

Atalanta (August 1997) 28 (1/2): 161–171, Würzburg, ISSN 0171-0079

## A review of the Ethmiidae of the Asian part of Russia and neighbouring territories

(Lepidoptera: Ethmiidae)

by

V. V. DUBATOLOV, P. YA. USTJUZHANIN, & V. K. ZINTSHENKO

received 24.V.1997

**Summary:** Based on the material of the Siberian Zoological Museum, Institute of Animal Systematics and Ecology, Siberian Division of Russian Academy of Sciences (Novosibirsk), annotated list for Ethmiidae of Russian Siberia, the neighbouring regions of Kazakhstan, and the Russian Far East is composed including 20 species. Such species as *Ethmia vittalis*, *Ethmia duodecia*, *Ethmia funerella*, *Ethmia discipitella*, *Ethmia bipunctella*, *Ethmia nigrimaculata*, *Ethmia xanthopleura*, *Ethmia comitella steppella* subsp. nov. are reported this territory for the first time, the known ranges of many others being much extended. Species, *Ethmia nigrimaculata* and *Ethmia comitella* are for the first time recorded for the Mongolian People's Republic.

**Юме:** Основываясь на материалах Сибирского Зоологического Музея Института систематики и экологии животных СО РАН (Новосибирск) приводится аннотированный список черноточечных молей семейства *Ethmiidae* российской территории Сибири, приграничных районов Казахстана и российского Дальнего Востока, включающий 20 видов. *Ethmia vittalis*, *Ethmia duodecia*, *Ethmia funerella*, *Ethmia discipitella*, *Ethmia bipunctella*, *Ethmia nigrimaculata*, *Ethmia xanthopleura*, *Ethmia comitella steppella* subsp. nov. приводятся для данной территории впервые, данные об ареалах многих других значительно расширены. 2 вида, *Ethmia nigrimaculata* и *Ethmia comitella*, впервые приводятся с территории Монгольской Народной Республики.

The Ethmiidae fauna of Siberia, the Far East of Russia and the neighbouring territories is so insufficiently studied. In the main assessment of this group SÄTTLER (1967) reported only 10 species for Siberia (*Ethmia cirrhocnemis* (LEDERER, 1870) and *E. nigripedella* (ERSCHOFF, 1877)), and one species for Primorye (*E. septempunctata* (CHRISTOPH, 1877)). Later ample material of the Zoological Institute (St.-Petersburg) was studied by A. S. DANILEVSKY and K. ZAGULAJEV. As a result, a series of papers was published which included data on Asian Ethmiidae (ZAGULAJEV, 1975, 1981; DANILEVSKY, 1975, 1980), and the number of species known from Siberia increased to eight species. One more species has been described from the Altai (KOSTJUK (1980). Recently a guide to the Ethmiidae species of the Russian Far East has been published (SINEV, 1997), in which *E. maracandica* (REBEL, 1912) was reported for the first time for Siberia, and *E. angarensis* CARADJA, 1939 for Southern Primorye. This report is based on rather abundant material of this group kept in the Siberian Zoological Museum, Institute of Animal Systematics and Ecology, Siberian Division of Russian Academy of Sciences (Novosibirsk). Its study (together with a review of the so far published

the Magadan and Amur Regions, and the Khabarovskii and Primorskii (= Primorye) Provinces. 8 species are reported for this territory for the first time. 2 species are new for the Mongolian People's Republic. Below follows an annotated list of species.

1. *Ethmia vittalbella* (CHRISTOPH, 1877)

A species widely ranging in arid zones of the Palearctic: in N Africa, SW and Central Asia, Transcaucasia, Iran, Afghanistan, N Pakistan, NW China (Kuldja (= Gulja) region), Kazakhstan, and also in the southern and south-eastern European part of the former USSR (DANILEVSKY, 1980). P. YA. USTJUZHANIN found it also among the collections (preserved on cotton wool) of V. N. KUZNETSOV from Southern Primorye. A very slight probability of label confusion cannot be excluded in this case.

Material. 1 ♀, Primorye, Chuguevka district, headwater of the Sokolovka River, at light, 12.VIII.1984 (KUZNETSOV leg.).

2. *Ethmia duodecia* (HAWORTH, [1828])

Earlier this species was known from the moderate and southern parts of West Europe, Asia Minor, Iran, the former USSR: in Sw, S, and E European part, Caucasus, Transcaucasia, and W Kazakhstan (DANILEVSKY, 1980; ZAGULAJEV, 1981). Here this species is for the first time reported for Siberia, for the south-eastern part of the West Siberian Lowland (the upper Ob' basin), the Altai Mts., and S Transbaikalia. The moths were collected from mid June to late July.

Material. Novosibirsk Province: 1 ♀, vil. Yarkovo, SW of Novosibirsk, 24.VII.1963 (KORSHUNOV leg.); 1 ♂, Novosibirsk vicinity, Academy Town, "Vostok" gardens, at light, 13.VII.1992 (ZINTSHENKO leg.); 1 ♀, vil. Chingisy, south part of Novosibirsk storage lake, at light, 26.VI.1972 (anonym leg.); Altaiskii Krai: 1 ♀, vil. Soldatovo, left bank of the Ob' River, 100 km S of Barnaul, 12.VI.1990 (VASILENKO leg.); Altai Republic: 2 ♀♀, Lake Teletskoe, 21.VII.1987 (USTJUZHANIN leg.); 1 ♀, the Chulyshman River, 13.VII.1987 (USTJUZHANIN leg.); Chita Province: 1 ♀, Sokhondo Nature Reserve, kordon Agutsa on the Agutsa River, at light, 24.VI.1991 (DUBATOLV et ZINTSHENKO leg.).

3. *Ethmia angarensis* CARADJA, 1939

Reported for South Primorye by SINEV (1997). Earlier this species, in spite of its misleading name, was known only from the Chinese province Shanxi (SATTLER, 1967). The moths fly in late June to July only. Absent from our material.

4. *Ethmia septempunctata* (CHRISTOPH, 1882)

The species was described from Vladivostok and in Russia is so far only known for S Primorye. Besides, it inhabits Japan (MORIUTI, 1982). Flies from the end of May until the middle of July.

Material. Primorye: 3 ♂♂, Khasan district, Far Eastern Marine Nature Reserve, Furugelm Island, 6., 12., 15.VII.1975 (VELIZHANIN leg.).

# 5. *Ethmia funerella* (FABRICIUS, 1787)

A species widely distributed from W Europe to the Caucasus, E Kazakhstan (Lake Zaisan) and Middle Asia. According to DANILEVSKY (1980) and ZAGULAJEV (1981), it inhabits almost the entire European part of the former USSR, including the Kola Peninsula (Khibin Mts.). Reported for the first time for Siberia: in the southern part of the West Siberian Lowland and the NE Altai Mts. The moths fly from middle June to late July.

Material. Novosibirsk Province: 1 ♂, Novosibirsk Power Station town, 1.VII.1995 (USTJUZHANIN leg.); 1 ♂, Novosibirsk vicinity, vil. Ogurtsovo, 27.VI.1986 (USTJUZHANIN leg.); Kemerovo Province: 2 ♂♂, Gornaya Shoria, vil. Osman, 1.VII.1992 (USTJUZHANIN, KUZOVLEVA et MIROSHNIKOV leg.); Altai Republic: 1 ♀, vil. Inya, 19.VI.1989 (USTJUZHANIN leg.); Lake Teletskoe, Altaiskii Nature Reserve: 6 ♂♂, vil. Yailyu, 5., 20., 23.VII.1987 (USTJUZHANIN leg.); 1 ♀, near kordon Kokshi, 16.VI.1994 (A. et R. DUDKO leg.).

# 6. *Ethmia pusiella* (LINNAEUS, 1758)

According to DANILEVSKY (1980) this is a transpalearctic species ranging in W Europe, Asia Minor, the Caucasus, Transcaucasia, E Kazakhstan, Mongolia, the European part of the USSR north to the Khibin Mts. (Kola Peninsula) (ZAGULAJEV, 1981), and also in W Siberia. Unfortunately, its distribution in W Siberia was not specified. According to our data, here it ranges everywhere from the forest-steppe zone north to the southern taiga zone (Tomsk surroundings), and also in the Altai Mts (including its Kazakhstan part). For the first time it is found in S Primorye, being collected simultaneously with *E. vittalbella* (CHR.) (mentioned above). The moths fly in July–August.

Material. Kazakhstan: East-Kazakhstan Province: 1 ♂, Serebryansk, at light, 24.VII.1994 (KOLPAKOVA leg.); Russia: Kurgan Province: 1 ♂, 2 ♀♀, Ketovo district, vil. Temlyakovo, at light, 18., 26.VII., 6.VIII.1988 (VASILENKO leg.); Omsk Province: 1 ♀, road from Omsk to vil. Petukhovo in Kurgan Province, 9.VII.1969 (TIBATINA leg.); Tomsk Province: 4 ♂♂, Tomsk vicinity, settlement Timiryazevskii, 29.VII.1968, 19.VII., 25.VII.1969 (KOLOMIETS leg.); Novosibirsk Province: 1 ♂, 1 ♀, Lake Malyi Chan, the Kargat River delta 10 km NE of vil. Shirokaya Kur'ya, at light, 15., 19.VII.1980 (TOTUNOV leg.); 1 ♀, 5 km NW of vil. Kozhevnikovo, 55° 03' N, 78° 12' E, 14.VIII.1990 (DUBATOLOV et L. RONKAY leg.); 2 km S of vil. Vaganovo, 55° 52' N, 78° 26' E, 16.VIII.1990 (DUBATOLOV et L. RONKAY leg.); 4 ♀♀, Novosibirsk Power Station Town, 23.VIII.1984, 17.VIII.1988, 26.VII.1989 (USTJUZHANIN leg.); 1 ♀, Novosibirsk Academy Town, the Zyryanka rivulet valley, *Betula-Pinus* forest, at light, 22.VIII.1989 (DUBATOLOV leg.); 1 ♀, the same locality, 31.VII.1995 (ZINTSHENKO leg.); 1 ♂, the vicinity of Novosibirsk Academy Town, the valley of the Nizhnyaya El'tsovka rivulet, 28.VII.1964 (KORSHUNOV leg.); 7 ♀♀, Iskitim district, vil. Tal'menka, 12.VIII.1974 (TIBATINA leg.); 1 ♂, vil. Chingisy, south part of Novosibirsk storage lake, at light, 19.VI.1963 (KORSHUNOV leg.); Altaiskii Krai: 1 ♀, Shipunovo district, El'tsovka, 15.VIII.1983 (PERUNOV leg.); Altai Republic: 1 ♀, vil. Chelyush, 19.VIII.1961 (ZOLOTARENKO leg.); 3 ♂♂, vil. Cherga, 18., 23.VII.1995 (USTJUZHANIN leg.); 1 ♀, Lake Teletskoe, Artybash, at light, 26.VIII.1970 (ZOLOTARENKO leg.); 3 ♂♂, 1 ♀, Lake Teletskoe, vil. Yailyu, 20., 22.VII.1987 (USTJUZHANIN leg.); Primorye: 1 ♂, Chuguevka district, headwaters of the Sokolovka River, 12.VIII.1974 (KUZNETSOV leg.).

7. *Ethmia vidua* (STAUDINGER, 1879).

The species was described from E Kazakhstan (Lake Zaisan), later its subspecies *E. v. flavilaterella* DANILEVSKY, 1975 has been described from W Yakutia (the Vilyui River valley). The same subspecies was found in Transbaikalia. ZAGULAJEV (1981) attributed these moths to the Central European-Balkan species *E. lugubris* (STAUDINGER, 1879), differing by larger size and small differences in the genital structure. The latter species is known also from W Ukraine, and the central and southern European Part of the former USSR (DANILEVSKY, 1980; ZAGULAJEV, 1981).

Material. Buryat Republic: 1 ♂, vil. Kalenovo, 29.VI.1985 (USTJUZHANIN).

8. *Ethmia maracandica* (REBEL, 1912).

Reported for South Siberia and Mongolia by SINEV (1997), where it ranges east to the Irkutsk Region. Earlier it was known from Central Asia (Samarkand) (SATTLER, 1967). Absent from our material.

9. *Ethmia soljanikovi* DANILEVSKY & ZAGULAJEV, 1975.

The species was described from Tuva (Mongun-Taiga Mountain Range) and Mongolia (Dzavchan and Chövsgöl Aimaks) (ZAGULAJEV, 1975). Now it has been found also in the east of the Altai Republic (Altai Mts.). According to our material, the moths inhabit the mountains within an altitude range of 1500–3500 m above sea level and fly from early July to early August, although SINEV (1997) reported them for June to early July.

Material. Altai Republic: 4 ♂♂, Yuzhno-Chuyskii Mountain Range, headwater of the Kokuzek River, the stow Kyp, 2500 m, 5., 11. VII., 1.VIII.1982 (PERUNOV et GOLJAKOV leg.); 1 ♂, 80 km E of Kosh-Agach, 4 km NW of the Sailugem Mountain, 2300–2400 m, 14.VII.1996 (A. et R. DUDKO leg.); 1 ♂, Altaiskii Nature Reserve, Shapshal Mountain Range, no other data (N. ZLOTUKHIN leg.).

10. *Ethmia sibirica* DANILEVSKY, 1975.

Described from the old collection by O. BANG-HAAS from the highlands of the East Sayan (Tunkinskie Gol'tsy Mts.) (ZAGULAJEV, 1975). According to the opinion of V. I. KUZNETSOV, who prepared the paper by DANILEVSKY (1980) for publication, *Ethmia uhsensis* ZAGULAJEV, 1975, described from the region of Lake Ubsu-Nur (Uvs-Nur) and found in Tuva and Mongolia, should be synonymized with the species considered. On the contrary, SINEV (1997) again has separated these taxa based on a number of characters: *E. uhsensis* ZAG. is larger, its hindwings are not translucent, besides, in this species the apex of the gnathos has two closely-set blunt processes, while in *E. sibirica* DANIL. these processes are pointed and widely set.

11. *Ethmia zaguljaevi* KOSTJUK, 1980

This species was described from the territory of the Altai Republic where it was collected at the Aktash pit at 2600 m above sea level from 16th to 25th June (KOSTJUK, 1980). Absent in our material.

## 12. *Ethmia pyrausta* (PALLAS, 1771)

A transpalearctic species ranging in North and Central Europe; Kazakhstan (at the city of Alma-Ata), Mongolia (Töv (= Central) aimak), NW China (Kuldja; now – Gulja), the north-western, central, and eastern European part of the former USSR (north to the Khibin Mts. on Kola Peninsula), the Urals, Siberia, the western part (with no details) (ZAGULAJEV, 1981), Irkutsk, and Bunbui on the Chuna River (the Irkutsk Province) are reported. Also found on the Bol'shoi Shantar Island in the Ochot Sea (ZAGULAJEV, 1975; DANILEVSKY 1980), but this label seems to be doubtful. There is rather ample material in the Zoological Institute (St.-Petersburg) labelled as if collected on the Shantar Islands (Bol'shoi Shantar and Maliy Shantar), which is quite doubtful, for it includes such southern species as *Rhyarioides metelkana* (LEDERER, 1861) (Arctiidae). In 1986 L. V. POPOV with colleagues made collections on these islands (these collections were transmitted to Yu. P. KORSHUNOV at the Siberian Zoological Museum), but found only a set of boreal species such as *Arctia flavia* (FUESSLY, 1779) (Arctiidae), absent, by the way, in the St.-Petersburg Shantar collections. Certain doubts in these collections were expressed by an orthopterologist, Prof. M. G. SERGEEV, too (personal communication). Here *E. pyrausta* (PALL.) is for the first time reported for the territory of Tuva. According to SINEV (1997), the moths fly from May to June.

Material. Tuva Republic: 1 ♂, 5 km W of Kyzyl, Ulug-Khem River valley, at light, 19.V.1990 (DUBATOLOV leg.).

## 13. *Ethmia discipitella* (REBEL, 1901)

This species was so far only known from the South Urals (at the Guberlya River). There are two specimens in the Siberian Zoological Museum collected at the beginning of the 20th century at Barnaul. Most probably these moths were collected in middle May (early May according to the Julian calendar).

Material. Altaiskii Krai: 2 ♂♂, Barnaul, near the Goretovsky's house, 6.V.1902 (RODD leg.).

## 14. *Ethmia bipunctella* (FABRICIUS, 1775)

A holarctic species ranging in the Palearctic, according to DANILEVSKY (1980) and ZAGULAJEV (1981), in N Africa, S Europe, in the western, southern, and central European parts of the former USSR, in the Near East, the Caucasus, Transcaucasia, and Central Asia. We found it also in NE Kazakhstan and in the steppe and forest-steppe zones and in the very south of the forest zone of West Siberia. The moths fly almost throughout the whole warm season, from early May to early September.

Material. Kazakhstan: Chimkent Province, 2 ♂♂, 35 km ESE of Chimkent, vil. Georgievka, a garden, at light, 2.IX.1992 (DUBATOLOV et LOGUNOV leg.); East-Kazakhstan Province: 2 ♂♂, 2 ♀♀, Irtysh River, settlement Glubokoe, 28.VIII.1989, 5.V.1994, 8.V.1995 (ZINTSHENKO leg.); Russia: Kurgan Province: 5 ♂♂, Ketovo district, vil. Temlyakovo, at light, 15., 18., 24., 26., 31.VII.1988 (VASILENKO leg.); 1 specimen, Pritobolnyi district, vil. Berezovo, 27.V.1990 (UTKIN leg.); Omsk Province: 1 ♂, vil. Solyanoe, 18.–19.V.1989 (VASILENKO leg.); Novosibirsk Province: 1 ♂, Lake Maliy Chan, Kargat River delta, 10 km NE of v. Shirokaya Kur'ya, at light, 30.VII.1995 (ZINTSHENKO leg.); 1 ♂, 5 km NW of vil. Kozhevnikov, 55° 03' N, 78° 12' E, 14.VIII.1990 (DUBATOLOV et RONKAY leg.); 1 ♂, Novosibirsk Power Station Town, 11.VIII.1985 (UST-JUZHANIN leg.); 16 ♂♂, Novosibirsk Academy Town, Zyryanka rivulet valley, a birch/pine forest,

at light, 30.VI.1984, 19.V., 25.V., 22.VIII.1989, 4.VI.1992 (DUBATOLOV leg.); 1 ♂, 1 ♀, Iskitim district, 12 km NE of vil. Morozovo, the Koyon River, 10.VI.1990 (ZINTSHENKO leg.); Altaiskii Krai: 1 ♂, vil. Klyuchi, 4.VII.1956 (ZOLOTARENKO leg.); Barnaul, 24.V., 3.IX.1984 (PERUNOV leg.).

#### 15. *Ethmia cirrhocnemis* (LEDERER, 1870)

This species ranges widely from the Caucasus, Transcaucasia, Iran, S and SE European part of the former USSR, the South Urals, Kazakhstan, Central Asia, S Siberia, Mongolia to Amurland, Primorye, Central China (Shanxi Province) (SATTLER, 1967; DANILEVSKY, 1980; ZAGULAJEV, 1981). In Siberia it was reliably reported from Minussinsk (Krasnoyarsk Province), Ust'-Kut (Irkutsk Province), and Transbaikalia (SATTLER, 1967). SINEV (1997) reported this species for the Buryat Republic, Irkutsk, Chita, Amur and Primorye Provinces. We found it locally on the eastern West Siberian Lowland (the southern Omsk Province, the environs of Novosibirsk and Barnaul cities), in the Altai Mts, Khakassia, southern Buryatia, and Chita Province. The most interesting is a finding of a female in the southern Magadan Province (the so far north-easternmost locality). The imagines occur from middle May to late July. Material. Omsk Province: 1 ♂, vil. Solyanoe, 5.–6.VI.1989 (VASILENKO leg.); Novosibirsk Province: 1 ♂, Novosibirsk Power Station Town, 1.VII.1995 (USTJUZHANIN leg.); 1 ♂, Iskitim district, settlement Stepnoi, 6.VI.1981 (USTJUZHANIN leg.); 1 ♀, Toguchin district, Bugotak Hills, 5 km W of town Gornyi, at light, 10.VI.1991 (USTJUZHANIN leg.); Altaiskii Krai: 1 ♂, Barnaul, 15.V. 1967 (anonym leg.); Altai Republic: 10 km W of vil. Katanda, the Katun River left bank, 23.VII. 1983 (DUBATOLOV); 3 ♂♂, vil. Inya, 16., 18., 23.VI.1989 (USTJUZHANIN leg.); Khakas Republic: 1 ♂, Altaiskii district, the Beryezovka farm, at light, 2.VII.1986 (USTJUZHANIN leg.); Buryat Republic: 2 ♂♂, settlement Tayezhnyi, 23.VII.1984, 11.VII.1987 (USTJUZHANIN leg.); Chita Province: 1 ♀, vil. Kyra, 27.VI.1991 (DUBATOLOV leg.); 1 ♀, 7 km ENE of vil. Nizhnii Tsasuchei, the Onon River left bank, the stow Maliy Batur, 3.VI.1995 (DUBATOLOV et DUDKO leg.); 1 ♂, Nizhnii Tsasuchei, at light, 2.VII.1996 (DUBATOLOV et KOSTERIN leg.); Magadan Province: 1 ♀, Magadanskii Nature Reserve, 100 km SE of Magadan, Koni Peninsula, Burgali River head-water, flying above a large-stoned scree, 19.VII.1989 (KOSTERIN leg.).

#### 16. *Ethmia nigripedella* (ERSCHOFF, [1877])

While this species is known from Europe so far only by a single specimen from the Crimea (ZAGULAJEV, 1975), in Asia it is widely distributed in Kazakhstan (Tien Shan), "everywhere in West and East Siberia", Amurland, Primorye, Mongolia (Töv (= Central) Aimak), China (Shanxi), and Japan (Hokkaido). SINEV (1997) recorded it in East Siberia from Irkutsk, Chita, Amur and Primorye Provinces. The species was described from a series of specimens collected in E Siberia (Irkutsk, Kyakhta (Buryatia), Albazin [now – Albazino] (Amurland), and southern Amurland) (ERSCHOFF, 1877). In our material the species is absent from the West Siberian Lowland but present from all over the mountains of South Siberia from E Altai and Tuva to Irkutsk and Chita Provinces, and also from the Amurskaya Province, Khabarovskii Krai and Primorye. According to ZAGULAJEV (1975), the moths fly from late April to early July, this corresponds with our material.

Material. Altai Republic, Altaiskii Nature Reserve: 1 ♂, Chulyshman River right bank, stow Dyon, 12.V.1984 (N. ZOLOTUKHIN leg.); Lake Teletskoe: 1 ♀, Yailyu, 8.V.1984 (N. ZOLOTUKHIN

leg.), 1 ♀, stow Khaira, 15.V.1984 (N. ZOLOTUKHIN leg.); 2 ♀♀, Bele, 21.VI.1984 (N. ZOLOTUKHIN leg.); Tuva Republic: 1 ♂, 1 ♀, Kyzyl environs, mountains N of the Ulug-Khem River, 30.V.1989, 18.V.1990 (DUBATOLOV et ZINTSHENKO leg.); 1 ♂, Khondyrgei River, 21.V.1963 (VIOLOVICH leg.); 1 ♂, 6 km S of vil. Targalyg, Targalyg River, 9.V.1990 (ZINTSHENKO leg.); 1 ♂, 5 km E of vil. Erzin, a rock, 23.V.1990 (DUBATOLOV leg.); 1 ♂, 20 km W of vil. Erzin, Onchalaan relic mountain, 28.V.1989 (ZINTSHENKO leg.); 1 ♂, 30 km W of vil. Erzin, 28.V.1989 (ZINTSHENKO leg.); 2 ♂♂, 4 ♀♀, Bii-Khemsii district, vil. Ust'-Uyuk, 21.V.1989 (ZINTSHENKO leg.); 2 ♂♂, vil. Azas, 12.VI.1987, 31.V.1988 (ZINTSHENKO leg.); 3 ♂♂, 1 ♀, Tandinsky district, 6 km W of vil. Khovu-Aksy, Elegest River, 5.V.1990 (ZINTSHENKO leg.); Irkutsk Province: 1 ♂, vil. Mel'nikovo, 3.VI.1941 (BYKOV leg.); Chita Province: 1 ♀, SW border of the Sokhondo Nature Reserve, kordon Agutsa, 16.VI.1991 (TSHERNYSHEV leg.); 2 ♂♂, 2 ♀♀, 7 km ENE of vil. Nizhnii Tsasuchei, Onon River left bank, stow Malyi Batur, 3.VI.1995 (DUBATOLOV et DUDKO leg.); 2 ♂♂, 1 ♀, 20 km SW of vil. Nizhnii Tsasuchei, Lake Butyvken, an open pine forest with steppe glades, 4.VI.1995 (DUBATOLOV, DUDKO leg.); 1 ♂, Dauriskii Nature Reserve, SW corner of Lake Barun-Torei, the stow Bulum-Khuduk, 15.V.1995 (DUBATOLOV et DUDKO leg.); 1 ♀, 23 km E of vil. Kholui-Baza, Adon-Chelon Mts., a part of Dauriskii Nature Reserve, 19.–21.VI.1995 (KOSTERIN, BEREZINA et LJUBECHANSKY leg.); Amurskaya Province: 1 ♀, 10 km of Blagovestshensk, 28.VI.1981 (STRELTZOV leg.); 2 ♀♀, Blagovestshensk, 31.V., 10.VI.1994 (STRELTZOV leg.); Khabarovskii Krai Province: 1 specimen, 9 km NW of town Obluch'e, 10.VI.1993 (STRELTZOV leg.); Primorye: 3 ♂♂, 1 ♀, Khasan district, Gamov Peninsula, Vityaz Bay, 21.V.1994 (DUBATOLOV leg.).

#### 17. *Ethmia nigrimaculata* SATTLER, 1967

This species was hitherto known only by the original description from Central China (Shanxi Province) (SATTLER, 1967). ZAGULAJEV (1981) reported this species with a doubt for the Crimean Peninsula. We found it for the first time in the Russian territory in Central Tuva and the southern Chita Province. One of the localities, the Imalkinskii section of the State Nature Reservation Dauriskii, at the SW corner of Lake Barun-Torei, is situated just at the boundary to Mongolia, and some specimens were collected in 30–50 m distance of the border and observed crossing it. Therefore the presence of this species in the Dornod (the Eastern) Aimak of Mongolia is without doubt.

Material. Tuva Republic: 1 ♂, 3 ♀♀, Kyzyl, 2.VI.1948 (TSHEREPANOV leg.); 27 ♂♂, 5 km W of Kyzyl, Ulug-Khem River valley, at light, 15.–20.V.1990 (DUBATOLOV leg.); Chita Province: 2 ♂♂, vil. Nizhnii Tsasuchei env., a pine forest, at light, 22.VI.1996 (KOSTERIN, LJUBECHANSKY, BEREZINA leg.); 11 ♂♂, 3 ♀♀, SW corner of Barun-Torei lake, stow Bulum-Khuduk, 15.VI.1995 (DUBATOLOV, DUDKO et LJUBECHANSKY leg.).

#### 18. *Ethmia xanthopleura* MEYRICK, 1931 (figs. 5–7)

This species was described from Korea (Vongsan) and so far has been known only from this country. We have found it in the very south of Primorye on the boundary with China and Korea. The moths fly in early and middle June on open meadows.

Material. Primorye: 3 ♂♂, 4 ♀♀, 8 km E of settlement Khasan, Golubinyi Utyos Mt., near the border to Korea, 12.VI.1994 (DUBATOLOV leg.); 1 ♀, settlement Pogranichnyi, 1.VI.1972 (KOSTINA leg.).

19. *Ethmia comitella steppella* DUBATOLOV & USTJUZHANIN **subspec. nov.** (figs. 1–4)

A series of moths collected in the steppes of East Siberia should be attributed to the species group *E. mongolica* (REBEL, 1901) – *E. comitella* CARADJA, 1927 – *E. xanthopleura* MEYRICK, 1931 – *E. asbolarcha* MEYRICK, 1938 by colouration of their bodies and wings and the general male genitalia structure. They have almost black legs; forewings with 5 black dots around the cell, one at the base, two on vein R, at its middle and at cell apex; 2 dots on vein Cu. Male genitalia with a well developed prolonged saccus (fig. 4), as in *E. comitella* CAR. (fig. 19) and *E. xanthopleura* MEYR., not developed in two other species. By the valva shape (characterized by an almost straight outer margin of the cucullus (fig. 3 a)) our specimens are most close to *E. comitella* CAR. (figs. 16–18), known from China from Central Tien Shan (Aksu) to Peking. But they differ from this taxon by the structure of the caudal processus of the gnathos. In *E. comitella* this processus is short and has no more than 3–4 teeth on the central field (figs. 10–11), judging from the figures 53-5 and 53-6 on table 54 in SATTLER (1967). In our specimens the processus is somewhat larger and bears 6–7 teeth (fig. 3). The male genitalia resembles also those of *E. xanthopleura* MEYR., but in the latter the outer margin of the cucullus of the valva is more rounded (fig. 5), while the caudal processus of the gnathos bears more teeth, more than 10 on the central field and 9–10 on the upper margin (fig. 6). In *E. comitella*, including *E. c. steppella* subspec. nov., this margin bears no more than 6–8 teeth (figs. 3, 10–11).

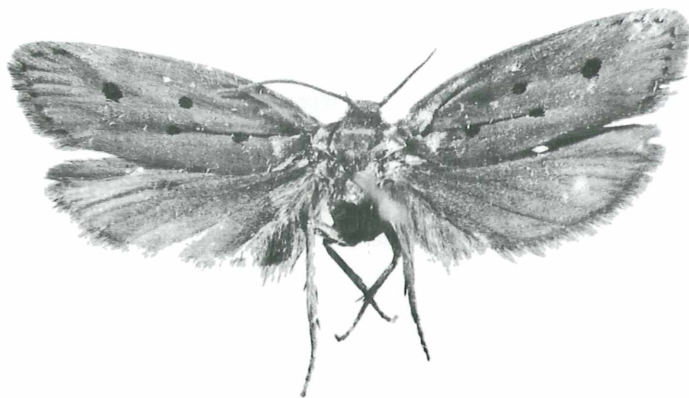
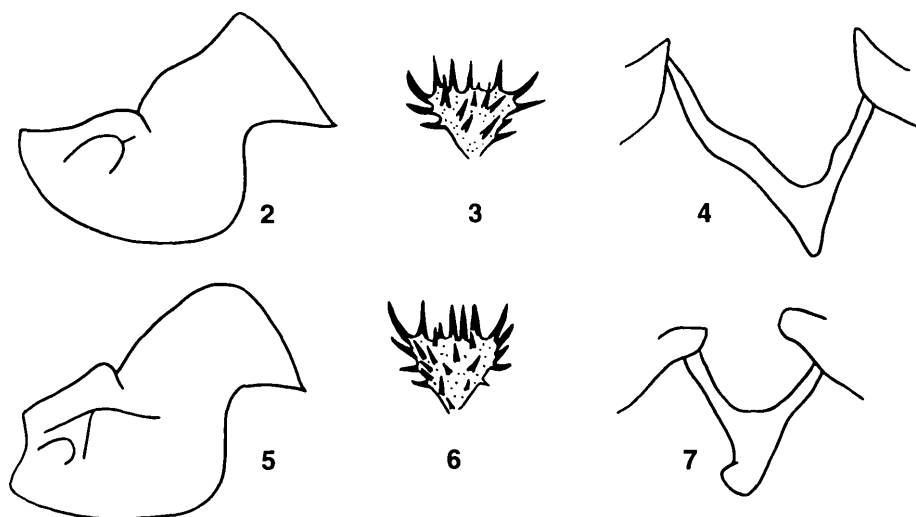


Fig. 1: *Ethmia comitella steppella* subspec. nov. Tuva, ♀, paratype.

Material. Holotype: ♂, 7 km ENE of vil. Nizhnii Tsasuchei, Onon River left bank, stow Malyi Batur, 3.VI.1995 (DUBATOLOV et DUDKO leg.). Paratypes: Krasnoyarsk Province: 1 ♂, Sayano-Shushenskii Nature Reserve, delta of the Uzun-Sug stream, 25.V.1989 (VAGIN leg.); Tuva Republic: 1 ♂, Kyzyl environs, a mountain on the north side of the Ulug-Khem River, 20.V.1989 (LOGUNOV et ZINTSHENKO leg.); 1 ♂, vil. Khaibar, 26.V.1959 (anonym leg.); 4 ♂♂,





Figs. 2–4. *Ethmia comitella steppella* subsp. nov. Chita Province, Onon River, male genitalia, holotype. 2 – valva, 3 – caudal processus of gnathos, 4 – saccus.

Figs. 5–7. *Ethmia xanthopleura*, Primorye, Golubinyi Utyos Mt., male genitalia, 5 – valva, 6 – caudal processus of gnathos, 7 – saccus.

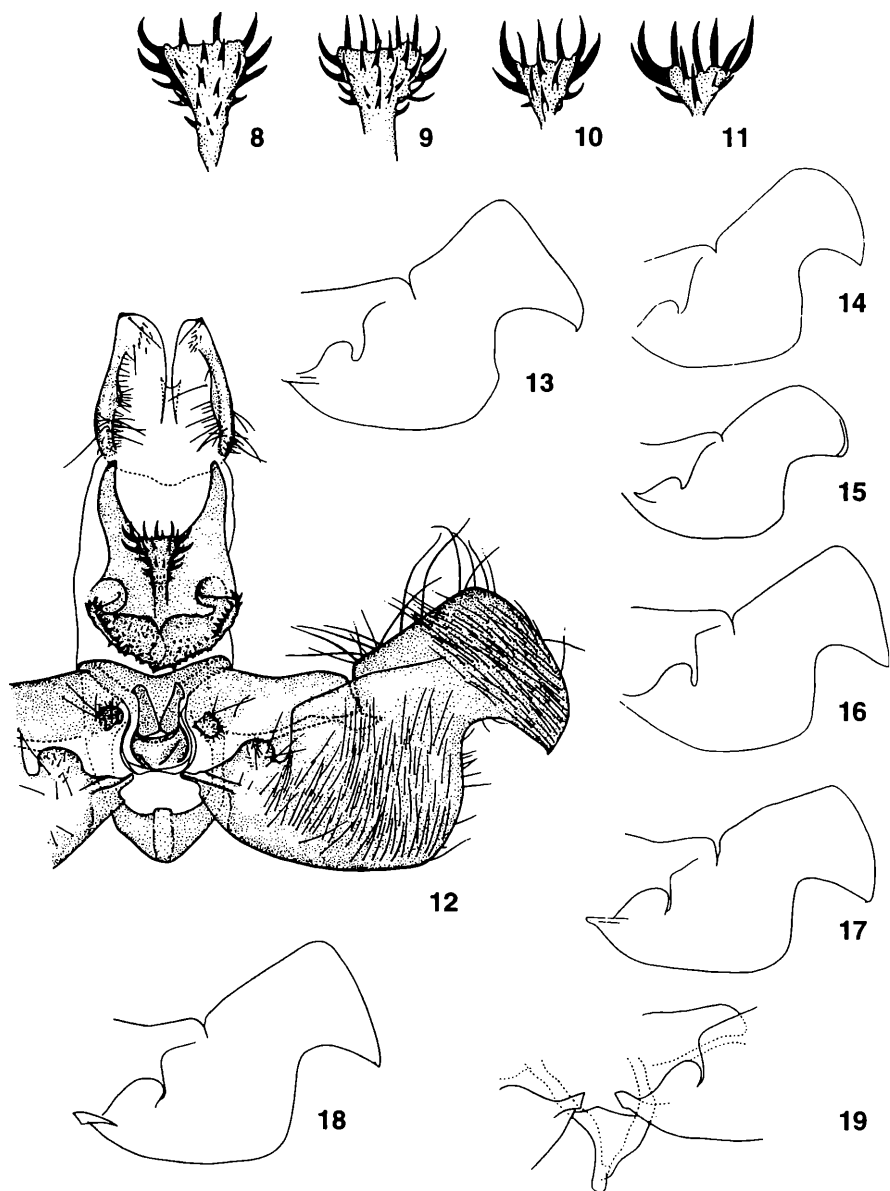
1 ♀, Kyzyl environs, a mountain N of the Ulug-Khem River, 20.V.1989, 20.V.1990, 1.–5.V. 1993 (DUBATOLOV, LOGUNOV, ZINTSHENKO leg.); Chita Province: 1 ♂, SW corner of Barun-Torei lake, the stow Bulum-Khuduk, 15.V.1995 (LJUNECHANSKY leg.); 1 ♂, Mongolia-Russia boundary, 2 km W of Lake Barun-Torei, a Nipsei boundary landmark, 15.VI.1995 (DUBATOLOV).

#### 20. *Ethmia ultima* SÄTTLER, 1967

This species was described from Mongolia from Ömnögov' (South Gobi) and Öbörchängai Aimaks. Later it was found by Y. A. KOSTJUK in South Tuva on the Tsagan-Shibetu Mountain Range in the Mугur River lower reaches (ZAGULAJEV, 1975). Besides, this species was reported by DANILEVSKY (1980) for Transbaikalia. In Mongolia the moths were collected in middle and late June, in Tuva – in middle May; SINEV (1997) reported these moths to fly in July. Absent from our material.

#### Acknowledgements

The authors express their sincere gratitude to Dr. O. E. KOSTERIN for translating the manuscript into English.



Figs. 8–19. *Ethmia* species from SATTLER (1967). 8, 12, 13 – *E. asbolarcha*; 9, 14–15 – *E. mongolica*; 10–11, 16–19 – *E. comitella*; 8–11 – caudal processus of gnathos, 12 – general view of genitalia, 13–18 – valva shape, 19 – saccus; 8 – China: N Yunnan, 9, 14 – China: Sichuan: Ta-tsien-lu, 10, 17, 19 – China: Sichuan: Kwanhsien, 11, 18 – China: Beijing, 12–13 – China: Likiang, 15 – "coll. CHRISTOPH", 16 – China: Xinjiang: Aksu.

---

## References

- CHRISTOPH, H. (1882): Neue Lepidopteren des Amurgebietes. – Bull. Soc. Nat. Mosc. **17**: 5–47.
- DANILEVSKY, A. S. (1975): New moths of the genus *Ethmia* Hb. (Lepidoptera, Ethmiidae) from the USSR. – Entomologicheskoe obozrenie **54**(3): 615–616 (in russian).
- DANILEVSKY, A. S. (1980): A key to Ethmiidae (Lepidoptera) of the European part of the USSR. – Entomologicheskoe obozrenie **59**(2): 322–345 (in russian).
- ERSCHOFF, N. (1876 [1877]): Diagnosen neuer Lepidopteren aus den verschiedenen Provinzen des Russischen Reiches. – Horae Soc. Entomol. Ross. **12**: 336–348.
- KOSTJUK, YU. A. (1980): A new species of the genus *Ethmia* Hb. (Lepidoptera, Ethmiidae) from Altai mountains. – Entomologicheskoe obozrenie **59**(4): 858–859 (in russian).
- MORIUTI, S. (1982): 32. Ethmiidae. – Moths of Japan. – Tokyo, Kodansha; **1**: 254–256; **2**: 14, 112, 207, pls. 12, 241.
- SATTLER, K. (1967): Ethmiidae. – Microlepidoptera Palaearctica. Vol. **2**. – Wien, XVI + 185 pp., 106 Taf.
- SINEV, S. YU. (1997): 31. Familia Ethmiidae. – Opredelitel' nasekomykh Dal'nego Vostoka Rossii [A key to insects of the Far East of Russia]. T. 5, part 1, Vladivostok, p. 510–514.
- ZAGULAJEV, A. K. (1975): Ethmiidae (Lepidoptera) from the Mongolian People's Republic. – Nasekomye Mongolii [Insects of Mongolia], Leningrad, **3**: 342–349 (in russian).
- ZAGULAJEV, A. K. (1981): 45. Familia Ethmiidae. – Opredelitel' nasekomykh evropeiskoi chasti SSSR [A key to insects of European part of the USSR]. T. 4. Lepidoptera. Part 2, Leningrad, p. 638–651 (in russian).

## Adresses of the authors

V. V. DUBATOLOV

Siberian Zoological Museum

Institute of Animal Systematics and Ecology

Siberian Department of Russian Academy of Sciences

Frunze street, 11, Novosibirsk, 630091, Russia

P. YA. USTJUZHANIN

Post Box 169

Novosibirsk, 630056, Russia

V. K. ZINTSHENKO

Siberian Zoological Museum

Institute of Animal Systematics and Ecology

Siberian Department of Russian Academy of Sciences

Frunze street, 11, Novosibirsk, 630091, Russia

# ZOBODAT - [www.zobodat.at](http://www.zobodat.at)

Zoologisch-Botanische Datenbank/Zoological-Botanical Database

Digitale Literatur/Digital Literature

Zeitschrift/Journal: [Atalanta](#)

Jahr/Year: 1997-1998

Band/Volume: [28](#)

Autor(en)/Author(s): Dubatolov Vladimir V., Ustjuzhanin Peter (Petr) Ya., Zintshenko V. K.

Artikel/Article: [A review of the Ethmiidae of the Asian part of Russia and neighbouring territories \(Lepidoptera: Ethmiidae\) 161-171](#)