

Faunistics of the Epermeniidae from the former USSR (Epermeniidae)

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Abstract. 26 species of Epermeniidae are recorded from the territory of the former USSR. Two of them (*Epermenia wockeella* und *E. vartianae*) are recorded for the first time. New distributional data for 11 species and new life history data for 5 species are given. The genitalia of the male of *E. wockeella* and female of *E. vartianae* are described and illustrated for the first time.

Zusammenfassung. Es werden 26 Epermeniidae-Arten für das Gebiet der ehemaligen UdSSR nachgewiesen, zwei von ihnen (*Epermenia wockeella* und *E. vartianae*) sind Erstnachweise. Für 11 Arten werden Neufunde und für 5 Arten neue Angaben zur Lebensweise gemacht. Die Genitalien der Männchen von *E. wockeella* und der Weibchen von *E. vartianae* werden erstmals beschrieben und abgebildet.

Key words. Lepidoptera, Epermeniidae, former USSR, *Epermenia wockeella*, *E. vartianae*.

Introduction

The family Epermeniidae is the only representative of the superfamily Epermenioidea (*sensu* Kristensen 1999). The phylogenetic relationships with the other superfamilies of the Apoditrysia are still unknown. Some characteristics of the recognized recent genera are known but the complete phylogenetic relationships between the genera are still uncertain. Only for some genera are some autapomorphies apparent. The family is divided into the subfamilies Epermeniinae and Ochromolopinae.

The family contains nearly 100 described species in eight genera, and is known from all faunal regions. The life histories indicate that the larvae live in mines (sometimes only in the first instars) of leaves, or that they skeletonize leaves or feed on seeds, mainly of Apiaceae. There are a few host records in other plant families: Araliaceae, Celastraceae, Epacridaceae, Fabaceae, Loranthaceae, Olacaceae, Pittosporaceae, and Santalaceae.

Data on taxonomy, distribution, and biology were compiled by Gaedike (1979, 1996a), including the hitherto known data from the former USSR. Since then several papers with descriptions of new taxa from various zoogeographical regions have been published (Buvat & Nel 2000; Gaedike & Kuroko 2000; Gaedike 2001, 2002, 2004a, 2004b; Budashkin 2003).

Material and methods

The aim of the following paper is to summarize our knowledge about the recent distribution of the family in a major part of the Palaearctic region, the former Soviet Union. The family was studied in this region only fragmentarily in the past. Information on the faunistics can be found in numerous papers by many authors (Eversmann 1844; Erschoff [= Jeršov], N. G. & Fil'd 1870; Erschoff [= Jeršov], N. G. 1881; Gjunther 1986; Rebel 1901; Krulikovskij 1907; Schille 1930; Lebedjev 1936; Sovyns'kyj

1938; Gerasimov 1948; Kuznetsov 1960; Merzhejevskaja et al. 1976; Tibatina 1976, 1977; Buszko & Skalski 1980; Kuznetsov & Stekol'nikov 1984; Gershenson 1988; Kutenkova 1989; Budashkin 1990; Martin 1991; Budashkin & Satshkov 1991; Gaedike 1993; Ivinskis 1993; Kostjuk et al. 1994; Budashkin & Kostjuk 1994; Fal'kovitsh 1994; Bidzilja 1995; Satshkov et al. 1996; Savenkov et al. 1996; Budashkin 1996; Gaedike 1996b; Bidzilja & Budashkin 1997; Shutova et al. 1999; Jurivete et al. 2000; Shmytova 2001; Bidzilja et al. 2001; Bidzilja et al. 2002; Budashkin 2003), but none of these was exhaustive. The two recent keys for the studied territory (Fal'kovitsh 1981; Budashkin 1997) cover the fauna of the Western and Eastern parts, but the Central parts, including the regions of Siberia and Middle Asia, were not treated.

The examination of the material of the Zoological Institute of the Russian Academy of Sciences, St. Petersburg (ZIN) and of the Institute of Animal Systematics and Ecology, Siberian Zoological Museum, Novosibirsk (SZMN), the study of the collections of Finnish entomologists (Russian-Finnish Expeditions) in the Finnish Museum of Natural History, Helsinki (FNMH), and more detailed observations in Crimea enable the presentation of several new distributional records, new data on the biology of some species, and descriptions of the hitherto unknown male of one species and female of another. Previously unpublished distributional records from the distribution file of the second author were included.

Each species in the following list is presented as follows: (1) Name of the taxon with synonymy, (2) Material examined, (3) Distribution, (4) Life history, and (5) References for distributional records. Host plant data are taken from the specimen labels or from literature cited at the end of the paper.

Explanations of Russian words and abbreviations

balka	(gorge)
botsad.	botanicheskij sad (botanical garden)
cvetah	(flowers)
d.	derevnja (village)
gora	(mountains)
gornaja	(mountainous)
g.	gorod (city)
gub.	gubernia (gouvernement – administrative district)
hr.	hrebet (mountain range)
i	(and)
koshenije po ljucerne	(swept from lucerne)
kovyl'no-raznotravnyje stepi	(<i>Stipa</i> -steppe with species of different plant families)
kraj	(region – administrative district)
kvarc	(light) (na kvarcj: at light)
les	(forest)
m.	mys (cape)
na	(at, on)
list'jah	(leaves of)
svet	(light)
niz uschel'ja	(bottom of the gorge)
obl.	oblast (region – administrative district)

okr.	okres (region – administrative district)
p.	posjokok (settlement)
poljana	(clearing)
pos.	posjokok (settlement)
predg.	predgorje (foothills)
r-n	raion (region – administrative district)
s.	sever (north)
solonchakovaja step'	salt steppe
st.	step' (steppe)
u podnozh'ja sopki	(foot of the hill)
uschel'je	(gorge)
verhov'ja r.	(upper course)
vyl.	vyletel (emerged)
zapovednik	(nature reserve)

Epermeniidae: Epermeniinae: Phaulernini

Phaulernis Meyrick, 1895: 690

Type species: *Aechmia dentella* Zeller, 1839: 204, by original designation.

= *Aechmia* sensu Stainton, 1854, nec Treitschke, 1833 [Glyphipterigidae], nec Zeller, 1847 [Heliozelidae]

Phaulernis dentella (Zeller, 1839: 204) (*Aechmia*)

Material. 1♂ **Russia**, Samarskaja obl., Zhiguljovskij zapovednik, Bahilova poljana, vi.1993 (Satshkov); 1♂, 1♀ Tul'skaja obl., Svoboda 20 km W Schjokino (Bol'shakov); 1♂ [Siberia] Myski, Kuzneckij Alatau, 9.vii.1956 (Fal'kovitsch). 5♀ **Ukraine**, Crimea, Karadag, 12.vi.1987 (Zagulajev).

Life history. Larvae in seeds of *Chaerophyllum bulbosum* L., *Ch. temulum* L., *Aegopodium podagraria* L., *Angelica silvestris* L. (Apiaceae). Overwintering as pupa.

Distribution. Central and East Europe, Caucasus, Western part of Siberia.

References. Estonia, Latvia, Lithuania, European part of Russia (Fal'kovitsh 1981: 436; Martin 1991: 35; Ivinskis 1993: 65; Savenkov et al. 1996: 25; Gaedike 1996b: 159; Jurivete 2000: 58), Russia: Kaluzhskaja oblast' (Shmytova 2001: 90), Western Ukraine (Schille 1930: 224), Eastern part of Crimea (Budashkin 1990: 53), Caucasus and Western part of Siberia (Budashkin 1996: 15). The records from the Russian Far East (Gaedike 1993: 92) refer to *E. sergei* Budashkin.

Phaulernis fulviguttella (Zeller, 1839: 193) (*Oecophora*)

= *Oecophora flavimaculella* Stainton, 1849

= *Oecophora auromaculata* Frey, 1867

= *Phaulernis monticola* Moriuti, 1982

Material. 1♀ **Russia**, Murmansk, Pechenga, 8.vii.1910 (D'jakonov); 1♂ Murmanskaja obl., Pechengskij r-n, okr. Zapoljarnogo, 15.viii.1979 (Sinjov); 2♂, 6♀ Poljarnyj Ural, 110 km E Sejdy, na cvetah *Angelica* sp., 15. et 17.vii.2003 (Lvovsky); 1♀ Jaroslavskaja obl., Tutajevskij r-n, okr. d. Gorazdovo, les, 27.vii.1995 (Klepikov); 4 specimens, Petrosavodsk (Günther); Caucasus: 1♂ Kabardino-Balkarija, zapovednik, Bezengi, 5.vii.1997 (Bolov); 1♂ Kabardino-Balkaria, uschel'je Haznidon, 27.vii.1997 (Bolov); 2♀ Dombai, 2240 m, Lake Mussa Atschitara, 1.viii.1976 (Eichler); 2♀ Teberda, 1300 m, 29.vii.–11.viii.1976 (Eichler); 2♂ Kamchatka, 8 km W-S-W Ust'-Bol'sherecka, na list'jah *Ligusticum scoticum*, 10.viii.1992 (Kosterin); 1♂ Kommandeur Islands: Island Mednoj, 12.vii.1927 (Rostovoj). 1♂ **Georgia**, Lagodechi, 23.vii.1961 (Zagulajev).

Life history. Larvae in seeds of *Peucedanum* L., *Angelica* L., *Heracleum* L., *Pimpinella* L., and apparently on *Ligusticum scoticum* L. (Apiaceae). In Lapland the larva lives from July to September, the pupa overwintering (Koponen & Hurme 1986).

Distribution. All Europe, Caucasus, Russian Far East, Japan.

References. Russia: Peninsula Kola (Kozlov & Jalava 1994: 76; Shutova et al. 1999: 22), Northern and North-Western regions of European part (Erschoff & Fil'd 1870: 185), 'Rossia septentrionalis occidentalis' (Rebel 1901: 184), Estonia, Latvia, Lithuania, Karelia, Western Ukraine, Caucasus, Kamchatka Peninsula and Komandorskije Islands (Island Mednyj) (Gjunther 1986: 32; Schille 1930: 230; Fal'kovitsh 1981: 436; Martin 1991: 35; Ivinskis 1993: 65; Gaedike 1993: 93; Savenkov et al. 1996: 25; Gaedike 1996b: 159; Budashkin 1996: 16; 1997: 483; Jurivete 2000: 58).

***Phaulernis pulchra* Gaedike, 1993: 93–95, figs. 1–4, 12–13**

Material. 2♀ **Russia**, Southern Primor'je, 20 km E Ussurijska, Gornotajozhnoje, na svet, 12., 18.vii.1994 (Omel'ko); 1♀ Primorskij kraj, 20 km E Ussurijska, Gornotajozhnoje, na svet, 12.vii.1996 (Sinjov); 1♀ Southern Kuril Islands: Kunashir Island, okr. Sernovodska, 13.viii.1967 (Zabello).

Life history. Foodplants of the larvae still unknown.

Distribution. Hitherto known only from the Russian Far East.

References. Russia: Primorje, Kuril Islands: Kunashir (Gaedike 1993: 93–96; Budashkin 1997: 483).

***Phaulernis chasanica* Gaedike, 1993: 95–97, figs. 5–11**

Material. 2♂, 2♀ **Russia**, Southern Primor'je, Lozovyj hr., 22 km NO Nahodki, na svet, 19.–22.vii.1999 (Sinjov).

Life history. Foodplants of the larvae still unknown.

Distribution. Hitherto known only from the Russian Far East.

References. Russia: Primorje (Gaedike 1993: 94–97; Budashkin 1997: 483).

Epermeniini

***Epermenia* Hübner, 1825: 418**

Type species: *Tinea pontificella* Hübner, 1796, by monotypy

= *Calotripis* Hübner, 1825; *Tichotripis* Hübner, 1825; *Chauliodus* Treitschke, 1833; *Lophonotus* Stephens, 1834; *Chauliomorpha* Blanchard, 1840; *Calotrypis* Herrich-Schäffer, 1854; *Heydenia* Hofmann, 1868, nec Förster, 1856; *Cataplectica* Walsingham, 1894; *Epimonia* Kearfott, 1903; *Acanthodra* Meyrick, 1917; *Epermeniola* Gaedike, 1968

***Epermenia* (*Calotripis*) Hübner, 1825: 424–425**

Type species: *Tinea illigerella* Hübner, 1813, designated by Herrich-Schäffer, 1854: 207–208.

***Epermenia* (*Calotripis*) *insecurella* (Stainton, 1849: 24) (*Elachista*)**

= *Chauliodus illigerellus* Stainton, 1848, nec Hübner, 1813

= *Elachista dentosella* Stainton, 1851

= *Calotrypis dentosella* Herrich-Schäffer, 1854

= *Epermenia plumbeella* Rebel, 1915

Material. 1♂ **Lithuania**, Vilnius, 1.vi.1978 (Ivinskis); 1♂ Lervynos, 6.vi.1979 (Ivinskis); 1♂ **Russia**, Rostov-na-Donu, 10.v.1927, koshenije po ljucerne; 1♂ Gornyj Altaj, p. Ulagan, na svet, 8.vii.1989 (Ustjuzhanin); 1♂ Altaj, Shebalinskij r-n, okr. s. Cherga, 21.vii.1995 (Ustjuzhanin); 3♂ Altaj, Kosh-Agachskij r-n, ploskogor'je Ukok, 2200 m, 11., 18., 22.vii.2001 (Bidzilja); 1♂ Jakutsk, bot. garden, 14.viii.1985 (Dubatolov); 1♂ Env. of Lugansk, 28.vi.1929 (Talitzkij); 1♂ Tuva, 16 km N Kyzyla, 1000 m, step', 14.–16.vi.2001 (Ustjuzhanin); 1♂ Tuva, 30 km NW Samagaltaj, predg. E Tannu-Ola, 1500 m, 24.vi.2001 (Ustjuzhanin); 1♂ Tuva rep., 52°04'N, 94°22'E, 670 m, Ust-Ujuk, 3.–5.vi.1995 (Jalava & Kullberg); 2♀ Tuva rep., 50°50'N, 94°19'E, 2175 m, E Tannu-Ola mts., timberline (*Larix*) steppe, 7.–8.vi.1995 (Jalava & Kullberg); 2♂ Uralsk, 18., 19.v.1907 (Bartel); 2♂ Sarepta (Christoph); 1♂ **Kazakhstan**, Zapadnyj Kazakhstan, Petrov, kovyl'no-raznotravnyje stepi, 2.vi.1949 (Martynova); 1♂ Vostochnyj Kazakhstan, Zajsanskij r-n, 5 km S g. Marbutsu, hr. Saur, 25.v.2000 (Ustjuzhanin); 6♂, 5♀ **Turkmenistan**, Central'nyj Kopetdag, Germab, 780 m, 18.–22.vi.1982 (Fal'kovitsh); 1♂ Aschhabatskaja obl., Kara-Kala, 25.v.1952; 1♀ Aschhabatskaja obl., gora Sjunt, 15.v.1953; 1♀ **Georgia**, Suchumi, UV-light, 7.–10.vi.1974 (Eichler); 1♀ **Armenia**, Erevan, 16.–18.vi.1974 (Eichler).

Life history. Larvae on *Thesium* spp. (Santalaceae), the first stages in mines, later on the surface of the leaves.

Distribution. Middle, South and East Europe, Asia Minor, Near East, Mongolia. New record for Tuva.

References. Estonia [the record from Estonia is probably in error], Central, South and Southeast part of the European part of Russia, Ukraine, Caucasus (Martin 1991: 35, under the name *E. plumbeella* Rebel; Fal'kovitsh 1981: 436; Gaedike 1996b: 159); Lower Povolzh'je (Rebel 1901: 179); Western Ukraine (Schille 1930: 226; Buszko & Skalski 1980: 17), South-East Ukraine (Bidzilja et al. 2001: 81); Turkmenia (Kuznetsov 1960: 30); Kazakhstan, Altai Mts., South-West Siberia, Baikal region, Southern Primorje and Jakutia (Gaedike 1993: 97; Kostjuk et al. 1994: 10; Budashkin & Kostjuk 1994: 17; Budashkin, 1996: 12; Budashkin 1997: 483; Bidzilja et al. 2002: 206).

***Epermenia (Calotripis) gaedikei* Budashkin, 2003: 57–58**

Life history. Foodplants of the larvae still unknown.

Distribution. Known only from the type locality in Uzbekistan and the environs of Dekhanobod and Derbent (Budashkin 2003: 57).

***Epermenia (Calotripis) sinjovi* Gaedike, 1993: 99–102, figs. 14–22**

Material. 1♀ **Russia**, Zabajkal'je, Ulan-Ude, u podnoz'h'ja sopki, 1.vii.1956 (collector unknown); 3♀ S. Primorje, 20 km E Ussurijsk, 12., 25.v., 10.viii.1983 (Kozlov); 1♂ Primor'je, GTS, 6.v.1993 (Lvovskij).

Life history. One larva was collected and reared by S. Ju. Sinjov on *Angelica* sp., (pers. comm.) and it seems to be the foodplant.

Distribution. See below.

References. Described from Southern Primor'je, Southern Kuril Islands (Kunashir) and from the Baikal region (Burjatija) (Gaedike 1993: 99–102); later the species was recorded from the same localities and additionally from Kamchatka and South-East Siberia (Budashkin 1996: 12–13, 1997: 483).

***Epermenia (Calotripis) chaerophyllella* (Goeze, 1783: 169, Nr. 292) (*Phalaena Tinea*)**

= *Tinea testaceella* Hübner, 1813

= *Lophonotus fasciculellus* Stephens, 1834

= *Chauliodus nigrostriatellus* Heylaerts, 1883

= *Epermenia turatiella* Constantini, 1923

Material. 1♂ **Latvia**, Tapiau, 9.v.1912; 2♀ Libau, 16.v.1924 (Brehm); 1♀ Sortavala, 19.vi.1936 (Brandt). 3♂, 2♀ **Russia**, [Kirovskaja obl.], Urshum, 20.iv.1904, 24.v.1908 [Krulikovskij]; NW Caucasus: Dombai, 3.–5.vi.1974 (Eichler); 1♀ NW Caucasus, hr. Azshi-Tau, p. Kamyschanova poljana, 1350 m, 10.–21.viii.1999 (Schurov); 3♀ [Tatarstan], Sarapul, 1.v.1909 [Krulikovskij]; 1♂, 4♀ Petrosavodsk (Günther); 1♀ env. of Vitebsk, 26.v.1969 (Piskunov); 1♀ [East Siberia], Irkutskaja obl., 20 km S Sljudjanki, pik Cherskogo, 1442 m, 11.vi.1983 (Sinjov); 1♂ Irkutsk. 1♂ **Ukraine**, Zaporozhskaja obl., Vol'njanskij r-n, balka Bal'chanskaja 26.vi.1997 (Zhakov). 1♂, 1♀ **Kazakhstan**, Kuzneckij Alatau, Myski, 21.v.1956 (Fal'kovitsh); 2♂ **Kazakhstan**, 43°5'N, 77°15'E Zalijskij Ala-Tau, Almaatinskij zap., 1700 m, 23.vi., 12.vii.1990 (Kaila & Mikkola). 3♂, 8♀ **Uzbekistan**, 60 km ESE Tashkent, Chatkal'skij zapovednik, 11.–18.vi., 7., 18., 20.x.1992 (Zolotuchin).

Life history. Larvae recorded from many plants: *Chaerophyllum* L., *Conium* L., *Pimpinella* L., *Sium* L., *Seseli* L., *Silaum* Mill., *Angelica* L., *Heracleum* L., *Pastinaca* L., *Daucus* L., *Anthriscus* (Pers.) Hoffm., *Apium* L., *Carum* L., *Sison* L., *Torilis* Adans., *Oenanthe* L., *Levisticum* L., *Peucedanum* L.; the young larvae are miners, the later instars are skeletonizers, they live between leaves that are spun together. Two generations, the imago overwintering.

Distribution. All Europe, Asia Minor and Near East (Syria), Middle Asia and Siberia. New records for East Siberia and from Uzbekistan.

References. Estonia, Latvia, Lithuania (Martin 1991: 35; Ivinskis 1993: 65; Savenkov et al. 1996: 25; Gaedike 1996b: 159; Jurivete et al. 2000: 58), Belarus (Merzhejevskaja et al. 1976: 19), Ukraine (Schille 1930: 226; Gershenzon 1988: 285), the Mountains of Middle Asia, Siberia (Fal'kovitsh 1981: 434, 1994: 273), European part of Russia (Erschoff & Fil'd 1870: 187; Shutova et al. 1999: 22; Erschoff 1881: 220; Gjunther 1896: 32; Kozlov & Jalava 1994: 76; Krulikovskij 1907: 233; Kutenkova 1989: 24; Shmytova 2001: 90; Satshkov et al. 1996: 70), Caucasus, Western Siberia, Middle Asia, Kyrgyzstan, and Kazakhstan (Tibatina 1976: 353, 1977: 158–159; Gaedike 1993: 99; Budashkin 1996: 12; Dovnar-Zapolski 1969: 126).

***Epermenia (Calotripis) aequidentella* (Hofmann, 1867: 206–207) (*Chauliodus*)**

= *Chauliodus daucellus* Peyerimhoff, 1870

Material. 1♂ **Russia**, Krasnodarskij kraj, okr. Abrau-Djurso, on *Daucus sativus*, e.l. 12.x.1997 (Schjurov); 1♂ Caucasus NW, Fl. Et. Loc. [?] Teberda, 4200 m, 4.viii.1912 (Tschetwerikow). 1♂ **Azerbaidjan**, village Kosporljak, 6.vii.1962 (Zagulajev); 1♂ Talysch, Kyz-Urdu, 8.viii.1932 (Rjabov). 4♂ **Turkmenistan**, Central'nyj Kopetdag, Germab, 780 m, 18. et 22.vi.1982 (Fal'kovitsh).

Life history. Larvae on *Libanotis montana* Crantz., *Daucus carota* L., *Meum athamanticum* Jacq., *Anthriscus vulgaris* Pers., *Thapsia villosa* [L.], *Angelica* L., *Peucedanum* L. (Apiaceae).

Distribution. Central and South Europe, Madeira, Canary Islands, Near and Middle East, Mongolia. New record for Caucasus.

References. Without examination of the specimens the records from the older literature (before 1965) are doubtful, because the following species (*E. strictella*) was then regarded as a synonym of *E. aequidentella*. The records from Estonia and Latvia are probably an error (Martin 1991: 35; Budashkin 1996: 12; Gaedike 1996b: 159; Jurivete et al. 2000: 58). Southern part of European Russia (Fal'kovitsh 1994: 273: no material available for examination); Altaj (Gaedike 1993: 97); Altaj and Azerbaidzhan (Budashkin 1996: 12); the record from Western Ukraine (Schille 1930: 226) belongs to *E. strictella*.

***Epermenia (Calotripis) strictella* (Wocke, 1867: 209) (*Chauliodus*)**= *Epermenia infracta* Braun, 1926= *Epermenia sublimicola* Meyrick, 1930= *Epermenia anthracoptila* Meyrick, 1931= *Epermenia srictelloides* Gaedike, 1977

Material. 1♂ **Latvia**, Libau, 26.v.1924 (Brehm). 1♂ **Ukraine**, Crimea, Staryj Krym, 2.viii.1913 (Chetverikov). 1♂, 2♀ **Crimea**, Karadag, na svet, 6.v.1985, 14.ix.1987, 16.x.2002 (Budashkin). 8♂ 5♀ **Crimea**, Karadag, plato, e.l. *Seseli arenarium* M. B., 26.–31.x.2002 (Budashkin), 1♂ Wolczkow, p. Zaleszczyki, 1.ix.1935 (Toll). 1♂ **Russia**, Kaukasus (Christoph); 1♀ **Altaj**, Aktash, 2.vii.1998 (L'vovskij). 1♀ **S Tuva**, 15 km NW pos. Dusdag, 1950 m, na svet, 26.vi.2001 (Ustjuzhanin); 1♀ **Tuva**, 20 km E Mugur-Aksy, hr. Cagan-Shibetu, 2200 m, 30.vi.2001 (Ustjuzhanin). 4♀ **Tuva**, 20 km W Mugur-Aksy, 2150 m, lug. step', 1.–3.vii.2001 (Ustjuzhanin); 2♂ **Russia**, Tuva rep., 52°47'N, 93°18'E, 1230 m, W-Sajan Mts., subalpine meadow/taiga, 20.–22.vi.1995 (Jalava & Kullberg); 1♂, 5♀ **Burjatia**, 54°47' N, 110°55'E, Bargazin range 920 m, Olso river valley, taiga, 4.–6.vii.1996 (Jalava & Kullberg); 1♀ **Burjatia**, 54°21'N, 110°12'E, Bargazin valley, Upper Kurumkan river, 700 m, 1.vii.1996 (Jalava & Kullberg); 2♀ **Burjatia**, 55°01'N, 111°08'E, Bargazin valley, Umhoj, 600 m, hot springs, 9.vii.1996 (Jalava & Kullberg). **Georgia**: 1♂, 5♀ **Borshomi**; 1♀ **Russia**, **Altaj**, 40 km E pos.[village] Kosh-Agach, 1.–5.vii.1997 (L'vovskij). 1♀ **Kazakhstan**, okr. Alma-Ata, Namok. uschel'je, v plodah zontichnogo (vyvodka Nr. 613), vii.1938 (Gerasimov). 1♀ **Kyrgyzstan**, Cholpon-Ata, za avtovokzalom na lugu, 6.viii.1987 (L'vovskij & Nikiforova). 1♂ 3♀ **Kirgizija**, 25 km S Kara-Balta, Sosnovka, 1100 m, 14.viii.1987 (L'vovskij & Nikiforova). 1♀ **Kungej-Alatau**, 2000 m, 29.vi.2000 (Kljuchko).

Life history. Larvae on *Pimpinella saxifraga* L., *Ferula communis* L., *Laserpitium* sp., on flowers and unripe fruits of *Seseli arenarium* M. B. (Apiaceae). Overwintering as imago (Crimea).

Distribution. Europe from Iberian Peninsula to Poland, Romania, Balkan Peninsula, North Africa, from Turkey to Japan, North America. New records for the faunas of Kyrgyzstan and the Tuva Region.

References. Latvia, South-Western and Southern part of European Russia, Caucasus (Gaedike 1996b: 159; Fal'kovitsh 1981: 434; Savenkov et al. 1996: 25; Jurivete et al. 2000: 58; Shmytova 2001: 90), Western Ukraine (Schille 1930: 226, under the name *E. aequidentella*), East Crimea (Budashkin 1990: 53), Kazakhstan, Altaj Mts., South-western and East Siberia, Far East of Russia, Southern Kuril Islands (Kunaschir Island), Magadan region (Gaedike 1993: 98–99; Budashkin 1996: 12; Bidzilja & Budashkin 1997: 81; Budashkin 1997: 483; Bidzilya et al. 2002: 206), Kamchatka Peninsula (Gaedike 1993: 99; Budashkin 1997: 483). Records by Budashkin (1996) were misidentifications of *E. sinjovi*.

***Epermenia (Calotripis) petrusella* (Heylaerts, 1883: xi–xii) (*Chauliodus*)**= *Epermenia kroneella* Rebel, 1903= *Epermenia notodoxa* Gozmany, 1952

Life history. Larvae on *Peucedanum alsaticum* L. and *Peucedanum montanum* (Apiaceae).

Distribution. Only recorded from some parts of Central and Southern Europe.

References. There are only records in the literature from the Kaluzhskaja oblast (Shmytova 2001: 90) and from Western Ukraine (Buszko & Skalski 1980: 17) [without examination this record is doubtful – it may be a misidentification of *E. falciformis*]

***Epermenia (Calotripis) falciformis* (Haworth, 1828: 555) (*Recurvaria*)**

Material. 1♂ **Russia**, [Ural], Guberli, 23.vi.1892 (Christoph). 2♂ [East Siberia], Irkutsk, without any additional dates; 1♂ Primorskij kraj, 20 km E Ussurijsk, Gornotajozhnoje, na svet, 8.vii.1980 (Omel'ko).

Life history. Larvae on *Angelica sylvestris* (Apiaceae) (Scholz 1996). Tokar et al. (2002: 1–11) indicated *Aegopodium* as food plant, but this record probably refers to *E. illigerella*. The specimen should be re-examined.

Distribution. The species was reestablished as valid by Scholz (1996), it was previously thought to be a synonym of *E. illigerella*. Since this time recorded only from some parts of Middle and North Europe (Scholz 1996; Gaedike 1996b). New record for Russia.

References. Latvia (Jurivete et al. 2000).

***Epermenia (Calotripis) illigerella* (Hübner, 1813: pl. 48 fig. 333) (*Tinea*)**

Material. 3♂ **Estonia**, 26.vi.1880 (Moravic). 1♀ **Belarus**, okr. Vitebska, d. Tulovo, 10.vi.1995 (Piskunov). 2♂ **Russia**, [Karel'ija], Jalguba (Günther); 2♂, 1♀ [Karel'ija], Petrozawodsk (Günther); 2♂ Karel'skij pereshejek, 4., 6.vii.1956 (Kellomajaj); 1♂ Petropol'; 1♀ Petrograd, Ozerki, 13.vii.1917; 1♂, 1♀ Petrograd, Liesnyi, 20.vii.1922; 2♂ Leningradskaja gub., Pavlovsk, 27.vi.1924 (Gerasimov); 1♂ okr. Starogo Petergofa, vyl. 15.vi.1956, N° 10, larvae on *Aegopodium podagraria* (Kuznetsov); 1♂ Leningradskaja obl., Tolmachovo, 9.vi.1960 (Fal'kovitsh); 1♂ Leningradskaja obl., st. Gor'kovskoje, 28.vi.1983 (Sinjov); 2♀ Arhangel'sk, m. Karela, 15.viii.1968, 21.viii.1969 (Zelenova); 1♀ Novgorodskaja obl., Torbino, 22.vi.1917 (Filip'jev); 2♀ okr. Pskova, 7., 9.vi.1907 (Chistovskij); 1♂, 1♀ Urshum, 11.vii.1902, 16.vii.1908 [Krulikovskij]; 4♂, 1♀ [Caucasus], Nal'chik, Malaja Kizilovka, les, 700 m, 13.vi.1986, 18.vi.1987 (Zagulajev); 1♀ [Caucasus], Nal'chik, botsad, na svet, 15.vi.1986 (Zagulajev); 2♂ [Tatarstan], Sarapul, v.1910 [Krulikovskij]; 1♀ Bashkirskij zapovednik, 50 km SE Uzjana, 24.vii.1937 (Filip'jev); 1♀ Novosibirsk, Ob'GES [hydroelectrical power-station at the river OB], na svet, 1.vii.1994 (Ustjuzhanin); 1♂ Kemerovskaja obl., Vaganovo, 22.vi.1955 (Fal'kovitsh); 3♂ Altaj, Kurajskij hrebet u Aktasha, verhov'ja r. Jarly-Jary, 2600 m, gornaja tundra, 6., 7., 13.vii.1974 (Ju. Kostjuk); 1♀ Siberia, Altay Mts., 42 km S Shebalino, 1230 m, 6.vii.1997 (Ustjuzhanin); 1♀ Siberia, Altay Mts., 14 km N Onguday, 1300 m, 15.vii.1997 (Ustjuzhanin).

Life history. Larvae in leaves of *Aegopodium podagraria* (Apiaceae).

Distribution. All Europe, Western Siberia, Altai region.

References. The records from the literature until 1996 need to be checked, as they may refer to *E. falciformis*. Recorded from Estonia, Latvia, Lithuania, and from the European part of Russia (Fal'kovitsh, 1981: 435; Martin, 1991: 35; Ivinskis, 1993: 65; Savenkov et al., 1996: 25; Gaedike, 1996b: 159; Jurivete, 2000: 58; Erschoff, Fil'd, 1870: 187; Kuznetsov & Stekol'nikov 1984: 71; Erschoff 1881: 220; Rebel 1901: 179; Krulikovskij, 1907: 233; Shmytova 2001: 90; Satshkov et al. 1996: 70); Karelia (Gjunther 1896: 32); Belarus (Merzhejevskaja et al. 1976: 19), Western and Northern parts of Ukraine (Schille 1930: 225; Sovyns'kyj 1938: 35); Ural Mts. (Eversmann 1844: 576); Caucasus Mts. (Budashkin 1996: 13); Western Siberia and Altai (Tibatina 1976: 353; Fal'kovitsh 1981: 435; Gaedike 1993: 102; Budashkin 1997: 483). The records from South Ural, East Siberia, and Southern Primorje (Gaedike 1993: 102; Budashkin 1996: 13; 1997: 483) refer to *E. falciformis*.

Epermenia (Epermenia)***Epermenia (Epermenia) pontificella* (Hübner, 1796: 56, pl. 26 fig. 181) (*Tinea*)**

Material. 1♂ **Ukraine**, Lemberg [= Lwow], Coll. Museum Bucuresti; 1♂, 1♀ Galizien [= Galicia], Krzywce, p. Borszaczow, 31.v.1937, leg. S. Toll.

Life history. Larvae on *Thesium montanum* (Santalaceae).

Distribution. All Europe, Asia Minor (Turkey).

References. The species was recorded from West Ukraine (Schille 1930: 225), Estonia, Lithuania, and the European part of Russia (Ivinskis 1993: 65; Gaedike 1996b: 159; Jurivete et al. 2000: 58).

***Epermenia (Epermenia) scurella* (Stainton, 1851: 25) (*Elachista*)**

Life history. Foodplants of the larvae are still unknown.

Distribution. Mountain regions of Central and South Europe.

References. There are only records in the literature from West Ukraine (Carpathian Mountains) (Schille 1930: 225; Falkovitsh 1981: 435).

***Epermenia (Epermenia) ochreomaculella ochreomaculella* (Milliere, 1854: 63–64) (*Chauliodus*)**

= *Epermenia prohaskaella* Schawerda, 1921.

Material. 2♂ **Russia**, Saratovskaja obl., s. Nizhnjaja Bannovka, 28.vi.2003 (Sinjov); 3♂ **Caucasus**, Kabardino-Balkarija, s. Planovskoje, 8., 10.vi.1997 (Bolov). 3♂ **Ukraine**, Zaporozhskaja obl., Vol'njanskij r-n, balka Bal'chanskaja, 18., 22., 25.vi.1997 (Zhakov); 5♂, 1♀ **Crimea**, Krasnoles'je, 29.iv.1983; 4.vii.1984; 7., 8.v., 8., 21.vi.1985 (Zagulajev); 1♂ **Crimea**, Schastlivoje, kvarc, 3.vii.1984 (Zagulajev); 1♂ **Crimea**, Aj-Petri, 27.vii.1989 (Budashkin). 1♂ **Crimea**, s.Osovino, kvarc, 9.vi.1984 (Zagulajev).

Life history. Foodplants of the larvae are still unknown.

Distribution. South Europe from Iberian Peninsula to Bulgaria (New record for the Caucasus area).

References. Western Ukraine (Buszko & Skalski 1980: 17), South-eastern Ukraine (Bidzilja 1995: 35; Bidzilja et al. 2001: 81), Crimea (Budashkin 1990: 53).

***Epermenia (Epermenia) ochreomaculella asiatica* Gaedike, 1979: 278**

Material. 1♂ **Russia**, [Zabajkal'je], Chitinskaja obl., 20 km N p. Kyra, 6.viii.1994 (Ustjuzhanin). 1♂ **Amurskaja obl.**, 75 km W Svobodnogo, 12.vi.1959 (Fal'kovitsh).

Life history. Foodplants of the larvae are still unknown.

Distribution. From Near East (Lebanon) to Mongolia. New record from the Amur region.

References. Southern part of Siberia (Gaedike 1993: 102); Region Zabajkal'je (Kostjuk et al. 1994: 10; Budashkin & Kostjuk 1994: 17; Budashkin 1997: 483).

Epermenia (Epermeniola) Gaedike, 1968: 617

***Epermenia (Epermeniola) thailandica* Gaedike, 1987: 155–157**

Material. 2♀ **Russia**, [Priamur'je], e.l. [1960] (larvae collected 14., 17.viii.1959) (T. Shel'deshova).

Life history. Larvae in fruits of *Eleutherococcus senticosus* (Araliaceae). The pupa overwinters.

Distribution. Thailand; Russian Far East.

References. Russian Far East (Gaedike 1993: 103–104; Budashkin 1997: 483).

Epermenia (Cataplectica) Walsingham, 1894: 199–200***Epermenia (Cataplectica) wockeella (Staudinger, 1880: 382) (Chauliodus)***

Material. 1♂ **Turkmenistan**, Central'nyj Kopetdag, Firjuza, 29.–30.iv.1991, na svet (Dubatolov); 1♀ Zapadnyj Kopetdag, niz uschel'ja Aj-dere, na svet, 23.iv.1991 (Dubatolov); 1♀ Kopetdag, 20 km E Nohura, uschel'je Karajalchi, 27.iv.1991 (Dubatolov & Zinchenko).

Life history. Foodplants of the larvae still unknown.

Distribution. Hitherto known only from Turkey (type locality) and Turkmenistan. New record for Turkmenistan.

Remarks. The examination of the male of this species confirms that *wockeella* belongs to the genus *Epermenia*. The structure of the male genitalia (narrow tegumen) shows that the species is a member of the subgenus *Cataplectica*. Figures 1–3 show the hitherto unknown male genitalia: Uncus with widened rounded apex, narrower in middle; tegumen narrow, apical edge more thickly sclerotized; valva with broad rectangular transtilla, sacculus with a blunt rounded tooth apically, ampulla curved, pointed, border of valva not clearly visible; phallus as long as valva, slightly curved, with two more sclerotized bands extending from base to distal half, cornutus as long as half of phallus, elongate and apically pointed.

Epermenia (Cataplectica) iniquella (Wocke, 1867: 208) (Chauliodus)

= *Calotrypis dentosella* auct., nec Herrich-Schäffer, 1854

= *Cataplectica kruegeriella* Schawerda, 1921

Material. 8♂, 11♀ **Ukraine**, Crimea, Cape Chauda, solonchakovaja step', na list'jah i cvetah *Ferula caspica*, 1.vi.2002 (Budashkin). 1♀ **Russia**, Caucasus Mts., Teberda, 1250 m, 10.–21.vii.1972 (Eichler). 1♀ **Kazakhstan**, Biesimas, 5 km S Topoljovki, Sardkanskoj r-na, Taldy-Kurganskoj obl., 2.vii.1957 (Kuznetsov). 1♀ **Tajikistan**, [Pamir], Horog, botanicheskij sad, na svet, 31.v.1969 (Martynova).

Life history. Larvae on *Peucedanum officinale* and on *Ferula caspica*.

Distribution. Europe (from Southern France to Greece, Poland, and Ukraine); from Turkey to Iran, Kazakhstan and Tajikistan. New record for Tajikistan.

References. European part of USSR (Gaedike 1996b: 159); Western Ukraine (Schille 1930: 226, under the name *E. dentosella* Herrich-Schäffer), Crimea (Budashkin 1996: 13); Caucasus Mts. (Fal'kovitsh 1981: 434, under the name *E. dentosella* Herrich-Schäffer); Kazakhstan (Gaedike 1993: 103).

Epermenia (Cataplectica) vartianae (Gaedike, 1971: 43–45) (Cataplectica)

Material. 1♂ **Tajikistan**, Kondara, 24.v.1973 (Fal'kovitsh); 1♀ Pamir, Horog, 2300 m, na kvarc, 22.vi.1965 (Gur'jeva); 1♂ 30 km N Duschanbe, Kondara, 4.vii.1986 (Puplesis).

Life history. Foodplants of the larvae are still unknown.

Distribution. SE Afghanistan (Safed Koh) (type locality), Tajikistan. New record for Tajikistan.

Remarks. The material from Tajikistan allows the description of the hitherto unknown female genitalia of this species (Fig. 4). Apical edge of last sternite more strongly sclerotized than rest of sternite; shorter part of forked apophyses very thin. Corpus bursae without signum.

***Epermenia (Cataplectica) farreni* (Walsingham, 1894: 200–201) (*Cataplectica*)**

Material. 1♂, 1♀ **Russia**, Polar Ural, 66°55'N, 65°10'E, Krasnyj Kamen', 200 m, 7.vii.1994 (Jalava, Kullberg & Koponen). **Kazakhstan**: 1♀ Zailijskij Alatau, Medeo, 25.viii.1986 (Mironov). 2♀ **Kyrgyzstan**, 14 km E g. Naryn, hr. Karyktau, 2700 m, 4.viii.1988 (Mironov).

Life history. Larvae in seeds of *Peucedanum montanum*.

Distribution. Only recorded from some European countries (Great Britain, Sweden, Slovakia, Northern Russia); Kazakhstan, Kyrgyzstan. New records for Kazakhstan, Kyrgyzstan, and Russia.

***Epermenia (Cataplectica) profugella* (Stainton, 1856: 38–39) (*Asychna*)**

Life history. Larvae in seeds of *Pimpinella saxifraga* and other species of this genus.

Distribution. North, Central, and East Europe.

References. Estonia, Latvia, European part of Russia (A. & I. Sulcs 1987; Ivinskis 1993: 65; Savenkov et al. 1996: 25; Gaedike 1996b: 159; Jurivete et al. 2000: 58), West Ukraine (Schille 1930: 230).

***Epermenia (Cataplectica) sergei* Budashkin, 1996: 13–15, figs. 1–2**

= *Epermenia sergeyi* Budashkin, 1997 (lapsus calami)

Life history. Foodplants of the larvae are still unknown.

Distribution. Hitherto known only from the locality of the typical series: Russian Far East: Priamur'je and Primor'je (Budashkin 1996: 13–15; Budashkin 1997: 483 under the name *E. sergeyi* Budashkin). In the literature (Gaedike 1993: 92) the species was recorded erroneously as *Phaulernis dentella* Zeller.

Ochromolopinae***Ochromolopis* Hübner, 1825: 408**

Type species: *Ochromolopis icella* Hübner, 1813, designated by Herrich-Schäffer, 1854: 213

***Ochromolopis icella* (Hübner, 1813: pl. 53 fig. 361)**

= *Ornix ictipennella* Treitschke, 1833

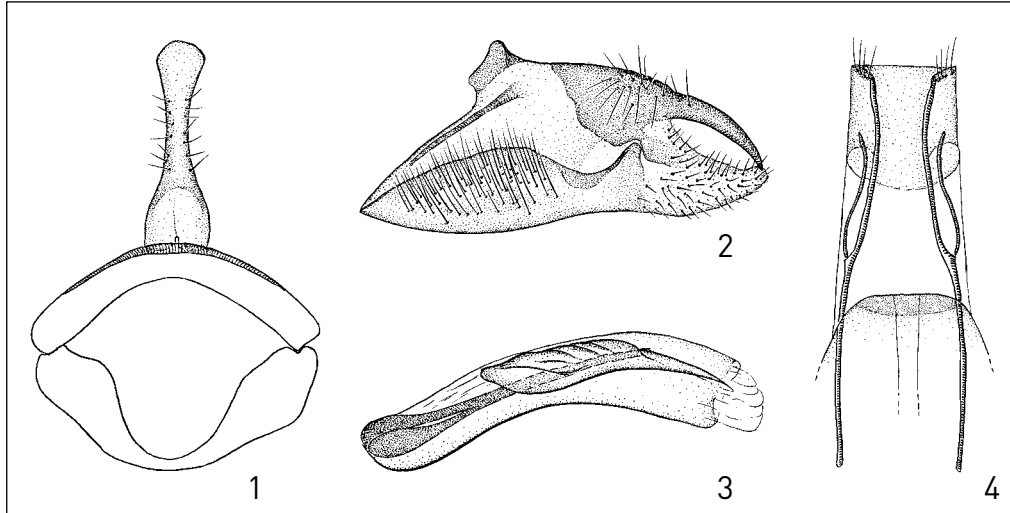
Material. 1♂ **Ukraine**, Ubierzowa, p. Zaleszyki, 18.v.1936 (Toll).

Life history. Larvae are miners in *Thesium* spp. (Santalaceae).

Distribution. Central and South Europe, North Africa.

References. Estonia (Jurivete et al. 2000: 58), Belarus (Merzhejevskaja et al. 1976: 19), Western, Central, and Northern part of Ukraine, Caucasus Mts.* (Schille 1930: 232; Lebedev 1936: 64; Obratsov 1936: 32); Sovyns'kyj, 1938: 85; Fal'kovitsh 1981: 445), Southern part of European Russia* (Gerasimov 1948: 976), probably in the west of European Russia (Budashkin & Satshkov 1991: 83), European Russia* (Gaedike 1996b: 159).

The records marked with an asterisk need revision because they may refer to *O. zagulajevi*. Other hitherto published records from Asia Minor and Near East need further examination because they may refer to *O. zagulajevi* also.



Figs. 1–4. *Epermenia (Cataplectica) wockeella*. **1.** ♂, Uncus-tegumen-vinculum complex. **2.** ♂, valva. **3.** ♂, phallus. **4.** ♀, *Epermenia (Cataplectica) vartianae*.

***Ochromolopis zagulajevi* Budashkin & Satshkov, 1991: 78–81, figs. 1–2**

Material. 1♂ **Russia**, Saratovskaja obl., s. Nizhnjaja Bannovka, 28.vi.2003 (Sinjov).; 10♂, 2♀ Caucasus, 43°N, 43°E, Kabardino-Balkarskij zap., 35 km SE Elbrus, 2300 m, 9., 10., 11., 12., 13.vii.1990 (Jalava). 1♀ **Ukraine**, Zaporozhskaja obl., Vol'njanskij r-n, balka Bal'chanskaja, 25.vi.1997 (Zhakov). 1♀ **Moldova**, Kishinjov, na svet, 2.vi.1981 (Belousov). 1♂ **Georgia**, Umg. Tbilissi, 500–600 m, 30.5.–1.vi.1971 (Muche). 1♂ **Armenia**, Geghard, 1700 m, 40 km E Erevan, 26.–27.vii.1976 (Kasy & Vartian).

Life history. Foodplants of the larvae are still unknown.

Distribution. See below. New record for Moldova.

References. Middle part of Povolzh'je, Northern Part of Ukraine, Crimea, Caucasus Mts., Transcaucasus, Western Kazakhstan (Budashkin & Satshkov 1991: 78–81, 83: typical series); European part of Russia (Gaedike 1996b: 159); Middle part of Povolzh'je (Satshkov et al. 1996: 70); South-East of Ukraine (Bidzilja et al. 2001: 81); South-East Crimea (Reservat Karadag) (Budashkin 1990: 53, under the name *O. ? ictella* Hübner).

***Ochromolopis kaszabi* Gaedike, 1973: 96–97, figs. 1–4**

Material. 6♂ **Russia**, SW-Altai, Kuragan valley, 15 km S Katanda, 1200 m, 23.–25.vii.1983, (Exp. Mikkola; Hippa & Jalava); 1♀ Burjatskaja ASSR, Ulan-Udenskij r-n, p. Kalenovo, na svet, 2.viii.1985 (Ustjuzhanin); 1♂ [Primur'je], Klimoucy, 16.vi.1959 (Fal'kovitsh?); 1♂ Ju. Primor'je, Gornotajozhnoje, 20 km E Ussurijska, na svet, 25.vii.1999 (Sinjov).

Life history. Foodplants of the larvae are still unknown.

Distribution. Mongolia, Russian Far East, Siberia (Southern part).

References. Southern part of Siberia, Far East (Kuznetsov & Stekol'nikov 1984: 73; Budashkin & Satshkov 1991: 81–82; Gaedike 1993: 104; Kostjuk et al. 1994: 10; Budashkin & Kostjuk 1994: 17; Budashkin 1997: 487; Bidzilya et al. 2002: 206). In the Southern Primorje represented by a smaller subspecies *O. kaszabi minima* Budashkin & Satshkov (Budashkin & Satshkov 1991: 82).

Acknowledgements

We would like to express our special thanks for help to Dr. O. V. Bidzilja (Kijev), Dr. V. V. Dubatolov (SZMN), M. A. Klepnikov (Jaroslavl'), and Dr. S. Ju. Sinjov (ZIN). Dr. L. Kaila (FMNH) enabled study of the material from the Russian-Finnish Expeditions, and Mr. A. D. Liston (Waldsiedersdorf) helped with linguistic corrections.

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