are congeneric with the Hübner's genera. Since the Stephens publication only few other genera had been described. The family *Cochylidae* has been studied principally by Guenée (1845), Lederer (1859) and Meyrick (1912-37).

The studying of the genitalia of the group in question has been started only by Pierce and Metcalfe (1922). They erected a new system of that family forming the species into groups on their genital characters. Since that time some authors, as Le Marchand or Kennel have taken into consideration only external features. Other authors have based their systematics of *Cochylidae* on the genital character. Recently the majority of papers on the *Cochylidae* have been published by Obraztsov who has described several new species and genera of that family.

In the present paper the author would like to order the recent system of *Cochylidae*, that is rather uncomplete and artificial. It is proposed a system based on the external characters, as well as on the genital ones. Owing to the fact that rather scanty world material has been available for the study, only the Palearctic species are discussed.

The *Cochylidae* characterize by the atrophied vein *a1* in the fore wing. Cu_2 derivates from discal cell about two thirds its length, sometimes further. The costal fold of the fore wing in the male sex occurs only in few instances and has little importance for systematic study. In male genital armatures

gnathos lacking. Uncus sometimes well developed, however, it is often completely reduced. Valvae usually broad, in most cases moderately haired. Sacculus usually attached to the valva on its total length. Aedeagus large in the comparison to the whole apparatus. Females often have strongly sclerotized ductus bursae and bursa copulatrix. Signa of various structure, seldom lacking.

Caterpillars living usually inside the seeds, stems, roots or flovers of plants, very often on *Compositae*.

The general characters of *Cochylidae* are following: Frons most often convex, the longest seales occur on the vertex; labial palpi usually long (*Hysterosia* Steph.), more rarely they are short and broad (*Aethes* Billb.), the apical joint short but well visible; ocelli present; proboscis well developed. The wing coloration sometimes very characteristic. The most typical element of the pattern is the spot running from the dorsal edge of the fore wing. In some instances that spot is bound with other elements of the pattern, or reduced. The coloration at times very contrasted. The hind wing usually unicolorous, often transversally stripped with darker. The venation of the wings little differentiated and very variable. In the fore wing *r5* touching the alar apex or costa as in *Cochylis* Treit., *Diceratura* Diak. and others. Sometimes, it is touching the termen as in some species of *Hysterosia* Steph., *Aethes* Billb. or *Eugnosta* Hbn. There are two kinds of the hind wings venation among the above mentioned two groups of genera. In the first of them *rr* and *m1* stalked as a rule; *m3* and *cu1* run always separately. In the members of the second group *rr* and *m1* in some instances run separately; the run of *m3* and *cu1* variable, stalked or separate from each other. There are great differences in the venation between the species of the same genus, however, those species are often closely related to each other. The genus *Eupoecilia* Steph. (*Clysia* Hbn.) is a good illustration of this fact: in *E. angustana* (Hbn.) in the fore wing *r4* and *r5* run separately and in *E. ambiguella* (Hbn.) they are stalked. There are great differences also in other genera, especially with regard to *m3* and *cu1* in the hind wing. The variability of the venation among the specimens of the same species occurs too (e. g.

Eugnosta lathoniana (Hbn.)). In *Eupoecilia ambiguella* (Hbn.) occurs often an additional vein running from the stalk of *rr* and *m1* to costa. I have found a specimen of *Hysterosia inopiana* (Steph.) having strongly forked *m1* in the hind wing. Such a variability does not allow to base the system of *Cochylidae* on the characters of the venation.

The genitalia characteristic for individual genera, especially the male ones. There are several types of their structure. The first group includes the genera related to *Hysterosia* Steph. In these genera there occurs uncus of various size and shape. Socii usually well developed. Valvae stout. Sacculus often with a free tip. Cornuti in most cases present, they lack only in the genus *Acornutia* Obr. and probably in a few species of *Hysterosia* Steph. (they may be lost while preparing or copulating). Female genitalia are strongly sclerotized areas or scattered minute spines on ductus bursae and bursa copulatrix or at last on one of the two; distinct signa present only in few instances.

The genus *Falseuncaria* Sw. forms distinct group. Tegumen in this genus of a quite different structure than in the members of the previous group and the valvae are coalescent with transtilla. There is a thin small stick besides the cornuti in the aedeagus. In the female genitalia gonapophyses posteriores long and ovipositor produced.

The third group of genera includes *Phalonidia* Le March., *Brevisociaria* Obr., *Stenodes* Guen. and four other genera more distinct, considered as yet as *Agapeta* Hbn. In the male genital armature uncus lacking or poorly developed as a small projection on the top of tegumen. Socii of various shape, usually broad. A single cornutus in the aedeagus present or absent. Female genitalia differentiated. Signa and heavily sclerotized patches often present.

The group of genera related to *Aethes* Billb. characterizes by long and in some instances very long, often rigid socii. The latter appear on the top of tegumen. Valva broad, usually poorly haired; sacculus attached to the valva; branches of vinculum separated. Cornuti in the aedeagus lacking, however, as an

exception they are numerous in *Eupoecilia* Steph. Female genitalia of a various armature among individual genera.

The next group is formed by three genera, namely: *Diceratura* Diak., *Cochylidia* Obr. and *Cochylimorpha* Raz. They are characterized by the presence of processus basales; the latter usually club-shaped. Socii usually short, appearing on the top of tegumen. The latter large, rounded. Ductus bursae and bursa copulatrix in female genitalia usually lightly sclerotized.

The last group is constituted by the genera related to *Cochylis* Treit. Socii appear in a membraneous scaphium. Uncus lacking as a rule. The size and number of cornuti variable, in some instances they lack. The armature of female genitalia various.

KEY TO THE IDENTIFICATION OF THE GENERA OF *COCHYLIDAE*

1. Uncus heavily sclerotized, more long than broad; tegumen in some cases uncus-shaped 2
— Uncus lightly sclerotized, short, usually rounded; in some cases quite lacking; tegumen of basic shape 5
2. Tegumen uncus-shaped; cornuti numerous . . . . *Falseuncaria* Sw.
— Uncus more or less of even width throughout or pointed, if not, 0 to 3 cornuti in the aedeagus 3
3. Cornuti numerous, minute . . . *Obraztsoviana gen. nov.*
— A single cornutus, or lacking 4
4. Central part of transtilla elongated, cornuti lacking . . . . . *Acornutia* Obr.
— Central part of transtilla broad, cornuti usually present . . . . . *Hysterosia* Steph.
5. Uncus short, vinculum coalescent ventrally 6
— Uncus nearly atrophied or lacking, vinculum usually not coalescent ventrally 7
6. Two cornuti . . . . . *Phtheochroides* Obr.
— A single cornutus . . . . . *Phtheochroa* Steph.
7. Socii attached to the tegumen 8
— Socii in a membraneous scaphium 22
8. Processus basalis of the valva well developed, club-shaped 9
— Processus basalis of the valva small 11

9. Valva narrow; socii long, hanging . . *Cochylimorpha* Raz.
— Valva very broad and short; socii usually short . . . 10
10. Uncus lacking; a heavily sclerotized cone-shaped sclerit in the aedeagus . . . . . *Cochylidia* Obr.
— Uncus small; no heavily sclerotized cone-shaped sclerit in the aedeagus . . . . . *Diceratura* Diak.
11. Vinculum not coalescent ventrally, its arms dilated terminally 12
— Vinculum coalescent ventrally or its arms narrow and not dilated terminally 13
12. Socii long and thin . . . . . *Aethes* Billb.
— Socii short . . . . . *Prochlidonia gen. nov.*
13. Socii heavily sclerotized, rigid, long 14
— Socii lightly sclerotized, short 16
14. The base of socii convex, haired; cornuti numerous, one of them distinctly longer than the remaining ones . . . . . *Eupoecilia* Steph.
— The base of socii not convex, not haired; one or two cornuti in the aedeagus 15
15. Socii of even width throughout . . . *Commophila* Hbn.
— Socii broadened basally . . . . . *Eugnosta* Hbn.
16. Vinculum broad, well coalescent ventrally, aedeagus at times coalescent with juxta 17
— Vinculum narrow, not coalescent ventrally, at times linked there with a feeble membrane. Aedeagus not coalescent with juxta 18
17. Socii broad, aedeagus coalescent with juxta . . . . . *Ceratoxanthis gen. nov.*
— Socii narrow, aedeagus free . . . . . *Agapeta* Hbn.
18. Central part of transtilla long and narrow 19
— Central part of transtilla broad 20
19. Sacculus large, socii small . . . . *Brevisociaria* Obr.
— Sacculus small, socii large . . . *Phalonidia* Le March.
20. Vesica depart near the base of aedeagus; on valva several spines 21
— Vesica depart about half length of the aedeagus; no spines on valva . . . . . *Stenodes* Guen.

21. Vinculum not coalescent ventrally; the spines of valva appear on large areas . . . . . *Fulvoclysia* Obr.
— Vinculum usually distinctly coalescent ventrally; the spines of valva appearing at most on a short abscissa . . . . . *Euxanthoides gen. nov.*
22. Transtilla uniform 23
— Transtilla forked . . . . . *Cryptocochylis gen. nov.*
23. A single very large cornutus in the aedeagus . . . . . *Longicornutia gen. nov.*
— Cornuti small or absent . . . . . *Cochylis* Treit.

Genus 1: *Obraztsoviana nom. nov.*

(Figs. 1, 37, 56, 108)

Typus generis: *Tortrix maculosana* Haworth, 1811

Tortrix (part.) Haworth, 1811, Lep. Brit., p. 438.
Eupoecilia (part.) Stephens, 1834, Ill. Brit. Ent., 4, p. 181.
Cochylis (part.) Treitschke, 1835, Schmett. Eur., 10, p. 148.
Hysterosia (part.) Kennel, 1913, Pal. Tortr., p. 349.
„Genus 3" Pierce & Metcalfe, 1922, Genit. Tortr. Brit., p. 26.
Hysterophora Obraztsov, 1944 (non 1943, Mitt. münch. Ent., 33, p. 91), Iris, p. 66.

Obraztsov in 1943 used the generic name *Hysterophora* for the species *H. rocharva* Obr., 1943, but only in 1944 he described this genus, designating *Tortrix maculosana* Haw. as the typus generis. However, *H. rocharva* Obr. is congeneric with *Hysterosia* Steph. and the name *Hysterophora* Obr. 1943 should be sunk to the synonyms of it. In such a case *Hysterophora* Obr., 1944 is a homonym of *Hysterophora* Obr., 1943. I name the former *Obraztsoviana nom. nov.*

Labial palpi fairly short; middle joint the longest, considerably dilated posteriorly; apical joint short. Fore wing narrow, costal fold in the male narrow, reaching about to one third of costa. In the fore wing *r1* arises before middle of discal cell. The abscissa *r-r2* more than twice as long as *r2-r3*; *r5* touching termen: *m3* and *cu1* visibly remote from each other. In the hind wing *rr* and *m1* run separately, at the commencing parallelly to each other, further dispersing; *m3* and *cu1* depart separately from discal cell.

Male genital armature. Uncus short, strongly sclerotized, socii fairly large. Vinculum ventrally coalescent, valva elongate, rather equally broad throughout, sacculus long, reaching the end of ventral edge of valva, freely tipped. Numerous rather small cornuti in the aedeagus.

Female genitalia. Ductus bursae very long, strongly sclerotized. Bursa copulatrix transparent, signum lacking.

Only one species, namely *Hysterophora maculosana* (Haw.) belongs here. *Hyst. porculana* Mn., and its form *Hyst. purgatana* (Treit.) should be regarded only as forms of *Hyst. maculosana* (Haw.), as the comparison of their genitalia shows.

Distribution: Europe, Asia Minor.

Genus 2: *Hysterosia* Stephens, 1829

Typus generis: *Tortrix inopiana* Haworth, 1811

Tortrix (part.) Haworth, 1811, Lep. Brit., p. 469.
Hysterosia Stephens, 1829, Syst. Cat. Brit. Ins., 2, p. 85.
Cochylis (part.) Treitschke, 1830, Schmett. Eur., 8, p. 285.
Xanthosetia (part.) Stephens, 1834, Ill. Brit. Ent., 4, p. 192.
Argyrolepia (part.) Duponchel, 1836, Hist. Nat. Lép. Fr., 9, p. 435.
Seriocoris (part.) Duponchel, 1843, Suppl. 4, p. 143.
Eupoecilia (part.) Guenée, 1845, Ann. Soc. Ent. Fr., 3, p. 298.
Phtheochroa (part.) Lederer, 1859, Wien. Ent. Monatschr., 3, p. 189.
Idiographis Lederer, 1859, l. c., p. 246.
Hysterophora Obraztsov, 1943 (non 1944), Mitt. münch. Ent., p. 91

The species belonging to this genus show various coloration. The fore wing more or less broad. Labial palpi long, middle joint more or less dilated anteriorly. Costal fold in the fore wing in the male sex occasionally present. In the fore wing *r5* touching the termen more or less below alar apex. In the hind wing *rr* and *m1* usually run separately and stalked only in few species (e. g., *Hysterosia hilarana* (H.-S.)). The situation of *m3* with respect to *cu1* very various: they may be stalked, from one point or depart separately from discal cell.

Male genital armature of a various structure. Uncus in most instances long, socii well developed. Valva long. Sacculus sometimes protruding the ventral edge of the latter. Aedeagus large, often tipped with a spine-like process. Cornuti: one, two, sel-

dom three in number, or lacking. Vinculum ventrally coalescent. Female genitalia: ductus bursae and bursa copulatrix strongly sclerotized. Beside strongly sclerotized patches bursa copulatrix shows minute spined signa. The latter sometimes constitute larger groups. Lamella vaginalis usually well developed, large, strongly sclerotized. Ovipositor of usual armature, produced only in *Hysterosia inopiana* (Haw.).

Obraztsov, in 1944, sugested the division of the genus *Propira* Durr, into two subgenera, in the first of them grouping the species having costal fold in the male sex, and in the second the species lacking the mentioned fold. I believe, however, the presence or absence of the costal fold in the male sex is not of great importance in the taxonomical study. There are some species having such a fold rather slightly developed. In such cases the placing the species for its group is very difficult. By the genitalic characters and partially by the venation there subgenera of the genus in question might be established.

KEY TO THE IDENTIFICATION OF THE SUBGENERA OF THE GENUS *HYSTEROSIA* STEPHENS

1. Ovipositor produced . . . . *Hysterosia* Stephens *s. str.*
— Ovipositor of usual shape 2
2. Ductus bursae and the major part of bursa copulatrix heavily sclerotized. In the male genital armature socii teethed . . . . . *Parahysterosia sgen. nov.*
— The strong sclerotization covering only partly ductus bursae and bursa copulatrix. In the male genital armature socii smooth . . . . . *Propira* Durr.

Subgenus 1: *Parahysterosia sgen. nov.*

(figs. 2, 38, 57, 109)

Typus subgeneris: *Cochylis simoniana* Staudinger, 1859

Only one species belongs here. The frons rounded, labial palps long, middle joint slightly dilated anteriorly, apical joint well visible. Costal fold of the fore wing in the male sex lacking. In the wing *sc* running near the costa, *r1* departs from discal cell about as far as *cu2*. The abscissas *r1-r2* and *r2-r3* almost

identical. *r5* touching the termen. The inner vein of the medial cell departs below *r1*.

Male genital armature: uncus stout, valva broad, sacculus reaching the end of the ventral edge of valva. Socii distinctly teethed, transtilla small. Two thin needle-like cornuti in the aedeagus. Female genitalia: the most characteristic features are to see in ductus bursae and bursa copulatrix; they are bounded with a strongly sclerotized patch. The anterior part of bursa copulatrix lacks the signa. Lamella vaginalis strongly sclerotized, narrow, gonapophyses long.

Distribution: Spain, Morocco.

Subgenus 2: *Hysterosia* Stephens *s. str.*, 1829

(Figs. 3, 39, 58, 110)

Typus sugeneris: *Tortrix inopiana* Haworth, 1811

Labial palpi strongly elongated, middle joint more or less dilated anteriorly, the apical one rather small, produced. Males show large costal fold in the fore wing. In the latter *r1* from medial cell near half of its length, considerably nearer the alar base than *cu1*; *r4* and *r5* depart near each other, the latter touching termen. In the hind wing *rr* and *m1* run near each other; *m3* and *cu1* very shortly stalked. Uncus elongate; socii large; valva long, saculus with a free tip; a single cornutus in the aedeagus. Female genitalia. Ovipositor elongate, labia coalescent posteriorly, gonapophyses long; lamella vaginalis broad; a strongly sclerotized patch beside minute spines in the bursa copulatrix.

Several species have been described under the generic name *Hysterosia* Steph., however, in consideration of the armature of the ovipositor I place in that subgenus only one species, namely *H. inopiana* (Haw.). By the characters in the male genital armature *Hysterophora rocharva* Obr. is most allied to *Hysterosia inopiana* (Haw.). However, the former species should be refered to the subgenus *Durrantia sgen. nov* as the comparison of its female genitalia shows.

Distribution: Europe, Asia, ? South America.

Subgenus 3: *Propira* Durrant, 1914

(Figs. 4, 5, 40, 59, 60, 111, 112)

Typus subgeneris: *Tortrix schreibersiana* Frölich, 1828

Labial palpi long, middle joint more or less dilated anteriorly. In *Hysterosia palpana* (Dup.) labial palpi very large and broad.

The majority of species of the subgenus discussed lack the costal fold in the fore wing in the male sex. In the fore wing *sc* more or less remote from costa; *r1* from discal cell in half or two-third of its length; the inner vein of the discal cell commencing frequently between *r1* and *r2; r5* touching the termen, occasionally near the alar apex. In *Hysterosia* (*Propira*) *ochrobasana* (Chrét.) and *Hyst.* (*Propira*) *syrtana* (Rag.) *r5* touches the termen just a little beyond the apex. In the hind wing of the two *m3* and *cu1* stalked, whilst in the remainder of species they run separately or from one point. *rr* and *m1* usually separate from each other.

Male genital armature. Valva broad, more or less bent upwards, rounded apically; sacculus reaching most frequently one-third of valva, in several species freely tipped; tegumen broad; uncus long being, however, in some instances proportionally short, at times bifurcated (e. g., *Hyst. syrtana* (Rag.)); socii large, occasionally extending over tegumen; the middle part of the transtilla clothed with minute spikes; vinculum distinct, coalescent ventrally. Aedeagus large, frequently tipped in a spine-like process; two cornuti in number as a rule (only in a few species one or three).

The armature of the female genitalia rather constant. Ovipositor of a usual armature; lamella vaginalis broad, frequently bulbose; ductus bursae broad; bursa copulatrix large clothed with strongly sclerotized plates, folds and groups of minute spikes.

The subgenus in question is the most numerous one in the genus *Hysterosia* Steph., including several species widely spread in the Palearctic and Nearctic Region.

Genus 3: *Acornutia* Obraztsov, 1944

(Figs. 6, 41, 61, 113)

Typus generis: *Tortrix nana* Haworth, 1811

Tortrix (part.) Haworth, 1811, Lep. Brit., p. 439.
Eupoecilia (part.) Guenée, 1845, Ann. Soc. Ent. Fr., 3, p. 298.
Cochylis (part.) Herrich-Schaeffer, 1847, Schmett. Eur., 4, p. 190.
Phalonia (part.) Kennel, 1913, Pal. Tortr., p. 264.
„Genus 7" (part.) Pierce & Metcalfe, 1922, Genit. Tortr. Brit., p. 28.
Acornutia Obraztsov, 1944, Iris, p. 67.

Labial palpi fairly short; the wings narrow; costal fold in fore wing in the male sex lacking. In the fore wing *r5* touching alar apex; all the veins running separately. In the hind wing *rr* and *r1* stalked, the remaining veins run separately, distinctly remote from each other.

The genital armature. Valva elongate; sacculus freely tipped, both of a similar armature as in *Hysterosia* Steph. Uncus rather long; socii small; transtilla with a strongly elongated central process; aedeagus narrow, pointed, cornuti lacking.

Female genitalia. Lamella vaginalis feeble; ductus bursae fairly long. The latter and the bursa copulatrix provided with numerous minute spikes.

Only one species belongs here.

Distribution: Europe, Asia Minor.

Genus 4: *Phtheochroa* Stephens, 1829

(Figs. 7, 42, 63, 114)

Typus generis: *Tortrix rugosana* Hübner, 1796-99

Tortrix (part.) Hübner, 1796-99, Samml. Eur. Schmett., tabl. 14, fig. 82.
Oporinia (part.) Hübner, 1825, Verz. Bek. Schmett., p. 387.
Sciaphila (part.) Duponchel, 1836, Hist. Nat. Lep. Fr., 9, p. 395.
Phalonia (part.) Kennel, 1913, Pal. Tortr., p. 299.

Labial palpi smaller than in *Hysterosia* Steph., middle joint dilated anteriorly, the apical one small. Fore wing broad, all veins running separately. *r5* touching the termen just a little beyond the alar apex. In the hind wing *rr* and *m1* run separately; *m3* and *cu1* shortly stalked nearly from one point. The

abscissa *m2-m3* at the discal cell considerably smaller than *cu1-cu2*.

Male genital armature. Uncus broad, short; socii large, flap-like; valva strongly developed, curved dorsally; sacculus broad basally; the medial part of transtilla short; aedeagus provided with spined pectens apically; a single cornutus.

Female genitalia. Ovipositor of an usual armature. Lamella vaginalis lightly sclerotized; ductus bursae very broad; bursa copulatrix large, a haevier sclerotized plate on its side.

Only one species belongs here. By its armature of genitalia it comes near the members of *Hysterosia* Steph.

Distribution: Central and Southern Europe, North Africa.

Genus 5: *Phtheochroides* Obraztsov, 1943

Typus generis: *Phtheochroides vulneratana* Obraztsov, 1943
Phtheochroires Obraztsov, 1943, Mitt. Münch. Ent. Ges., 33, p. 94.

Labial palpi twice as long as the head. In the fore wing *r4* and *r5* depart separately from discal cell, *r5* touching the termen. In the hind wing *m3* and *cu1* shortly stalked.

Male genital armature. Uncus terminating with soft flakes. The latter are slighter than in *Phtheochroa rugosana* (Hbn.), however, the sacculus being in the species discussed more extending. Aedeagus long, two cornuti.

The mentioned diagnosis is an abbreviation of that of Obraztsov. I place *Phtheochroides* Obr. at the present moment next to *Phtheochroa* Steph., as it has been suggested by Obraztsov. However, judging from the description of the genus in question would be rather difficult to prove. Obraztsov has designated *Hysterosia vulneratana* Zett. as the typus generis of *Phtheochroides* Obr. However, the Obraztsov's „*Hysterosia vulneratana*" is a species obviously distinct from that of Zetterstedt. The former should preserve the name *Phtheochroides vulneratana* Obraztsov.

Distribution: Pamir.

Genus 6: *Falseuncaria* Sw.

(Figs. 8, 63, 115)

Typus generis: *Tinea ciliella* Hübner, 1796-99

Tinea (part.) Hübner, 1796-99, Samml. Eur. Schmett., fig. 180.
Tortrix (part.) Hübner, 1796-99, l. c., fig. 285.
Cochylis (part.) Treitschke, 1830, Schmett. Eur., 8, p. 279.
Conchylis (part.) Staudinger & Rebel, 1901, Cat. Lep., p. 99.
Phalonia (part.) Kennel, 1913, Pal. Tortr., p. 256.
„Genus 15" Pierce & Metcalfe, 1922, Genit. Tortr. Brit., p. 34.
Falseuncaria Swatschek, 1958, Abh. Larvalsyst., 3, p. 232.

Labial palpi fairly short, middle joint dilated anteriorly, the apical one rather short. In the fore wing all the veins run separately, *r5* touching the alar apex. In the hind wing *rr* and *m1* stalked, *m3* and *cu1* distinctly distant from each other (similarly as the remaining veins).

Male genital armature. Valva stout; transtilla heavily sclerotized; sacculus distinct, attached to the valva on its entire length, the free tip of the former short, rounded. Tegumen narrow, rather uncus-shaped, dilated posteriorly, curved upon 90°. Socii lacking, however, in *Falseuncaria ciliella* (Hbn.) on the tegumen appears a very small and lightly sclerotized process clothed with hairs. Aedeagus fairly long, cornuti long, 10-20 in number. Besides the cornuti there appears a thin rod covered with minute bristles.

Female genitalia. Labia show a tendency to coalesce with each other; ovipositor and lamella subgenitalis elongate. Gonapophyses posteriores long, the anteriores ones short. Lamella vaginalis broad; ostium bursae heavily sclerotized; ductus bursae narrow; bursa copulatrix only shagreened. I place in the genus in question three species: *F. epilinana* (Zell.), *F. degreyana* (Mc Laht.) and *F. ciliella* (Hbn.).

Distribution: Europe, Central Asia.

Genus 7: *Phalonidia* Le Marchand, 1933

(Figs. 9, 10, 64, 65, 116, 117)

Typus generis: *Cochylis affinitana* Douglas, 1846

Cochylis (part.) Treitschke, 1835, Schmett. Eur., 10, p. 141.
Argyrolepia (part.) Guenée, 1845, Ann. Soc. Ent. Fr. 3, p. 301.
Phalonia (part.) Kennel, 1913, Pal. Tortr., p. 246.

„Genus 5" Pierce & Metcalfe, 1922, Genit. Brit. Tortr., p. 27.
„Genus 18" Pierce & Metcalfe, 1922, l. c., p. 37.
Phalonidia Le Marchand, 1933, Amat. Papill. 6, p. 242.
Piercea Filipiev, 1940, Trav. Inst. Zool. Acad. Sci. URSS, p. 71.

Labial palpi rather short, middle joint dilated anteriorly. Fore wing fairly short and broad. All the veins in the fore wing run separately, *r5* touching alar apex, *m3* from discal cell remote from *cu1*. In the hind wing *rr* and *m1* stalked, *m2*, *m3* and *cu1* about equally remote from each other.

Male genital armature. Valva narrow, elongate; sacculus short more or less convex terminally; vinculum ventrally not coalescent; socii large, flake-shaped; the central part of transtilla long; aedeagus pointed terminally; anellus attached to the aedeagus beyond half its length. A single cornutus.

Female genitalia. Introitus vaginae heavily sclerotized barrel-shaped; lamella vaginalis reduced to thin rods bound with gonapophyses posteriores; ductus bursae short, bursa copulatrix rounded, with a faint sculpture, covered with minute spikes; the usual shape of signum is a more or less regular arc of spines.

Owing to the fact of no differences in the venation, as well as in the armature of genitalia, the genus *Piercea* Fil. erected in 1940 is sunk to the synonyms of *Phalonidia* Le March. The genitalia of the species related to *Cochylis mussehliana* Treit. (typus generis of the genus *Piercea* Filipiev) have the valvae a little narrower, sacculus less produced, and the socii proportionally larger than in the typical member of the genus under consideration. Female genitalia of the *Ph. mussehliana* (Treit.) are rather similar to those in the typical representatives of *Phalonidia* Le March., besides, there are intermediate stages between the two mentioned groups. In *Ph. manniana* (F. R.) signum on bursa copulatrix is dispersed, while in *Ph. affinitana* (Dgl.) it resembles that in *Ph. mussehliana* (Treit.).

I place several species in the genus *Phalonidia* Le March. Some of them are externally similar to each other. The genitalic differences are often slight.

Distribution: Europe, Asia, ? North Africa.

Genus 8: *Brevisociaria* Obraztsov, 1943

(Figs. 66, 118)

Typus generis: *Conchylis gilvicomana* Zeller, 1847

Conchylis (part.) Zeller 1847, Iris,, p. 742.
Phalonia (part.) Kennel, 1913, Pal. Portr., p. 267.
„Genus 7" (part.) Pierce & Metcalfe, 1922, Genit. Tortr. Brit., p. 28.
Brevisociaria Obrazstov, 1943, Mitt. Münch. ent. Ges., 33, p. 96.

The external characters similar as in preceding genus. In the fore wing all the veins run separately. *r5* touching the alar apex. In the hind wing only *rr* and *m1* stalked. The abscissas *m2-m3* and *m3-cu1* are of equal length and twice shorter than *cu1-cu2*. Male genital armature. Valva broad basally; sacculus large; vinculum ventrally not coalescent; socii smaller than in the former genus being, however, similarly attached to the tegumen. A single cornutus in the aedeagus. Female genitalia. Introitus vaginae heavily sclerotized; signum dispersed or grouped in an arc.

Obraztsov has placed in this genus three species, viz., *Brevisociaria gilvicomana* (Zell.), *B. curvistrigana* (Wilk.) and *B. contractana* (Zell.). The last species is, however, distinct from the two remaining ones, and presents a rather intermediate stage between this genus and *Phalonidia* Le March. I place the last species in the genus *Phalonidia* Le March.

The distinctness of those genera might be considered as doubtful.

Genus 9: *Stenodes* Guenée, 1845

Typus generis: *Cochylis elongana* Fischer Röslerstamm, 1838-44.

Cochylis (part.) Treitschke, 1835, Schmett. Eur., 10, p. 142.
Eupoecilia (part.) Guenée, 1845, Ann. Soc. Ent. Fr., 3, p. 293.
Stenodes (part.) Guenée, 1845, l. c., p. 300.
Argyrolepia (part.) Guenée, 1845, l. c., p. 301.
Xanthosetia (part.) Herrich-Schaeffer, 1847, Schmett. Eur., 4, p. 175.
Euxanthis (part.) Rebel, 1901, Cat. Lep., p. 101.

Labial palpi usually long, of various armature in individual subgenera and species. Costal fold of the fore wing in the male sex lacking. All the veins in the fore wing run separately, only in *Stenodes elongana* (F. R.) and *S. impurana* (Mann) *m3* and *cu1* are often approximated to each other or even

shortly stalked. In the hind wing *rr* and *m1* stalked as a rule, *m3* and *cu1* coincident for a short distance. This coincidence is sometimes very short, as in *S. halophilana* (Chr.).

Male genital armature. Valva broad; sacculus freely tipped only in a few instances; the medial part of transtilla produced. Socii more or less developed, occasionally very large; uncus lacking, however, in one group of species there are a small projection on the top of tegumen; vinculum in most cases fully developed, seldom membraneous; one cornutus in the aedeagus or lacking.

Female genitalia of a more uniform armature. Lamella vaginalis often well developed and heavily sclerotized, seldom atrophied; signa of bursa copulatrix present or absent, sometimes appear heavily sclerotized patches on bursa.

The genus *Stenodes* Guen. is widely spread in the Palearctic Region. It is divided into several subgenera, the key to those is given below.

KEY TO THE IDENTIFICATION OF THE SUBGENERA OF THE GENUS *STENODES* GUEN.

1. Socii large, tegumen smooth 2
— Socii small, haired, flake-shaped; tegumen with a small projection on its top. . . . *Eustenodes sgen. nov.*
2. Aedeagus bifurcate, or transtilla cupola-shaped, very broad 3
— Aedeagus of an usual armature, not bifurcate; only the middle part of transtilla projected 4
3. No cornuti in the aedeagus present . *Bipenisia sgen. nov.*
— One small cornutus in the aedeagus. *Parastenodes sgen. nov.*
— In the female genitalia gonapophyses short . . . . . *Substenodes sgen. nov.*

Subgenus 1: *Stenodes* Guenée *s. str.*

(Figs. 11, 43, 67, 190)

Typus subgeneris: *Cochylis elongana* Fischer Röslerstamm, 1838-44

Labial palpi very long, middle joint broad, faintly arched, the apical one short, but well visible. Fore wing narrow, only slightly expanding posteriorly. *sc* near the costa, *r1* from

about half the length of discal cell, *r2* usually arched, *r4* and *r5* departing nearly from one point or very shortly stalked, *m3* and *cu1* run similarly as *r4* and *r5*.

Male genital armatures of both the species strikingly similar to each other. Tegumen broad; socii rather large; the central part of transtilla very broad, cupola-shaped; valva broad; sacculus without a free tip; aedeagus short and broad, tipped with a small spine; cornutus small, thin.

In the female genitalia lamella vaginalis very feeble, lightly sclerotized; gonapophyses posteriores proportionally long.

I place in the mentioned subgenus only two species, viz., *Stenodes elongana* (F. R.) and *S. impurana* (Mann).

Distribution: Southern and Central Europe, Asia Minor.

Subgenus 2: *Substenodes sgen. nov.*

(Figs. 12, 68, 120)

Typus subgeneris: *Cochylis pontana* Staudinger, 1859

Labial palpi long, middle joint strongly broadened, arched, the apical one projected, acute. In the fore wing all the veins run separately. *r5* touching the termen, *m3* and *cu1* remote from each other. In the hind wing *rr* and *m1* long stalked, *m3* and *cu1* very shortly stalked.

Male genital armature of a similar structure as in the preceding subgenus having, however, larger tegumen, sometimes very large socii, considerably smaller transtilla, the central part of that is narrower; aedeagus very large proportionately to the other parts of genital armature; cornutus thick.

In the female genitalia lamella vaginalis variously developed, however, it is usually strong and heavily sclerotized. Bursa copulatrix usually with spikes-like structure and small heavily sclerotized, sometimes sculptured areas, being quite transparent in the preceding subgenus. Gonapophyses of a proportional armature.

The armature of the genitalia uniform, the specific differences being above all in the shape of aedeagus. In *Stenodes jaculana* (Snel.) there is a rather large, but lightly sclerotized uncus, however, this species should be placed in the genus

Stenodes Guen. as the comparison of the other parts of its genitalia shows.

This subgenus includes about 20 species.

Distribution: Europe, Asia, North Africa.

Subgenus 3: *Parastenodes sgen. nov.*

(Fig. 13, 44, 69, 121)

Typus subgeneris: *Cochylis meridiana* Staudinger, 1859

Labial palpi very large, middle joint broad, the apical one well visible. In the fore wing all the veins run separately. *r5* touching the termen; the inner vein of the medial cell commencing between *r1* and *r2*. In the hind wing *rr* and *m1* long stalked, *m3* and *cu1* usually shortly stalked. The abscissa *cu1 -cu2* about three times as long as *m2-m3*.

Male genital armature. Valva broad; sacculus always without a free tip; the central part of transtilla fairly broad; aedeagus stout, provided with a single, very large cornutus.

Female genitalia characteristic by very long gonapophyses and heavily sclerotized lamella vaginalis. Ductus bursae long, clothed on its major part with heavily sclerotized areas, minute spikes and folds.

Several species very similar to each other belong here. Fore wing rather narrow, the scales erected, the coloration uniformly light.

Distribution: Spain, South-Eastern Europe, Asia Minor, Central Asia, North Africa.

Subgenus 4: *Eustenodes sgen. nov.*

(Figs. 14, 45, 70, 122)

Typus subgeneris: *Euxanthis dorsimaculana* Preissecker, 1908

Labial palpi similar to those in the former subgenera. In the fore wing all the veins run separately. *r5* touching the termen. The inner vein of the discal commencing below *r1*. In the hind wing *rr* and *m1* long stalked, the stalk of *m3* and *cu1* shorter than in the preceding subgenus.

Male genital armature. Valva broad, sacculus without a free tip. Tegumen tipped with a small projection or well-rounded

with ceptalic end. Socii small. Aedeagus of the same general armature as in the previous subgenera. Cornutus large.

In female genitalia ductus bursae broad. Bursa copulatrix in some instances with signa and heavily sclerotized patches.

Distribution: Europe.

Subgenus 5: *Bipenisia sgen. nov.*

(Figs. 15, 71, 123)

Typus subgeneris: *Cochylis jucundana* Treitschke, 1835

Labial palpi large, middle joint more or less broad, the apical one well visible, often acute. In the fore wing all the veins run separately, *r5* touching the termen, *m3* and *cu1* depart from discal cell near each other, *cu2* rather near *cu1*. In the hind wing *rr* and *m1* rather long stalked, *m3* and *cu1* shortly stalked.

Male genital armature. Valva broad; sacculus well developed; tegumen broad; socii large; aedeagus characterized by the lack of cornuti and bifurcation.

In the female genitalia lamella vaginalis heavily sclerotized, labia broad.

Several species distributed in the Europe and Asia belong here.

Genus 10: *Fulvoclysia* Obraztsov, 1943

(Figs. 16, 17, 72, 73, 74, 124)

Typus generis: *Fulvoclysia armeniaca* Obraztsov, 1944

Tortrix (part.) Treitschke, 1835, Schmett. Eur., 10, p. 66.
Xanthosetia (part.) Guenée, 1845, Ann. Soc. Ent. Fr., 3, p. 300.
Cochylis (part.) Lederer, 1870, Ann. Ent. Belg., p. 54.
Euxanthis (part.) Kennel, 1901, Iris, p. 240.
Fulvoclysia Obraztsov, 1943, Z. Wien. Ent. Ges., 28, p. 44.

Labial palpi very large, broad. Fore wing broad, all the veins run separately; *r5* touching the termen, *r1* usually departs from half lenght of the medial cell, *m3* near *cu1*. In the hind wing *rr* and *m1* long stalked, the stalk of *m3* and *cu1* distinctly shorter than the former one and, in *Fulvoclysia fulvana* (F. R.) being very short. The remaining veins distinctly remote from each other.

Male genital armature. Valva broad; sacculus long, with a more or less long free tip. A tuft of spines under the dorsal edge of valva, near its base. Socii fairly small, narrow. Transtilla well developed. Vinculum ventrally not coalescent. No cornuti in the aedeagus present.

Female genitalia. Lamella subgenitalis well developed. Lamella vaginalis rather heavily sclerotized. Ostium bursae large. Ductus bursae and bursa copulatrix well transparent.

I place in this genus four species differing considerably from each other by their male genital armatures. The male of *F. defectana* (Led.) and the female of *F. subdolana* (Kenn.) are not yet known.

Distribution: Europe, Asia Minor.

Genus 11: *Ceratoxanthis gen. nov.*

(Figs. 18, 75)

Typus generis: *Conchylis argentomixtana* Staudinger, 1870

Conchylis Staudinger, 1870, Berl. ent. Zeit., p. 277.
Euxanthis (part.) Rebel, 1901, Cat. Lep., p. 101.

Labial palpi fairly long, the middle joint dilated, the apical one short, projected, well visible. In the fore wing all the veins run separately, *r5* touching the termen. In the hind wing *rr* and *m1*, as well as *m3* and *cu1* long stalked.

Male genital armature. Valva very broad, sacculus broad. Tegumen small, socii large, flake-shaped. Juxta with acute points, strongly coalescent with the aedeagus. No cornuti present.

Female genitalia are not as yet known.

Only one species belongs here, namely *Ceratoxanthis argentomixtana* (Stgr.). It is distributed in the Eastern Europe and Asia Minor.

Genus 12: *Agapeta* Hübner, 1822

(Figs. 19, 46, 76, 77, 125)

Typus generis: *Phalaena Tortrix zoegana* Linnaeus, 1767

Phalaena Tortrix (part.) Linnaeus, 1767, Syst. Nat. 12, p. 876.
Pyralis (part.) Fabricius, 1794, Ent. Syst., 3, p. 256.
Agapeta Hübner, 1822, Syst.-alph. Verz., p. 58.

Pharmacis Hübner, 1823 (non 1822) Zuträge Exot. Schmett., 2, p. 10. (nom. praeocc.).
Agapete Hübner, 1825, Cat. Lep. Coll. Franck, p. 98.
Euxanthis Hübner, 1825, Verz. bek. Schmett., p. 391.
Xanthosetia (part.) Stephens, 1834, Ill. Brit. Ent., 4, p. 191.
Carolella Busck, 1938, Bull. S. Calif. Acad. Sc., 38, p. 104 (nom. nov. pro *Pharmacis* Hbn.).

Labial palpi fairly long, faintly dilated, the middle joint long, the apical one acute. In the fore wing all the veins run separately, *r5* touching the termen near the alar apex. In the hind wing the stalk of *rr* and *m1* longer than that of *m3* and *cu1*.

Male genital armature. Valva narrow elongated, sacculus with a large free tip. Vinculum strongly developed. Tegumen proportionately rather small. Socii hanging. No cornuti in the aedeagus present. In the female genitalia lamella vaginalis large, heavily sclerotized. Ductus bursae and bursa copulatrix considerably elongated, both lightly sclerotized. There are rows of minute spines on bursa.

Two Palearctic species of this genus are hitherto known. They differ from each other considerably by the armature of their male genital armatures, particularly by the shape of the aedeagus which is bifurcate in *Agapeta zoegana* (L.).

Distribution: Europa, Asia Minor, Pamir. However, it seems that the range of the genus under consideration is rather unsufficiently known, as the mentioned distribution of it shows.

Genus 13: *Euxanthoides gen. nov.*

(Figs. 47)

Typus generis: *Tortrix straminea* Haworth, 1811

Tortrix (part.) Haworth, 1811, Lep. Brit., p. 401.
Lozopera (part.) Stephens, 1834, Ill. Brit. Ent. 4, p. 187.
Cochylis Duponchel, 1836, Hist. Nat. Lep. Fr., 9, p. 571.
Euxanthis (part.) Rebel, 1901, Cat. Lep., p. 100.
Phalonia (part.) Kennel, 1913, Pal. Tortr., p. 287.
Agapete (part.) Pierce & Metcalfe, 1922, Genit. Brit. Tortr., p. 31.

Labial palpi of various armature. In *Euxanthoides chamomillana* (H.-S.) they are long and pointed, in *E. santolinana* (Stgr.) being short and broad. In the remaining species the palpi

are usually of medium size. In the fore wing all the veins run separately, *r5* touching the alar apex. However, in *E. chamomiltana* (H.-S.) *m3 and cu1* are very shortly stalked. In the hind wing *rr* and *m1*, as well as *m3* and *cu1* stalked as a rule.

In the male genital armature valva broad, its apex gently bent dorsally. Sacculus broad. In some instances there are minute spines on valva. Tegumen of various armature, at times provided with a small projection (uncus). One cornutus in the aedeagus, or in some cases it is lacking.

In the female genitalia lamella vaginalis heavily sclerotized. Signa and heavily sclerotized patches on bursa copulatrix usually lacking.

I divide this genus into three subgenera.

THE KEY TO THE IDENTIFICATION OF THE SUBGENERA OF THE GENUS *EUXANTHOIDES GEN. NOV.*

1. Aedeagus bifurcate: lamella vaginalis large, folded . . . . . *Błeszyńskiella sgen. nov.*
— Aedeagus simple; lamella vaginalis small, smooth . . . 2
2. A group of spines on the central part of valva; lamella vaginalis elongated . . . *Euxanthoides sgen. nov. s. str.*
— No spines on the central part of valva; lamella vaginalis berrel-shaped . . . . . *Paraxanthoides sgen. nov.*

Subgenus 1: *Błeszyńskiella sgen. nov.*

(Figs. 20, 78, 126)

Typus subgeneris: *Tortrix alternana* Stephens, 1834

Labial palpi rather large, middle joint broad, the apical one long and well visible. The venation of the wings as given for the genus in question.

Male genital armature. Valva evenly haired throughout with a strong proximal projection. Sacculus well developed, broad; vinculum ventrally coalescent. Socii rather small, transtilla broad. Aedeagus bifurcate, anellus large. Vesica departs considerably nearer the base of aedeagus than in the other subgenera. Cornuti lacking.

In the female genitalia lamella vaginalis large, strong sclerotization appears only at the ostium bursae. Signa and heavily

sclerotized patches on bursa copulatrix and on ductus bursae absent.

I place only one species in this subgenus, namely *Euxanthoides alternana* (Steph.).

Distribution: Europe, Asia Minor.

This subgenus in named for Dr S. Błeszyński of the Institute of Zoology of the Polish Academy of Sciences in Kraków.

Subgenus 2: *Euxanthoides sgen. nov. s. str.*

(Figs. 21, 79, 127)

Typus subgeneris: *Tortrix straminea* Haworth, 1811

Labial palpi a little shorter than in the preceding subgenus. Venation of the wings similar to that in *Błeszyńskiella sgen. nov.*

Male genital armature. Valva broad; sacculus considerably narrower than in *E. alternana* (Steph.). A row of bristles in the central part of valva. Vinculum narrow; tegumen provided with strong lists. The basal part of aedeagus slightly marked; a single cornutus.

In the female genitalia lamella vaginalis plate-shaped, distinctly narrower than in the preceding subgenus.

Distribution: Palearctic Region.

Subgenus 3: *Paraxanthoides sgen. nov.*

(Figs. 22, 23, 82, 83, 128)

Typus subgeneris: *Cochylis chamomillana* Herrich-Schaeffer, 1847

Labial palpi of various shape, long or short. The venation in the wings similar as in the previous subgenera, however, in *Paraxanthoides chamomillana* (H.-S.) in the fore wing *m3* and *cu1* very shortly stalked.

Male genital armature. Valva of even width throughout; sacculus stout. Several minute spines on the ventral edge of valva. Tegumen and uncus small. A single cornutus in the aedeagus.

Female genitalia. Lamella vaginalis a little resembling that in the genus *Phalonidia* Le March. being, however, more stout in the genus under consideration. Ductus bursae rather long; bursa copulatrix small.

I place here two species, namely *Euxanthoides chamomillana* (H.-S.) and *E. santolinana* (Stgr.). They are distinct from each other by the armature of labial palpi, venation and male genitalia. The female genitalia of these species are strikingly similar to each other.

Distribution: Southern Europe, Asia Minor, North Africa.

Genus 14: *Aethes* Billberg, 1820

Typus generis: *Pyralis smeathmanniana* Fabricius, 1781

Phalaena (part.) Clerck, 1759, Icones Ins., pl. 4 fig. 10.
Pyralis (part.) Fabricius, 1781, Spec. Ins., p. 278.
Tortrix (part.) Brachm, 1791, Ins. Kal., p. 267.
Aethes Billberg, 1820, Enum. Insect.
Phalonia Hübner, 1825, Verz. bek. Schmett., p. 393.
Chlidonia Hübner, 1825, l. c., p. 394.
Dapsilia Hübner, 1825, l. c., p. 394.
Argyrolepia (part.) Stephens, 1829, Syst. Cat., 2, p. 190.
Lozopera (part.) Stephens, 1829, l. c., p. 191.
Coccyx (part.) Treitschke, 1830, Schmett. Eur., p. 127.
Cochylis (part.) Treitschke, 1830, l. c., p. 274.
Argyroptera Duponchel, 1834, Hist. Nat. Lep. Fr., 9, p. 24.
Chrosis (part.) Guenée, 1845, Ann. Soc. Ent. Fr., 3, p. 300.
Eupoecilia (part.) Herrich- Schaeffer, 1847, Schmett. Eur., 4, p. 179.
Argyridia Stephens, 1852, List, p. 90.
Conchylis (part.) Lederer, 1859, Wien. Monatschr., p. 272.

Labial palpi usually fairly short, protruding beyond the head not more than for half their length. The middle joint rather slightly dilated, the apical one more or less projected. In the fore wings all the veins departing separately from discal cell. Only in the group of species so named *Lozopera* (s. Kennel et auct.) *r4* and *r5* commencing from one point or separately very near each other. *r5* touching the alar apex. In the hind wing *rr* and *m1* long stalked, the remaining veins run separately.

Male genital armature. One of the main characters are long and thin socii. Valva rather broad, sacculus usually without

a free tip; aedeagus in most instances narrow; a single cornutus present or absent. Only in few cases the armature of the aedeagus more complicated. Vinculum ventrally not coalescent.

In the female genitalia lamella vaginalis more or less developed. Ductus bursae usually short; frequently occur heavily sclerotized patches, minute spikes-like sclerits and sculptures on bursa copulatrix.

THE KEY TO THE IDENTIFICATION OF THE SUBGENERA OF THE GENUS *AETHES* BILLB.

1. *r4* and *r5* in the fore wing run separately *Aethes* Billb. *s. str.*
— *r4* and *r5* in the fore wing depart from one point . . . 2
2. A row of spines on the valva . . . *Coecaethes* Obr.
— No spines on the valva present . . . *Lozopera* Steph.

Subgenus 1: *Aethes* Billb. *s. str.*, 1820

(Figs. 24, 48, 82, 83, 84, 85, 86, 129, 130)

Typus subgeneris: *Pyralis smeathmanniana* Fabricius, 1781

Labial palpi rather short, the middle joint faintly dilated, the apical one more or less well visible. In the fore wing *r4* and *r5* commencing separately.

Male genital armature of various structure. Valva more or less broad, sacculus attached to the valva on its total length or with a free tip, at times with bends and swellings. Tegumen small, socii long. Transtilla usually narrow, its central part more or less elongated. In *Aethes pardaliana* (Kenn.) the latter is only slightly marked; in *A. willana* (Brachm) and *A. margarotana* (Dup.) this part is thin and strongly elongated. Aedeagus narrow, elongated as a rule; a single cornutus; it is lacking in few instances as in two latter species. In *A. cnicana* (Dbld.), *A. pardaliana* (Kenn.), *A. perfidana* (Kenn.) and *A. badiana* (Hbn.) the aedeagus is markedly broadened, forked and provided with process or spines. Regarding the shape of the aedeagus there are, however, the species showing the interstages.

Female genitalia. Lamella vaginalis heavily sclerotized as a rule, at times bulbose. Ductus bursae more or less broad, only in few instances it is narrow. Sometimes there occur

heavier sclerotized patches, signa or other sculptures on bursa copulatrix.

In this subgenus some groups of species closely related to each other may be selected. The most numerous of them includes the species closely related to *A. diacrisiana* (Rbl.); they have the central part of transtilla of the basic type, narrow aedeagus and one distinct cornutus. To the second group I include above mentioned *A. cnicana* (Dbld.) and *A. badiana* (Hbn.) having aedeagus covered with spines and broad, proportionately weakly sclerotized ostium bursae. At last *A. willana* (Brachm) and *A. margarotana* (Dup.) resemble the members of the subgenus *Lozopera* Steph. by the armature of their sacculus and aedeagus, they are, however, quite distinct from this subgenus by the transtilla and the female genitalia; cornutus lacking. The remainder of species are genitalically rather distinct from each other.

Distribution: Palearctic Region.

Subgenus 2: *Lozopera* Stephens, 1829

(Figs. 25, 49, 87, 132)

Typus subgeneris: *Pyralis francillana* Fabricius, 1794

Labial palpi rather short, usually slightly dilated. The venation of the wings similar to that in the preceding subgenus, only *r4* and *r5* in the fore wing usually from one point.

Male genital armature. Valva broad, sacculus stout, at times with a distinct free tip. Hair of valva slight. Transtilla broad, curved, with spines apically. Aadeagus with processes or teeth, cornutus lacking.

Female genitalia. Lamella vaginalis usually broad, ductus bursae short, bursa copulatrix with dense minute spikes.

Several species belong here, for example *Aethes (L.) beatricella* (Wlsghm.), *A. (L.) dilucidana* (Steph.), *A. (L.) vicinana* (Mann) etc.

Distribution: Europe, North Africa, Asia Minor.

Subgenus 3: *Coecaethes* Obraztsov, 1943

(Figs. 88, 89, 132)

Typus subgeneris: *Lozopera mauretanica* Walsingham, 1898

The armature of the head and the venation of the wings as in the preceding subgenus. Male genital armature. Valva more or less broad, sacculus without a free tip. A row of spines throughout the valva. The hair of the sacculus sometimes differentiated into the normal hairs and more stout ones. Transtilla broad with a pointed process in its central part. Aedeagus forked, cornutus lacking.

Female genitalia. Lamella vaginalis sometimes weaker and ductus bursae narrower than in the preceding subgenus.

Several species belong here. They range probably throughout the Palearctic Region.

Genus 15: *Commophila* Hübner, 1825

(Figs. 26, 50, 90, 133)

Typus generis: *Tortrix aeneana* Hübner, 1799-1800

Tortrix (part.) Hübner, 1799-1800, Samml. Eur. Schmett., pl., 30, fig. 138.
Commophila (part.) Hübner, 1825, Verz. bek. Schmett., p. 392.
Argyrolepia (part.) Stephens, 1834, Ill. Brit. Ent., 4, p. 176.
Euxanthis (part.) Rebel, 1901, Cat. Lep., p. 100.

Labial palpi rather short, only slightly protruding beyond the head; the middle joint fairly broad, the apical one slightly visible. The wings broad. In the fore wing all the veins run separately, *r5* touching the termen. In the hind wing *rr* and *m1* long stalked, the others run separately; *m3* near *cu1*.

Male genital armature. Valva elongate, sacculus long with a very small free tip, vinculum ventrally coalescent, narrow. Transtilla in the shape of a narrow band twice dilated in its middle part. Socii very long, tapering gradually posteriorly. A single cornutus in the aedeagus present.

Female genitalia. Gonapophyses large, lamella vaginalis narrow, ductus bursae fairly long of equal width throughout; no signa in bursa copulatrix; hairs on labia short.

Only one species — *Commophila aeneana* (Hbn.) — belongs here.

Distribution: Europe.

Genus 16: *Prochlidonia gen. nov.*

(Figs. 27, 51, 91, 134)

Typus generis: *Tortrix amiantana* Hübner, 1796-99

Tortrix (part.) Hübner, 1796-99, Samml. Eur. Schmett, pl. 24, fig. 155.
Chlidonia (part.) Hübner, 1825, Verz. bek. Schmett., p. 393.
Argyrolepia (part.) Stephens, 1834, Ill. Brit. Ent., 4, p. 176.
Conchylis (part.) Lederer, 1859, Wien. Monatschr., p. 275.
Euxanthis (part.) Rebel, 1901, Cat. Lep., p. 100.

Labial palpi rather long, the middle joint strongly dilated, the apical one short. In the fore wing *r5* touching the termen. *m3* and *cu1* arising from discal cell, remote from each other, from one point or shortly stalked; sometimes the run of these asymmetrical on both right and left wing. In the hind wing the stalk of *rr* and *m1* considerably longer than that of *m3* and *cu1*.

Male genital armature. Valva broad, sacculus stout, vinculum ventrally not coalescent, tegumen with two short socii apically. Central part of transtilla rather broad, juxta with produced cornes. Two small cornuti in the aedeagus present. Anellus very long reaching nearly the end of aedeagus.

Female genitalia somewhat resembling those in the previous genus, especially by the very long gonapophyses and short hairs of labia. Lamella vaginalis narrow, heavily sclerotized; ductus bursae short, bursa copulatrix without signa.

The only species of the genus, namely *Prochlidonia amiantana* (Hbn.) is distributed in Europe.

Genus 17: *Eugnosta* Hübner, 1825

(Fig. 28, 29, 52, 92, 135)

Typus generis: *Tortrix lathoniana* Hübner, 1796-99

Tortrix (part.) Hübner, 1796-99, Samml. Eur. Schmett., pl. 30, fig. 189.
Argyrolepia (part.) Stephens, 1829, Syst. Cat., p. 190.
Argyroptera (part.) Duponchel, 1834, Hist. Nat. Lep. Fr., 9, p. 448.
Eupoecilia (part.) Herrich-Schaeffer, 1847, Schmett. Eur., p. 179.
Euxanthis (part.) Rebel, 1901, Cat. Lep., p. 100.

Labial palpi fairly long, in the female longer than in the male; the apical joint more or less projected. In the fore wing *sc* near the costa, *r5* touching termen; all the veins run separately. However, at times *m3* and *cu1* coincident for a some distance (fig. 52). In the hind wing *rr* and *m1* on a rather long stalk; *m3* and *cu1* usually separate from each other, however, in some instances coincident or, as in *Eugnosta magnificana* (Rbl.) shortly stalked.

Male genital armature. Valva large, sacculus attached to the valva for its entire length. Tegumen tipped in two large processes (socii) tapering gradually posteriorly. Central part of transtilla elongated. Aedeagus very large, two cornuti (one long and the other shorter). The latter show specific differences. Obraztsov (1943) stated only a single cornutus in *Eugnosta pamirana* Obr. Such a case would be an exception among the species of the genus under consideration.

Female genitalia. Labia long; gonapophyses posteriores of a similar armature as in previous two genera. Lamella vaginalis of a more or less stout armature, ductus bursae broad; bursa copulatrix with minute spikes and heavier sclerotized areas.

This genus includes only few species distributed in the Palearctic Region.

Genus 18: *Eupoecilia* Stephens, 1829

(Figs. 30, 53, 93, 136)

Typus generis: *Tortrix angustana* Hübner, 1796-99

Tortrix (part.) Hübner, 1796-99, Samml. Eur. Schmett., pl. 31, fig. 197.
Dapsilia (part.) Hübner, 1825, Verz. bek. Schmett., p. 394.
Clysia Hübner, 1825 (non Leach, 1817), l. c., p. 409, nom praeocc.
Eupoecilia Stephens, 1829, Syst. Cat., p. 190.
Coccyx (part.) Treitschke, 1830, Schmett. Eur., 8, p. 127.
Cochylis (part.) Treitschke, 1830, l. c., p. 282.
Argyroptera (part.) Duponchel, 1834, Hist. Nat. Lép. Fr., 9, p. 454.
Telea (part.) Stephens, 1834, Ill. Brit. Ent., 4, p. 245.
Euxanthis (part.) Meyrick, 1895, Handb., p. 556.
Phalonia (part.) Kennel, 1913, Pal. Tortr., p. 242.

Labial palpi in most instances fairly short, the middle joint dilated. In the fore wing *r4* and *r5* coincident or separate from each other, *r5* touching the termen; *m5* and *cu1* at times run

near each other. In the hind wing *rr* and *m1*, as well as *m3* and *cu1* stalked, at times on the stalk of *rr* and *m1* an additional vein of a various run. There are also cases of an abnormal run of *sc* in the fore wing, as is shown in fig. 53.

Male genital armature. Valva elongate, sacculus narrow, at times provided with faint teeth. Vinculum narrow, tegumen fairly long, tipped with two very characteristic socii. Aedeagus large, one large and numerous small cornuti. In the female genitalia lamella vaginalis rather well developed, ductus bursae and bursa copulatrix with numerous spikes or distinctly sculptured.

The genus under consideration includes only few members distributed probably throughout the Palearctic Region.

Genus 19: *Cochylidia* Obraztsov, 1956

(Figs. 31, 94, 95, 137)

Typus generis: *Tortrix subroseana* Haworth, 1811

Tortrix (part.) Haworth, 1811, Lep. Brit., p. 394.
Cochylis (part.) Curtis, 1834, Brit. Ent., p. 491.
Eupoecilia (part.) Wood, 1839, Ind. Ent., p. 167.
Conchylis (part.) Lederer, 1859, Wien. Monatschr., p. 273.
Coccyx (part.) Lederer, 1859, l. c., p. 276.
Phalonia (part.) Meyrick, 1859, Handb., p. 545.
„Genus 16" Pierce & Metcalfe, 1922, Genit. Brit. Tortr., p. 34.
Phalonidia (part.) Lhomme, 1939, Cat. Lep. Fr. & Belg., p. 206.
Cochylidia Obraztsov, 1956, Mitt. Münch. Ent. Ges., 46, p. 14.

Labial palpi rather short, the middle joint considerably dilated. In the fore wing all the veins run separately, *r5* touching costa. In the hind wing *rr* and *m1* stalked, *m3* and *cu1* remote from each other.

Male genital armature. Valva very broad, its tip curved dorsally. Sacculus well attached to the walva. Processus basales long and stout. Tegumen rounded. Socii short being, however, elongate in *Cochylidia rupicola* (Curt.). Vinculum ventrally not coalescent. Hair very weak. Aedeagus large, numerous cornuti and a heavily sclerotized cone-like piece of chitin present.

Female genitalia. Lamella vaginalis lightly sclerotized, ductus bursae intergrades to bursa copulatrix. Signum and heavily

sclerotized patches in bursa copulatrix appear rather in few instances.

Several species belong here. They are distributed throughout Palearctic Region. The specific differences in the genitalia very little; the only species having distinct genitalic characters is *C. rupicola* (Curt.). Obraztsov in 1956 suggested to erect a separate genus for the latter species, that seems to be rather correct, however, in the author's opinion much more materials should be examine to decide in that matter.

Genus 20: *Cochylimorpha* Razowski, 1959

(Figs. 32, 96)

Typus generis: *Cochylis favillana* Staudinger, 1859

Cochylis Staudinger, 1859, Stett. ent. Zeit., p. 230.
Conchylis (part.) Rebel, 1901, Cat. Lep., p. 97.
Euxanthis (part.) Kennel, 1913, Pal. Tortr., p. 342.
Cochylimorpha Razowski, 1959, Pol. Pis. Ent., 29, p. 440.

Labial palpi thin and very long, the apical joint rather short. The wing venation has not yet been examined, as the only known specimen of the species under consideration is too old for a thorough study.

Male genital armature. Valva narrow and considerably longer than that in the previous genus; sacculus without a free tip. Processus basales club-like tipped. Tegumen with a small projection, that may be regarded as a lightly sclerotized uncus. Socii long. Vinculum ventrally not coalescent, rounded terminally. Aedeagus short, a single cornutus present. The tips of juxta strongly elongated. Female genitalia not yet known.

The only species belonging here occurs in Spain.

Genus 21: *Diceratura* Diakonoff, 1929

(Figs. 33, 97, 98, 138)

Typus generis: *Cochylis purpuratana* Herrich-Schaeffer, 1847

Cochylis (part.) Herrich-Schaeffer, 1847, Schmett. Eur., p. 186.
Conchylis (part.) Mann, 1855. Verh. Zool.-Bot. Ges., p. 554.
Phalonia (part.) Kennel, 1913, Pal. Tortr., p. 261.
Diceratura Diakonoff, 1929, Rev. Russ. Ent., 23, p. 155.

Labial palpi rather short. In the fore wing all the veins run separately, *r5* touching the costa, *cu1* rather near *m3*. In the hind wing *rr* and *m1* stalked, the remaining veins remote from each other.

Male genital armature. Valva broad and short, sacculus at times provided with process, processus basales long, tapering. Vinculum ventrally not coalescent. A lightly sclerotized uncus and small socii on the tegumen. Transtilla stout, aedeagus usually large, the number of cornuti variable.

Female genitalia. Lamella vaginalis lightly sclerotized; ductus bursae intergrades to bursa copulatrix, signa and heavily sclerotized areas in the latter occur seldom.

Several species belong here. They are distributed in the South Europe, North Africa and Asia Minor.

Genus 22: *Cryptocochylis gen. nov.*

(Figs. 34, 54, 99, 139)

Typus generis: *Conchylis conjunctana* Mann, 1864

Conchylis (part.) Mann, 1864, Wien. Monatschr., p. 183.
Phalonia (part.) Kennel, 1913, Pal. Tortr., p. 282.
Euxanthis Meyrick, 1928, Exot. Micr., 3, p. 591.

Labial palpi strongly elongated, the middle joint behind its broadening long and tapering. Fore wing narrow, apex produced. All the veins run separately, *r5* touching the costa, *m3* near *cu1*, *cu2* curved. In the hind wing *rr* and *m1* long stalked, the stalk of *m3* and *cu1* somewhat shorter.

Male genital armature very characteristic. Valva tapering, well fused with sacculus, a dentate flap on the dorsal edge. Sacculus long with a thin acute tip. Tegumen large, scaphium membranous, socii coalescent with each other. Transtilla with two processes in its central part. Aedeagus rather small.

Female genitalia. Gonapophyses long, lamella vaginalis heavily sclerotized, ductus bursae rather short, minute spines and small, heavily sclerotized pathes on bursa copulatrix.

The only species belonging to the genus under consideration is distributed in the South Europe (Dalmatia) and Asia Minor.

Genus 23: *Longicornutia gen. nov.*

(Figs. 35, 100, 140)

Typus generis: *Cochylis phaleratana* Herrich-Schaeffer, 1847

Cochylis (part.) Herrich-Schaeffer, 1847, Schmett. Eur., p. 189.
Conchylis (part.) Rebel, 1901, Cat. Lep., p. 95.
Phalonia (part.) Kennel, 1913, Pal. Tortr., p. 273.

Labial palpi rather long, strongly dilated. In the fore wing *r5* touching alar apex or costa, all the veins run separately. In the hind wing *rr* and *m1* separate from each other.

Male genital armature. Valva fairly narrow, sacculus stout, freely tipped. Socii in the membraneous scaphium, the central part of transtilla elongated. Vinculum ventrally not coalescent, as in the former genus. Aedeagus stout, a single cornutus present.

Female genitalia. Gonapophyses short, lamella vaginalis narrow. Heavily sclerotized patches in bursa copulatrix.

Two species belong here, viz., *Longicornutia phalerotana* (H.-S.) and *L. carpophilana* (Stgr.).

Distribution: Europe.

Genus 24: *Cochylis* Treitschke, 1830

(Figs. 36, 55)

Typus generis: *Tortrix roseana* Haworth, 1811

Tortrix (part.) Hübner, 1796-99, Samml. Eur. Schmett., pl. 12, fig. 71.
Chlidonia (part.) Hübner, 1825, Verz. bek. Schmett., p. 393.
Clysia (part.) Hübner, 1825, l. c., p. 409.
Cochylis Treitschke, 1830, Schmett. Eur., p. 283.
Conchylis Sodoffsky, 1837, Bull. Soc. Nat. Mosc., p. 93.
Eupoecilia (part.) Stephens, 1834, Ill. Brit. Ent., 4, p. 182.
Phalonia (part.) Kennel, 1913, Pal. Tortr., p. 257.
„Genus 6" Pierce & Metcalfe, 1922, Genit. Brit. Tortr., p. 27.
Cochylichroa Swatschek, 1958, Abh. Larvalsyst., 3, p. 233.

Labial palpi in most instances fairly short. In the fore wing all the veins run separately, *r5* touching the alar apex. In the hind wing *rr* and *m1* stalked, the remaining veins run separately.

Male genital armature. Valva fairy narrow, sacculus stout, at times freely tipped or provided with process. Tegumen

broad; socii small, at times coalescent with each other. Transtilla with a central process. Vinculum ventrally not coalescent. In some instances two cornuti in the aedeagus present.

Female genitalia. Ovipositor strongly elongated or of general *Cochylidae*-shape. Lamella vaginalis broad, ostium often heavily sclerotized, bursa copulatrix without signa, often with a distinct sculpture.

I divide the genus under consideration into several subgenera, the characteristic of which is given below. These, may be, should be regarded as distinct genera, however, oving to the fact that the genus *Cochylis* Treit. is as yet unsufficiently known, the decision must be stopped for some future time. Because of some common characters in the genitalia, in the venation and in the shape of labial palpi I include the species discussed below for a time in the genus *Cochylis* Treit.

THE KEY TO THE IDENTIFICATION OF THE SUBGENERA OF THE GENUS *COCHYLIS* TREIT.

1. Cornuti present, transtilla provided at times with a long spine 2
— Cornuti absent, central part of transtilla elongated, never spine-like 5
2. Numerous spines on the ventral edge of valva or, a heavily sclerotized plate on the sacculus 3
— No spines on the ventral edge of valva or, no heavily sclerotized plate on the sacculus . . *Paracochylis sgen. nov.*
3. Cornuti short, spines on valva present *Cochylichroa* Sw.
— Cornuti long or, a heavily sclerotized pecten on sacculus 4
4. Cornuti long . . . . . *Pontoturania* Obr.
— Cornuti short . . . . . *Brevicornutia sgen. nov.*
5. Ovipositor strongly elongated, lamella vaginalis rather narrow . . . . . *Cochylis* Treit. *s. str.*
— Ovipositor of a usual shape, lamella vaginalis broad . . . . . *Neocochylis sgen. nov.*

Subgenus 1: *Cochylis* Treitschke *s. str.*

(Figs. 101, 141, 142)

Typus subgeneris: *Tortrix roseana* Haworth, 1811

Male genital armature. Valva rather narrow, sacculus well developed freely tipped. Vinculum ventrally not coalescent, narrow. The central part of transtilla fairly long. Aedeagus narrow. Cornuti lacking.

Female genitalia. Ovipositor very long, labia bounded with each other, gonapophyses long. Lamella vaginalis heavily sclerotized, at times fairly large. Ductus bursae long and narrow. No signa on bursa copulatrix.

Several species belong here. They are distributed probably only in Europe.

Subgenus 2: *Neocochylis sgen. nov.*

(Figs. 102, 143)

Typus subgeneris: *Conchylis calavrytana* Rebel, 1906

Male genital armature. Valva broader than in the previous subgenus. Sacculus stout. Vinculum ventrally not coalescent, broad. Central process of the transtilla broad. Juxta large. Aedeagus rather narrow, anellus just a little beyond half of it.

Female genitalia. Ovipositor of a general *Cochylis*-shape, lamella vaginalis very broad, ductus bursae narrow, no signa in bursa copularix.

I place in this subgenus three species, viz., *Cochylis calavrytana* (Rbl.), *C. dubitana* (Hbn.) and *C. rufosignana* (Kenn.).

Distribution: Europe, Asia Minor.

Subgenus 3: *Paracochylis sgen. nov.*

(Figs. 103, 144)

Typus subgeneris: *Cochylis amoenana* Kennel, 1899

In the male genital armature valva tapering, sacculus without a free tip. Tegumen broad, socii rather small, central part of transtilla prong-shaped. Aedeagus broad, cornuti minute.

In the female genitalia ovipositor rather distinctly elongated,

gonapophyses long, lamella vaginalis well developed. No signa in bursa copulatrix present.

The only species belonging to this subgenus occurs in Asia Minor.

Subgenus 4: *Cochylichroa* Swatschek, 1958

(Figs. 104, 145)

Typus subgeneris: *Eupoecilia atricapitana* Stephens, 1851

Valva of a similar armature as in the previous subgenus. Sacculus without a free tip. Numerous fairly long spine on valva. Vinculum ventrally not coalescent, narrow. Transtilla rather narrow, its central part small. Cornuti in the aedeagus small, anellus attached beyond half of the latter.

Female genitalia very characteristic by the very broad and folded lamella vaginalis. Ductus bursae short and broad, no signa in bursa copulatrix, the latter faintly sculptured. Ovipositor of a usual shape.

This monospecific subgenus was erected in 1922 by Pierce and Metcalfe as a distinct genus („Genus 6").

Distributed in Europe.

Subgenus 5: *Brevicornutia sgen. nov.*

(Figs. 105, 146)

Typus subgeneris: *Cochylis pallidana* Zeller, 1847

In the male genital armature valva narrow, sacculus very stout provided with a heavily sclerotized pecten. Tegumen rather small, the central part of the transtilla elongated. A group of very minute cornuti in the aedeagus present.

In the female genitalia lamella vaginalis rather heavily sclerotized, dilated. Ductus bursae narrow. No signa in bursa copulatrix present.

The only species belonging to this subgenus is distributed in the Europe and Asia Minor.

Subgenus 6: *Pontoturania* Obraztsov, 1943

(Fig. 106)

Typus subgeneris: *Conchylis defessana* Mann, 1862

The armature of the valva and sacculus as in *Cochylis* Treit. *s. str.* Central part of transtilla elongated. Aedeagus broad, tipped with a spine-like process. Numerous long cornuti present.

The female genitalia not yet known.

The systematical position of *Cochylis posterana* (Zell.) (fig. 107) is rather doubtfull. Because of its male genital armature this species resembles *C. refessana* (Mann.). However, the female genitalia of the latter species are not as yet known. Owing to that fact the author does not decide on the relationship of both. *Cochylis subposterana* (Toll) shows several intermediate characters between the above mentioned species, but the female genitalia of it are not as yet known too.

STRESZCZENIE

Autor opracował nowy układ systematyczny rodziny *Cochylidae* (= *Phaloniidae*), oparty zarówno na przeanalizowaniu cech zewnętrznych jak i budowy aparatu kopulacyjnego. Palearktyczne gatunki tej rodziny zostały zgrupowane w 24 rodzaje (w tym 5 nowych); liczne rodzaje zostały ponadto podzielone na podrodzaje (w tym wiele nowych). Oznaczanie rodzajów i podrodzajów ułatwiają załączone klucze.

PISMIENNICTWO — REFERENCES

Agenio, R., 1952, Fáunula lepidopterológica almerienҫe, Madrid.

Amsel, H. G., 1935, Neue palästinische Lepidopteren, Mitt. Zool. Mus. Berlin, 20, p. 271-319, 11 pls.

Amsel, H. G., 1951, *Lepidoptera* Sardinica, Fragm. Faun., 1, p. 1-152, 7 pls.

Caradja, A., 1917, Beitrag zur Kenntnis der geographischen Verbreitung der Pyraliden und Tortriciden des europäischen Faunengebietes, nebst Beschreibung neuer Formen, Iris, 30, p. 1-88.

Caradja, A., 1926, Noch einige Worte über ostasiatische Pyraliden und Microlepidopteren, Iris, 40, p. 155-167.

Caradja, A., 1931, Second Contribution to our Knowledge about the *Pyralidae* and *Microlepidoptera* of Kwanhsien, Acad. Rom. Bull. Soc. Sci., 1931, p. 1-17.

Caradja, A. & Meyrick, E., 1934, Materialien zu einer Microlepidopteren-Fauna Kwantungs, Iris, 48, p. 28-43.

Caradja, A. & Meyrick, E., 1937, Materialien zu einer Microlepidopterenfauna des Yülingshanmassivs (Provinz Yünan). *Microlep.* excl. *Pyralidae* — Meyrick, E., Iris, 51, p. 137-182.

Chrétien, P., 1899, Note sur le premiers états de la *Cochylis purana* Gn., Bull. Soc. Ent. Fr., 68, p. 273-275.

Chrétien, P., 1916. Contribution à la connaissance des Lépidoptères du Nord de l'Afrique, Ann. Soc. Ent. Fr., 84, p. 289-374.

Chrétien, P., 1925, La Legende de *Graelisia isabellae* (appendice), Amat. Papill., Paris, 1925, p. 241-247.

Christoph, H., 1872, Neue Lepidoptera des europaeischen Faunengebietes, Horae Soc. Ent. Ross., 1872, p. 1-39, 1 pl.

Constant, M., A. 1888, Descriptions de Lépidoptères nouveaux ou peu connus, Ann. Soc. Ent. Fr., 1888, p. 161-172, pl. 4.

Constant, M. A., 1893, Descriptions d'éspèces nouvelles de Microlépidoptères, Ann. Soc. Ent. Fr., 62, p. 391-404.

Curtis, J., 1826, British Entomology, London, 3.

Danilewskij, A. S., 1955, Nowyje widy nizszich czeszujekryłych *Lepidoptera, Microheterocera*) wredjaszczije drewiesnym i kustarnikowym porodam w Sredniej Azii, Entom. Obozr., 34, p. 103-123.

Diakonoff, A., 1929, Eine neue Gattung und vier neue Arten der Tortriciden aus dem östlichen Mittelmeergebiet, Entom. Obozr., 23, p. 153-165.

Duponchel, P. A. J., 1826-1838, Histoire Naturelle des Lépidoptères ou Papillons de France, Paris, 6-10.

Duponchel, P. A. J., 1843, Histoire Naturelle des Lépidoptères ou Papillons de France. Supplement, Paris, 4.

Duponchel, P. A. J., 1845, Catalogue méthodique des Lépidoptères d'Europe, Paris.

Durrant, H., Joannis J., 1922, Correction of Nomenclature of Microlepidoptera, Entomologist, 55, p. 209.

Fabricius, I. C., 1787, Mantissa Insectorum..., Holmiae, 2.

Fabricius, I. C., 1794, Supplementum Entomologiae Systematicae. Hafniae.

Fernald, C. H., 1908, The Genera of the *Tortricidae* and their Types, Amherst.

Filipiev, N., 1928, Lepidopterologische Notizen V. *Microheterocera* vom Munku-Sardyk (Ost-Sajan Gebirge), Ann. Mus. Zool. URSS, 30, p. 1-12, 3 pls.

Filipiev, N., 1940, *Piercea gen. n. (Lepidoptera, Tortricidae)*, Trav. Inst. Zool. Acad. Sci. URSS, 6, p. 171-183, 22 figs.

Fletcher, T. B., 1931, Catalogue of Indian Insects, Part 22 — *Phaloniidae* and *Chlidanotidae*, Calcutta.

Gerasimov, A., 1829, Drei neue Arten von Microlepidopteren aus der Ukraina, Ann. Mus. Zool. URSS, 30, p. 35-38, 2 pls.

Geyer, C., Hübner, J., 1830, Sammlung europäischer Schmetterlinge. Fortsetzung.

Guenée, A., 1845, Europaeorum Microlepidopterorum Index Methodicus, Parisiis.

Haworth, A. H., 1811, Lepidoptera Britanica, London.

Hemming, I., 1937, Hübner. Bibliographical and systematic Account of the Entomological Works of J. Hübner and the Supplements..., London, 2.

Herrich-Schäffer, G. A. W., 1843-1854, Systematische Bearbeitung der Schmetterlingen Europas, Regensburg, 4.

Herrich-Schäffer, G. A. W., 1856-1861, Neue Schmetterlinge aus Europa und den angrenzenden Ländern, Regensburg, 1-3.

Hübner, J., 1796-1824, Sammlung europäischer Schmetterlinge, Augsburg.

Hübner, J., 1822, Systematisch-alphabetisches Verzeichniss aller bisher bey Fürbildungen zur Sammlung..., Augsburg.

Hübner, J., 1825-1826, Verzeichniss bekannter Schmettlinge, Augsburg.

Kennel, J., 1913, Die Palaearktischen Tortriciden, Zoologica, 21, p. 233-397, 8 pls.

Lhomme, L., 1937, Espèces et sous espèces nouvelles à ajouter au Catalogue de Lépidoptères de France et de Belgique, Amat. Papill., Paris, 1937, p. 196-205.

Lederer, J., 1859, Classification der europäischen Tortriciden, Wien. Ent. Monatschr., 3, p. 118-126, 141-155, 241-255, 273-288.

Le Marchand, S., 1933, Les Tordeuses. Première Familie: *Phaloniidae*, Amat. Papill., Paris, 6, p. 235-245.

Lucas, D., 1942, Contribution à l'étude des Lépidoptères de l'Afrique du Nord, Bull. Soc. Ent. Fr., 47, p. 122-126.

Lucas, D., 1946, Lépidoptères nouveaux pour l'Afrique du Nord. Bull. Soc. Ent. Fr., 51, p. 96-98.

Meyrick, E., 1912-1937, Exotic Microlepidoptera, 1-5.

Obraztsov, N., 1943, Lepidopterologische Ergebnisse der Pamir-Expedition des kiewer Zoologischen Museum im Jahre 1937. III. *Tortricidae*, Mitt. münch. Ent. Ges., 33, p. 85-108.

Obraztsov, N., 1944, Über die Phaloniiden-Gattung *Propira* Durr. und einige andere verwandte Gattungen (*Lepidoptera, Tortricidae*), Iris, 1944, p. 66-73.

Obraztsov, N., 1950, On the Correct Name of the Family *Phaloniidae* (*Lepidoptera*), Entom. News, 61, p. 198.

Obraztsov, N., 1952, Über einige palaearktische *Aethes* Billb.-Arten (*Lepidoptera, Agapetidae=Phaloniidae*), Entomol. Zschrift. Stuttgart, 61, 12 pp.

Obraztsov, N., 1956, *Cochylidia gen. nov.*, eine neue *Phaloniidae*-

Gattung, nebst Beschreibung einer neuen Art aus Deutschland, Mitt. münch. Ent. Ges., 46, p. 14-20.

Pierce, F. N. & Metcalfe, J. W., 1922, The Genitalia of the Group *Tortricidae* of the *Lepidoptera* of the British Islands, Oundle.

Razowski, J., 1959, Some Remarks on *Phaloniidae* (*Lepidoptera*), Pol. Pis. Ent., 29, p. 437-446.

Rebel, H., 1901, in Staudinger und Rebel: Catalog der Lepidopteren des palaearctischen Faunengebietes, Berlin, 2.

Rebel, H., 1910, Neue palaearctische Pyraliden, Tortriciden und Tineiden, Iris, 24, p. 1-16, 1 pl.

Rebel, H., 1917, Ueber eine Microlepidopterenausbeute aus dem östlichen Tannuola-Gebiet, Iris, p. 186-195.

Schiffermüller, J. & Denis, J. N. C. M., 1776, Systematischer Verzeichniss der Schmetterlinge der Wienergegend, herausgegeben von einigen Lehrern, Wien.

Staudinger, O., 1879, Lepidopteren-Fauna Kleinasiens, Horae Soc. Ent. Ross., p. 158-435.

Stephens, J. F., 1834, Illustrations of British Entomology..., Haustellata, 4, London.

Stephens, J., 1852, List of the Specimens of British animals in the Collection of the British Museum, 10, London.

Toll, S. 1939, *Tortricidae* zebrane w l. 1934-1938 w powiatach zaleszczyckim i borszczowskim na Podolu, Sprawozd. Kom. Fizjogr. PAU, Kraków, 73, p. 225-260, 2 pls.

Toll, S., 1947, Beitrag zur Mikrolepidopterenfauna von Nordost-Persien, Zschrift. Wien Ent. Ges., Wien, 32, 107-116, 3 pls.

Treitschke, F., 1829-1835, Die Schmetterlinge von Europa, Leipzig, 7, 8, 10.

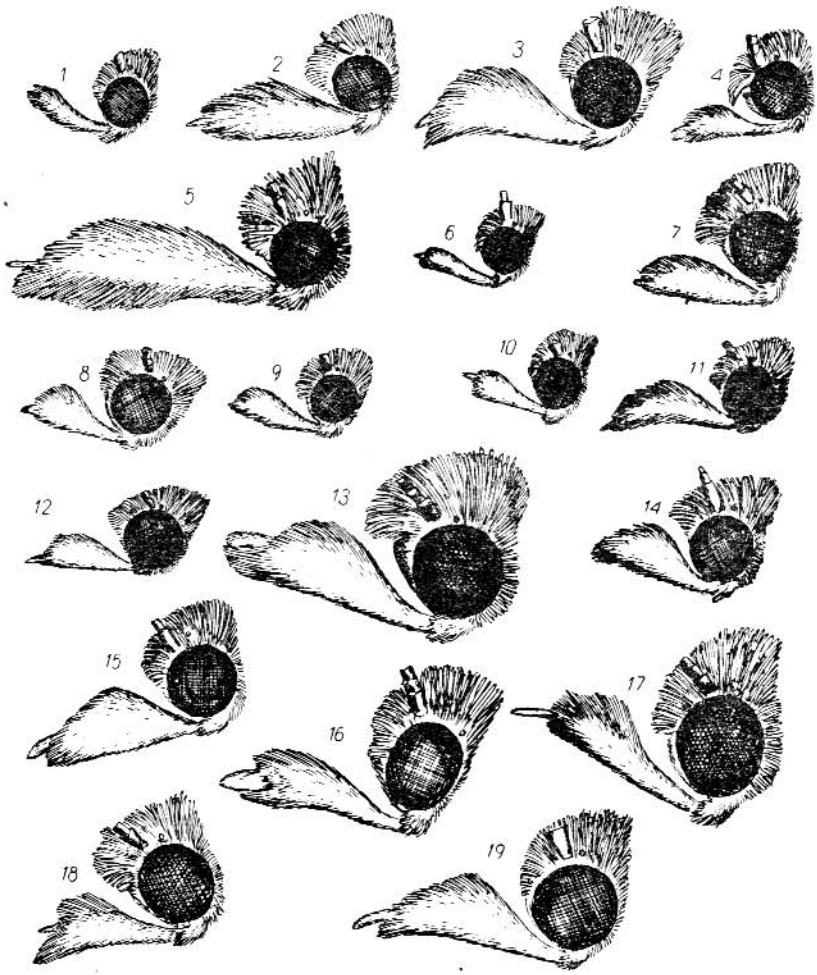
Turati, E., 1924, Spedizione Lepidotterologica in Cirenaica 1921-1922, Atti Soc. Ital. Sci. Nat., Milano, 63, p. 21-191, 6 pls.

Turati, E., 1934, Novità di Lepidotterologia in Cirenaica. IV, Atti Soc. Ital. Sci. Nat. Milano, 73, p. 156-212, 1 pl.

Zerny, H., 1927, Die Lepidopterenfauna von Albarracin in Aragonien, Eos, p. 298-488. 2 pls.

The head

Fig. 1. *Obraztsoviana maculosana* (Haw.)
Fig. 2. *Hysterosia (Parahysterosia) simoniana* (Stgr.)
Fig. 3. *Hysterosia (Hysterosia) inopiana* (Haw.)
Fig. 4. *Hysterosia (Propira) sodaliana* (Haw.)
Fig. 5. *Hysterosia (Propira) palpana* (Rag.)
Fig. 6. *Acornutia nana* (How.)
Fig. 7. *Phtheochroa rugosana* (Hbn.)
Fig. 8. *Falseuncaria ciliella* (Hbn.)
Fig. 9. *Phalonidia manniana* (F. R.)
Fig. 10. *Phalonidia mussehliana* (Treit.)
Fig. 11. *Stenodes (Stenodes) elongana* (F. R.)
Fig. 12. *Stenodes (Substenodes) pontana* (Stgr.)
Fig. 13. *Stenodes (Parastenodes) meridiana* (Stgr.)
Fig. 14. *Stenodes (Eustenodes) dorsimaculana* (Preiss.)
Fig. 15. *Stenodes (Bipenisia) jucundana* (Treit.)
Fig. 16. *Fulvoclysia fulvana* (F. R.)
Fig. 17. *Fulvoclysia subdolana* (Kenn.)
Fig. 18. *Ceratoxanthis argentomixtana* (Stgr.)
Fig. 19. *Agapeta zoegana* (L.)
Fig. 20. *Euxanthoides (Bleszyńskiella) alternana* (Steph.)
Fig. 21. *Euxanthoides (Euxanthoides) straminea* (Haw.)
Fig. 22. *Euxanthoides (Paraxanthoides) chamomillana* (H.-S.)
Fig. 23. *Euxanthoides (Paraxonthoides) santolinana* (Stgr.)
Fig. 24. *Aethes (Aethes) hartmanniana* (Cl.)
Fig. 25. *Aethes (Lozopera) francillana* (F.)
Fig. 26. *Commophila aeneana* (Hbn.)
Fig. 27. *Prochlidonia amiantana* (Hbn.)
Fig. 28. *Eugnosta lathoniana* (Hbn.) male
Fig. 29. *Eugnosta lathoniana* (Hbn.) female
Fig. 30. *Eupoecilia cebrana* (Hbn.)
Fig. 31. *Cochylidia pudorana* (Stgr.)
Fig. 32. *Cochylimorpha favillana* (Stgr.)
Fig. 33. *Diceratura purpuratana* (H.-S.)
Fig. 34. *Cryptocochylis conjunctana* (Mann)
Fig. 35. *Longicornutia phaleratana* (H.-S.)
Fig. 36. *Cochylis (Cochylis) roseana* (Haw.)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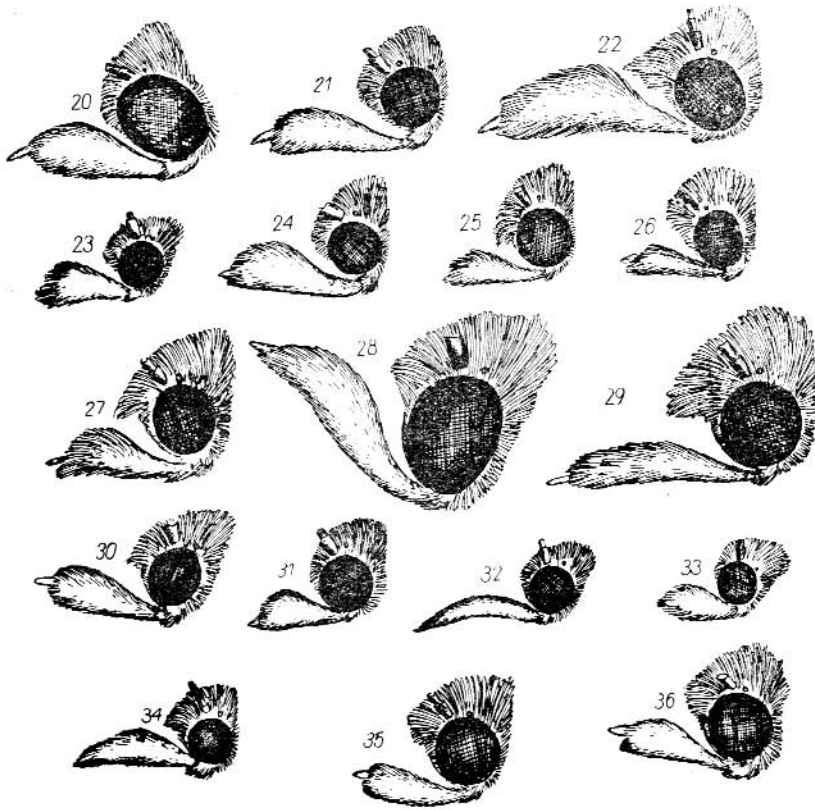
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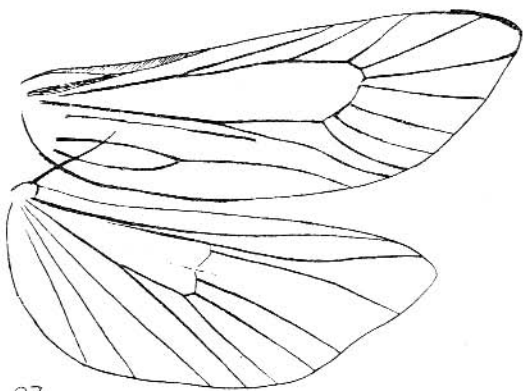
Venation of the wings

Fig. 37. *Obraztsoviana maculosana* (Haw.)
Fig. 38. *Hysterosia (Parahysterosia) simoniana* (Stgr.)
Fig. 39. *Hysterosia (Hysterosia) inopiana* (Haw.)
Fig. 40. *Hysterosia (Propira) sodaliana* (Haw.)
Fig. 41. *Acornutia nana* (Haw.)
Fig. 42. *Phtheochroa rugosana* (Hbn.)
Fig. 43. *Stenodes (Stenodes) elongana* (F. R.)
Fig. 44. *Stenodes (Parastenodes) meridiana* (Stgr.)
Fig. 45. *Stenodes (Eustenodes) perfusana* (Guen.)
Fig. 46. *Agapeta hamana* (L.)
Fig. 47. *Euxanthoides (Bleszyńskiella) alternana* (Steph.)
Fig. 48. *Aethes (Aethes) margarotana* (Dup.)
Fig. 49. *Aethes (Lozopera) francillana* (F.)
Fig. 50. *Commophila aeneana* (Hbn.)
Fig. 51. *Prochlidonia amiantana* (Hbn.)
Fig. 52. *Eugnosta lathoniana* (Hbn.)
Fig. 53. *Eupoecilia cebrana* (Hbn.)
Fig. 54. *Cryptocochylis conjunctana* (Mann)
Fig. 55. *Cochylis (Cochylichroa) atricapitana* (Steph.)



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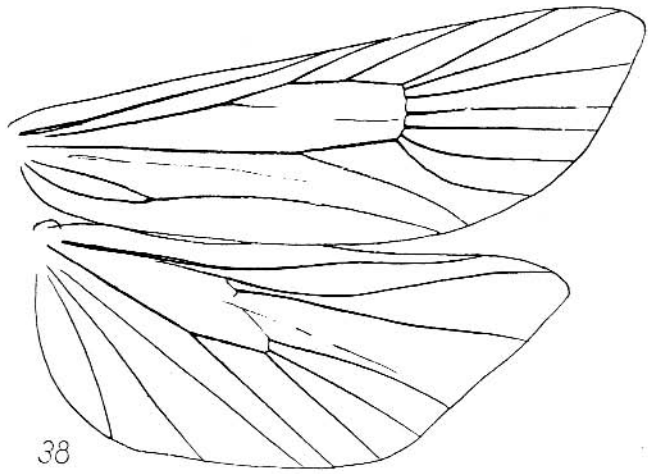

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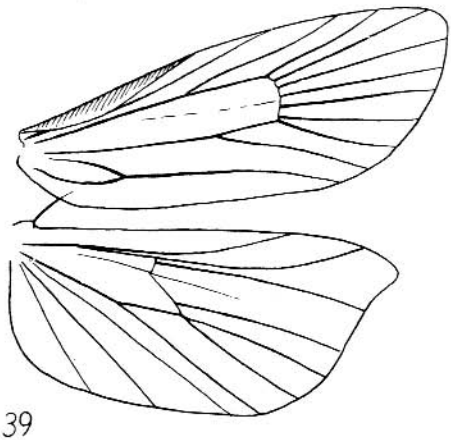

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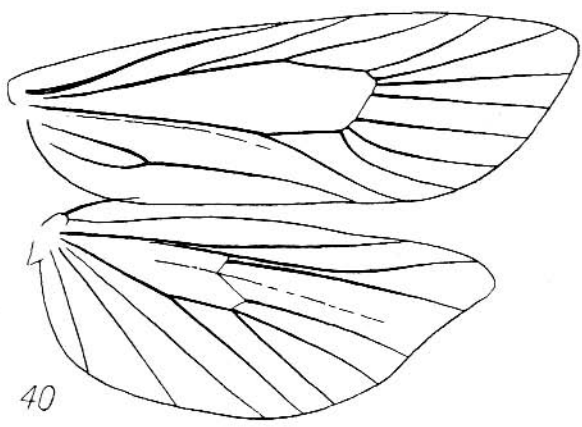

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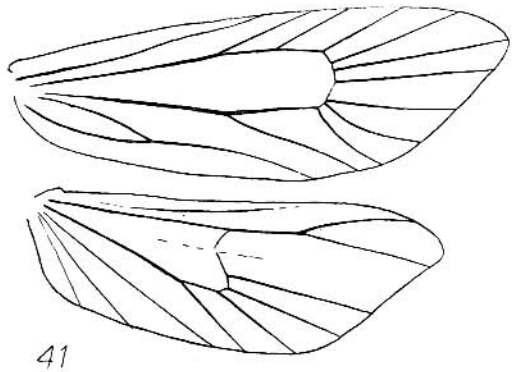

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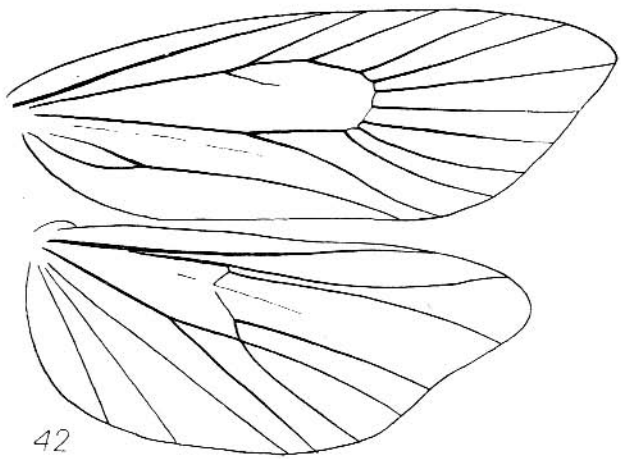

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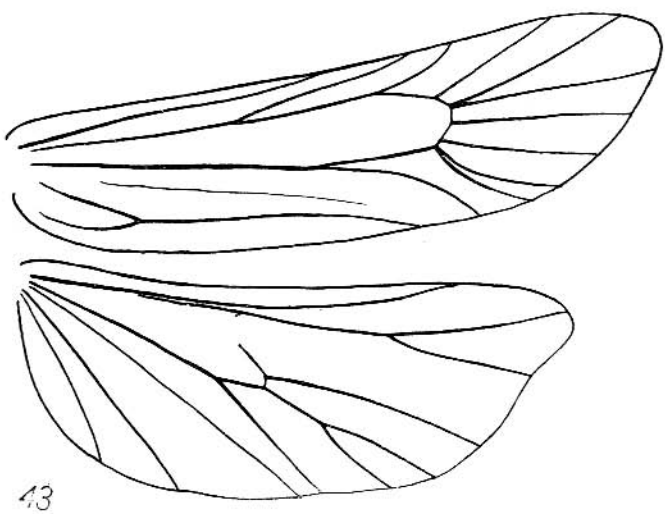

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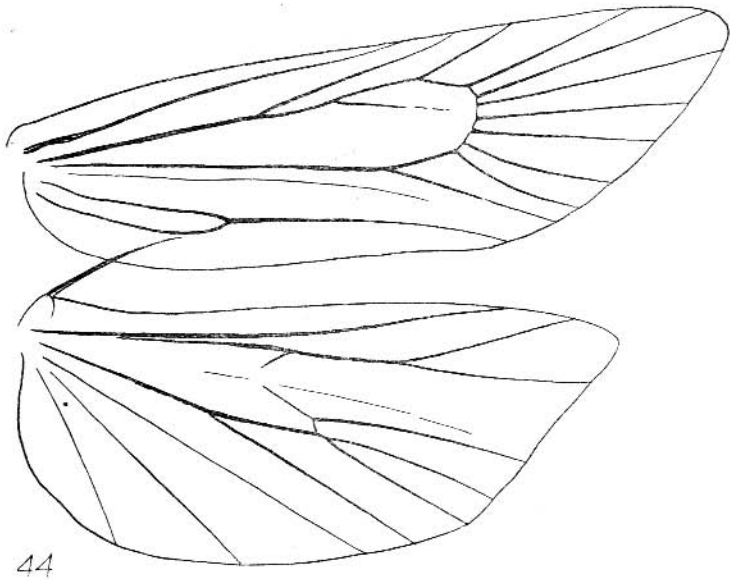

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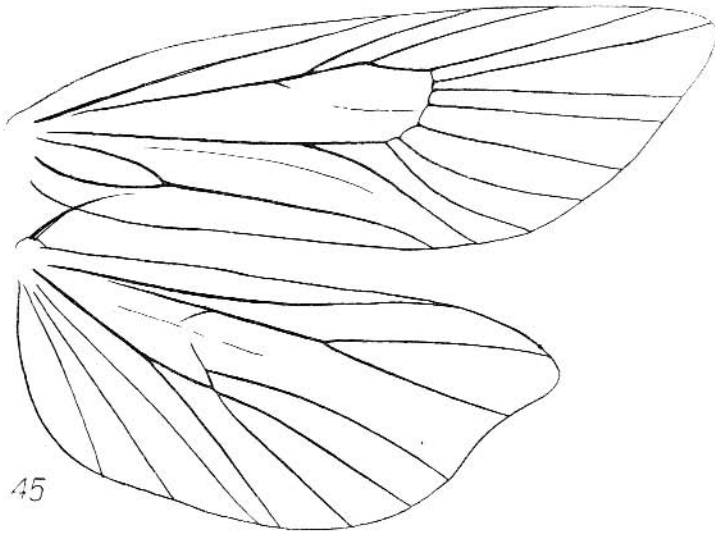

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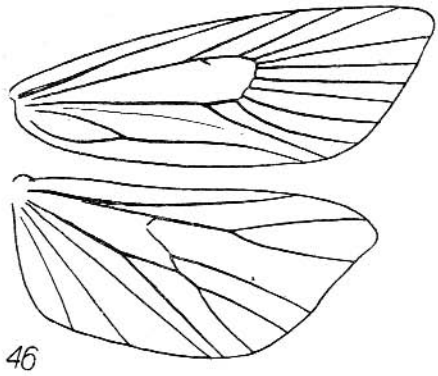

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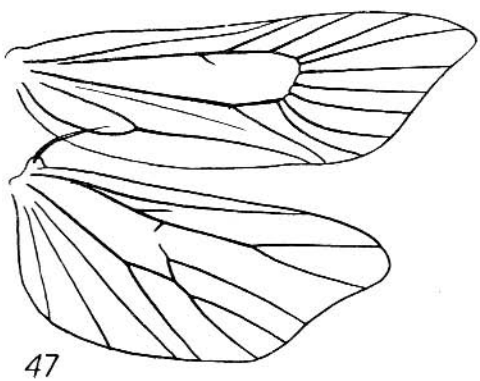

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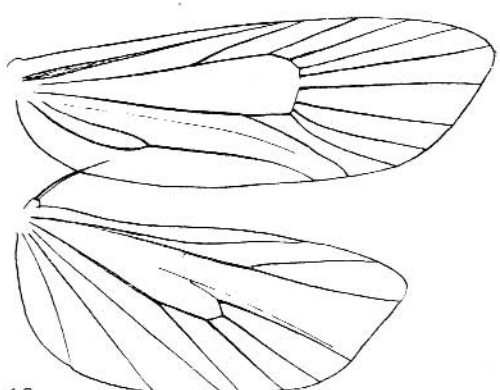

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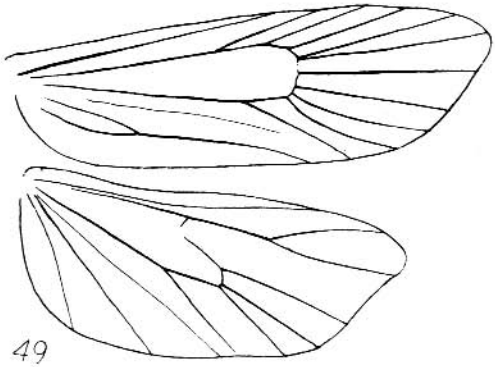

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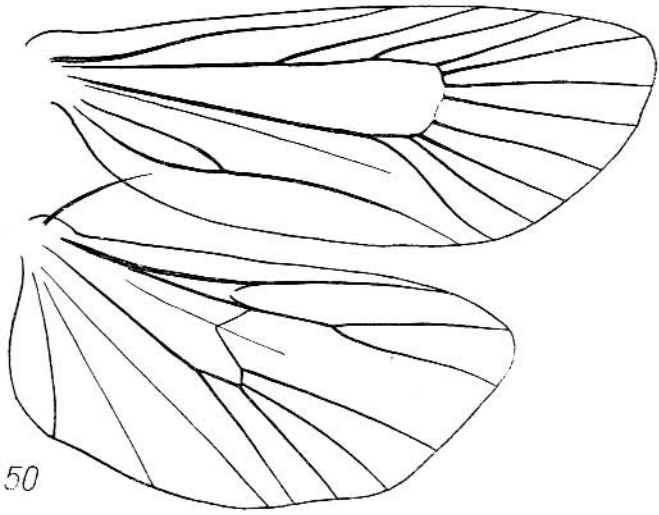

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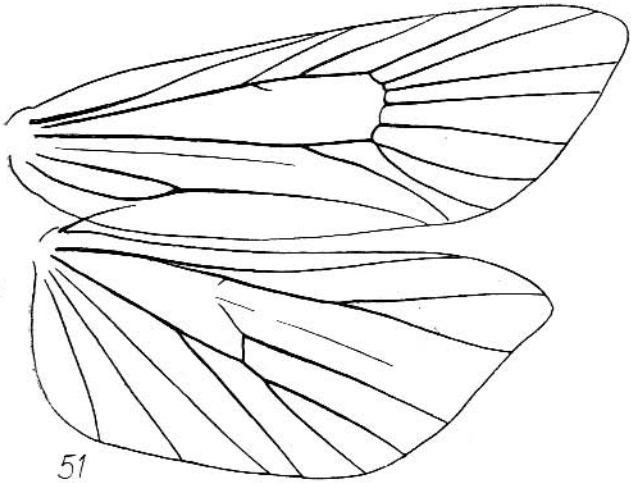

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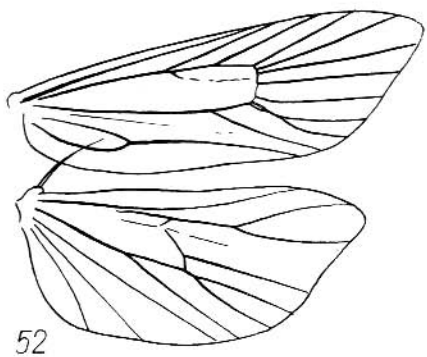

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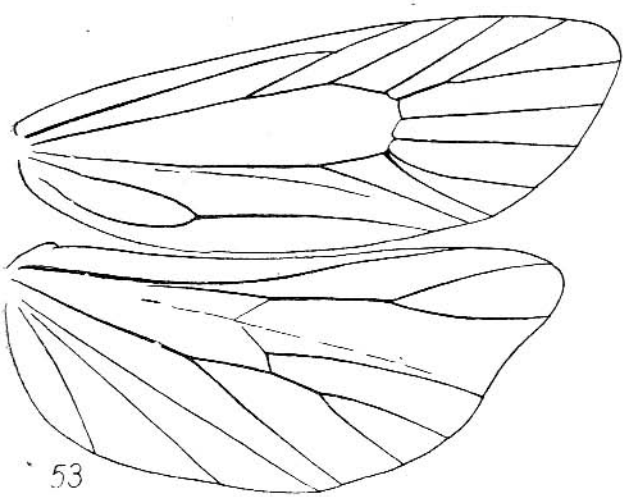

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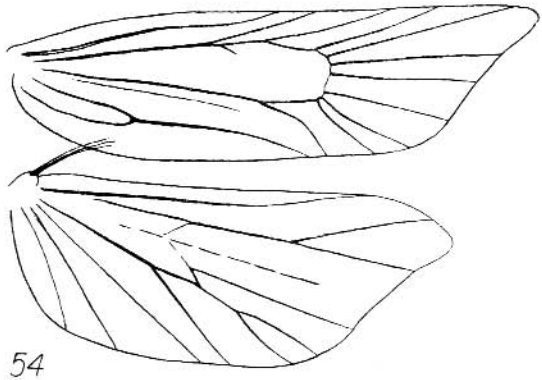

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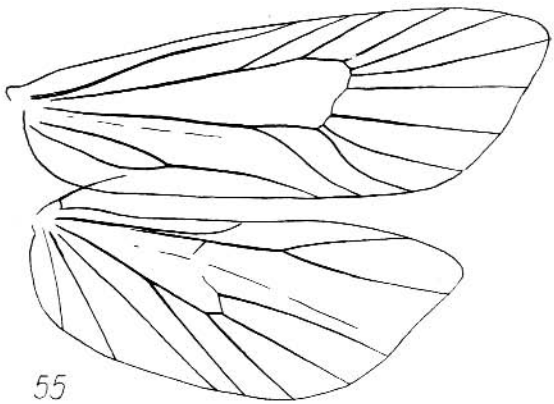

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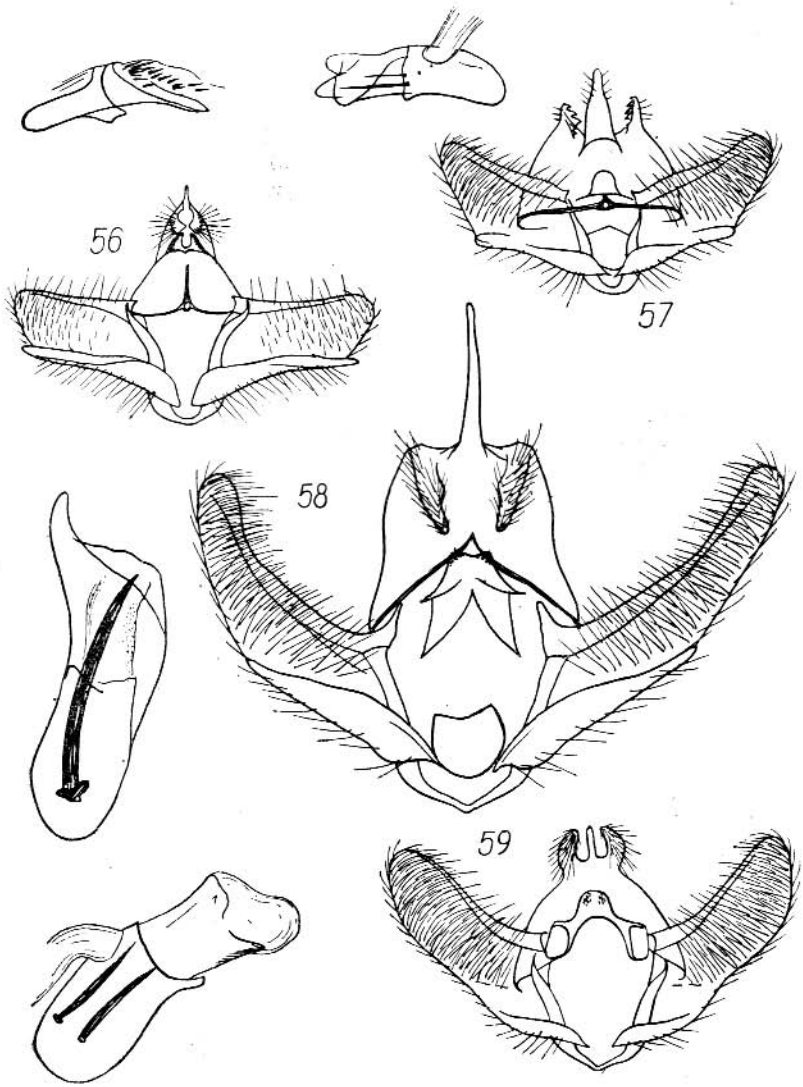
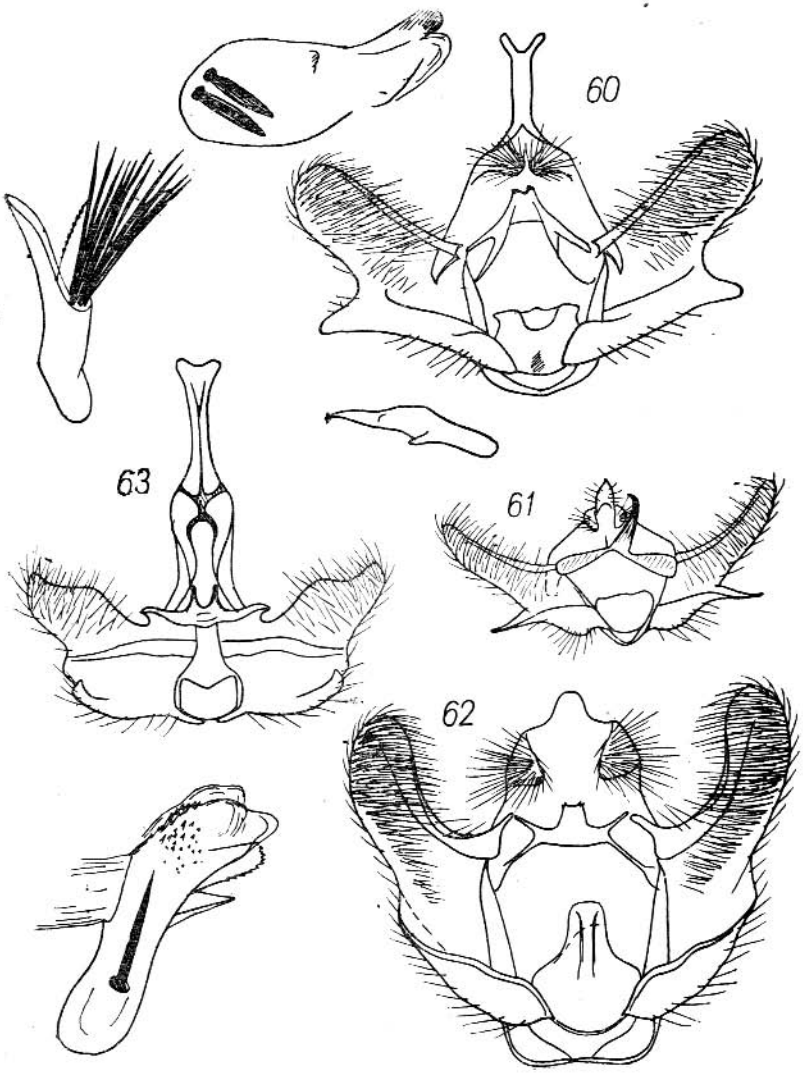
Male genital armature

Fig. 56. *Obraztsoviana maculosana* (Haw.)
Fig. 57. *Hysterosia (Parahysterosia) simoniana* (Stgr.)
Fig. 58. *Hysterosia (Hysterosia) inopiana* (Haw.)
Fig. 59. *Hysterosia (Propira) rectangulana* (Chrét.)
Fig. 60. *Hysterosia (Propira) ochrobasana* (Chrét.)
Fig. 61. *Acornutia nana* (Haw.)
Fig. 62. *Phtheochroa rugosana* (Hbn.)
Fig. 63. *Falseuncaria degreyana* (Mc. Lachl.)
Fig. 64. *Phalonidia manniana* (F. R.)
Fig. 65. *Phalonidia rubricana* (Peyer.)
Fig. 66. *Brevisociaria curvistrigana* (Wilk.)
Fig. 67. *Stenodes (Stenodes) elongana* (F. R.)
Fig. 68. *Stenodes (Substenodes) pontana* (Stgr.)
Fig. 69. *Stenodes (Parastenodes) meridiana* (Stgr.)
Fig. 70. *Stenodes (Eustenodes) dorsimaculana* (Preiss.)
Fig. 71. *Stenodes (Bipenisia) jucundana* (Treit.)
Fig. 72. *Fulvoclysia (Bipenisia) jucundana* (Treit.)
Fig. 73. *Fulvoclysia subdolana* (Kenn.)
Fig. 74. *Fulvoclysia dictyodana* (Stgr.)
Fig. 75. *Ceratoxanthis argentomixtana* (Stgr.)
Fig. 76. *Agapeta zoëgana* (L.)
Fig. 77. *Agapeta hamana* (L.)
Fig. 78. *Euxanthoides (Błeszyńskiella) alternana* (Steph.)
Fig. 79. *Euxanthoides (Euxanthoides) straminea* (Haw.)
Fig. 80. *Euxanthoides (Paraxanthoides) chamomillana* (H.-S.)
Fig. 81. *Euxanthoides (Paraxanthoides) santolinana* (Stgr.)
Fig. 82. *Aethes (Aethes) respirantana* (Stgr.)
Fig. 83. *Aethes (Aethes) perfidana* (Kenn.)
Fig. 84. *Aethes (Aethes) cnicana* (Dbld.)
Fig. 85. *Aethes (Aethes) pardaliana* (Kenn.)
Fig. 86. *Aethes (Aethes) margarotana* (Dup.)
Fig. 87. *Aethes (Lozopera) francillana* (F.)
Fig. 88. *Aethes (Coecaethes) mauretanica* (Wlsghm.)
Fig. 89. *Aethes (Coecaethes) fennicana* (Her.)
Fig. 90. *Commophila aeneana* (Hbn.)
Fig. 91. *Prochlidonia amiantana* (Hbn.)
Fig. 92. *Eugnosta lathoniana* (Hbn.)
Fig. 93. *Eupoecilia cebrana* (Hbn.)
Fig. 94. *Cochylidia pudorana* (Stgr.)
Fig. 95. *Cochylidia rupicola* (Curt.)
Fig. 96. *Cochylimorpha favillana* (Stgr.)
Fig. 97. *Diceratura purpuratana* (H.-S.)
Fig. 98. *Diceratura infantana* (Kenn.)
Fig. 99. *Cryptocochylis conjunctana* (Mann)

Fig. 100. *Longicornutia phaleratana* (H.-S.)
Fig. 101. *Cochylis (Cochylis) roseana* (Treit.)
Fig. 102. *Cochylis (Neocochylis) calavrytana* (Rbl.)
Fig. 103. *Cochylis (Paracochylis) amoenana* (Kenn.)
Fig. 104. *Cochylis (Cochylichroa) atricapitana* (Steph.)
Fig. 105. *Cochylis (Brevicornutia) pallidana* (Haw.)
Fig. 106. *Cochylis (Pontoturania) defessana* (Mann)
Fig. 107. *Cochylis (? Pontoturania) posterana* (Zell.)

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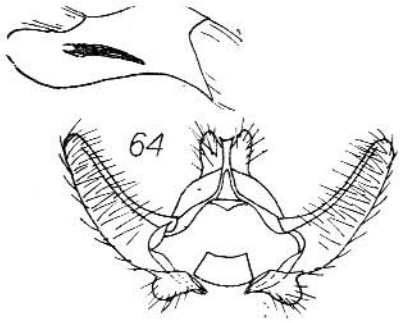
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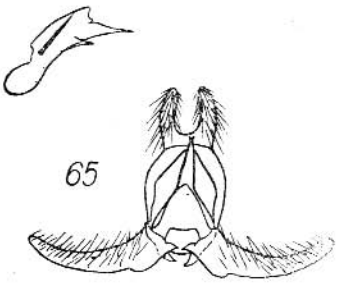
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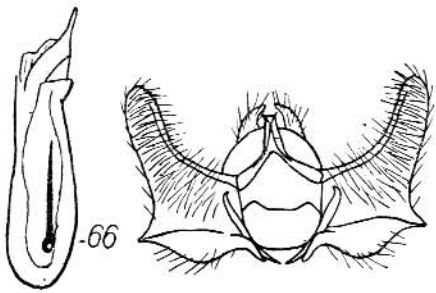
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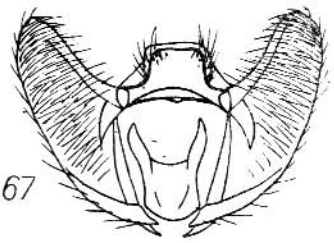
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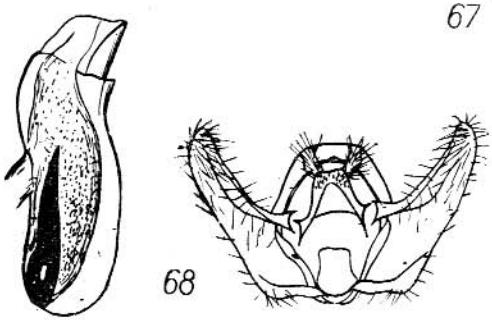
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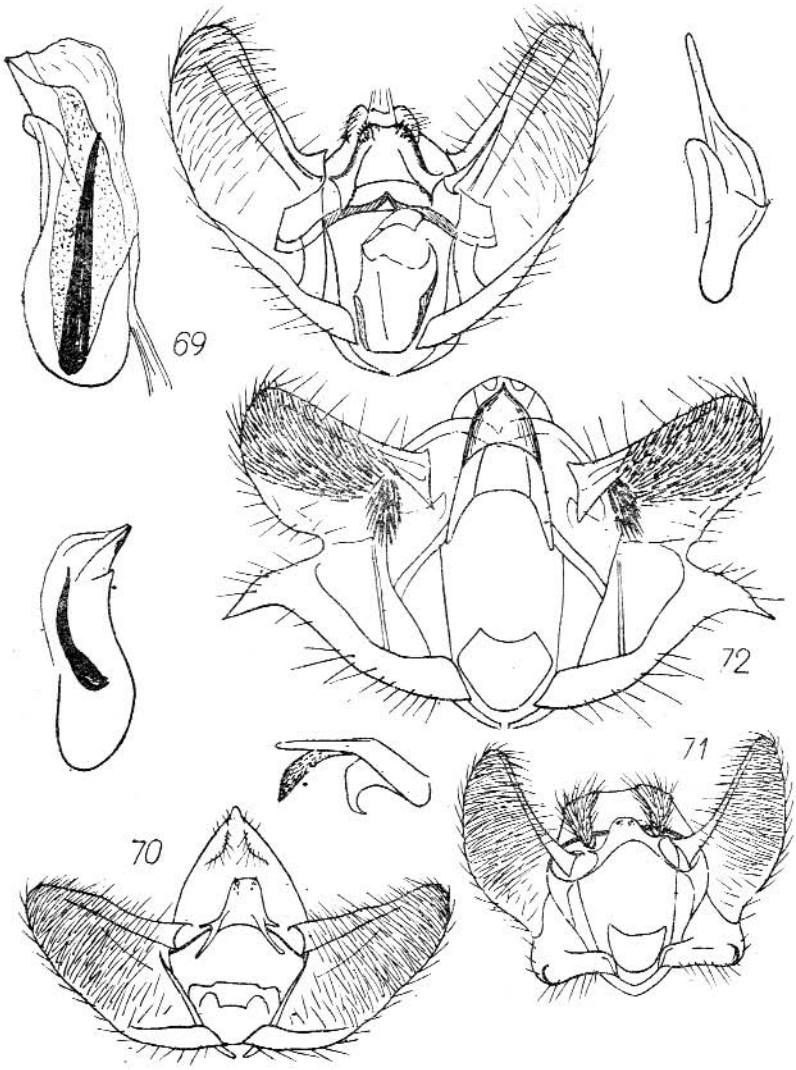
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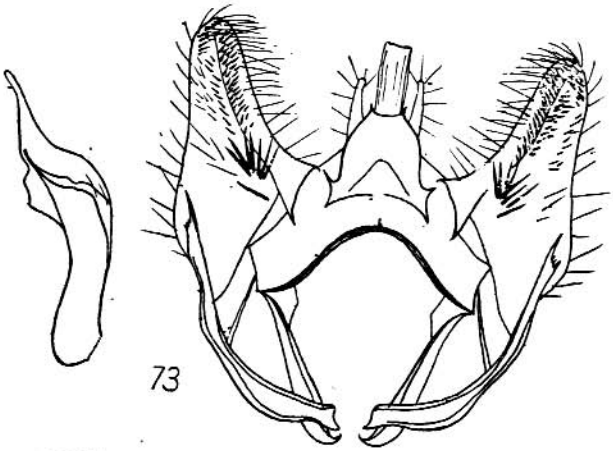

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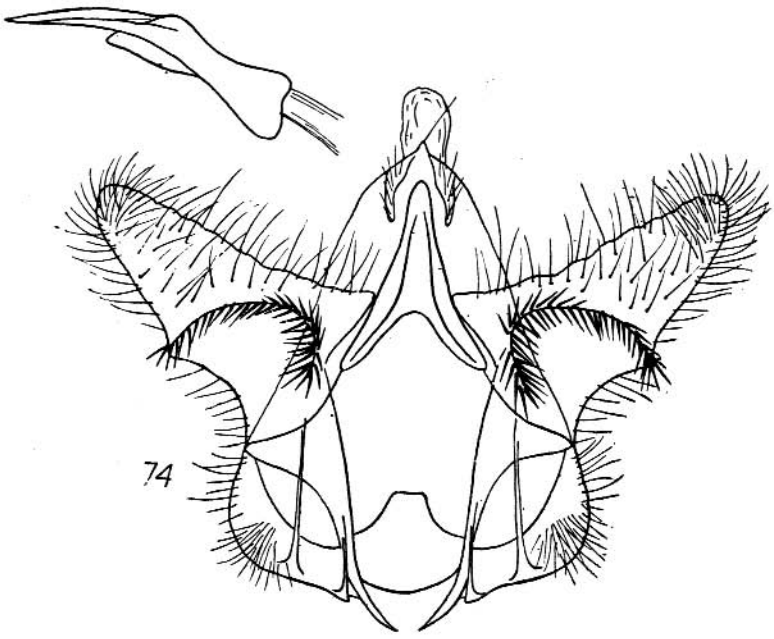

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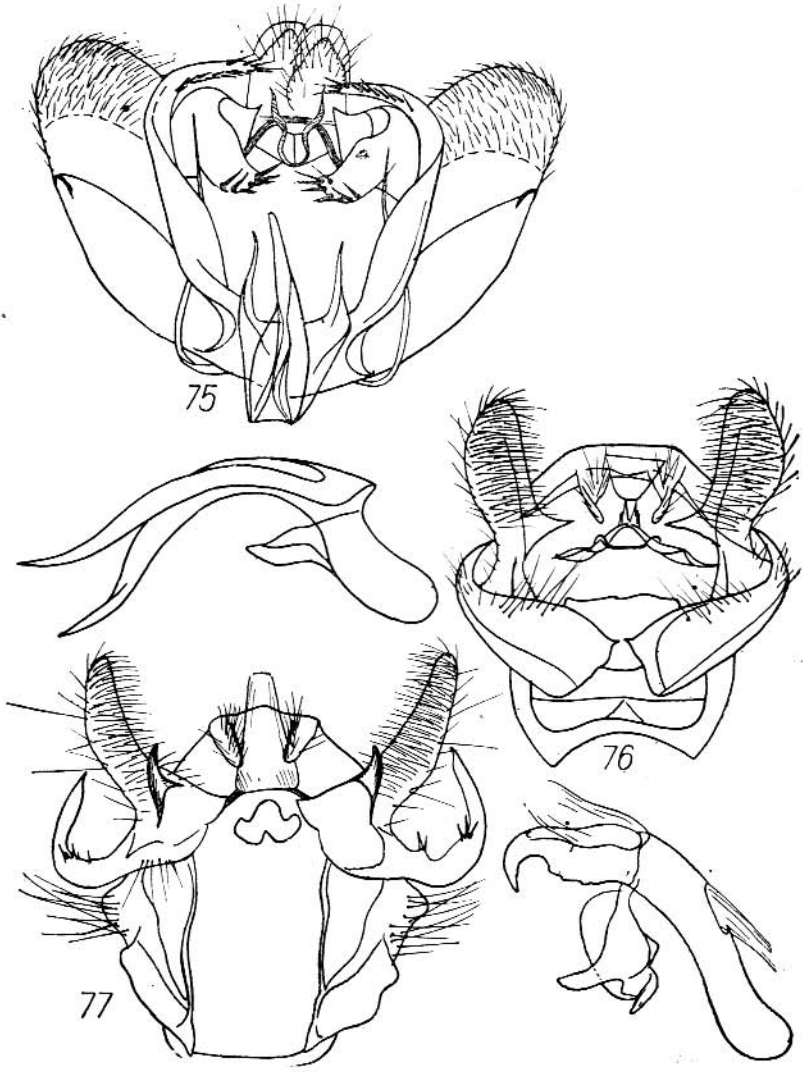
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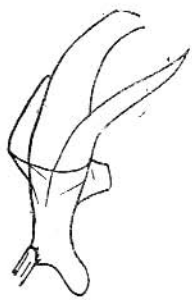

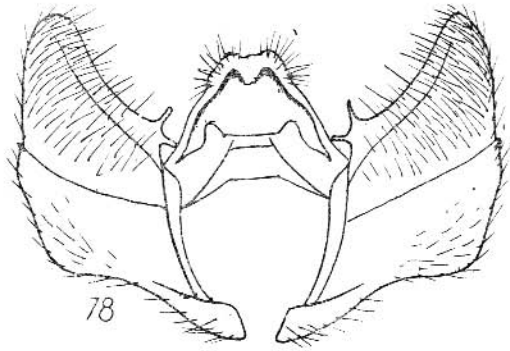
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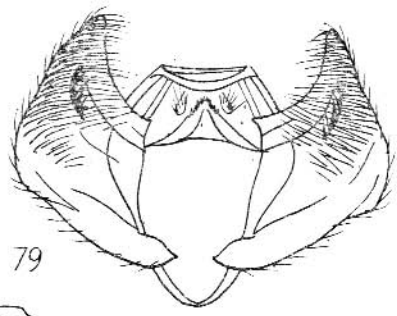
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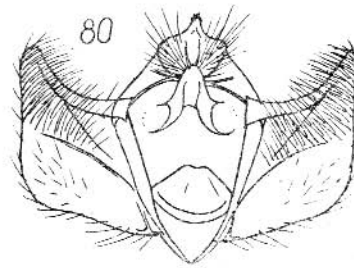
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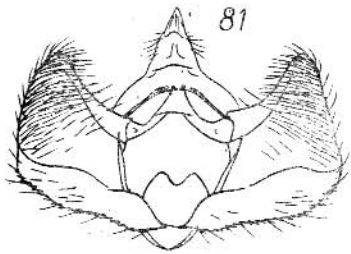
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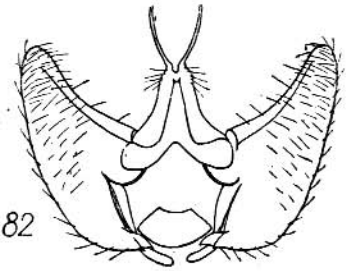

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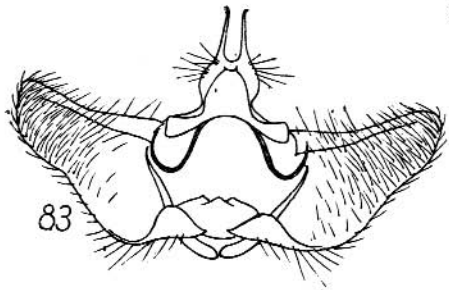

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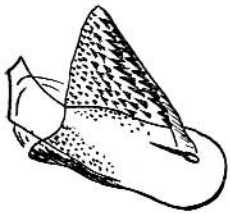

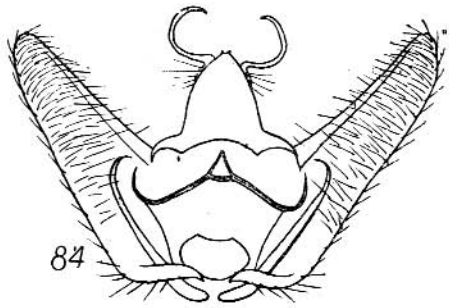

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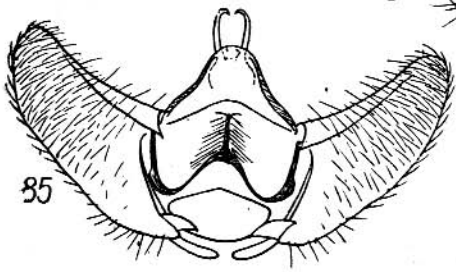

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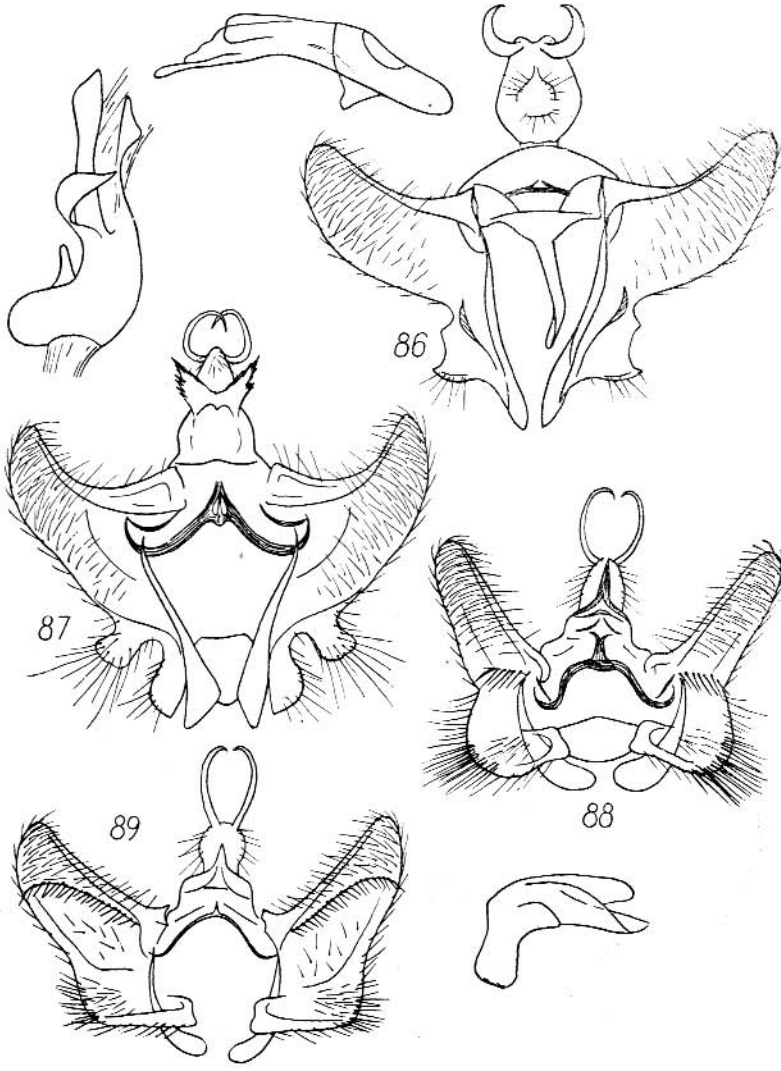
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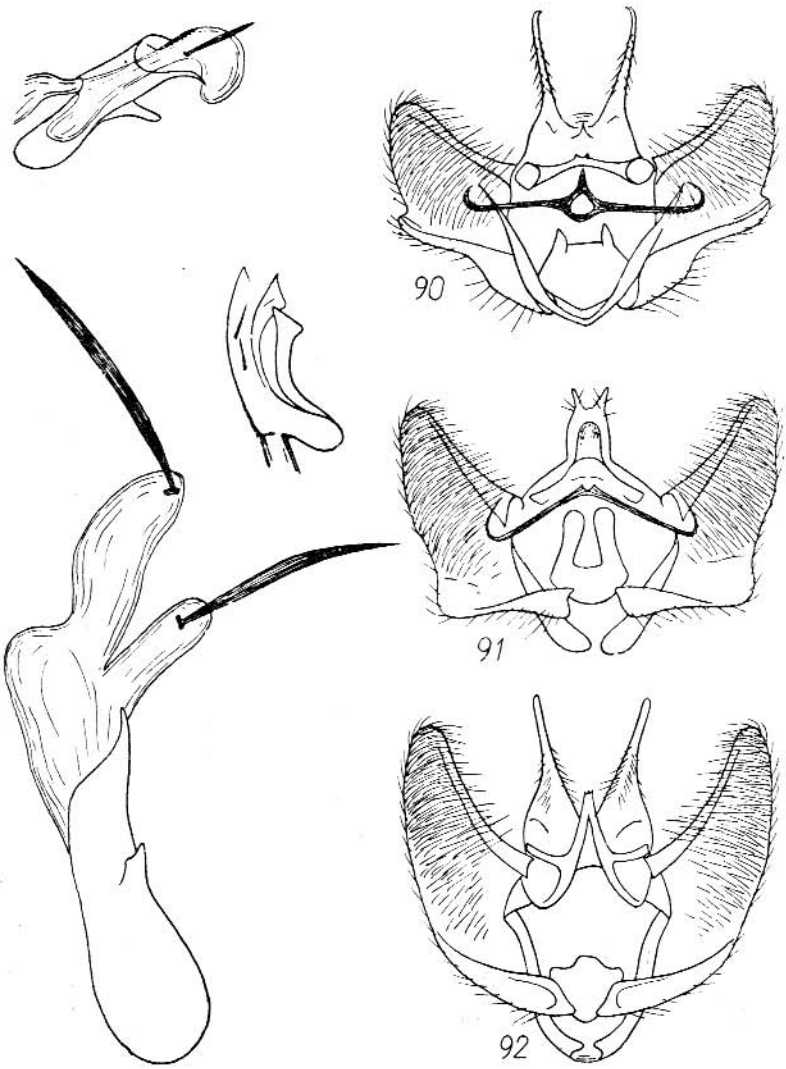
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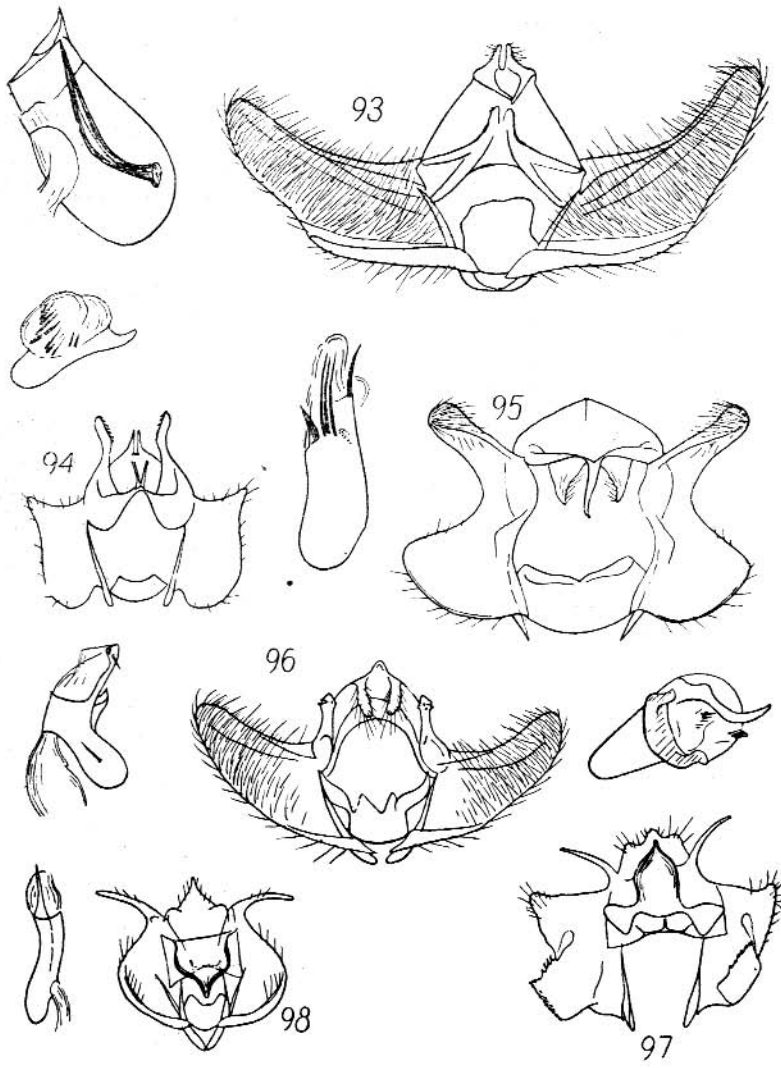
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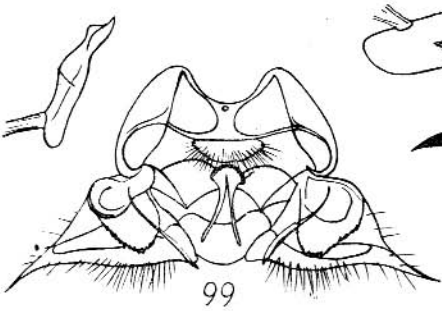
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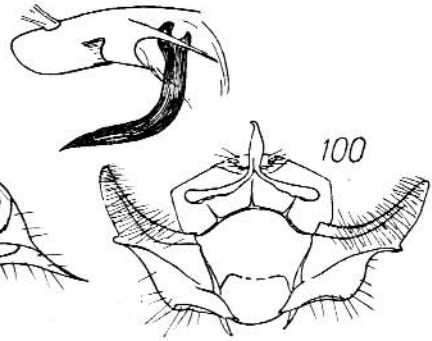
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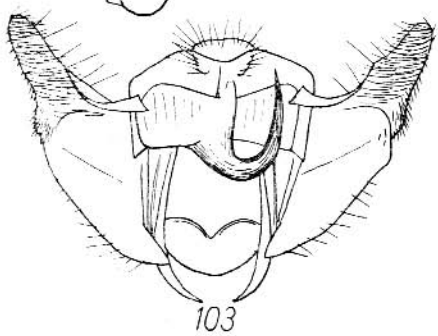
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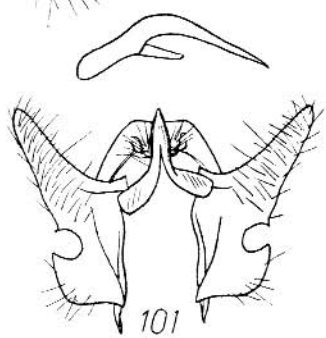
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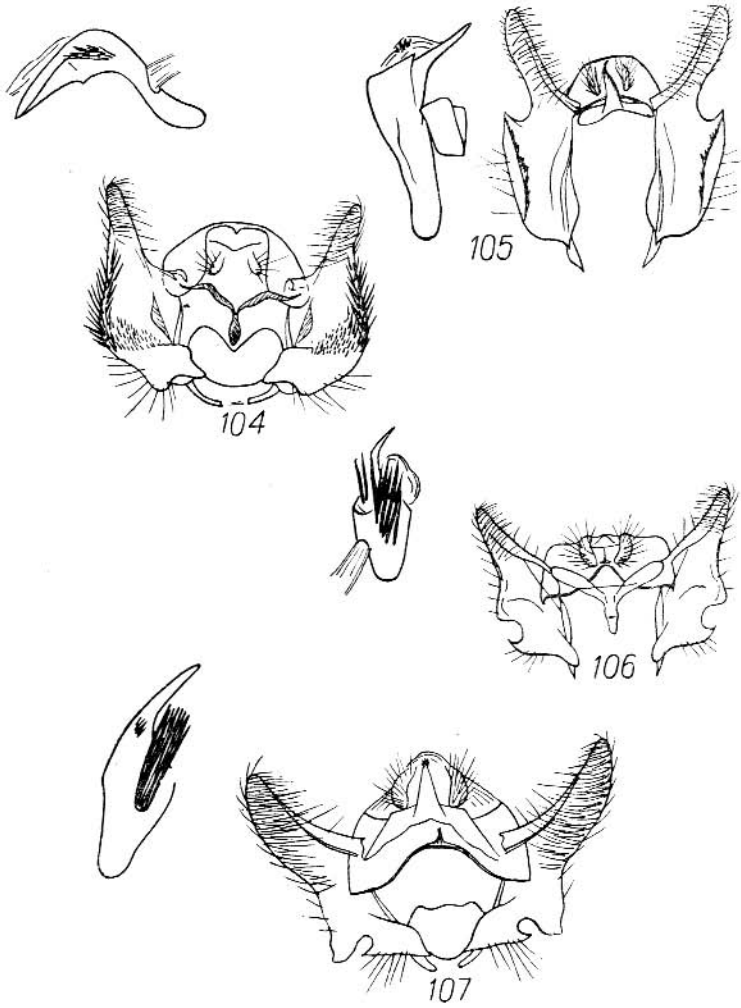
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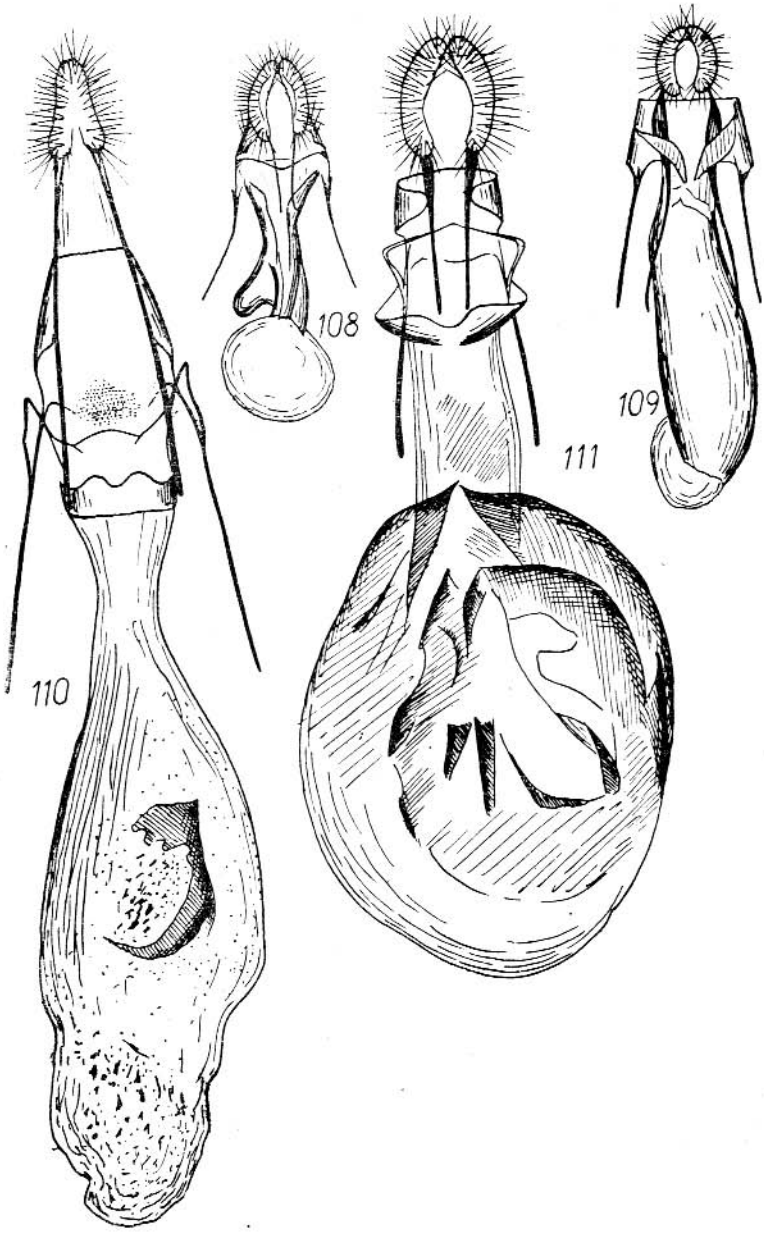
Female genitalia

Fig. 108. *Obraztsoviana maculosana* (Haw.)
Fig. 109. *Hysterosia (Parahysterosia) simoniana* (Stgr.)
Fig. 110. *Hysterosia (Hysterosia) inopiana* (Haw.)
Fig. 111. *Hysterosia (Propira) duponcheliana* (Dup.)
Fig. 112. *Hysterosia (Propira) procerana* (Mann)
Fig. 113. *Acornutia nana* (Haw.)
Fig. 114. *Phtheochroa rugosana* (Hbn.)
Fig. 115. *Falseuncaria ciliella* (Hbn.)
Fig. 116. *Phalonidia contractana* (Zell.)
Fig. 117. *Phalonidia mussehliana* (Treit.)
Fig. 118. *Brevisociaria curvistrigana* (Wilk.)
Fig. 119. *Stenodes (Stenodes) elongana* (F. R.)
Fig. 120. *Stenodes (Substenodes) pontana* (Stgr.)
Fig. 121. *Stenodes (Parastenodes) meridiana* (Stgr.)
Fig. 122. *Stenodes (Eustenodes) dorsimaculana* (Preiss.)
Fig. 123. *Stenodes (Bipenisia) pyramidana* (Stgr.)
Fig. 124. *Fulvoclysia dictyodana* (Stgr.)
Fig. 125. *Agapeta zoegana* (L.)
Fig. 126. *Euxanthoides (Euxanthoides) straminea* (Haw.)
Fig. 127. *Euxanthoides (Euxanthoides) straminea* (Haw.)
Fig. 128. *Euxanthoides (Paraxanthoides) santolinana* (Stgr.)
Fig. 129. *Aethes (Aethes) reversana* (Stgr.)
Fig. 130. *Aethes (Aethes) lucindana* (Kenn.)
Fig. 131. *Aethes (Lozopera) francillana* (F.)
Fig. 132. *Aethes (Coecaethes) fennicana* (Her.)
Fig. 133. *Commophila aeneana* (Hbn.)
Fig. 134. *Prochlidonia amiantana* (Hbn.)
Fig. 135. *Eugnosta lathoniana* (Hbn.)
Fig. 136. *Eupoecilia ambiguella* (Hbn.)
Fig. 137. *Cochylidia richteriana* (F. R.)
Fig. 138. *Diceratura purpuratana* (H.-S.)
Fig. 139. *Cryptocochylis conjunctana* (Mann)
Fig. 140. *Longicornutia phaleratana* (H.-S.)
Fig. 141. *Cochylis (Cochylis) undulatana* (Kenn.)
Fig. 142. *Cochylis (Cochylis) roseana* (Treit.)
Fig. 143. *Cochylis (Neocochylis) calavrytana* (Rbl.)
Fig. 144. *Cochylis (Paracochylis) amoenana* (Kenn.)
Fig. 145. *Cochylis (Cochylichroa) atricapitana* (Steph.)
Fig. 146. *Cochylis (Brevicornutia) pallidana* (Zell.)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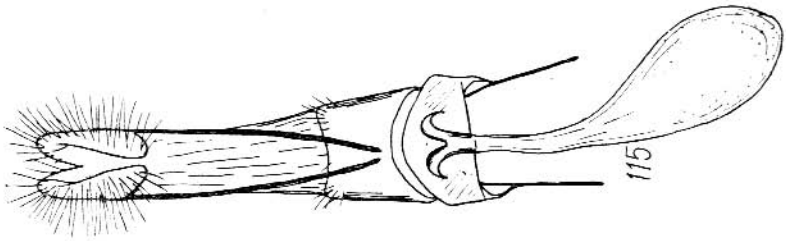
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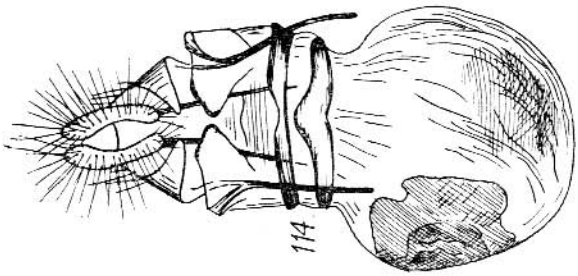
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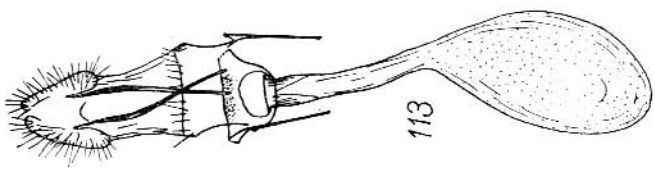
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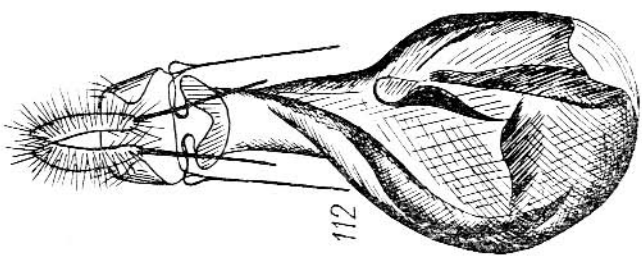
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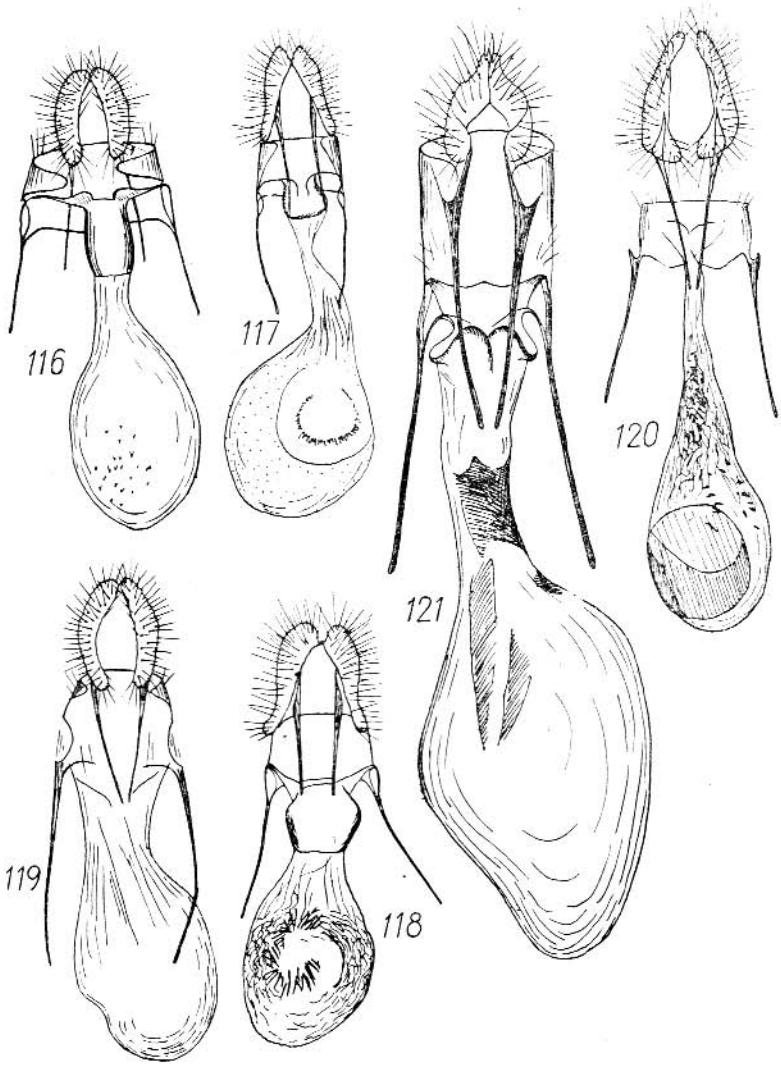
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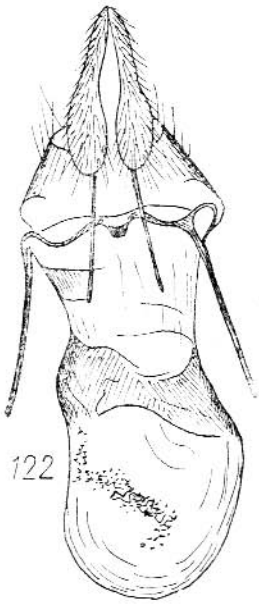

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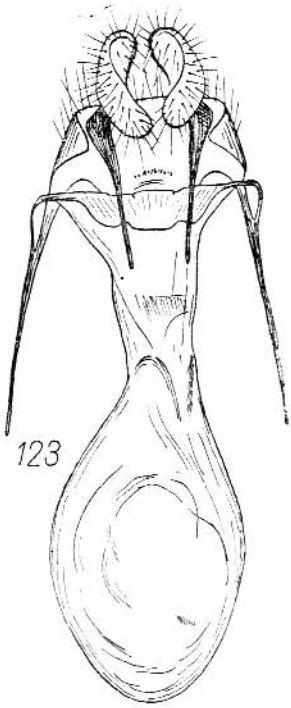

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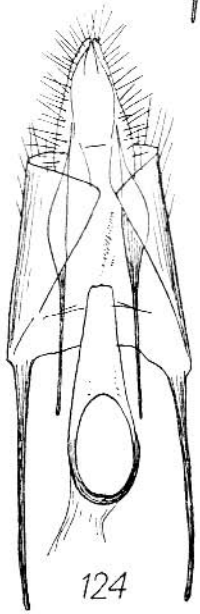

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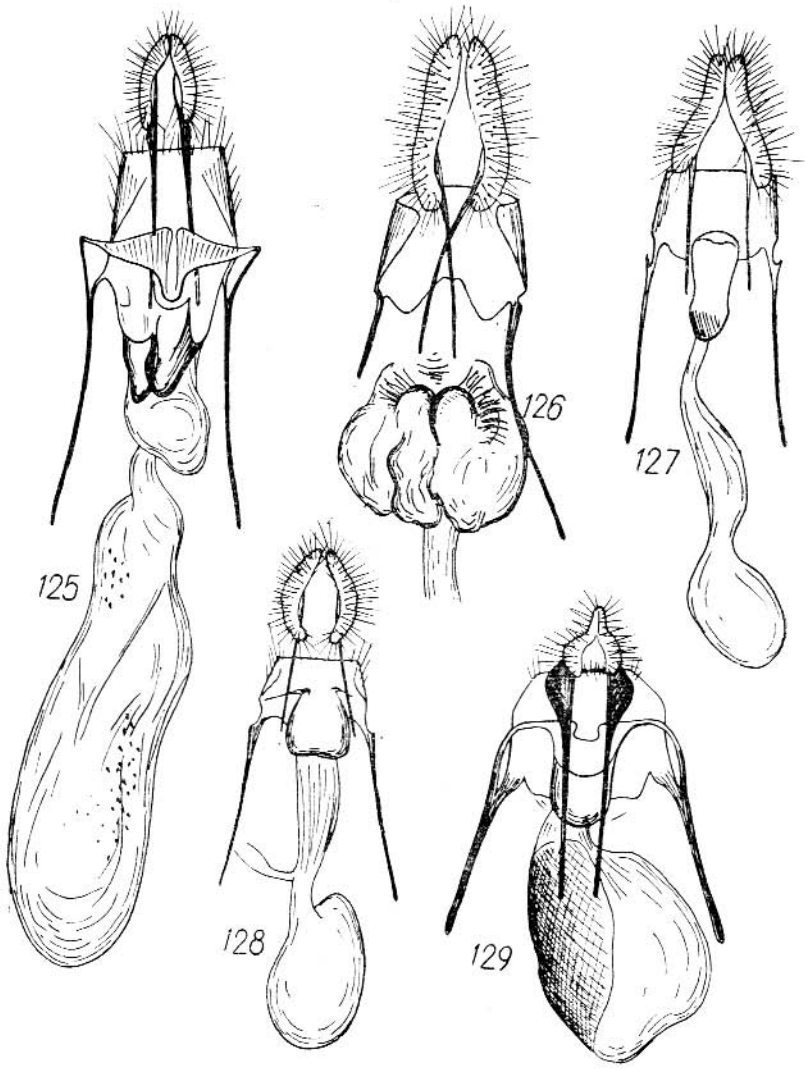
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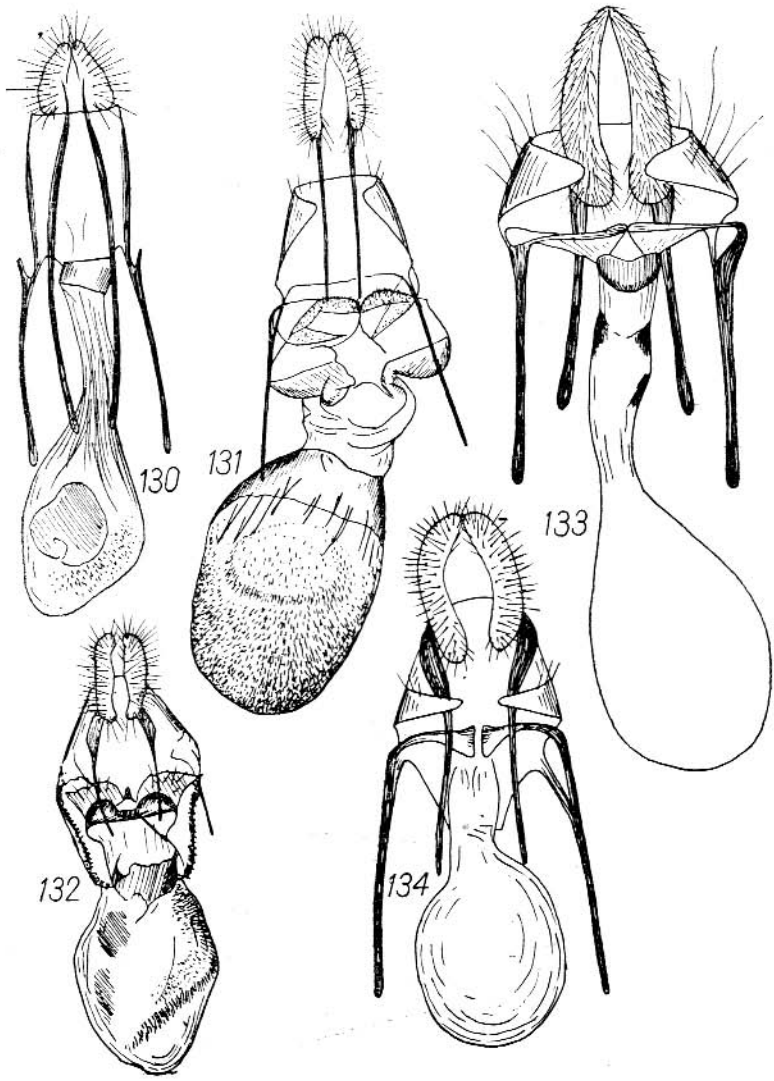
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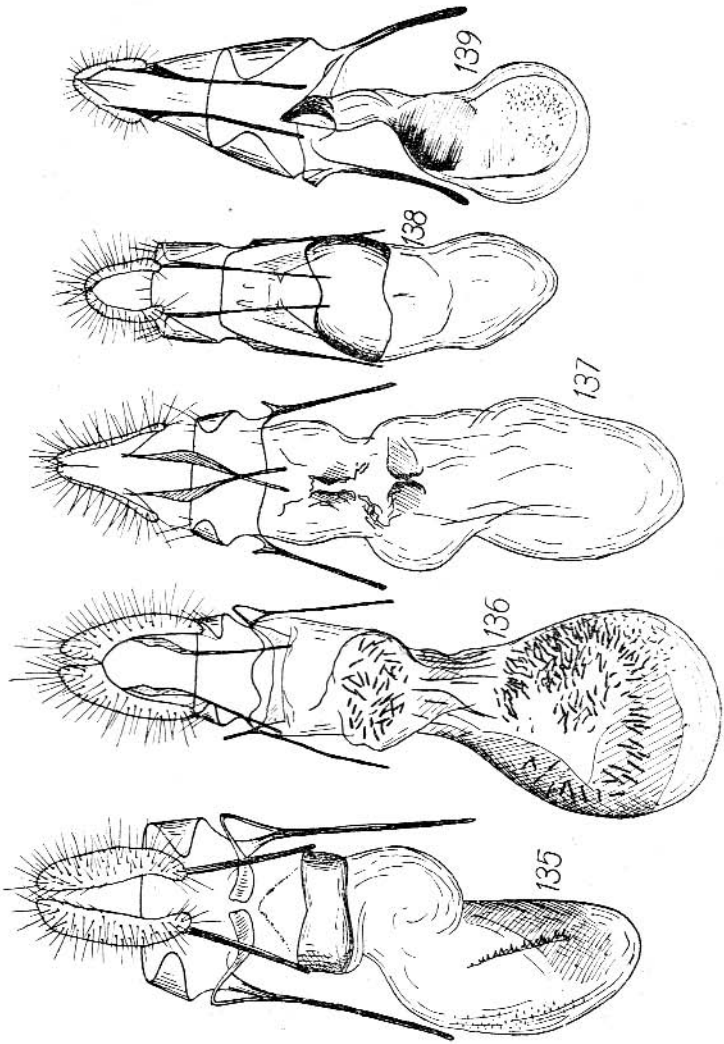
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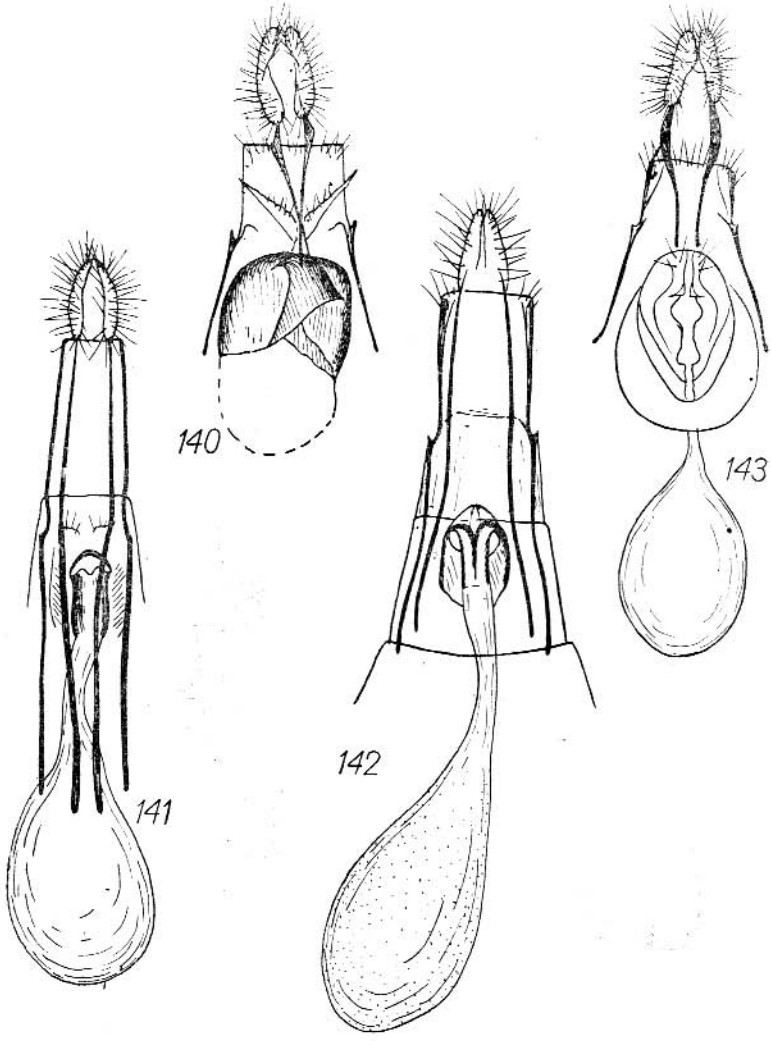
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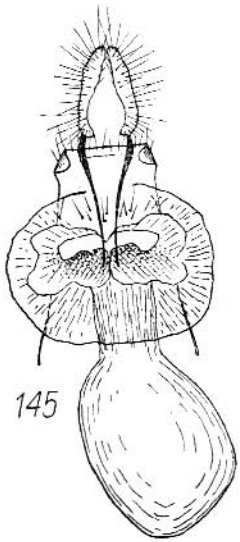
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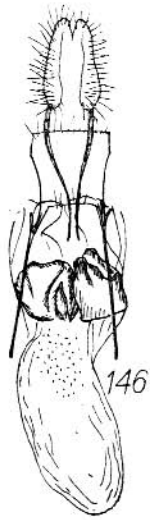
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