

GELECHIIDAE (LEPIDOPTERA) MENTIONED IN THE ROMANIAN FAUNA FOR THE FIRST TIME

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On présente sept espèces de Gelechiidae, nouvelles pour la faune de Roumanie: *Ptocheuusa abnormella* H.S., *Teleiopsis bagriotella* Dup., *Chionodes luctuella* Hbn., *Gelechia sabinella* Z., *Caryocolum tischeriella* Z., *Reuttia subocella* Steph. et *Acanthophila latipennella* Rebel. On donne une courte description des imagos, de l'armature génitale du male et de la female et des données concernant leur distribution.

On the occasion of the identification of the material belonging to Gelechiidae family, preserved in our collection, we identified seven species whose presence haven't been mentioned from Romania, as yet (Popescu-Gorj, 1984).

Within this paper, we present the studied material and a short description of the external morphology of the species and genitalia. Also, there are presented some data concerning their distribution and biology according to the data from the specialized literature (Gozmány, 1958; Hrubý, 1964; Klimesch, 1953–1954; Leraut, 1980 and Piscunov, 1981) as well as our remarks on them.

Ptocheuusa abnormella Herrich-Schäffer, 1854

Material: 3♂♂: Apuseni Mt., Cheile Turzii, 450 m, 11.V.1991, Leg. & coll. S. Kovács & Z. Kovács, genital preparation, no 372, 373 (♂♂)/Kovács.

Description.

Head white-light greyish, white labial palpi, outerly the middle segment dark.

Thorax white-light greyish, with a dark grey-yellowish stripe in the middle side.

Wing span of 13–15 mm. Forewings narrow, background colour dark grey-yellowish; pattern formed of white stripes along veins and outer margin. Fringes are light grey. Hind wings are greyish (Fig. 9).

Genitalia ♂: *Tegumen* small and slightly sclerotized, *uncus-gnathos* complex is absent. *Valvae* with a triangular area strongly sclerotized and covered with hairs. *Vinculum* narrow and long, *saccus* small. *Aedeagus* very large, much widened towards *cecum*, without *cornutus* (Fig. 1).

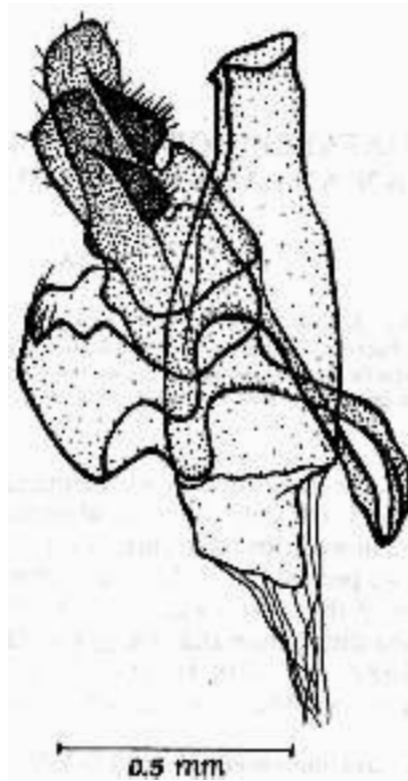


Fig.1 - *Ptocheuusa abnormella* H.S.: genitalia ♂ - Turda Gorges, 11.V.1991, genital preparation, no 373 / Kovács

Remarks.

It is a Central-European species known from Sicilia, Germany, Austria and Hungary. It flies during June and July. Larvae live on the inflorescence of *Inula ensifolia* species (Gozmány, op. cit.). We collected them at light, at night. The mention of *Ptocheusa abnormella* H.S. in the Western Carpathians has a major zoogeographic importance because this area can be considered the western limit of the distribution of this species.

Teleiopsis bagriotella Duponchel, 1840
(= *elatella* Herrich-Schäffer)

Material: 7♂♂, 4♀♀: Bucegi (Valea Jepilor) 1 600–1 800 m, 26.VII.1985, 1.VIII.1990 Bucegi (Vânturiş) 1 600 m, 21.VI.1993, Leg. & coll. S. Kovács & Z. Kovács, genital preparation, no 359, 364 (♂♂), 360, 365 (♀♀)/Kovács.

Description.

Head dark brown in males, white-greyish in females. Labial palpi long, curved above head, dark brownish with two white rings on each of the middle and apical segments in males; in females, white elements are prevalent.

Thorax, tegulae and abdomen dark brown.

Wing span 18–21 mm in males and 17–18 mm in females. Hind wings background dark brown. The inner transversal line is oblique, it starts from the base of the fore margin and reaches the inner margin straight to the point which marks the basal third of the middle one. Within the cell there are 3 points much elongated, 2 horizontal in the middle of the cell and 1 vertical in its top. All these elements are formed of black scales which raise from the fore wings plane. A small triangular point in the middle of the fore margin, a large spot which covers all the middle third of the inner margin and the outer transversal line broken off in the middle are white-pink in males; in females they are more extended and the pink colour is more subdued. The fringes of the costal side, up to the tip, are brown, broken off by 3 white-pinkish lines; the fringes of the outer and inner margins are white-pinkish in their basal half and distally light brown. Hind wings are greyish-brown with light brown fringes (Figs 11, 12).

Genitalia ♂: *Uncus* is narrow and pointed. *Valvae* are bifid with a shorter and pointed *costa* and a *sacculus* longer, finger-shaped, with a small processus on its tip. *Aedeagus* long, straight, larger in *coecum*, narrowing towards its tip (Fig. 2 B). Abdominal segment VIII characteristic (Fig. 3).

Genitalia ♀: Hind apophyses are more than three times longer than the fore ones; but the latter are thicker. In its distal half *ductus bursae* is larger and well sclerotized. *Corpus bursae* rounded, with a *signum* (Fig. 2 A).

Remarks.

It is an alpine species known from the Alps (Leraut, op. cit.), Tatra (Hrubý, op. cit.) and the Ukraine Carpathians (Piscunov, op. cit.). We collected them at the end of June – the beginning of August from the sunny mountain paths of the Bucegi, at an altitude of 1 600–1 800 m; during the day, butterflies are hidden in the abundant grassy vegetation of these regions or they appear at light, during the night. The mention of *Teleiopsis bagriotella* Dup. in the

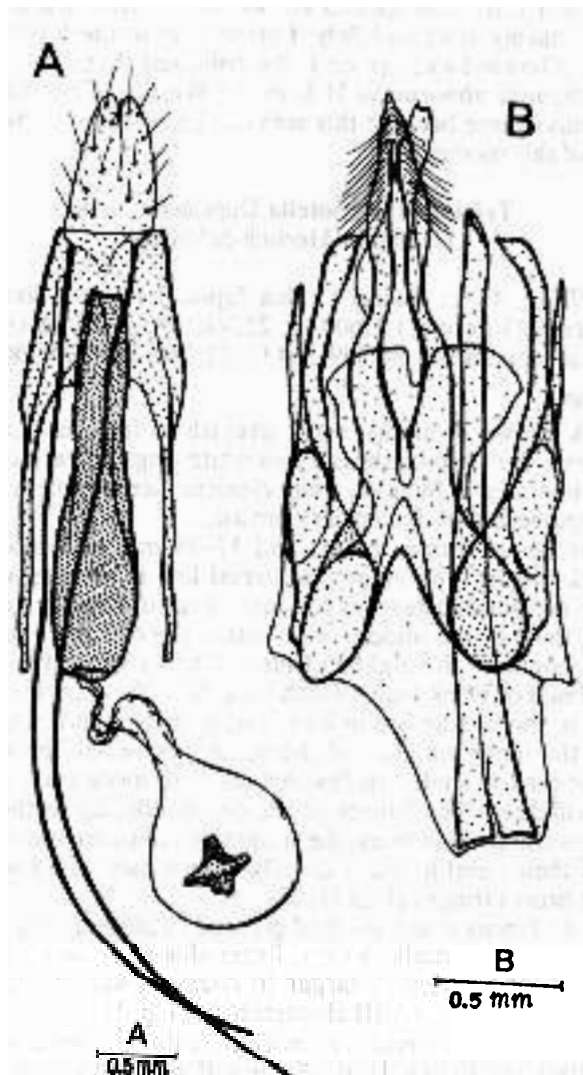


Fig. 2 - *Teleiopsis bagriotella* Dup.: Bucegi, Jepi Valley, 1700 m, 1.VIII.1990: A, genitalia ♀ - genital preparation, no 365 / Kovács; B, genitalia ♂ - genital preparation no 364 / Kovács

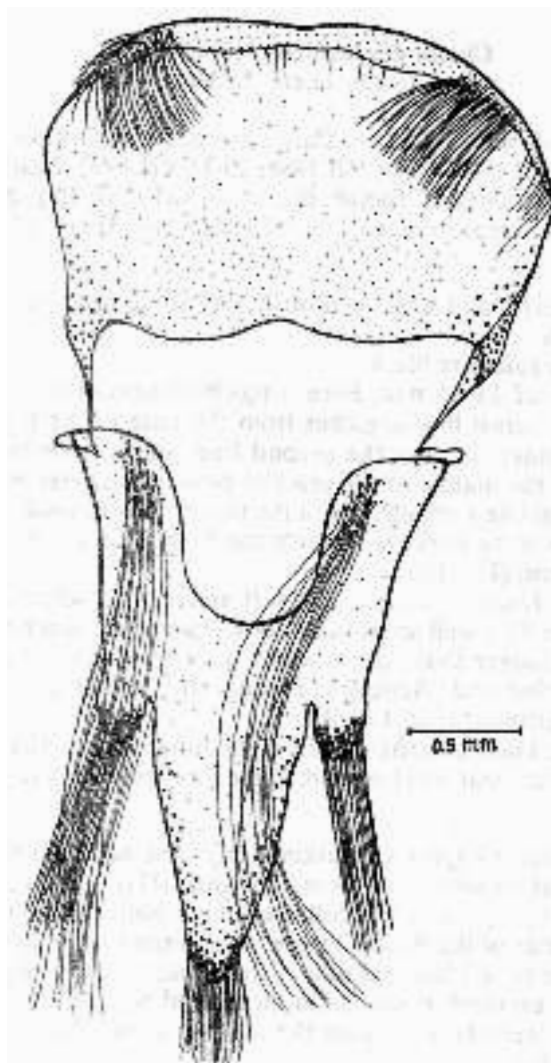


Fig. 3 - *Teleiopsis bagriotella* Dup., ♂: abdominal segment VIII - Bucegi, Jepsi Valley, 1700 m, 1.VIII.1990, - genital preparation, no 364 / Kovács

Bucegi Mountains is important because this area can be considered the south-eastern limit of its distribution.

Chionodes luctuella Hübner, 1793
(= *sauteriella* Zeller)

Material: 9♂♂, 4♀♀, Eastern Carpathians, Bicz Gorges, 1 200–1 300 m, 20.VII.1986, 24-25.VII.1987, 10-11.VII.1988, 13-14.VII.1990; Eastern Carpathians, Southern Harghita Mountains, Bicsad, 600 m, 19.VII.1987, Leg. & coll. S. Kovács & Z. Kovács, genital preparation, no 336, 362 (♂♂), 363, 371 (♀♀)/Kovács.

Description.

Head and labial palpi white-yellowish with some black scales on the apical segment of the palpi.

Thorax and **tegulae** are black.

Wing span is of 13–15 mm. Fore wings background is black with a white pattern; inner transversal line stretches from the base of the fore margin to the proximity of the inner margin; the second line starts from the middle of the margin, narrows in the middle of the cell and ends in the inner margin of the cell; the outer transversal line is straight, with the two ends bent towards the wing base, thus the line seems to be concave towards the base. The fringes are greyish. The hind wings are greyish (Fig. 10).

Genitalia ♂: *Uncus* rounded. The soft and slightly sclerotized base of the *gnathos* continues with a well sclerotized hook. *Valvae* are short and bifid, *costa* is bent, pointed and longer than *saccus* which is finger-shaped. *Saccus* is long and deep, with a rounded end. *Aedeagus* is long, thin and straight with a *coecum* elongated, much narrowed (Fig. 4 A, B).

Genitalia ♀: Hind apophyses are eight times longer than the fore ones. *Ostium bursae* is triangular and longer than the fore apophyses (Fig. 4 C).

Remarks.

It is a montaneous species mentioned from the northern Europe, the Alps, Tatra, Germany and Hungary. It flies in June–July (Gozmány, op.cit.; Hrubý, op. cit.; Piscunov, op. cit.). We collected them both during the day from the sunny mountain paths of the Bicz Gorges, at an altitude of 1 200–1 300 m, and at night, at light in the same places, as well as from Bicsad, also at night, at the feet of a slope very much exposed in sun, at an altitude of 600 m. We have to point out that *Chionodes luctuella* Hbn. reaches the south-eastern limit of its distribution in the Eastern Carpathians.

Gelechia sabinella Zeller, 1839
(= *hoffmanniella* Strand, *kalevalella* Kanerva)

Material: 1♂, Eastern Carpathians, Bicz Gorges, 1 250 m, 25–27.VIII.1987, Leg. & coll. S. Kovács, genital preparation, no 358 (♂)/Kovács.

Description.

Head dirty white.

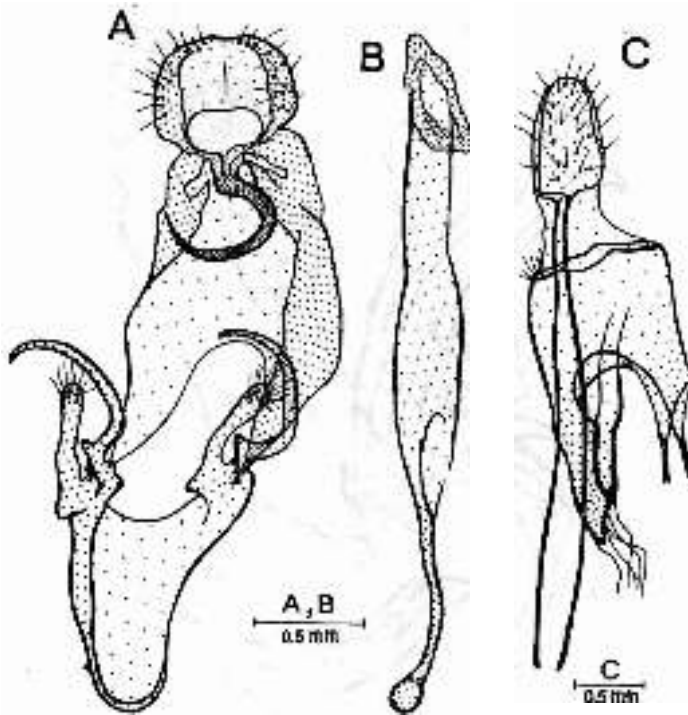


Fig.4 - *Chinodes luctuella* Hbn.: Bicz Gorges, 1250 m: A - B, genitalia ♂, 13 - 14.VII.1990, genital preparation, no 367 / Kovács; C. genitalia ♀, 24 - 25.VII.1987, genital preparation, no 363 / Kovács

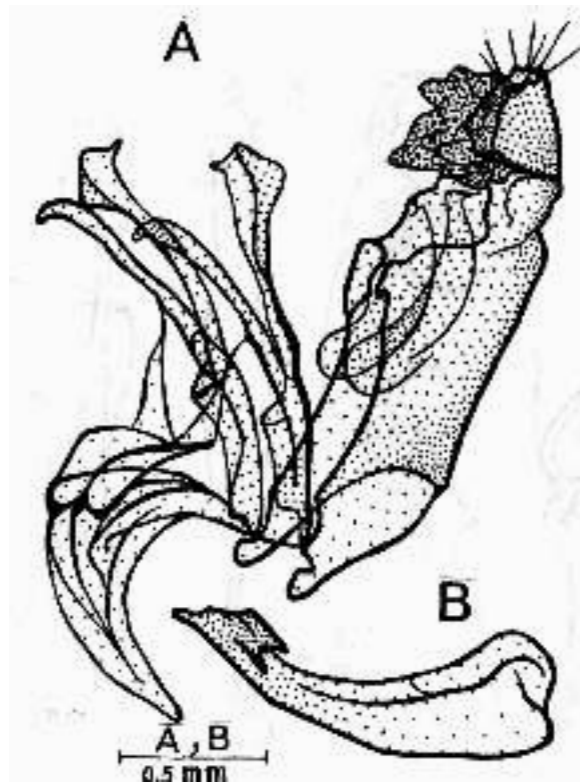


Fig., 5-*Gelechia sabinella* Z.: ♂ - Bicz Gorges, 1250 m, 25-27.VIII.1987, genital preparation, no 358/Kovács

Thorax and *tegulae* greyish. Labial palpi are characteristic for a short basal segment; middle segment covered with very long hairs which form a bunch almost quadrilateral with the basal half dark greyish and the apical half dirty white; the apical segment is orientated upwards.

Wing span of the forewings is of 15.5 mm. The background is greyish dusted abundantly with black. At the base of the costal margin there is a dark spot. Along the cell there is a dark longitudinal stripe, paler at its margins broken off by 2 white points. Fringes are greyish. Hind wings are dark greyish (Fig. 13).

Genitalia ♂: *Uncus* rounded with hairs on its margins, *gnathos* soft, slightly chitinous. *Valvae* bifid, *costa* with a small processus, *sacculus* finger-shaped and almost as long as *costa*. *Saccus* triangular with a pointed bottom. *Aedeagus* with a larger *coecum*; on tip a small *carina penis* hook-shaped (Fig. 5).

Remarks.

The species is distributed in Europe and Minor Asia; it flies in July and August. Larvae live on *Juniperus* species (Gozmány, op. cit.; Hrubý, op. cit. and Piscunov, op. cit.). We collected them during the night, at light, on a rocky slope covered with chalcophylous lawns (*Seslerion rigidae*), *Juniperus sabina* and *J. communis*.

Caryocolum tischeriella Zeller, 1839

Material: 16♂♂, 11♀♀, Eastern Carpathians, Bicz Gorges, 1 250 m, 20.VII.1986, 25–27.VIII.1987, 11–12.VIII, 26–27.IX.1988, 7–9.VIII, 26–27.VIII, 22–23.IX.1989, Leg. & coll. S. Kovács & Z. Kovács, genital preparation, no 337, 343, 344, 370 (♂♂), 338, 367 (♀♀)/Kovács.

Description.

Head black, face white, labial palpi black with a white ring on the tip of the middle segment.

Thorax and *tegulae* black.

Wing span of the forewings is of 12–13 mm. The background is black with a white pattern: the inner transversal line stretches from the costa base to the inner margin of the cell, where it is doubled by a small point; in the middle of the wing there is a large white spot, rounded, placed near the inner margin, more than the costa; the outer transversal line is oblique, narrowed in the middle. Fringes are black with whitish tips. Hind wings are greyish (Fig. 14).

Genitalia ♂: *Uncus* rounded. *Valvae* bifid with *costa* shorter but distally widened; *valvula* narrowed, slightly longer than *costa* and the distal end pointed. On the distal margin of *saccus* the outgrowths are of the same size, the lateral ones wider than the median ones and the median incision is narrower and deeper than the lateral ones. Proximal prolongation of the *vinculum* is long and equally narrowed all along its length. *Aedeagus* is long and narrow, slightly curved and with a wide *coecum* (Fig. 6 A).

Genitalia ♀: Hind apophyses are almost four times longer than the fore ones. Subgenital plate has its width and length almost equal. *Ostium bursae* is cup-shaped. *Ductus bursae* distally strongly sclerotized. *Corpus bursae* is oval with a nail-shaped *signum* (Fig. 6 B).

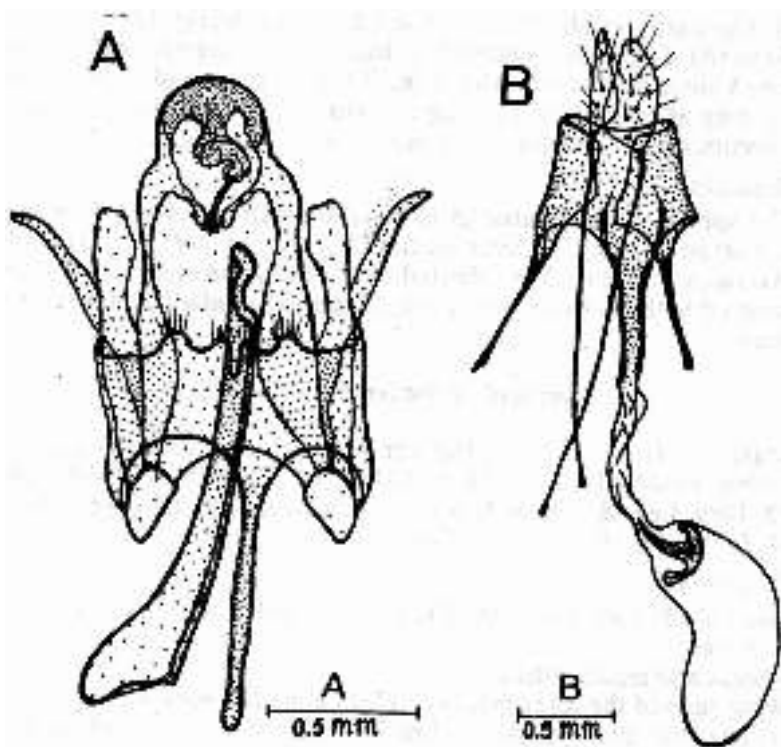


Fig.6 - *Caryocolum tischeriella* Z.: genitalia ♂ - Bicz Gorges, 1250 m: A, genitalia ♂, 11 - 12.VIII.1988, genital preparation, no 367/Kovács; B, genitalia ♀, 22-23.IX.1989, genital preparation, no 370/Kovács

Remarks.

It is a North- and Central-European species which flies within the period June-September. Larvae live on *Silene nutans* (Gozmány, op. cit.; Hrubý, op. cit.; Klimesch, op. cit.). We collected them in a great number, during the night, at light, on the rocky slopes with a xerothermic vegetation. The Bicaz Gorges are the most south-eastern point where the species has been mentioned.

Reuttia subocellea Stephens, 1834

(= *internella* Lienig & Zeller, *lathyri* Pierce & Metcalfe)

Material: 5 ♂♂, 7 ♀♀, 2 specimens without abdomen: Ineu, 9.VII.1927, 4.VII.1928, Leg. & coll. L. Diószeghy; Eastern Carpathians, Baraolt Mt., 650 m, Sf. Gheorghe, 31.VII.1981, 24.VII.1982, 31.VII.1984, Eastern Carpathians, Bicaz Gorges, 1 300 m, 2-4.VII.1982, 19-20.VII.1985, 26-28.VI.1989, Leg. & coll. S. Kovács & Z. Kovács, genital preparation no: 342 (♂), 335, 339 (♀♀)/Kovács.

Description.

Head, thorax and tegulae white. Labial palpi long, curved upwards, basal and middle segments white; the apical ones brownish.

Wing span of the forewings is of 10-12 mm. Background white, apically covered with many brownish scales. Along the inner margin stretches a wide brown-greyish stripe broken off before the outer angle. At the end of the cell there are two longitudinal dark brownish lines. Wing tip is black; on the costal and outer margin there are three white streaks directed towards the outer end of the longitudinal lines of the cell. Fringes are light greyish crossed by two dark lines. Hind wings are narrow, greyish, with long light greyish fringes (Fig. 15).

Genitalia ♂: *Uncus* rounded, *gnathos* soft at its base, tip strongly sclerotized, hook-shaped. *Valvae* asymmetrical, long, narrow at their base, gradually widening towards *cucullus*; the left one is simple, the right one is bifid, ventral part ending in a finger-like apophysis. *Saccus* almost as large as the *tegumen-uncus* complex, with a bifid tip. *Aedeagus* short, pear-like, with a little processus on its tip (Fig. 7 A, B).

Genitalia ♀: Hind apophyses longer than the fore ones, *ductus bursae* long, without sclerotized areas, *corpus bursae* elongated with a hemisphere-like *signum*, equally sclerotized (Fig. 7 C).

Remarks.

The species is distributed in Europe. It flies in June-July. Larvae live on *Origanum vulgare* (Gozmány, op. cit.; Hrubý, op. cit.; Leraut, op. cit.; Piscunov, op. cit.). Butterflies prefer the xerothermic places of the mountain area, at altitudes of 600-1 300 m; here they can be captured during day time with the net. In the L. Diószeghy's collection from the Museum of Sf. Gheorghe town

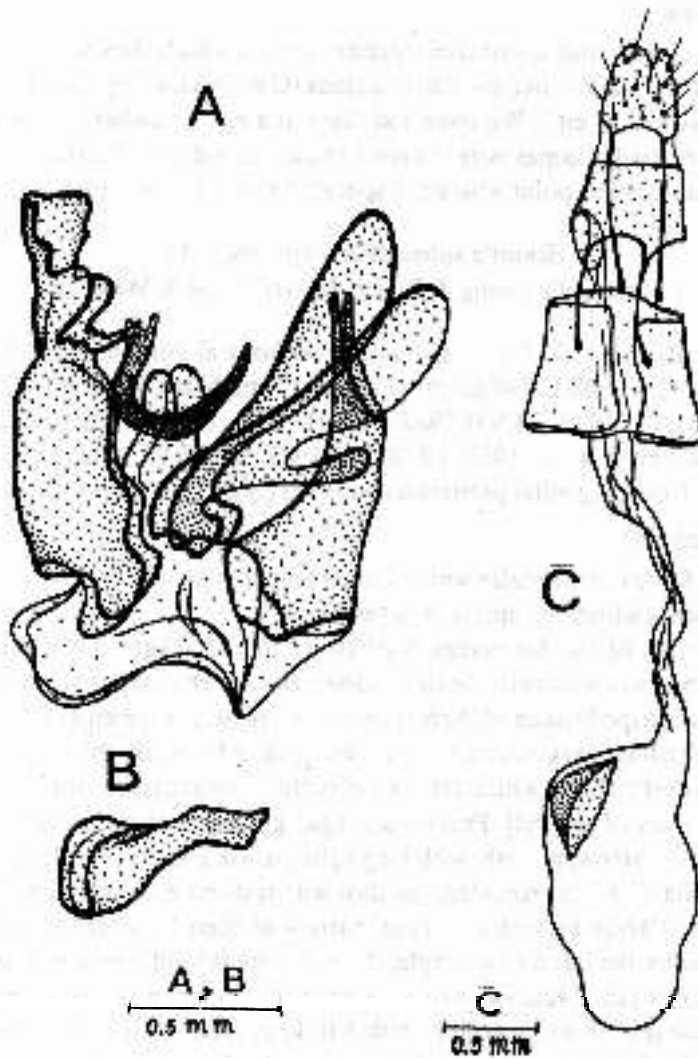


Fig.7 - *Reuttia subocellea* Steph.: Biçaz Gorges: A - B, genitalia ♂, 1200 m, 2.VII.1982, genital preparation, no 342 / Kovács; C, genitalia ♀, 1300 m, 19 - 20.VII.1985, genitalia preparation, no 339 / Kovács

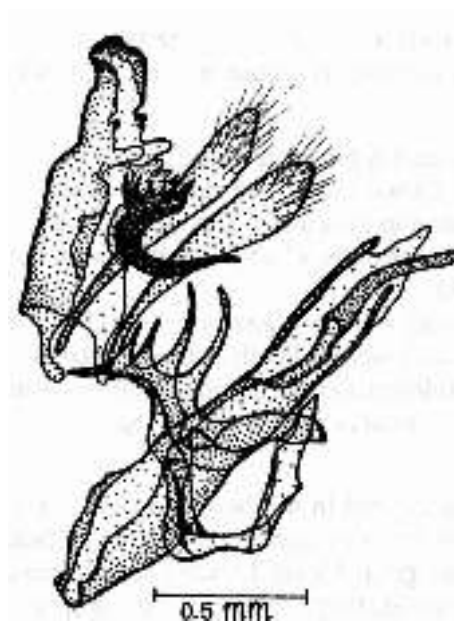


Fig.8 - *Acanthophila latipennella* Reb.: genitalia ♂ - Bicz Gorges, 1250 m, 26-28.VI.1989, genital preparation, no 368 / Kovács

there are two damaged specimens, both of them without abdomen; according to their external features they belong to this species. In the catalogue of the collection (Căpușe & Kovács, 1987) it is wrongly mentioned under the name of *Reuttia coleella* Constant.

***Acanthophila latipennella* Rebel,**
(= *scotosiella* Hackman, *piceana* Sulcs, *steueri* Povolný)

Material: ♂: Eastern Carpathians, Bicaz Gorges, 1 250 m, 26–28.VI.1989, Leg. & coll. Z. Kovács, genital preparation no: 368 (♂)/Kovács.

Description.

Head, labial palpi slightly forward curved, **thorax** and **tegulae** black.

Wing span of the forewings is of 14.5 mm. Forewings and fringes are black, dull, without pattern. According to Píscunov (op. cit.) there is an external light coloured crossing line, more or less obvious, which is not present in our specimen. Hind wings are dark greyish (Fig. 16).

Genitalia ♂: **Uncus** rounded, **gnathos** strongly sclerotized hook-shaped. **Valvae** narrow, elongated, with a slightly widened **cucullus**. **Vinculum** has a short, smooth ribbon-like prolongation on its sides. **Saccus** recurved, wide. **Aedeagus** voluminous with a long **cornutus**, distally spiral (Fig. 8).

Remarks.

The species is distributed in northern and central Europe. It flies from the end of May to the beginning of August at the top of the spruce firs, practically they do not come down at the ground level. Larvae live on *Picea excelsa*, feeding on the female and male cone scales; they are considered the spruce fir pest (Píscunov, op. cit.). We collected them at the margin of the spruce fir wood, during the night, at light; the Bicaz Gorges are the southeast point where the species has been mentioned.

GELECHIIDAE (LEPIDOPTERA)
SEMNALATE PENTRU PRIMA DATĂ ÎN FAUNA ROMÂNIEI

REZUMAT

Din colecția autorilor sunt prezentate șapte specii aparținând familiei Gelechiidae, semnalate pentru prima dată în fauna României: *Ptocheuusa abnormella* H.S., *Teleiopsis bagriotella* Dup., *Chionodes luctuella* Hbn., *Gelechia sabinella* Z., *Caryocolum tischeriella* Z., *Reuttia subocellea* Steph. și *Acanthophila latipennella* Rebel. Se descrie morfologia externă, armăturile genitale masculine și femele și se dau date despre răspândirea și biologia speciilor.



Fig. 9



Fig. 10



Fig. 11



Fig. 12



Fig. 13



Fig. 14



Fig. 15



Fig. 16

- Fig. 9 - *Ptocheuusa abnormella* H.S., ♂ - Turda Gorges, 11.V.1991, leg. & coll. S.Kovács & Z. Kovács
 Fig. 10 - *Chionodes luctuella* Hbn., ♂ - Biczaz Gorges, 1250 m, 13-14.VII.1990, leg. & coll. S.Kovács & Z. Kovács
 Fig. 11 - *Teleiopsis bagriotella* Dup., ♂ - Bucegi, Jepi Valley, 1800 m, 26.VII.1985, leg. & coll. S.Kovács & Z. Kovács
 Fig. 12 - *Teleiopsis bagriotella* Dup., ♀ - Bucegi, Jepi Valley, 1700 m, 1.VIII.1990, leg. & coll. S.Kovács & Z. Kovács
 Fig. 13 - *Gelechia sabinella* Z., ♂ - Biczaz Gorges, 1250 m, 25-27.VIII.1987, leg. & coll. S.Kovács & Z. Kovács
 Fig. 14 - *Caryocolum tischeriella* Z., ♀ - Biczaz Gorges, 1250 m, 11-12.VIII.1988, leg. & coll. S.Kovács & Z. Kovács
 Fig. 15 - *Reuttia subocellea* Steph., ♀ - Biczaz Gorges, 1300 m, 26-28.VI.1989, leg. & coll. S.Kovács & Z. Kovács
 Fig. 16 - *Acanthophila latipennella* Reb., ♂ - Biczaz Gorges, 1250 m, 26-28.VI.1989, leg. & coll. S.Kovács & Z. Kovács

REFERENCES

- CĂPUȘE (L.), KOVÁCS (A.), 1987 – Catalogue de la collection de lépidoptères «László Diószeghy» du Musée départemental Covasna, Sfântu Gheorghe – Inst. Spéol. «Emil Racoviță»: 1–397. *București*.
- GOZMÁNY (L.), 1958 – Gelechiidae. In: *Microlepidoptera IV, Fauna Hungariae*, 16, 5: 141–295. *Budapest*.
- HRUBÝ (K.), 1964 – Prodomus Lepidopter Slovenska: 1–962. *Bratislava*.
- KLIMESCH (J.), 1953–1954 – Die an Caryophyllaceen lebenden europäischen *Gnorimoschema* Busck (= *Phthorimaea* Meyr.) – Arten. – *Z. Wien. Entomol. Ges.*, 1953, 64, 9: 225–239; 10: 275–282; 11: 311–319 (I. Teil); 1954. 65, 8: 273–288; 9: 335–341; 10: 357–362 (II. Teil).
- LERAUT (P.), 1980 – Liste systématique et synonymique des Lépidoptères de France, Belgique et Corse: 1–334. *Paris*.
- PISCUNOV (V. I.), 1981 – Gelechiidae. In: MEDVEDEVA (G.S.), *Opređitely nasekomyh Evropeiskoi Chiasiti SSSR*. 4, 2: 659–748. *Leningrad*.
- POPESCU-GORJ (A.), 1984 – La liste systématique des espèces de Microlépidoptères signalées dans la faune de Roumanie. Mise à jour de leur classification et nomenclature. *Trav. Mus. Hist. nat. "Grigore Antipa"*, 26: 111–162.

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