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The genera of Tortricidae (Lepidoptera) common for the Palaearctic and Afrotropical regions

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Abstract. Eight genera known to date from Palaearctic are found in the Afrotropical region., viz., *Choristoneura* HÜBNER, [1825], *Clepsis* GUENÉE, 1845, *Lumaria* DIAKONOFF, 1976, *Ancylis* HÜBNER [1825], *Dasodis* DIAKONOFF, 1982, *Protancylis* DIAKONOFF, 1983, *Strepsicrates* MEYRICK, 1888, *Fulcrifera* DANILEVSKY & KUZNETZOV, 1968. Three species are described as new: *Choristoneura africana, Lumaria afrotropica, Protancylis bisecta.* The occurrence of 20 genera is confirmed, 13 genera previously mentioned from Afrotropical region should be excluded.

Key words: Lepidoptera, Tortricidae, Afrotropical, genera.

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I. INTRODUCTION

The Afrotropical fauna of Tortricidae is still insufficiently known as only Chlidanotinae, Tortricini, Phricanthini, and Cochylini were revided and catalogized (RAZOWSKI 1995). Thus a publication of any new data seem justifiable.

It seems interesting that several genera previously described or known from the Palaearctic subregion have their representatives in the African fauna. The newly discovered genera are discussed below in a separate chapter, then a list of other genera known to this date from the two regions is provided. Several species have been correctly described or placed in the "Palaearctic" genera, especially in the most recent publications. Numerous species, however, have been misplaced or assigned to the synonymies of the Palaearctic taxa. Both groups are listed below and for each genus its general distribution is given.

Alltogether there 29 genera recorded from the Palaearctic region are found in the Afrotropical fauna. Some of them are essencially tropical and were found only in southern territories of the Palaearctic, e.g. in Saudi Arabia or C China. These are: *Lumaria, Procrica*, *Eccopis, Dudua*, *Dasodis, Protancylis,* and *Cryptophlebia*. Some genera are cosmopolitic, viz., *Bactra, Cydia*, and *Grapholita*. Also distribution of *Acleris* is very wide as it is known from all regions but Australian. Four genera have their representatives in Australia (*Adoxophyes, Endothenia, Metendothenia* and *Strepsicrates*, and also are known from the Holarctic and Oriental regions). Distribution of *Eugnosta, Clepsis, Ancylis,* and *Crocidosema* shows their tropical connections as they occur in Palaearcic and

Oriental regions and in the New World. There is also a group with Holarctic/Oriental or Palaearctic/Oriental distribution (*Choristoneura, Pandemis, Eudemis, Phaecasiophora, Lobesia, Aterpia, Notocelia, Fulcrifera*). Finally, only two genera, viz., *Gypsonoma* and *Retinia* limited to the Holarctic region are now found in the Toropical Africa.

We thus can conclude that the group of the "Palaearctic" genera recorded from the Afrotropical region is more closely related to the tropical and subtropical faunas than to those of the more northern areas into which their species could successively migrate. Unfortunately the distribution of Tortricidae of the central belt of Africa is very little known and we cannot realize if some S African genera (e.g. *Pandemis, Choristoneura*) have a wider continental distribution.

One Afrotropical genus, viz., *Epichoristodes* DIAKONOFF, 1960 was introduced to Europe.

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Note. The acronyms used are explaned above; GS – genitalia slide, lp – labial palpus; the number given in the descriptions of the labial palpus indicates proportion of its total length to diameter of the eye.

II. SYSTEMATICS

1. The genera new for the Afrotropical region

Choristoneura LEDERER, 1859

Choristoneura LEDERER, 1859, Wien. Ent. Mschr.,**3**: 242. Type species: [Tortrix] *diversana* HÜBNER, [1917]. Redescription: RAZOWSKI 1987: 223.

This Archipini genus is widely distributed in the Holarctic and Oriental regions. Its only South African member is described below, however, further species are expected (this group of genera is well represented in the Palaearctic).

Choristoneura africana sp. n.

Wing span 13 mm (paratype – 15 mm). Head and thorax tawny creamy; labial palpus 1.3. Forewing uniformly broad throughout; costa strongly convex at base, then straight; termen concave at vein M1, convex postmedially. Ground colour pale creamy ochreous, mixed brownish at base and dorsum, strigulation weak, rather concolorous. Markings brown with dark brown strigulae: Basal blotch missing (its probable remnants are two costal strigulae), median fascia represented by costal blotch, subapical blotch extending towards end of termen by means of brownish fascia marked by a few brown dots. Cilia concolorous with suffusions. Hindwing translucent, ochreous creamy, yellower on peripheries; cilia concolorous with outer part of wing.

In paratype costal portion of median fascia blackish, subapical blotch much paler, dot at apex and a few spots along termen blackish.

Male genitalia (Figs 1,2): Uncus slightly expanding terminally, rounded apically; socii short; gnathos moderately large; sacculus with distinct postmedian prominence ventrally and a few minute terminal thorns; aedeagus large, bent subterminally, provided with ventro-terminal process; two nests of cornuti in vesica.

Holotype, male: "Mt. Cameroun, Buea, m. 1090, 9 Nouvembre. Sped. G. BASSI Ott.-Nov. 1986, Cameroun", GS 13571; paratype, male, same label. Coll. MRSN.

Lumaria DIAKONOFF, 1976

Lumaria DIAKONOFF, 1976, Zool. Verh. Leiden,**144**: 110 Type-species: *Capua minuta* WALSINGHAM, 1900 – by original designation. Oriental. Redescription: RAZOWSKI 1987: 227.

Archipini genus known from the Oriental and SE Palaearctic regions. Of ten species eight are known from China. Only one species described below is Afrotropical.

Lumaria afrotropica sp. n.

Wing spam 9 mm. Head and thorax creamy, labial palpus 1.5, mixed brownish. Forewing not expanding posteriorly, fairly broad; costa weakly convex, termen rather straight, weakly oblique; costal fold absent. Ground colour creamy suffused pale ochreous at base and near termen, strigulated and dotted brown especillay along dorsum, black-brown spot at end of median cell. Markings: Dorso-basal blotch elongate, brown; median fascia ochreous brownish medially, brown at costa, subapical blotch brownish. Cilia concolorous with ground colour. Hindwing pale brownish grey, paler basally; cilia more white-grey.

Male genitalia (Figs 4,3). Apical part of uncus broad; socii reduced; terminal portion of valva long; sacculus long, broad basally, provided with several postmedian thorns; aedeagus slender, curved, with long dorsal slit; no cornuti in vesica.

Female unknown.

Holotype, male: "SW Cameroun, Buea, m. 1090, 24/26.X. 1986, G. BASSI leg.", GS 13574; paratype, male: "Sped. G. BASSI, Ott.-Nov. 1986, Cameroun, Mt. Cameroun, Buea m. 1090, 9 Nouvembre", GS 13575. Both in coll. MRSN.

Clepsis GUENÉE, 1845

Clepsis GUENÉE, 1845, Annls Soc. ent. Fr.,(2)**3**: 168. Type-species: *Tortrix rusticana* TREITSCHKE, 1830 = *[Tortrix] senecionana* HÜBNER, [1817-19]. Redescription: RAZOWSKI 1987: 237.

Clepsis, also a representative of higher Archipini, is widely distributed in the New World and the Palaearctic and Oriental regions. In the Australian region there are some very close genera only (e.g. *Epiphyas* TURNER, 1927). In the discussed fauna there are several species certainly belonging in *Clepsis* of which one, as an example, is *Clepsis stenophora* (BRADLEY, 1965), **comb.n**. and one was recorded by DIAKONOFF (1960) under the generic name *Siclobola* DIAKONOFF, 1947. However, that record is based most probably on an introduced specimen.

Ancylis HÜBNER, [1825]

Ancylis HÜBNER, [1825], Verz. bekannter Schmett.: 376. Type-species: *Pyralis laetana* FABRICIUS, 1775. Redescription: RAZOWSKI 1989: 189.

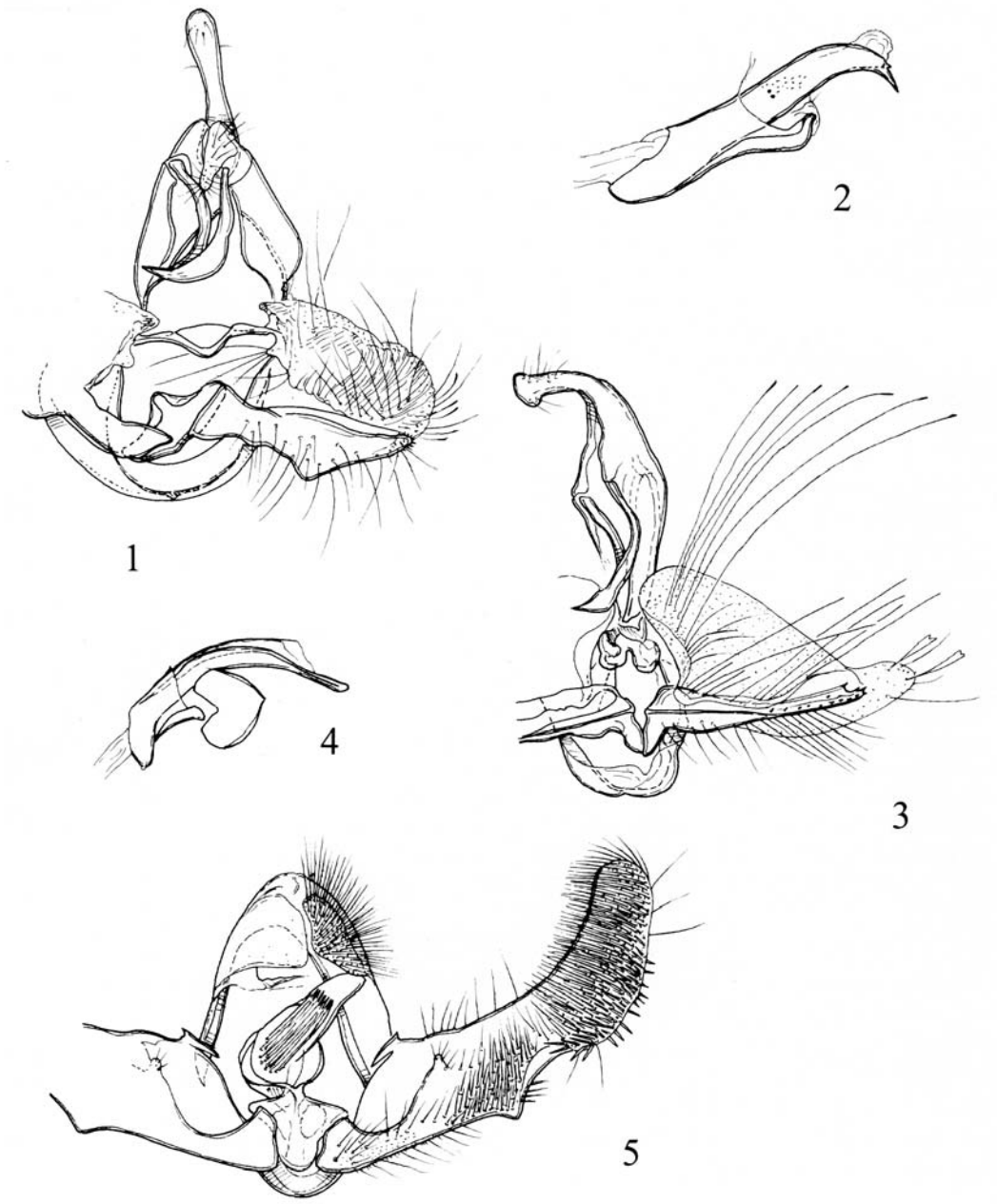
This genus is widely distributed in the Holarctic, Oriental, Neotropical, and Australian regions; in Palaearctic it is known of ca 40 species. An example of Afrotropical species is *A. impatiens* (MEYRICK, 1921), **comb.n.** described in *Eucosma.*

It seems possible that some other species described previously in this genus were correctly assigned to it, however, they also may prove congeneric with *Dasodis* (cf. below).

Dasodis DIAKONOFF, 1982

Dasodis DIAKONOFF, 1982, Zool. Verh. Leiden, **193**: 49. Type-species: *Dasodis microphthora* DIAKONOFF, 1982. Oriental. Redescription: RAZOWSKI 1989: 190.

Dasodis was described from Sri Lanka and then found in Saudi Arabia. It seems that it represents tropical faunas of the Old World and penetrates the southern areas of Palaearctic only. An example of Afrotropical fauna is *Ancylis rimosa* MEYRICK, 1921 **-comb.n.**



Figs 1-5. Male genitalia: 1,2 – *Choristoneura africana* sp.n., holotype; 3,4 – *Lumaria afrotropica* sp.n., paratype; 5 – *Protancylis bisecta* sp.n., holotype.

Protancylis DIAKONOFF, 1983

Protancylis DIAKONOFF, 1983, Fauna of Saudi Arabia,**5**: 267. Type-species: *Protancylis amseli* DIAKONOFF, 1983 – by original designation.

This genus was described from Saudi Arabia as monotypical in Eucosmini. One species from Cameroon is described below. In the male genitalia *Protancylis* resembles *Ancylis* except for the absence of the process of pedunculus being the attachment point for muscle m_4 and the structure of sterigma in the female genitalia.

Protancylis bisecta sp. n.

Wing span 14 mm. Head creamy, vertex tinged ochreous, labial palpus 1.3, mixed brownish to middle. Thorax ochreous creamy tinged brown proximally. Forewing expanding terminally, costa weakly convex, termen straight, somewhat oblique. Ground colour creamy to median fascia, mixed ferruginous distally, strigulation and suffusions brown, costa darker. Dorso-basal mark brownish, median fascia brown-grey at costa and near middle; terminal markings from apex to mid termen consist of suffusions and brown spots. Cilia creamy ochreous, basal line ochreous. Hindwing brownish grey, cilia paler with brownish median line.

Male genitalia (Fig. 5): Top of tegumen rounded; socii very broad, rounded; valva long with small pulvinus and weakly expressed neck; cucullus large; sacculus with small ventro terminal prominence.

Female genitalia unknown.

Holotype, male: “SW Cameroun, Mt. Cameroun, m. 1870, First Hut Buea Side, 22.X.1986, G. BASSI legit”; GS 13596; coll. MRSN.

Strepsicrates MEYRICK, 1888

Strepsicrates MEYRICK, 1888, Trans. Proc. N.Z. Inst.,**20**(1887): 73. Type-species: *Sciaphila ejectana* WALKER, 1863. Redescription: RAZOWSKI 1989: 166.

Chiefly tropical genus known from Australian (incl. Oceania), Oriental, and Holarctic regions; there are a few Palaearctic species. DIAKONOFFF (1989) described a representative of this genus (*S. penechra* DIAKONOFF, 1989, **comb.n.**) in *Spilonota* STEPHENS, 1829.

Fulcrifera DANILEVSKY & KUZNETZOV, 1968

Fulcrifera DANILEVSKY & KUZNETZOV, 1968, Fauna SSSR,**5**(1): 454. Type-species: *Laspeyresia luteiceps* KUZNETZOV, 1962 – by original designation. Redescription: RAZOWSKI,1989: 212.

A Grapholitini genus represented by over 10 species known till now from the Palaearctic and Oriental regions. In the Afrotropical region represented by *F. psamminitis* (MEYRICK, 1913) **comb.n.**, and *F. periculosa* (MEYRICK, 1913), **comb.n.**, described from South Africa in the genus *Laspeyresia* HÜBNER, [1825] = *Cydia* HÜBNER, [1825].

2. List of Palaearctic genera previously recorded from the Afrotropical region

Several genera common to the two regions were incorrectly determined or assigned to the species. The occurrence of other genera (marked with an asterisk) is confirmed. The majority of synonyms are omitted. The genera are listed alphabetically within their tribes, and commented. The genera discussed above are not included in this list. For each genus the monographs containing synonymies and redescriptions are provided. General distribution of the particular taxa is provided.

Tortricini

**Acleris* HÜBNER, [1825] (RAZOWSKI 1987: 181). Distributed in all regions but Australian. In the Afrotropical region five species are known (RAZOWSKI 1995). Several species described in its junior synonym, *Agyrotoxa* STEPHENS, 1829 are transferable to other genera, chiefly of Tortricini.

Tortrix LINNAEUS, 1758 (RAZOWSKI 1987: 180). Known exclusively of two Palaearctic species. As in remaining faunas numerous species were placed or described in *Tortrix*, all incorrectly.

Cochylini

Cochylis TREITSCHKE, 1829; *Conchylis* SODOFFSKY, 1837 – n. emend. (RAZOWSKI 1987: 171). The species described under *Cochylis* are transferable to other genera (e.g. *Conchylis trimeni* FELDER & ROGENHOFER, 1875 to *Eugnosta*, *Cochylis tricolor* WALSINGHAM, 1891 to *Sanguinograptis* RAZOWSKI, 1981, Tortricini, or *Conchylis unicolorana* MABILLE, 1898 probably to Carposinidae).

**Eugnosta* HÜBNER, [1825] (RAZOWSKI 1987: 164). In Plaearctic there are 14 species, in the New World – ca 40, in Oriental – one. In the Afrotropical region 14 species are found (RAZOWSKI 1995).

Eupoecilia STEPHENS, 1828 (RAZOWSKI 1987: 166). This genus is widely distributed in the Old World; in the Palaearcic region it is represented by seven species (the majority of species are Oriental and Australian). The inclusion of two species (cf. RAZOWSKI 1995: 186) from the tropical Africa in this genus requires confirmation as they were described from the female material only.

Cnephasiini

Cnephasia CURTIS, 1826 (RAZOWSKI 1987: 200). This genus is distributed in the Palaearctic (over 20 species) and Oriental (2 species) regions only. It was introduced to North America. Numerous species described chiefly by MEYRICK (e.g. *C. melliflua* MEYRICK, 1914) are transferable to other tribes of Tortricinae, mainly to Archipini.

Archipini

**Adoxophyes* MEYRICK, 1881 (RAZOWSKI 1987: 240). Known from all but Neotropical regions; a few species are Palaearctic. MEYRICK described in it a few species (e.g. *peritoma* MEYRICK, 1918) and DIAKONOFF (1960, and other papers) described or placed several further Afrotropical species.

Batodes GUENÉE, 1845 (RAZOWSKI 1987: 210). Known from western part of the Palaearctic region. MEYRICK described *B. euryplaca* MEYRICK, 1933 and DIAKONOFF (1963) transferred it to *Homonoides* DIAKONOFF, 1960. Thus *Batodes* is to be excluded from the Afrotropical fauna.

Capua STEPHENS, 1834 (RAZOWSKI 1987: 216). The genus is widely distributed in the Palaearctic and Oriental regions with a few species in each. All species described by MEYRICK from tropical Africa are referable (DIAKONOFF 1960) to other Archipini genera, e.g. *Capua crocograpta* MEYRICK, 1933 to *Parapandemis* OBRAZTSOV, 1954 = *Pandemis* HÜBNER, [1825].

**Pandemis* HÜBNER, [1825] (RAZOWSKI 1987: 227). Distribution: Holarctic, Oriental and Afrotropical regions. In Palaearctic over ten species found. In the tropical Africa occur numerous species described or placed mainly under *Parapandemis* OBRAZTSOV, 1954 (DIAKONOFF 1960 and other papers).

**Procrica* DIAKONOFF, 1960. Known almost exclusively from tropical Africa. Only one species is described from Saudi Arabia.

Bactrini

**Bactra* STEPHENS, 1834 (RAZOWSKI 1989: 111). Cosmopolitic genus with several species in the two discussed regions.

Olethreutini

Argyroploce HÜBNER, [1825] (RAZOWSKI 1989: 143). Several Afrotropical species described e.g. *A. balanacma* MEYRICK, 1914, *A. calchantis* MEYRICK, 1914. Some of them proved not congeneric, other ones still require re-examination.

Aterpia* GUENÉE, 1845, Annls Soc. ent. Fr.,(2)3)**: 161. (RAZOWSKI 1989: 128). This genus is represented in the Palaearctic region by nine species; there are also data on the occurrence of two species in the Oriental region. An example of Afrotropical *Aterpia* is *A. mimochlamys* (DIAKONOFF, 1983), **comb.n.**

Celypha HÜBNER, [1825] (RAZOWSKI 1989). A Holarctic genus represented by ca 20 species of which 19 are known of Palaearctic. One species described by DIAKONOFF in this genus (*C. perfracta* DIAKONOFF, 1983) is probably referable in Zomariae (c.f. characteristic single signum, ventral corners of sterigma, shape of socii).

**Dudua* WALKER, 1864 (RAZOWSKI 1989: 136). There are two Palaearctic species (known from the transition zone: Yunnan, China, probably Oriental). The genus is recorded from the Oriental and Australian regions. *D. albocima* DIAKONOFF, 1981 is an example of Afrotropical fauna.

**Eccopis* ZELLER, 1852 (DIAKONOFF 1981: 8). Pantropical genus with many representatives in the tropical Africa. One of them, *E. wahlbergiana* ZELLER, 1852) was found in Saudi Arabia.

**Endothenia* STEPHENS, 1852 (RAZOWSKI 1989: 153). Probably cosmopolitic genus with 24 representatives in Palaearctic region. *E. alpigena* BRADLEY, 1952 is an Afrotropical example.

**Eudemis* HÜBNER, [1825] (RAZOWSKI 1989: 119). Known from innumerous species distributed in the Palaeartic and Oriental regions. DIAKONOFF (1971) most probably correctly described his *polychroma* in this genus.

**Lobesia* GUENÉE, 1845 (RAZOWSKI 1989: 152). Known from the Holarctic, Australian, and Afrotropical regions. In the Palaearctic it is known of ca 20 species being distributed throughout the region. The Afrotropical examples are *L. vanillana* (DE JOANNIS, 1900) and *L. harmonia* (MEYRICK, 1908).

**Metendothenia* DIAKONOFF, 1973 (RAZOWSKI 1989: 137). Of several, chiefly Australian species one is Holarctic and one Palaearctic. Example of Afrotropical fauna: *M. fulvoflua* DIAKONOFF, 1983.

Olethreutes HÜBNER, [1822] (RAZOWSKI 1989: 145). It comprises innumerous Palaearctic species. Some species, e.g. *O. anisorrhopa* DIAKONOFF, 1983 or *Argyroploce polymorpha* MEYRICK, 1932 transferred by that author to *Olethreutes* are not congeneric with its type-species. However, several other species have not been re-examined.

**Phaecasiophora* GROTE, 1873 (RAZOWSKI 1989: 121). Holarctic and Oriental regions; in Palaearctic one species is recorded from W China. Afrotropical species: *Phaecasiophora* (*Phaecasiophora*) *auroraegera* DIAKONOFF, 1983.

Eucosmini

Acroclita LEDERER, 1859 (RAZOWSKI 1989: 166). Palaearctic genus with ca 10 known species. DIAKONOFF (1989) described in it *A. praefracta* which belongs in a different genus.

**Crocidosema* ZELLER, 1847 (RAZOWSKI 1989: 173). A Cosmopolitic genus represented at least by one species. DIAKONOFF (1992) described one Afrotropical species, viz., *C. Bostrychodes* very similar (may be conspecific) to *C. plebeiana* ZELLER, 1847, the type species of this genus.

Epinotia HÜBNER, [1825] (RAZOWSKI 1989: 169). Known from the Palaearctic, Nearctic, Neotropical, Oriental, and Australian regions; in Palaearctic about 100 species known. DIAKONOFF (1970) and 1959 under its synonym *Steganoptycha* HERRICH-SCHÄFFER, 1851 described several species but most probably (some species require re-examination) no one belongs in the discussed genus.

Eucosma HÜBNER, [1823] (RAZOWSKI 1989: 175). Known from Holarctic and Oriental regions; in Palaearctic there are ca 160 species). Several species are described from the tropical Africa (e.g. *E. chloroterma* MEYRICK, 1913, *E. cremastropis* MEYRICK, 1930, *E. isogramma* MEYRICK, 1908) but none of re-examined ones proved to belong in this genus. The most similar to *Eucosma* is *E. bactromorpha* (DIAKONOFF, 1992) described in this genus with some doubts on basis of a female (similar genitalia are to be found also in other genera).

Gypsonoma* MEYRICK, 1895 (RAZOWSKI 1989: 178). Till now this genus was known from the Holarctic region; in Palaearctic it is represented by 28 species. DIAKONOFF (992) described *G. penthetria* which most preobably belongs in this genus. However, one species described from South Africa as *Eucosma* is certainly transferable to this genus (*Gypsonoma opsonoma* MEYRICK, 1918, **comb.n.).

**Notocelia* HÜBNER, [1825] (RAZOWSKI 1989: 180). Chiefly Palaearctic, with ca 20 species (a few in transition zone to the Oriental region); one species is Nearctic. DIAKONOFF (1989) described *N. cyclodes* and transferred *Steganoptycha albosectana* MABILLE, 1900 to this genus but probably only this last belongs to *Notocelia.*

**Retinia* GUENÉE, 1845 (RAZOWSKI 1989: 182). Holarctic genus with ca ten species in Palaearctic. DIAKONOFF (1989) described in it one species (*R. mecynopus*; not re-examined by me).

Spilonota STEPHENS, 1829 (RAZOWSKI 1989: 162). Known from Holarctic and Oriental regions. In Palaearctic ca 15 species are found. *S. penechra* DIAKONOFF (1989) **comb. n.** belongs in *Stepsicrates*.

Grapholitini

**Cryptophlebia* WALSINGHAM, 1899 (RAZOWSKI 1989: 221). A Pantropical genus; a few species are described from Japan and China, and one from Saudi Arabia. Several species found in Afrotropical region (cf. DIAKONOFF 1969, 1974: *C. etiennei, C. ecnomia, C. leucotreta* MEYRICK, 1913). One species, *apicinudana* MABILLE, 1898 was described in *Penthina* TREITSCHKE, 1830 (cf. also DIAKONOFF 1959), a synonym of *Hedya* HÜBNER, [1825].

Cydia* HÜBNER, [1825] (RAZOWSKI 1989: 209). Known from all the regions. Examples: *C. exornata* (DIAKONOFF, 1969), **comb.n., *C. siderocosma* DIAKONOFF, 1969), **comb.n.**, *C. platydryas* (MEYRICK, 1932) **comb.n.**, all described in synonymous *Laspeyresia* HÜBNER, [1825].

**Grapholita* TREITSCHKE, 1829 (DANILEVSKY & KUZNETSOV, 1968). Distribution similar to that in *Cydia.* Several species know from the Afrotropical region (c.f. DIAKONOFF 1969; examples: *G. miranda* (MEYRICK, 1911), *G. mesoscia* DIAKONOFF, *G. rhabdotacra* DIAKONOFF, *G. limbata* DIAKONOFF, etc.

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