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Cnephasiinae Polski *(Lepidoptera, Tortricidae)* *Cnephasiinae* Польши *(Lepidoptera, Tortricidae)* *Cnephasiinae* of Poland *(Lepidoptera, Tortricidae)*

[Pl. XIV—XXVI]

Work on the group of *Lepidoptera* known as the subfamily *Cnephasiinae* is made considerably more difficult by the fact that for the determination of the species it is not sufficient to rely exclusively upon the external characters. It is necessary to study the copulatory apparatuses of the types of these species. Since it is impossible for me for the time being to obtain these types, many questions have not been made clear. Despite a number of attempts the systematics of the subfamily in question has not so far been cleared. The position is the same as regards the synonymy. This presents a separate problem which I have as yet not been able to study thoroughly. Nevertheless I am giving some of the more interesting synonyms in this paper. In this introductory part of work on the genus *Cnephasia* CURT. I have decided to study the Polish species in relation to the whole group of allied species. The system which I am applying here is based on hitherto existing systems, and in particular on that established by Pierre RÉAL (1953). It is not definitely fixed as yet, and only after studying the majority of Palearctic species shall I be able to introduce some changes and supplements. At present I have changed the existing system in a few cases only.

The *Cnephasiinae* are characterised in general — as far as the male genital armature is concerned — by the well developed, elongated valvae. The uncus is similarly well developed; it is narrow and pointed at the end. Its length differs in different species. The sacculus is variable; in some species it has more or less the shape of an elongated rod with the end smooth or with fine hairs. In others it is developed only as a narrow edging situated at the ventral margin of the valva. In the aedeagus there are no cornuti (at least in the species so far known). The females have in the bursa copulatrix a signum shaped like a spiny plate. Exceptionally this may change or even vanish, as for example in *Exapate* HBN. The antevaginal plate and ovipositor are of very characteristic structure. Nevertheless, even considerable changes in the structure of the latter are not, in some cases, generic but subgeneric features, as is in the case of *Cnephasiella* ADAMCZ.

P. RÉAL (1953) in his work mentioned above and based upon the French fauna divided the genus *Cnephasia* CURT. into the following subgenera: *Anoplocnephasia* RÉAL (typus subgeneris: *C. sedana* (CONST.)) *Hypostephanuntia* RÉAL (typus subgeneris: *C. ecullyana* RÉAL), *Ablabia* HBN. (typus subgeneris: *C. osseana* (SCOP.)), *Nephodesme* HBN. (typus subgeneris: *C. penziana* (THNBG.)), *Trachysmia* GUEN. (typus subgeneris: *C. rigana* (SODOF.), *Sphaleroptera* GUEN. (typus subgeneris: *C. alpicolana* (HBN.)), *Neosphaleroptera* RÉAL (typus subgeneris: *C. nubilana* (HBN.)), *Cnephasiella* ADAMCZ. (typus subgeneris: *C. pasivana* (HBN.)), *Brachycnephasia* RÉAL (typus subgeneris: *C. longana* (HAW.)) and *Cnephasia* CURT. s. str. (typus subgeneris: *C. obsoletana* WOOD.).

In our fauna there are no representatives of the subgenera: *Anoplocnephasia* RÉAL, *Hypostephanuntia* RÉAL, and *Sphaleroptera* GUEN. I think that the subgenus *Trachysmia* GUEN. should form a separate genus because of the considerable differences in both the male and female genital armature in relation to the rest of the subgenera.

From the genera related to *Cnephasia* CURT. there occur in Poland the following: *Tortricodes* GUEN., *Exapate* HBN., and *Doloploca* HBN. Each of these is represented by one species.

Trachysmia Guen.

(Pl. XIV, fig. 1, Pl. XIX, fig. 3, Pl. XXIII, fig. 1).

In the male genital armature of *Trachysmia rigana* (Sodof.) there occur some features making it similar to that of *Cnephasia* Curt, but taking into consideration also the female genitalia this species should not be included in *Cnephasia* Curt. After the investigation of the majority of Palearctic *Tortricidae* I shall be able to decide to what degree this species is related to the representatives of the genus in question.

At present I include it into the group of genera related to *Cnephasia* Curt.

Doloploca Hbn., 1825

Typus generis: *D. punctulana* (Den. & Schiff., 1776)

(Pl. XIV, fig. 2, Pl. XIX, fig. 4, Pl. XXIII, fig. 2).

This is the only species of the genus *Doloploca* Hbn. occurring in this part of Europe. It was mentioned from Poland by Garbowski (1892) but without any closer data of its finding.

As far as the male genital armature is concerned, *Doloploca punctulana* (Den. & Schiff.) differs considerably from the representatives of the subgenus *Hypostephanuntia* Réal. The socii are well developed, the gnathos narrow. The valvae have an interesting structure. Their width is variable and half way along them there occurs a marked narrowing. The sacculus, running along their ventral margin, is markedly curved and its sharpened end points vertically downwards. The transtilla is also of strong structure and depressed at both sides. The aedeagus is slightly bent. There are no cornuti, similarly as in all the representatives of this subfamily which I have investigated so far.

The females are closely related to *Cnephasia* Curt. On the proximal margin of the subgenital plate there is a slight depression. The antevaginal plate is very narrow and pointed

at the ends. On the bursa copulatrix there is a distinct spiny signum.

This species in known from Central and Southern Europe and also from Asia (Armenia).

Exapate Hbn., 1825

Typus generis: *E. congelatella* (Clerck, 1759)

(Pl. XIV, fig. 3, Pl. XX, fig. 1, Pl. XXIII, fig. 3, 4).

The males of this species are externally very similar (in the shape of the wings) to the *Tortricodes* Guen. The females have distinctly atrophied wings especially the posterior ones. The genitalia of *Exapate* Hbn. are characterized by a very short, cone-like uncus, a wide tegumen and narrow valvae. In the females there is no signum in the bursa copulatrix. On the labium there occur two kinds of setae: long and uniformly narrow, and shorter terminated with swellings. The latter are situated more or less in one band.

There are only two species known to belong to this genus: *E. congelatella* (Clerck) and *E. duratella* (Heyd.). The first is known in many localities in Poland. Outside Poland it has been reported from Central and Northern Europe and also from South-Eastern Russia (Kennel 1921).

The second species has not been found in Poland as yet but it is possible that it may be found in the Tatra Mountains.

Tortricodes Guen., 1845

Typus generis: *T. tortricella* (Hbn., 1796)

(Pl. XIV, fig. 4, Pl. XX, fig. 2, Pl. XXIII, fig. 5, 6).

In the male genital armature the uncus is very elongated. The valvae are of variable width and folded at the ventral margin. The aedeagus is of special interest. It is provided on the ventral side with a long pointed process. The ovipositor of the female is very similar to that of the females of *Cnephasia* Curt. The antevaginal plate is vide and markedly sclerotized.

The introitus vaginae is widened. The anterior gonapophyses are much thicker than the posterior ones.

This species is common in Poland. It is also known from Central and Southern, and partly from Northern Europe.

Cnephasia Curt., 1826

Typus generis: *C. obsoletana* Wood., 1832 (*C. pascuana* Curt. nec Hbn.)

In the male genital armature the uncus is always well developed (mentioned by Réal (1953) as a subgeneric character). The valvae are elongated and generally of constant width up to the half of their length. The sacculus is usually narrow and long. Often it reaches the end of the valva or is even longer. This is also given by Réal as a subgeneric character. As I have recently found, this is not always of such importance and I shall mention it when discussing the subgenus *Brachycnephasia* Réal. The shape of the aedeagus, transtilla and gnathos provide specific features. The females of almost all subgenera are very similar to one another. A feature common to them all is a characteristic spiny signum (as in other *Cnephasiinae*). This signum is generally drop-shaped, but it often tapers considerably, or even, as in *Cnephasia nubilana* (Hbn.) is vanishing. The ovipositor is almost always of uniform structure; two kinds of bristles are found on it. Only in the representatives of the subgenus *Cnephasiella* Adamcz. do the labii lose their normal shape and become elongated or even merge together. Short bristles terminated with swellings do not occur in this subgenus. The structure of the subgenital plate shows slight changes within the particular species, but the antevaginal plate sometimes varies considerably.

When introducing his taxonomy, Réal gave only very laconic definitions and characteristics of the subgenera and these only when he had himself named them. For such genera as, for example, *Ablabia* Hbn. introduced earlier and by other authors, there are no descriptions at all (despite the fact that these authors gave descriptions based only on external features).

Subgenus 1: *Ablabia* Hbn., 1825

Typus subgeneris: *Cnephasia osseana* (Scop., 1763)

Of our native species of *Cnephasia* Curt to this subgenus belong *C. osseana* (Scop.) and *C. argentana* (Clerck) both closely related to each other, and *C. canescana* (Guen.) somewhat differing from them. It is possible that the last species, together with a number of newly described ones, will have to form a separate subgenus; for the time being however, I include these species in one group.

The males have a well-developed sacculus and a small uncus; the hairy parts of the tegumen pass into it gradually. In the females, the genital armature of *Cnephasia osseana* (Scop.) and *C. argentana* (Clerck) are still more similar to each other than in the males. The female genital armature of *C. canescana* (Guen.) is distinctly different and resembles more that of *C. incanana* (Steph.) or *C. penziana* (Thnbg.).

GROUP 1.

Cnephasia (A.) _osseana_ (Scop., 1763)

(Pl. XV, fig. 1, Pl. XX, fig. 3, Pl. XXIII, fig. 7, 8.).

The sacculus is characteristic of the male genital armature; it reaches a little beyond half the length of the valva. The aedeagus is terminated on the dorsal side by a small process. In the female the proximal margin of the subgenital plate is somewhat convex without sharp protuberances.

This species, common in Poland, is known from many parts of Europe and Asia (Tibet, Caucasus, Siberia etc.). There are hitherto no data concerning its occurence in the Pyrenees.

Cnephasia (A) _argentana_ (Clerck, 1759)

(Pl. XV, fig. 2, Pl. XX, fig. 4, Pl. XXIV, fig. 1).

The sacculus in the male genital armature is bent and of strong structure. It does not reach beyond half the length of the valva. The aedeagus is provided with a spine at the

end but on the opposite side to that in the preceding species. The female genitalia are very similar to those of *C. osseana* (SCOP.), but on the proximal margin of the antevaginal plate there occur sharp protuberances.

Like the preceding, this species is widely distributed. It has been reported from the Caucasus, India, Asia Minor, Siberia and North America. In Poland it has been collected in the Tatra Mts., the Pieniny Mts., Kraków and many other localities, especially in the sub-montane regions.

GROUP 2.

***Cnephasia* (A.) *canescana* (GUEN., 1845)**

(Pl. XV, fig. 3, Pl. XX, fig. 5, Pl. XXIV, fig. 2).

The male genital armature is characterized by a long, pointed sacculus and a big, hook-like process on the gnathos. The aedeagus is of about the same length as the sacculus. On the distal margin of the female antevaginal plate there is a distinct depression; the tips of this plate are pointed.

This species is common in Poland, especially in sub-montane regions. It has been reported from many European localities.

Subgenus 2: *Nephodesme* HBN., 1825

Typus subgeneris: *Cnephasia* (N.) *penziana* (THNBG., 1791)

The males have the uncus developed similarly to that in the preceding subgenus. It is short and as if compressed between the two convexities of the tegumen. The females usually have a long narrow signum and the corners of the antevaginal plate are sharply pointed. Three species occur in Poland.

***Cnephasia* (N.) *incanana* (STEPH., 1829)**

(Pl. XV, fig. 4, Pl. XX, fig. 6, Pl. XXIV, fig. 3).

In the male genital armature the uncus is very short, the sacculus narrow and curved. The proximal margin of the subgenital plate is emarginate.

Known from many localities in Poland both in the North and in the South of the country. It has also been reported from many countries in central and also in Northern Europe.

Cnephasia (N.) *derivana* (LAH., 1858)

(Pl. XVI, fig. 1, Pl. XXI, fig. 1, Pl. XXIV, fig. 4).

The problem of this species has not as yet been solved. As I think — in accordance with other entomologists — this is, as a matter of fact, a whole set of species or subspecies. Only one occurs in Poland; KREMKY (1934—37) named it *Nephodesme derivana* (LAHARPE). This problem cannot be definitely solved without investigating the types, with I was still unable to see. The sacculus is much longer than in the preceding species. Proximal margin of the subgenital plate not emarginate.

Because of the lack of precises data and uncertain determinations it is not possible at present to give the distribution of this species in Europe. In Poland it has been observed in the southern part of the country.

Cnephasia (N.) *penziana* (THNBG., 1791)

(Pl. XVI, fig. 2, Pl. XXI, fig. 2, Pl. XXIV, fig. 5).

The uncus of *C. penziana* (THNBG.) is the longest in this group of species. The hairy parts of the tegumen are more flattened and wide. The sacculus is narrow and considerably curved. The aedeagus is much wider than in the preceding species. The female genital armature is of strong built. The tip of the antevaginal plate is narrow and sharp.

C. penziana (THNBG.) occurs mainly in montane and submontane regions; it has, however, also been reported from the lowlands.

Subgenus 3: *Neosphaleroptera* RÉAL, 1953.

Typus subgeneris: *Cnephasia* (N.) *nubilana* (HBN., 1800)

Only one species, very characteristic in the structure of its genital armature, male as well as female, belongs to this subgenus.

Cnephasia (N.) *nubilana* (HBN., 1800)

(Pl. XVI, fig. 3, Pl. XXI, fig. 3, Pl. XXIV, fig. 6, Pl. XXV, fig. 1).

The uncus is long and pointed. The sacculus terminates in a marked curve preceded by a distinct process. The females differ in the structure of their genital armature from all the remaining subgenera of *Cnephasia* CURT. The antevaginal plate is wide and cup-like. The signum indistinct.

It occurs over almost the whole of Europe. The data concerning its occurrence in the Mediterranean Region are not certain, since that region is inhabited by another very similar species *Cnephasia tyrrhaenica* AMS. In Poland *C. nubilana* (HBN.) is a common and numerous species.

Subgenus 4: *Cnephasiella* ADAMCZ., 1936

Typus subgeneris: *Cnephasia* (C.) *pasivana* (HBN., 1805)

ADAMCZEWSKI (1934—36) placed two species, *Cnephasia pasivana* (HBN.) and *C. abrasana* (DUP.) in a separate genus on the basis of the different structure of the ovipositor in the female, and of several slight differences in the male genital armature. Taking into consideration not only the Polish species of *Cnephasia* CURT. I think that RÉAL (1953) was right in treating the genus *Cnephasiella* ADAMCZ. only as a subgenus. In this subgenus, separated mainly on the basis of the structure of the female genital armature, both species, i. e. *C. pasivana* (HBN.) and *C. abrasana* (DUP.) differ further from each other, as the subgenital plate is of different built. A feature they have in common is the structure of the ovipositor; labii are merged together.

Cnephasia (C.) *pasivana* (HBN., 1805) (C. *incertana* (TREIT. 1834))

(Pl. XVI, fig. 4, Pl. XXI, fig. 4, Pl. XXV, fig. 2).

The valvae are curved upwards in a characteristic way. The uncus is long and narrow; the sacculus is less than half the length of the valva. The aedeagus is narrow, terminated

by a very small spine, which, for the most part, becomes invisible after fixing the preparation. The female signum is long and the bursa copulatrix is also elongated.

In Poland *C. pasivana* (HBN.) is common and numerous. Abroad it is widely distributed in Europe, North Africa and Asia.

Cnephasia (C.) *abrasana* (DUP., 1842)

(Pl. XVII, fig. 1, Pl. XXI, fig. 5, Pl. XXV, fig. 3).

The valvae are of a more solid built than in the preceding species and are not curved upwards. The sacculus is short and thick, the uncus narrow and pointed, the aedeagus narrow and much curved. The female bursa copulatrix is more or less round and the signum much shorter than in the preceding species.

This species is known from South Eastern and Central Europe and also from Asia Minor. It has not hitherto been reported from Poland but it seems possible that it will be found in the south-eastern part of the country.

Subgenus 5: *Brachycnephasia* (RÉAL, 1953)

Typus subgeneris: *Cnephasia* (B.) *longana* (HAW., 1811)

RÉAL'S definition of this subgenus is not correct: „sacculus, partie libre comprise, n'atteignant pas la moitié de la longueur de la valve". The structure of the sacculus is, in this case, not a subgeneric feature, since there occur very considerable and invidual differences which do not fit the definition of the mentioned author. The differences between this subgenus and *Cnephasia* CURT. s. str. are chiefly in the structure of the uncus which narrows like a wedge, and in the shape of the valvae where a characteristic bending of the ventral margin occurs. Besides these there appears a whole complex of features difficult to define. The females have usually a short ductus bursae and are very similar to the females of the subgenus *Cnephasia* CURT. s. str. In Poland we have only one species not so far reported in our litterature: *Cnephasia longana* (HAW.).

Cnephasia (B.) *longana* (Haw., 1811)

(Pl. XVII, fig. 2, Pl. XXI, fig. 6, Pl. XXV, fig. 4, 5).

The sacculus is shorter than half the length of the valva. The aedeagus is slightly bent and pointed. On its ventral margin there are three triangular processes at the end. The ductus bursae is very short. The proximal margin of the subgenital plate is depressed. The distal margin of the antevaginal plate is emarginate in a characteristic way and the introitus vaginae is distinctly sclerotized.

Cnephasia longana (Haw.) was collected in Poland in the environs of Szczecin and at Bielinek nad Odrą.

Subgenus 6: *Cnephasia* Curt., 1826, s. str.

Typus subgeneris: *Cnephasia* (C.) *obsoletana* Wood., 1832

The uncus is long and pointed. The sacculus is usually longer than half the length of the valva, and, as in *Cnephasiella* Adamcz. and *Brachycnephasia* Réal, pencillate. The transtilla is narrow, the aedeagus of varied structure. The antevaginal plate is variable, the introitus vaginae sometimes markedly sclerotized. The signum on the bursa copulatrix is most often of drop-like shape, more rarely uniformly narrow.

Cnephasia (C.) *interjectana* (Haw., 1811)

(Pl. XVII, fig. 3, 4, Pl. XXII, fig. 1, Pl. XXV, fig. 6).

The aedeagus is characteristic of the male genital armature. It is sharp and narrows like a wedge towards the end. The sacculus is of variable length, and this affects consequently the shape of the valvae. Adamczewski (1936), according to the structure of this part of the genital armature distinguishes three groups: a) typical specimens, b) specimens with a long sacculus and c) specimens with a short sacculus. The distal margin of the antevaginal plate is slightly emarginate. The introitus vaginae is widened, the signum usually large.

Widely distributed in Poland. Known from Europe and Asia Minor.

Cnephasia (C.) *alticolana* (H.-S., 1843)

(Pl. XVIII, fig. 1, Pl. XXII, fig. 2, Pl. XXVI, fig. 1).

This species is easy to recognize by the shape of the aedeagus; this is almost uniformly wide throughout; the ratio of the length to the greatest width is less than 4. The valvae have almost parallel margins. The sacculus is long, reaching almost to the end of the valva. In the females the proximal margin of the subgenital plate is emarginate.

A mountain species, collected in Poland chiefly in the Tatra and Pieniny Mts. It occurs, however, also in the submontane regions, it is known from other mountains regions of Europe.

Cnephasia (C.) *wilkinsoni* Réal, 1952

(Pl. XVIII, fig. 2, Pl. XXII, fig. 3, Pl. XXVI, fig. 2).

This species has been so far commonly known as *C. chrysantheana* (Dup.). As has been shown, the name *C. chrysantheana* (Dup.) should belong to the species described by Pierce and Metcalfe 1922 under the name *C. conspersana* Dgl.

The sacculus is curved at the end in a characteristic way like a spoon: this part of it lies usually on the valva. The aedeagus is bent and blunt. The females of *C. wilkinsoni* Réal. differ from the females of the preceding species in the straight-cut proximal margin of the subgenital plate and in the greater sclerotization of the introitus vaginae.

Common and numerous in all parts of Poland and in other countries of Europe as well as in Asia Minor.

Cnephasia (C.) *obsoletana* Wood, 1832

(Pl. XVIII, fig. 3, Pl. XXII, fig. 4, Pl. XXVI, fig. 3).

Genitally this species is very similar to *C. conspersana* Dgl. The aedeagus is bent and pointed. The sacculus is more th an 2/3 the length of the valva. The antevaginal plate is semicircular, in the middle of the distal margin, slightly

emarginate. The signum is usually smaller and narrower than in *C. conspersana* DGL.

This species is not numerous in Poland but is reported from many localities, variously situated, except from the mountains. It occurs in almost all parts of Europe.

Cnephasia (C.) *błeszyńskii* TOLL, 1952

(Pl. XVIII, fig. 4, Pl. XXVI, fig. 4).

This species is most nearly related to *Cnephasia obsoletana* WOOD. It differs from it chiefly in the length of the sacculus, the shape of the valva and the structure of the aedeagus. Only one male specimen is so far known; it was collected at Duszniki in the Sudety.

Cnephasia (C.) *conspersana* DGL., 1851, nec auct., nec P. & M. 1915

(Pl. XIX, fig. 1, Pl. XXII, fig. 5, Pl. XXVI, fig. 5).

Cnephasia conspersana DGL. is the species which has been hitherto known as *C. genitalana* P. & M. But *C. genitalana* P. & M., since it was described much later, should be treated as a synonym of *C. conspersana* DGL. To explain this better I should mention that the figure in PIERCE'S work (1922) named *C. conspersana* DGL. represents in fact the genitalia of *C. chrysantheana* (DUP.), a species later described by DUPONCHEL 1842.

The sacculus is very well developed, reaching far beyond the valva. The aedeagus is pointed. The females have an introitus vaginae bent and sclerotized in a characteristic way.

In Poland it occurs more often in the lowlands than in the submontane regions. It has not hitherto been recorded from the mountains. It occurs in almost all parts of Europe.

Cnephasia (C.) *communana* (H.-S., 1851)

(Pl. XIX, fig. 2, Pl. XXII, fig. 6, Pl. XXV, fig. 6).

The aedeagus is, except for the basal part almost quite straight and pointed at the end. The sacculus is more or less

half the length of the valva: its length however, is subject to variations. In the female genital armature the left and right sides of the antevaginal plate together with the sclerotized part of the introitus vaginae, are arranged in a characteristic symetrical three-armed rosette.

C. communana (H.-S.) is a species widely distributed in Europe and North Africa. In Poland it is one of the commonest species of the genus *Cnephasia* CURT. It occurs in the lowlands as well as in the mountains.

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STRESZCZENIE

Niniejszą pracę traktuje autor jako wstępną do dalszych studiów nad gatunkami należącymi do rodzaju *Cnephasia* CURT. W oparciu o najnowsze próby opracowania układu

systematycznego tej grupy zostały tu omówione cztery rodzaje występujące na ziemiach Polski, łączone razem jako podrodzina *Cnephasiinae*. Szczególnie dokładnie rozpatrzony został rodzaj *Cnephasia* CURT. z uwzględnieniem podrodzajów wprowadzonych przez P. RÉALA (1953).

Zostały także skorygowane pewne niewłaściwe określenia podane w układzie systematycznym RÉALA. Tak np. *Trachysmia rigana* (SODOF.) została wyłączona z rodzaju *Cnephasia* CURT. z powodu znacznych różnic w budowie zarówno samczego jak i samiczego aparatu genitalnego. Dawny więc podrodzaj *Trachysmia* GUEN. został podniesiony do godności rodzaju i został tymczasowo umieszczony między rodzajem *Tortrix* L. a grupą rodzajów ściślej spokrewnionych z *Cnephasia* CURT.

Dalej autor rozważa charakterystykę podrodzaju *Brachycnephasia* RÉAL oraz podaje dotąd nie wykazywany z Polski gatunek *C. (B.) longana* (HAW.), łowiony w okolicach Szczecina i Bielinka nad Odrą.

Przy rodzajach, podrodzajach i gatunkach podane są krótkie ich charakterystyki oparte na cechach aparatów genitalnych.

Autor omówił w tej pracy następujące rodzaje i podrodzaje, które zaliczył do podrodziny *Cnephasiinae*:

Doloploca HBN. z gatunkiem *D. punctulana* (DEN. & SCHIFF.),

Exapate HBN. z gatunkiem *E. congelatella* (CLERCK),

Tortricodes GUEN z gatunkiem *T. tortricella* (HBN.),

Cnephasia CURT. z gatunkami zaliczonymi do następujących podrodzajów:

Ablabia HBN.; gatunki: *C. osseana* (SCOP.), *C. argentana* (CLERCK), *C. canescana* (GUEN.); pierwsze dwa gatunki zostały połączone w osobną grupę,

Nephodesme HBN.; gatunki: *C. incanana* (STEPH.), *C. derivana* (LAH.), *C. penziana* (THNBG.),

Cnephasiella ADAMCZ.; gatunki: *C. pasivana* (HBN.), *C. abrasana* (DUP.),

Brachycnephasia RÉAL; gatunek: *C. longana* (HAW.),

Cnephasia Curt. s. str.; gatunki: *C. interjectana* (Haw.), *C. alticolana* (H.-S.), *C. wilkinsoni* Réal, *C. obsoletana* Wood, *C. błeszyńskii* Toll, *C. conspersana* Dgl., *C. communana* (H.-S.).

Poza opisami aparatów genitalnych poszczególnych gatunków zostały także podane wyjaśnienia niektórych synonimów, jak też rozsiedlenie, ze szczególnym uwzględnieniem Polski.

РЕЗЮМЕ

Настоящую работу автор считает введением к дальнейшим исследованиям, посвященным изучению рода *Cnephasia* Curt. На основании новейших опытов систематического распределения видов этой группы, автор обсуждает четыре рода встречающиеся в Польше и соединенные в подсемейство *Cnephasiinae*. Особенно подробно автор рассматривает род *Cnephasia* Curt., учитывая при этом подроды, введённые Реалем /1953/.

Автор исправил при этом известные неправильные определения в системе Реаля. Так например, *Trachysmia rigana* (Sodof) автор исключил из рода *Cnephasia* Curt. основываясь на значительной разнице в строении копуляционных аппаратов как самца, так и самки. Таким образом прежний подрод *Trachysmia* Guen. автор возвёл до рода и временно поместил его между родом *Tortrix* L. и группой родов, тесно родственных роду *Cnephasia* Curt.

Далее автор рассматривает характеристику подрода *Brachycnephasia* Réal и приводит до сих пор не указывавшийся в Польше вид *C. (B.) longana* (Haw.), найденный в окрестностях Щецина.

При родах, подродах и видах, автор приводит краткую характеристику, основанную на особенностях копуляционных аппаратов.

В своей работе автор рассматривает следующие роды и подроды, которые он зачислил к подсемейству. *Cnephasiinae: Doloploca* Hbn. с видом *D. punctulana* (Den. & Schiff.) *Exapate* Hbn. с видом *E. congelatella* (Clerck) *Tortricodes* Guen. с видом *T. tortricella* (Hbn.) *Cnephasia* Curt. с видами, принадлежащими к подродам: *Ablabia* Hbn. виды: *C. osseana* (Scop.), *C. argentana* (Clerck), *C. canescana* (Guen.), первых два вида автор поместил в отдельной группе. *Nephodesme* Hbn. виды: *C. incanana* (Steph.), *C. derivana*

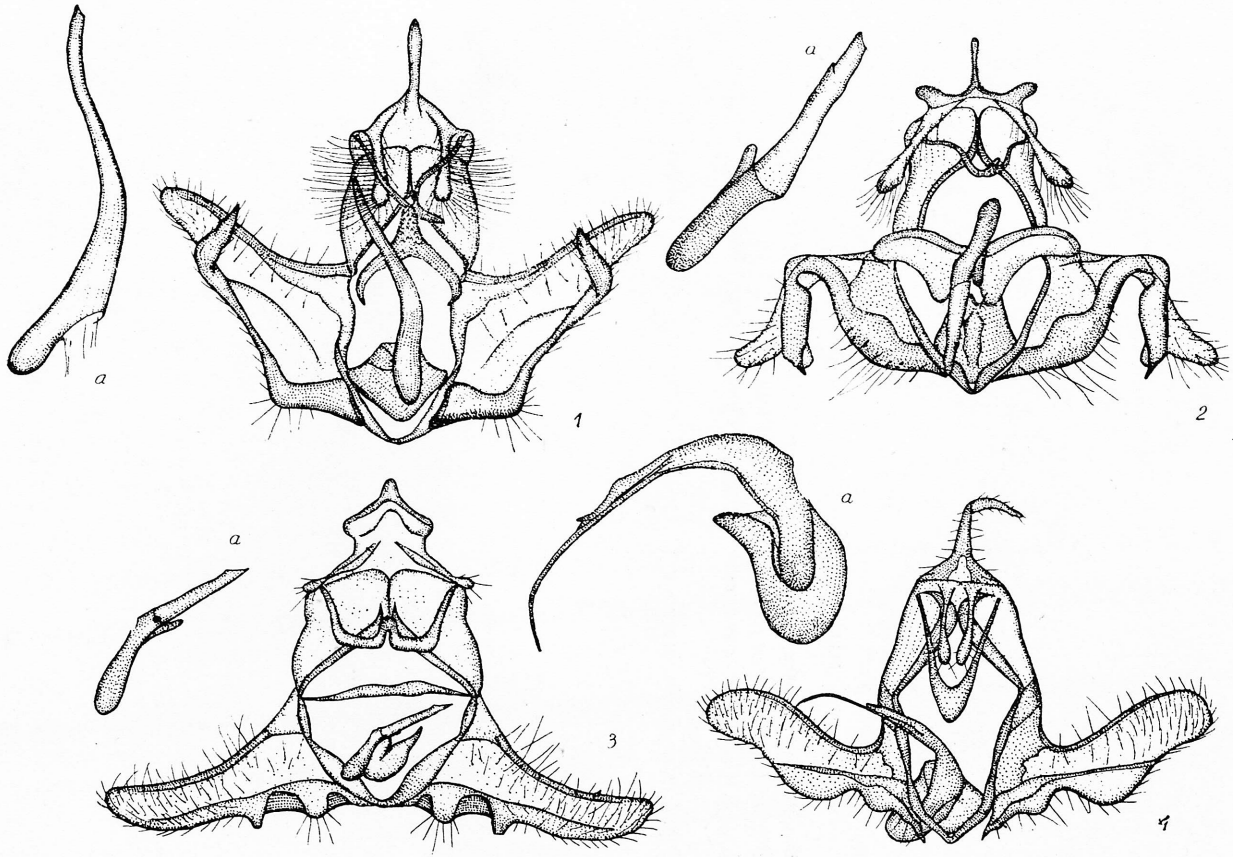
(LAH.), *C. penziana* (THNBG.). *Cnephasiella* ADAMCZ. виды: *C. pasivana* (HBN.), *C. abrasana* (DUP.). *Brachycnephasia* RÉAL вид: *C. longana* (HAW.), *Cnephasia* CURT, s. str. виды: *C. interjectana* (HAW.), *C. alticolana* (H.-S.), *C. wilkinsoni* RÉAL, *C. obsoletana* WOOD, *C. błeszyńskii* TOLL, *C. conspersana* DGL., *C. communana* (H.-S.).

Кроме описаний копуляционных аппаратов всех видов, автор даёт выяснения некоторых синонимов и приводит данные о распространении этих видов, в особенности в Польше.

Plate XIV

MALE GENITAL ARMATURE (A-AEDEAGUS)

Fig. 1. *Trachysmia rigana* (SODOF.), Riffleberg near Zermatt, Switzerland.
Fig. 2. *Doloploca punctulana* (DEN. & SCHIFF.), „Palatin".
Fig. 3. *Exapate congelatella* (CLERCK), Bydgoszcz, Northern Poland.
Fig. 4. *Tortricodes tortricella* (HBN.), Kraków, Souther Poland.

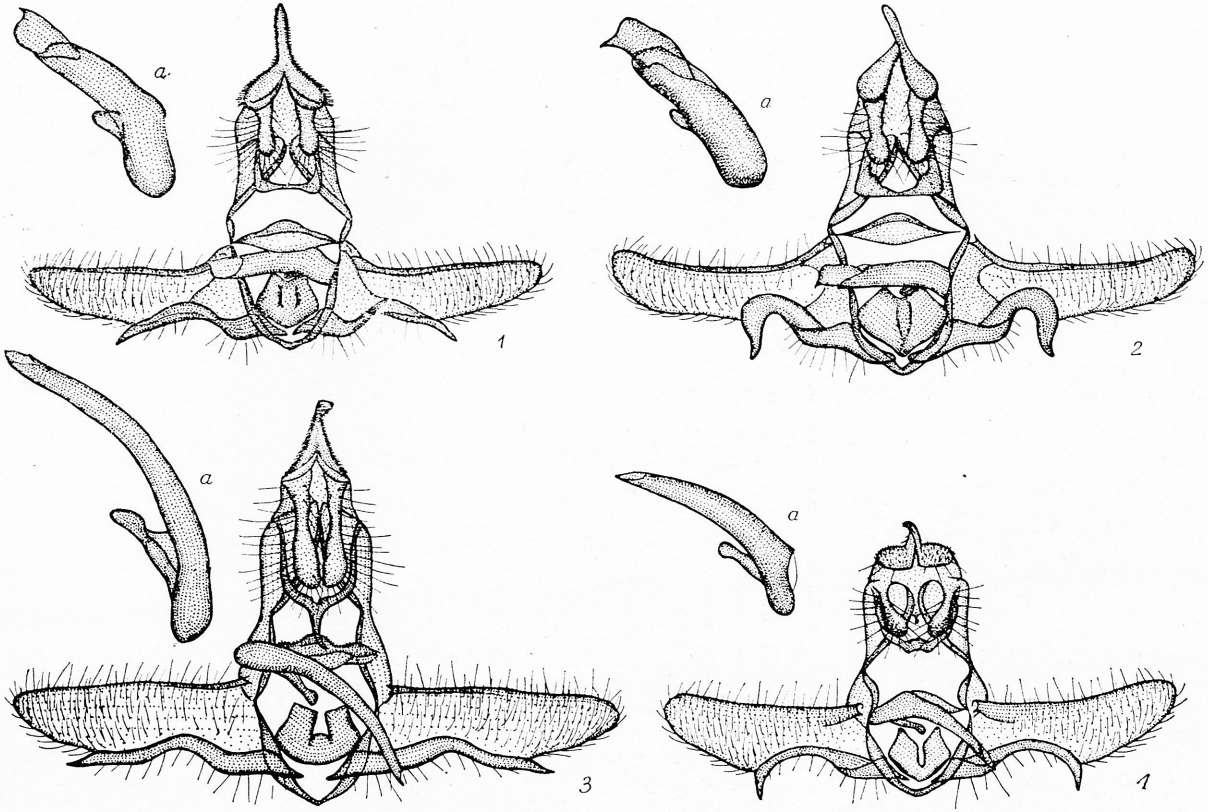


Auctor del.
J. Razowski

Plate XV

MALE GENITAL ARMATURE (A-AEDEAGUS)

Fig. 1. *Cnephasia osseana* (SCOP.), Kasina Wielka, Southern Poland.
Fig. 2. *Cnephasia argentana* (CLERCK), Poland.
Fig. 3. *Cnephasia canescana* (GUEN.), Tyniec, distr. Kraków, Southern Poland.
Fig. 4. *Cnephasia incanana* (STEPH.), Zawiercie, Southern Poland.



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J. Razowski

Plate XVI

MALE GENITAL ARMATURE (A-AEDEAGUS)

Fig. 1. *Cnephasia derivana* (Lah.), Zawiercie, Southern Poland.
Fig. 2. *Cnephasia penziana* (Thnbg.), Pieniny, Southern Poland.
Fig. 3. *Cnephasia nubilana* (Hbn.), Kraków, Southern Poland.
Fig. 4. *Cnephasia pasivana* (Hbn.), Kraków, Southern Poland.

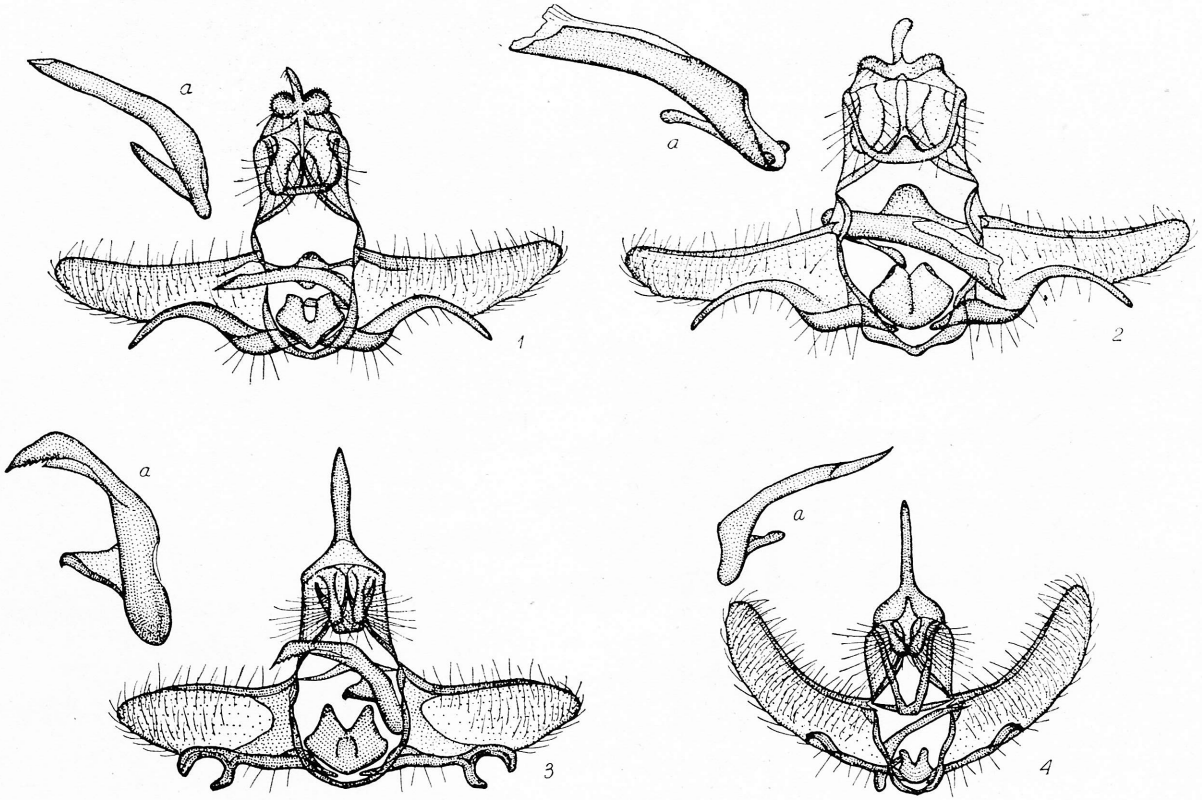

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Plate XVII

MALE GENITAL ARMATURE (A-AEDEAGUS)

Fig. 1. *Cnephasia abrasana* (DUP.), Tirolia.
Fig. 2. *Cnephasia longana* (HAW.), Western Poland.
Fig. 3. *Cnephasia interjectana* (HAW.), Poland.
Fig. 4. *Cnephasia interjectana*, Damberg.

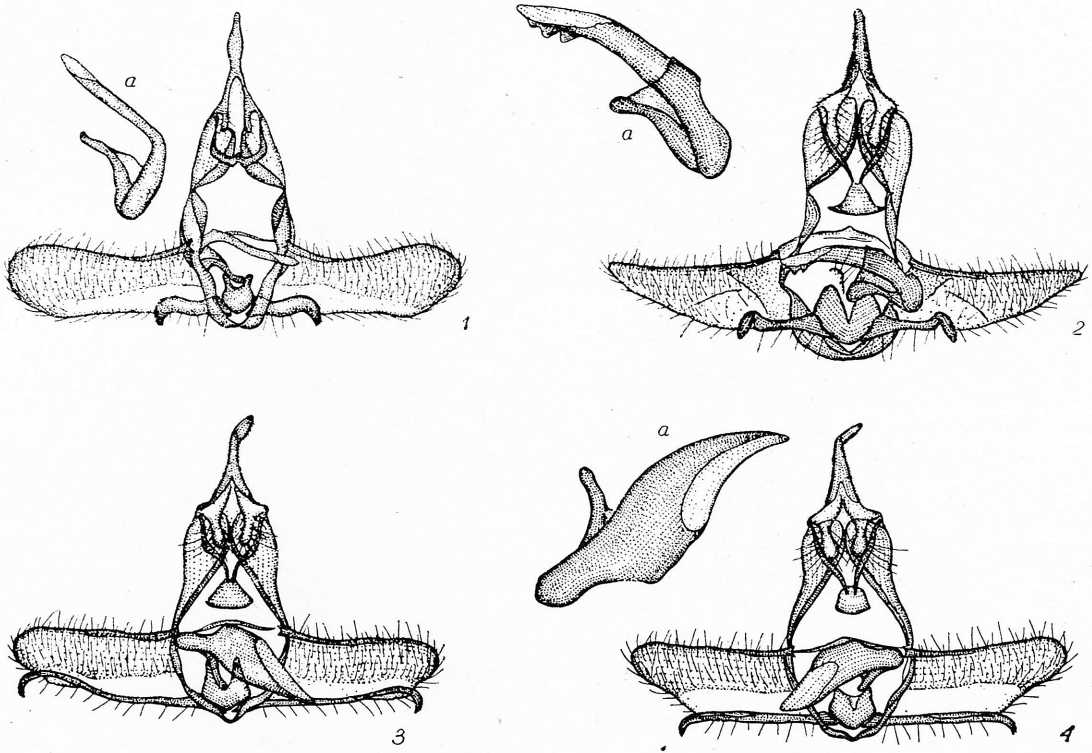

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Plate XVIII

MALE GENITAL ARMATURE (A-AEDEAGUS)

Fig. 1. *Cnephasia alticolana* (H.-S.), Rytro, Southern Poland.
Fig. 2. *Cnephasia wilkinsoni* RÉAL, Kraków, Southern Poland.
Fig. 3. *Cnephasia obsoletana* WOOD, Germany.
Fig. 4. *Cnephasia bleszyńskii* TOLL, Duszniki, Sudety Mts., Southern Poland.

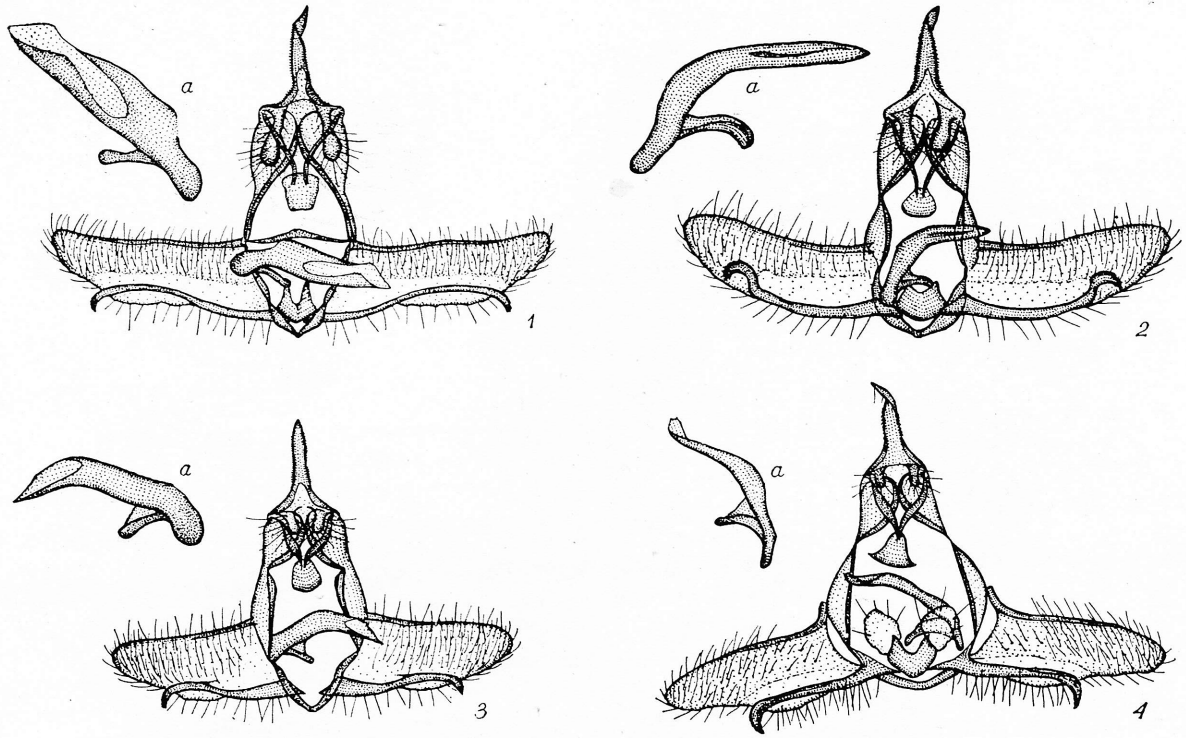

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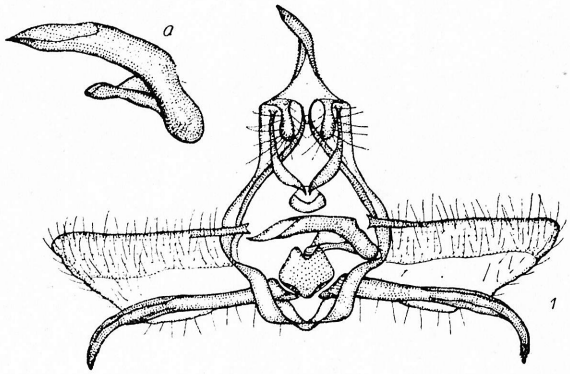
Plate XIX

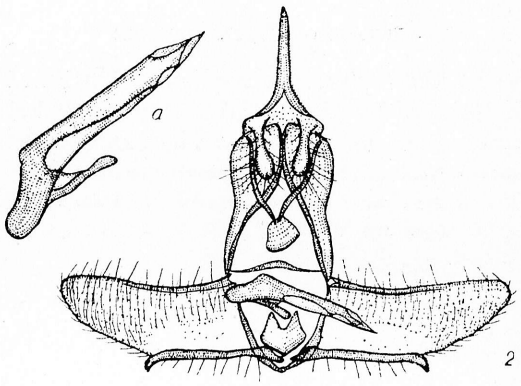
MALE GENITAL ARMATURE (A-AEDEAGUS)

Fig. 1. *Cnephasia conspersana* DGL., Radziszów, Southern Poland.
Fig. 2. *Cnephasia communana* (H.-S.), Kraków, Southern Poland.

FEMALE GENITAL ARMATURE

Fig. 3. *Trachysmia rigana* (SODOF.), Engadin, Switzerland.
Fig. 4. *Doloploca punctulana* (DEN. & SCHIFF.), „Palatin".





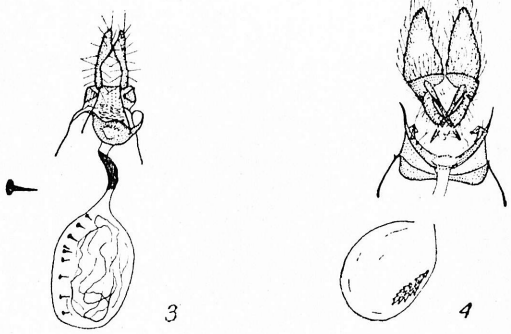


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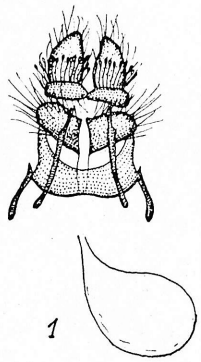
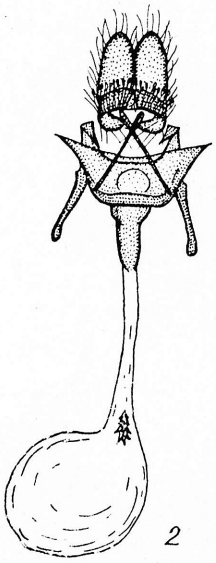
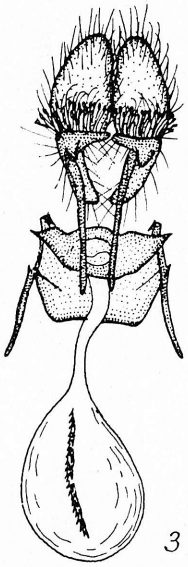
Plate XX

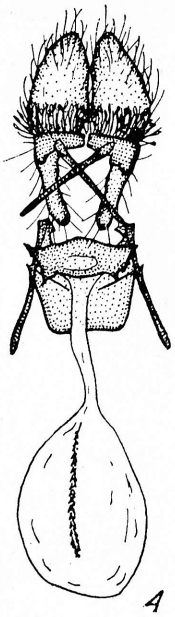
FEMALE GENITAL ARMATURE

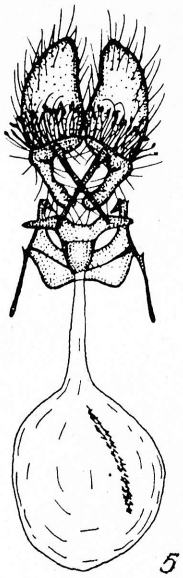
Fig. 1. *Exapate congelatella* (Clerc.), Bydgoszcz, Northern Poland.
Fig. 2. *Tortricodes tortricella* (Hbn.), Kraków, Southern Poland.
Fig. 3. *Cnephasia osseana* (Scop.), ex. coll. Klemensiewicz.
Fig. 4. *Cnephasia argentana* (Clerc.), Szczawnica, Southern Poland.
Fig. 5. *Cnephasia canescana* (Guen.), Smoleń, Southern Poland.
Fig. 6. *Cnephasia incanana* (Steph.) Pilica, distr. Zawiercie, Southern Poland.











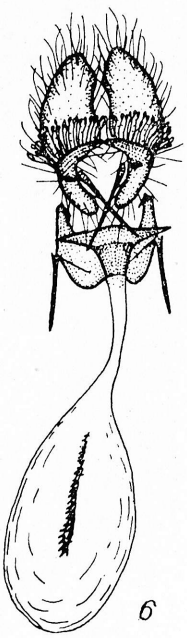


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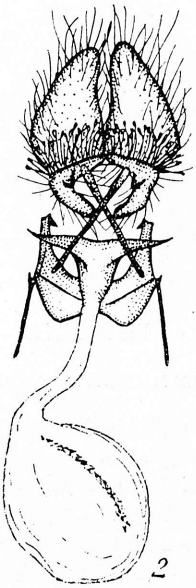
Plate XXI

FEMALE GENITAL ARMATURE

Fig. 1. *Cnephasia derivana* (Lah.), Pilica, distr. Zawiercie, Southern Poland.
Fig. 2. *Cnephasia penziana* (Thnbg.), Southern Poland.
Fig. 3. *Cnephasia nubilana* (Hbn.), Kraków, Southern Poland.
Fig. 4. *Cnephasia pasivana* (Hbn.), Kraków, Southern Poland.
Fig. 5. *Cnephasia abrasana* (Dup.), Wien, Austria.
Fig. 6. *Cnephasia longana* (Haw.), Hamburg, Germany.


1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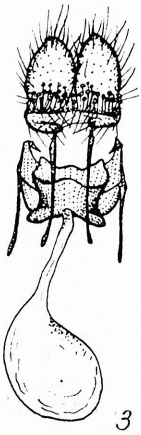
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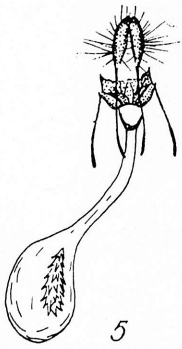
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Plate XXII

FEMALE GENITAL ARMATURE

Fig. 1. *Cnephasia interjectana* (Haw.), Rytro, Southern Poland.
Fig. 2. *Cnephasia alticolana* (H.-S.), Kraków, Southern Poland.
Fig. 3. *Cnephasia wilkinsoni* Réal, Kraków, Southern Poland.
Fig. 4. *Cnephasia obsoletana* Wood, Lwów, Western Ukraina.
Fig. 5. *Cnephasia conspersana* Dgl., Zawiercie, Southern Poland.
Fig. 6. *Cnephasia communana* (H.-S.), Dulowa, Southern Poland.

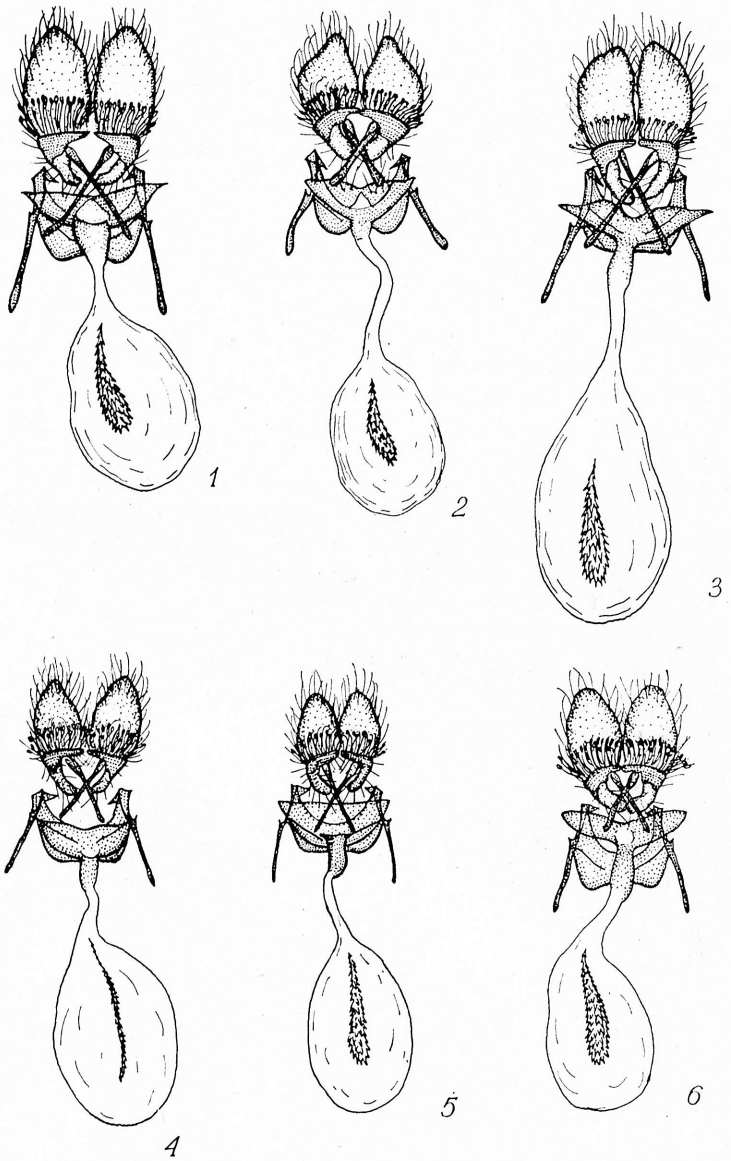

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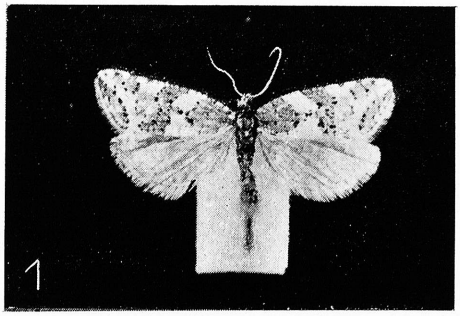
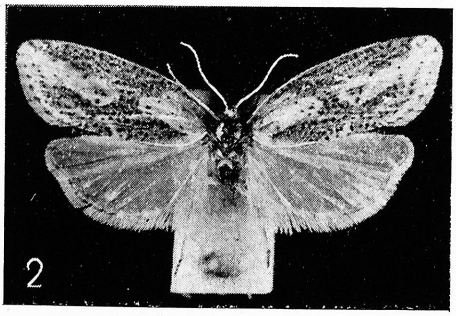
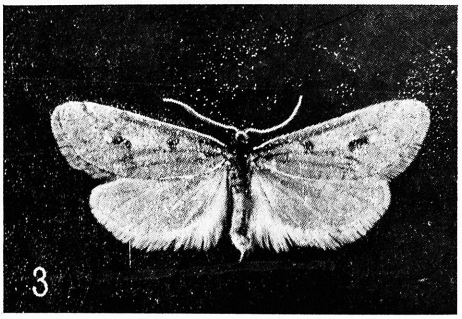
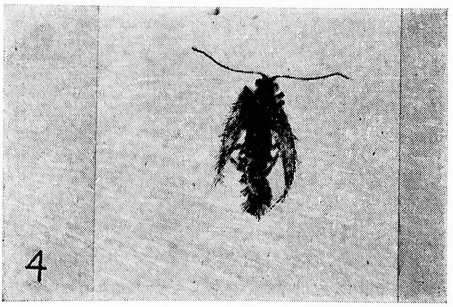
Plate XXIII

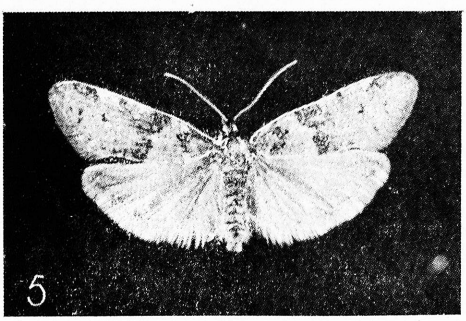
Fig. 1. *Trachysmia rigana* (SODOF.), Riffleberg near Zermatt, Switzerland.
Fig. 2. *Doloploca punctulana* (DEN. & SCHIFF.), Badenia, Germany.
Fig. 3. *Exapate congellatella* (CLERCK), male, Morszyn, Western Ukraina.
Fig. 4. *Exapate congellatella* (CLERCK), female, Bydgoszcz, Northern Poland.
Fig. 5. *Tortricodes tortricella* (HBN.), ex. coll. KLEMENSIEWICZ.
Fig. 6. *Tortricodes tortricella* (HBN.), ex. coll. KLEMENSIEWICZ.
Fig. 7. *Cnephasia osseana* (SCOP.), Western Ukraina.
Fig. 8. *Cnephasia osseana* (SCOP.), Western Ukraina.

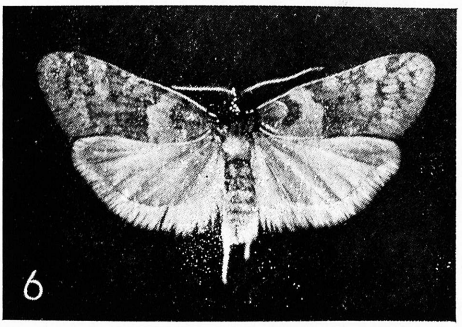


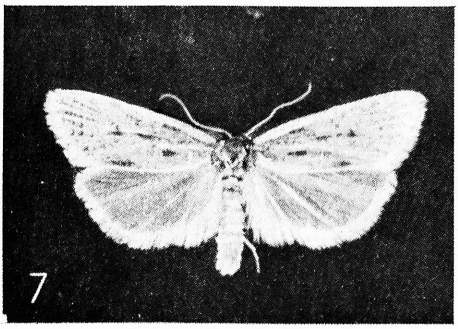












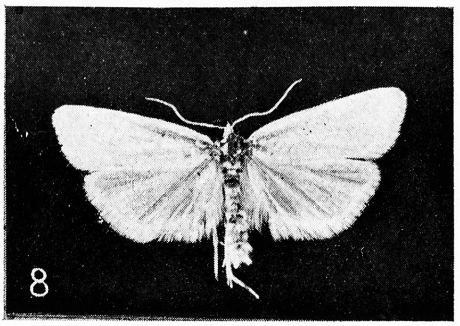


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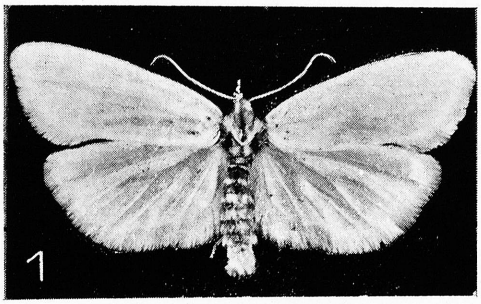
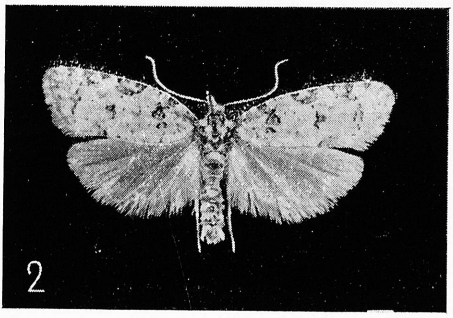
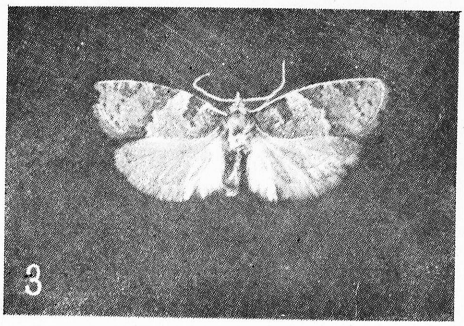
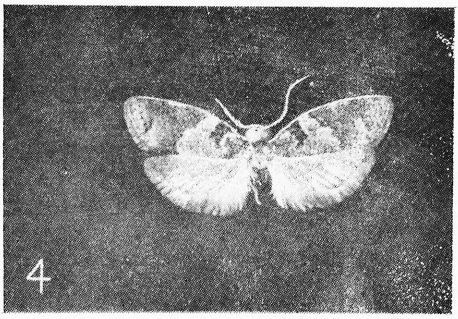
Plate XXIV

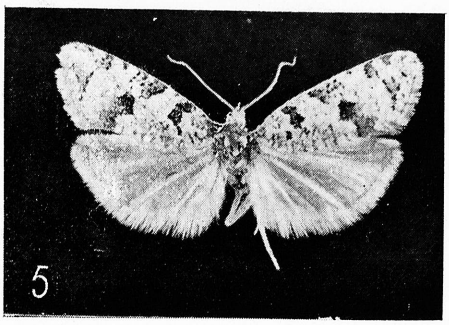
Fig. 1. *Cnephasia argentana* (Clerck), Western Ukraina.
Fig. 2. *Cnephasia canescana* (Guen.), Pomorzany, distr. Olkusz, Southern Poland.
Fig. 3. *Cnephasia incanana* (Steph.), Piwniczna, Southern Poland.
Fig. 4. *Cnephasia derivana* (Lah.), Ustroń, Southern Poland.
Fig. 5. *Cnephasia penziana* (Thnbg.), Rzyczanów, Southern Poland.
Fig. 6. *Cnephasia nubilana* (Hbn.), male, Strzałków, Western Ukraina.

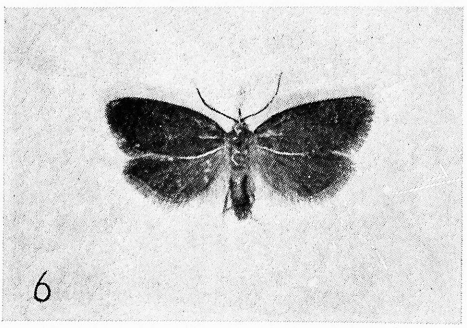












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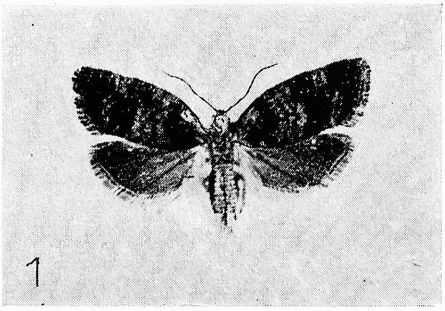
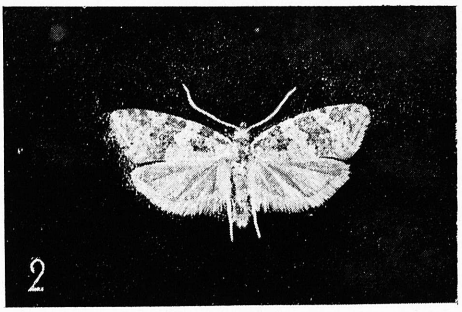
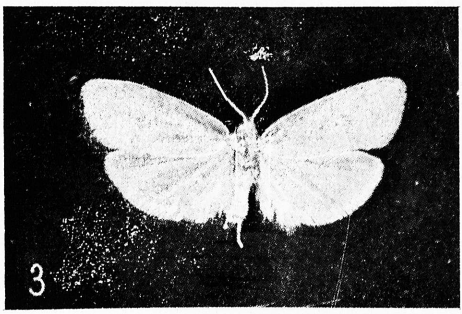
J. Razowski

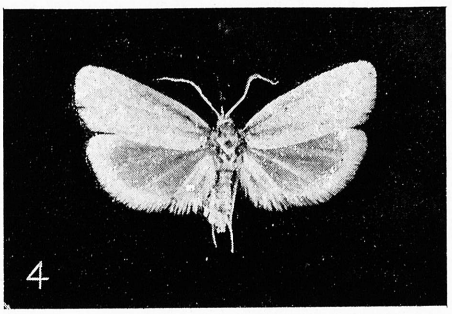
Plate XXV

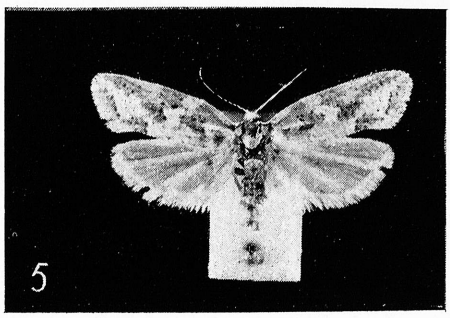
Fig. 1. *Cnephasia nubilana* (Hbn.), female, Nowy Sącz, Southern Poland.
Fig. 2. *Cnephasia pasivana* (Hbn.), Lwów, Western Ukraina.
Fig. 3. *Cnephasia abrasana* (Dup.), Austria.
Fig. 4. *Cnephasia longana* (Haw.), Hamburg, Germany.
Fig. 5. *Cnephasia longana* (Haw.), Hamburg, Germany.
Fig. 6. *Cnephasia interjectana* (Haw.), Nozdżec, Western Ukraina.











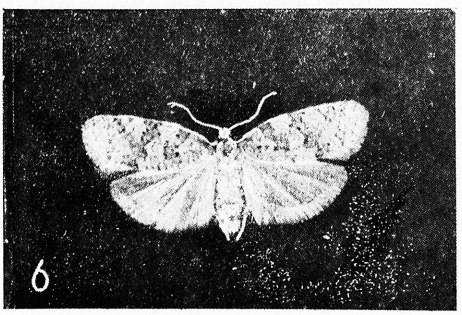


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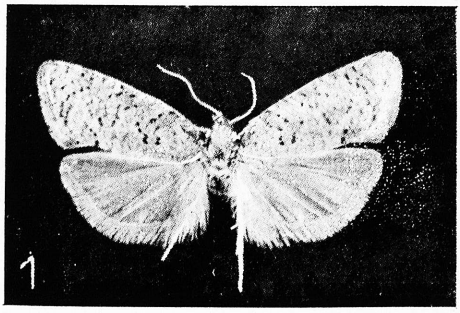
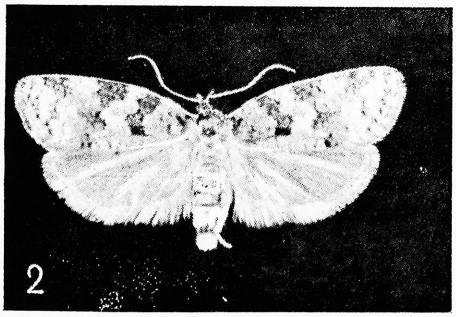
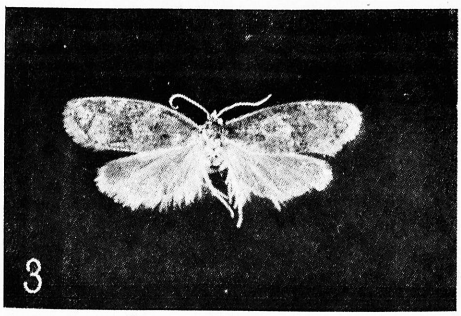
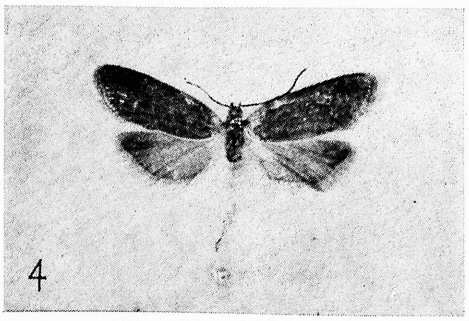
Plate XXVI

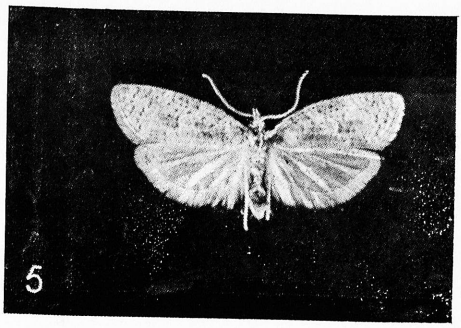
Fig. 1. *Cnephasia alticolana* (H.-S.), Stary Sącz, Southern Poland.
Fig. 2. *Cnephasia wilkinsoni* RÉAL, Kraków, Southern Poland.
Fig. 3. *Cnephasia obsoletana* WOOD, Lwów, Western Ukraina.
Fig. 4. *Cnephasia bleszyńskii* TOLL, Sudety Mts., Southern Poland.
Fig. 5. *Cnephasia conspersana* DGL., Jamy, distr. Grudziądz, Northern Poland.
Fig. 6. *Cnephasia communana* (H.-S.), Lwów, Western Ukraina.

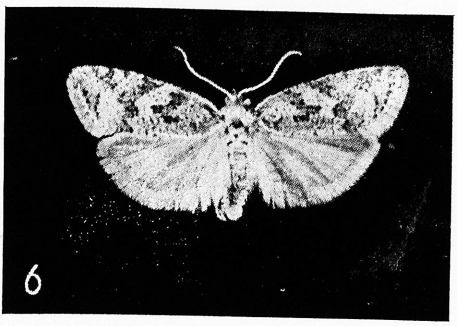












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