

**Data to the Lepidoptera fauna of Kazakhstan:
early summer collectings in 2007**

B. BENEDEK & ZS. BÁLINT

*Department of Zoology, Hungarian Natural History Museum,
H-1088 Budapest, Baross utca 13.
E-mails: benedek@nhmus.hu, balint@nhmus.hu*

Abstract – Faunistic data of 53 species of rhopaloceran butterflies (Hesperiidae and Papilionidae) and 112 species of heteroceran moths (Noctuidae) are given from Kazakhstan as the result of an expedition carried out in 2007. A list of ten collecting sites is given. Every collecting site is briefly characterised and supplemented by the list of butterflies and moths recorded.

Key words – Faunistics, Rhopalocera, Heterocera, Kazakhstan.

INTRODUCTION

The exploration of the forest steppe belt was, has been and remains in the horizon of Hungarian entomology. The analysis of the taxonomic composition of this fauna contributes significantly to a better understanding how the recent Lepidoptera communities of the Central Danube Basin have been formed (RONKAY *et al.* 2008, VARGA *et al.* 2004). That is why, amongst the first explorers of the Volga and Transcaucasus regions, there were lepidopterists native in Hungary, as the KINDERMANNs (father and his son) and ISTVÁN NOGEL. They were mandated to collect natural history materials by IMRE FRIVALDSZKY, the first Hungarian insect faunist and taxonomist (BÁLINT & *id.* FRIVALDSZKY 2009).

The Lepidoptera collection of the Magyar Természettudományi Múzeum (= Hungarian Natural History Museum) possesses more than 1.7 million specimens on pins, and the Palearctic region is represented best by far.

Nevertheless there are territories from where there are less material, like southern Siberia, the vast steppes of Kazakhstan and the mountainous Kyrgyzstan. In these territories many Lepidoptera genera appear that are also important elements in the fauna of the Carpathian Basin displaying great taxonomic diversification. Hence, in the last years several expeditions were led in this area by Hungarian lepidopterists for collecting material, field data and information.

In 2007, a trip was planned and organised to visit Kazakhstan by BALÁZS BENEDEK, to explore the insufficiently known late spring and early summer Noctuidae fauna, to collect material for the continuing taxonomic studies and to provide precise distributional data of certain groups, which are under revision. Effort was also made to collect butterflies and skippers for the same purposes, plus to supply material and bionomic data for the project on butterfly photonic structures.

The aim of the paper is to present information about the localities visited during this trip, to record the collecting methods applied and to provide lists of species collected. We present brief remarks on species we regard to be important from faunistic point of view. According to our knowledge the Lepidoptera fauna of Kazakhstan has not yet been monographed. The butterflies of Central Asia are the subject of recent scientific book enterprises (e.g. TOROPOV & ZHDANKO 2006, TSHIKOLOVETS 2005), therefore we believe, that our list of data and our remarks will be considered together as a positive contribution to the knowledge of the Central Asian fauna.

MATERIAL AND METHODS

Day flying Lepidoptera (butterflies, skippers and moths) were collected by traditional singling methods using a butterfly net. Before sunset and at dawn deeper lying places were scanned for lycaenids assembled for the coming night in groups. Moths were sampled at light during night using white sheet illuminated by 125 W HgLi mercury bulb plus five semi-automatic portable light traps with 8 and 20 W blacklight or ultra-violet tubes.

Specimens were arranged in cotton layers with indication to the site after the collecting event still in the field then pinned, set, labelled and inventoried in the HHNM under the entry "2008-60".

Collecting sites are listed as they appeared on the labels in chronological order. A brief entry is given for characterising the place and weather conditions. Subsequently, the material collected is grouped in two categories as Rhopalocera and Heterocera, respectively.

The species are listed according to their relevant families (Rhopalocera) or their noctuid subfamilies (Heterocera). Under the family and subfamily names the taxa are listed in alphabetical order provided by their genus-group names with the indication to the individual size of the sample in parentheses after the double dot mark. The following abbreviations are used: f = female, m = male. Species discussed are marked with an asterisk (*).

LIST OF LOCALITIES WITH FAUNISTIC RECORDS

1. Kazakhstan, Prov. Almaty, 20 km W of Almaty, Zailiskiy Alatau Mts, Ushkanur Plateau, 1850 m, N43°06'; E076°29', 10.VI.2007. – Stream valley on andesite rock with luxuriant altoherbosa vegetation, different kind of bushes and trees along the water course (*Berberis*, *Crataegus*, *Lonicera*, *Salix*).

Rhopalocera: HesperIIDae: *Muschampia tessellum* (HÜBNER, [1803]), 1949: 1 f. Lycaenidae: *Aricia agestis* (DENIS et SCHIFFERMÜLLER, [1775]): 2 f; *Celastrina argiolus* (LINNAEUS, 1758): 2 m; *Cyaniris semiargus* (ROTTEMBURG, 1775): 1 m; *Lycaena alciphron* (ROTTEMBURG, 1775): 1 m; *Scolitantides orion* (PALLAS, 1771): 1 f. Nymphalidae: *Chazara enervata* (STAUDINGER, 1881): 1 f; *Neptis rivularis* (SCOPOLI, 1763): 2 f. Pieridae: *Leptidea sinapis* (LINNAEUS, 1758): 2 f; *Metaporia leucodice* (EVERSMANN, 1843): 1 m, 1 f.

Heterocera: Noctuidae: Apameini: *Resapamea hedeni* (GRAESER, 1888): 1. Cato-calinae: *Drasteria obscurata* (STAUDINGER, 1882): 6. Cuculliinae: **Cucullia asteris* (DENIS et SCHIFFERMÜLLER, [1775]): 1; *Cucullia umbratica* (LINNAEUS, 1758): 2. Hadeninae: *Aneda rivularis* (FABRICIUS, 1775): 1; *Conisania cervina* (EVERSMANN, 1842): 1; *Ctenocera toda arshanica* (ALPHÉRAKY, 1882): 1; *Hadena compta* (DENIS et SCHIFFERMÜLLER, [1775]): 1; *Hadena magnolii* (BOISDUVAL, 1829): 1; *Mythimna comma* (LINNAEUS, 1761): 16. Heliotidinae: *Isochlora viridis* STAUDINGER, 1882: 18. Noctuidae: *Dichagyris ulrici* (CORTI et DRAUDT, 1933): 4; *Eicomorpha antiqua* STAUDINGER, 1888: 8; *Spaelotis ravida* (DENIS et SCHIFFERMÜLLER, [1775]): 2; *Netrocercora quadrangula* (EVERSMANN, 1844): 7. Plusiinae: *Abrostola triplasia* (LINNAEUS, 1759): 1; *Diachrysia chrysis* (LINNAEUS, 1758): 1; *Euchalcia renardi* (EVERSMANN, 1844): 18; *Euchalcia inconspicua* (GRAESER, 1892): 1. Xyleninae: **Eremohadena immunda* (EVERSMANN, 1842): 1.

2. Kazakhstan, Prov. Almaty, 20 km NW of Kapchagai, 650 m, N43°58'; E077°01', 11.VI.2007. – Closed and dry *Artemisia* steppe on rocky ground, *Allium coeruleum* in bloom. Little storm with short rain in the evening.

Rhopalocera: Lycaenidae: *Alpherakya sarta* (ALPHÉRAKY, 1881): 2 m; *Aricia agestis* (DENIS et SCHIFFERMÜLLER, [1775]): 4 m, 5 f; *Athamanthia alexandra* (PÜNGELER, 1901): 2 m, 3 f; *Polyommatus cyane* (EVERSMANN, 1837): 1 m; *Polyommatus icarus* (ROTTEMBURG, 1775): 13 m, 1 f. Papilionidae: *Papilio machaon* LINNAEUS, 1758: 1 f. Pieridae: *Colias erate* (ESPER, [1801]): 1 f. Nymphalidae: *Chazara enervata* (STAUDINGER, 1881): 2 m, 1 f; *Hyponephele lupina* COSTA, [1836]: 3 m, 3 f.

Heterocera: Noctuidae: Apameini: *Leucapamea ophiogramma* (ESPER, [1794]): 1. Cato-calinae: *Autophila cerealis* (STAUDINGER, 1871): 7; *Autophila gracilis* (STAUDINGER, 1874): 2. Cuculliinae: *Cucullia argentina* (FABRICIUS, 1787): 2; *Cucullia santonici*

(HÜBNER, [1809–1813]): 1. Eustrotiinae: *Phyllophila obliterata* (RAMBUR, 1833): 1. Hadeninae: *Hadula dianthii lukhtanovororum* HACKER, 1998: 3. Noctuidae: *Dichagyris clara* (STAUDINGER, 1888): 1; *Dichagyris kongur* VARGA, 1996: 1; *Dichagyris melanuroides* KOZHANCHIKOV, 1930: 1; *Opigena polygona* (DENIS et SCHIFFERMÜLLER, [1775]): 8; *Parexarnis ala* (STAUDINGER, 1881): 19; *Parexarnis obumbrata* (STAUDINGER, 1889): 1; *Parexarnis sollers* (CHRISTOPH, 1877): 1. Plusiinae: *Cornutiplusia circumflexa* (LINNAEUS, 1767): 3. Xyleninae: *Eremohadena immunda* (EVERSMANN, 1842)*: 91; *Rhiza laciniosa* (CHRISTOPH, 1887): 9; **Megahadena megaptera* (BOURSIN, 1970): 3.

3. Kazakhstan, Prov. Almaty, Taukum desert, 10 km W of Usharal, 450 m, N44°12'; E076°47', 12.VI.2007. – Open *Artemisia* steppe on sand dunes at the borders of the Taukum desert and the Ili river valley.

Rhopalocera: Lycaenidae: *Polyommatus icarus* (ROTTEMBURG, 1775): 3 m, 3 f.

Heterocera: Noctuidae: Amphipyriinae: *Chilodes distracta* (EVERSMANN, 1848): 1; *Chortodes fluxa* (HÜBNER, [1808–1809]): 1; *Oria musculosa* (HÜBNER, [1803–1808]): 1; *Apterogenum ypsilon* (DENIS et SCHIFFERMÜLLER, [1775]): 1. Apameini: *Apamea oblonga* (Haworth, 1809): 1; *Resapamea hedeni* (GRAESER, 1888): 1. Catocalinae: *Anumeta denticulata* (STAUDINGER, 1877): 1; *Anumeta fractistrigata* (ALPHÉRAKY, 1882): 1; *Armada clio* (STAUDINGER, 1884): 1; *Armada panaceorum* (MÉNÉTRIÉS, 1849): 1; *Autophila cerealis* (STAUDINGER, 1871): 2; *Autophila gracilis* (STAUDINGER, 1874): 1; *Catocala neonympha* (ESPER, 1805): 1; *Clytie sublunaris* (STAUDINGER, 1874): 2; *Drasteria flexuosa* (MÉNÉTRIÉS, 1847): 2; *Gonospileia munita* (HÜBNER, [1809–1813]): 1; *Lygephila cracca* (DENIS et SCHIFFERMÜLLER, [1775]): 1; *Tarachephia hueberi* (ERSHOV, 1874): 1. Cucullinae: *Cucullia amota* ALPHÉRAKY, 1887: 1; *Cucullia argentina* (FABRICIUS, 1787): 1; **Cucullia sabulosa* STAUDINGER, 1879: 46. Eublemminae: *Eublemma uniformis* (STAUDINGER, 1879): 1. Eustrotiinae: *Phyllophila obliterata* (RAMBUR, 1833): 1. Hadeninae: *Cardepija irrisor* (ERSHOV, 1874): 1; *Ctenoceratoda khorgossi* (ALPHÉRAKY, 1882): 1; *Hadula dianthii lukhtanovororum* HACKER, 1998: 1. Heliiothidinae: *Periphanes feildi* (ERSHOV, 1874): 1. Noctuidae: *Noctua orbona* (HUFNAGEL, 1766): 2; *Opigena polygona* (DENIS et SCHIFFERMÜLLER, [1775]): 30; *Parexarnis obumbrata* (STAUDINGER, 1889): 15; *Spaelotis ravida* (DENIS et SCHIFFERMÜLLER, [1775]): 2; *Yigoga orientis* (ALPHÉRAKY, 1882): 2. Metoponinae: *Aegle subflava* (ERSHOV, 1874): 1. Xyleninae: *Eremohadena immunda* (EVERSMANN, 1842): 21; **Megahadena megaptera* (BOURSIN, 1970): 1.

4. Kazakhstan, Prov. Almaty, Toraygir Mts, near Alasay pass, 1340 m, N43°18'; E078°56', 13.VI.2007. – Dry mountain steppe, rocky swards in a gorge on andesite.

Rhopalocera: Hesperidae: *Muschampia staudingeri* (SPEYER, 1879): 1 m. Lycaenidae: *Aricia agestis* (DENIS et SCHIFFERMÜLLER, [1775]): 3 m, 1 f; **Athamanthia dimorpha* (STAUDINGER, 1881): 1 m; *Alpherakya sarta* (ALPHÉRAKY, 1881): 4 m, 3 f; *Polyommatus cyane* (EVERSMANN, 1837): 1 m; *Polyommatus icarus* (ROTTEMBURG, 1775): 13 m, 1 f; *Satyrrium lunulata* (ERSHOFF, 1874): 1 m; *Thersamonia thersamon* (ESPER, [1784]): 1 f. Nymphalidae: *Aglais urticae* (LINNAEUS, 1758): 1 f; *Coenonympha pamphilus* (LINNAEUS, 1758): 1 m; *Hyponephele dysdora* (LEDERER, 1869): 1 m; *Hyponephele kirghisa* (ALPHÉRAKY, 1881): 6 m, 1 f; *Hyponephele lupinus* COSTA, [1836]: 1 m; *Melanargia russiae* (ESPER, [1786]): 4 m, 3 f;

Melitaea didyma (ESPER, [1779]): 1 m; *Satyrus ferula* (FABRICIUS, 1793): 1 m. Pieridae: *Pontia daplidice* (LINNAEUS, 1758): 1 f.

Heterocera: Noctuidae: Acronictinae: *Cryphia miltophaea* (HAMPSON, 1908): 2; *Oederemia lithoplasta* HAMPSON, 1908: 3. Catocalinae: *Autophila cerealis* (STAUDINGER, 1871): 5; *Autophila glebicolor* (ERSHOV, 1874): 1; *Autophila vespertalis* (STAUDINGER, 1901): 2; *Drasteria caucasica* (KOLENATI, 1846): 2; *Drasteria rada* (BOISDUVAL, 1848): 3; *Lygephila lubrica* (FREYER, 1846): 1. Cuculliinae: *Calophasia lunula* (HUFNAGEL, 1766): 7; *Cucullia absinthii* (LINNAEUS, 1761): 1; *Cucullia amota* ALPHÉRAKY, 1887: 1; *Cucullia argentina* (FABRICIUS, 1787): 1; *Cucullia cineracea* FREYER, 1842: 1; *Cucullia duplicata* FREYER, 1842: 2; *Cucullia santonici* (HÜBNER, [1809–1813]): 19; *Cucullia xeranthemi* BOISDUVAL, 1840: 4; *Omphalophana serratula* (STAUDINGER, 1888): 68. Hadeninae: *Ctenoceratoda graeseri* (PÜNGELER, 1898): 1; *Hadena albimacula* (BORKHAUSEN, 1792): 1; *Hadena cailinita* (DRAUDT, 1934): 1; *Hadena perplexa* (DENIS et SCHIFFERMÜLLER, [1775]): 4. Noctuidae: *Dichagyris clara* (STAUDINGER, 1888): 3; *Dichagyris kongur* VARGA, 1996: 6; *Dichagyris improba* (STAUDINGER, 1888): 1; *Dichagyris ulrici* (CORTI et DRAUDT, 1933): 1; *Dichagyris umbrifera* (ALPHÉRAKY, 1882): 1; *Opigena polygona* (DENIS et SCHIFFERMÜLLER, [1775]): 3; *Parexarnis ala* (STAUDINGER, 1881): 1; *Protexarnis confinis* (STAUDINGER, 1881): 1; *Rhyacia similis* (STAUDINGER, 1888): 1; *Yigoga orientis* (ALPHÉRAKY, 1882): 1. Xyleninae: *Eremohadena immunda* (EVERSMANN, 1842): 1; *Rhiza laciniosa* (CHRISTOPH, 1887): 7; *Phoebophilus amoenus* STAUDINGER, 1888: 36.

5. Kazakhstan, Prov. Almaty, Kuluktau Mt., 9 km E of Uzunbulag, 1550 m, N43°10'; E079°09', 14.VI.2007. – At the foothills of the Kuluktau mountain, closed *Artemisia* steppe on rocky ground with extensive *Berberis* shrublands, *Ziziphora* in bloom. Cold night after a storm in the evening with heavy rain.

Rhopalocera: Hesperiiidae: *Spialia orbifer* (HÜBNER, [1823]): 1 m. Lycaenidae: *Maculinea cyaneacula* (EVERSMANN, 1848): 1 m; *Philotes schiffermuelleri* HEMMING, 1929: 1 m. Nymphalidae: *Coenonympha pamphilus* (LINNAEUS, 1758): 2 f; *Hipparchia autonoe* (ESPER, [1783]): 1 m; *Pseudochazara turkestanica* (GRUM-GRSHIMAILO, 1893) 1 f.

Heterocera: Noctuidae: Catocalinae: *Autophila vespertalis* (STAUDINGER, 1901): 1. Cuculliinae: *Cucullia xeranthemi* BOISDUVAL, 1840: 3. Heliothidinae: *Isochlora viridis* STAUDINGER, 1882: 1.

6. Kazakhstan, Prov. Almaty, Elsyn-Buryak Mts, 12 km SE of Karasaz, near Tuz Kol, 2100 m, N43°00'; E079°56', 15.VI.2007. – Isolated mountain range with *Artemisia* steppe, lush vegetation on the hillsides, nearby with a salt lake east to the mountains. Cold night after a heavy hail in the evening.

Rhopalocera: Hesperidae: *Spialia orbifer* (HÜBNER, [1823]): 2 m. Lycaenidae: *Maculinea alcon* (DENIS et SCHIFFERMÜLLER, [1775]): 1 f. Nymphalidae: *Hipparchia autonoe* (ESPER, [1783]): 1 m; *Nymphalis xanthomelas* (DENIS et SCHIFFERMÜLLER, [1775]): 1 f.

Heterocera: Noctuidae: Cuculliinae: *Bryoxena centralasiae* (STAUDINGER, 1882): 1; *Cucullia vicina* BANG-HAAS, 1912. Hadeninae: *Hadena confusa iliensis* HACKER, 1996: 1; *Hadena intensa* (WARREN, 1910): 1; *Hadena strouhali* BOURSIN, 1955: 1; *Polia altaica*

(LEDERER, 1853): 1. Noctuidae: *Ammogrotis suavis* (STAUDINGER, 1896): 1; *Dichagyris ulrici* (CORTI et DRAUDT, 1933): 1.

7. Kazakhstan, Prov. Almaty, 20 km W of Narynkol, Bayankol valley, 2250 m, N42°38'; E079°58', 16.VI.2007. – Subalpine grassland with *Picea* forest. Frosty night.

Rhopalocera: HesperIIDae: *Muschampia tessellum* (HÜBNER, [1803]): 1 f; *Ochlodes faunus* (TURATI, 1905): 1 m, 1 f. Lycaenidae: *Aricia artaxerxes* (FABRICIUS, 1793): 1 f; *Aricia eumedon* (ESPER, [1780]): 6 m, 8 f; *Maculineaalcon* (DENIS et SCHIFFERMÜLLER, [1775]) 6 m, 3 f; *Polyommatus icarus* (ROTTEMBURG, 1775): 2 m. Nymphalidae: *Clossiana hegemone* (STAUDINGER, 1881): 1 m; *Coenonympha sunbeca* (EVERSMANN, 1843): 3 m; *Erebia turanica* ERSCHOFF, 1877: 16 m, 2 f; *Hipparchia autonoe* (ESPER, [1783]): 1 m; *Melitaea cinxia* (LINNAEUS, 1758): 1 m; *Melitaea fergana* STAUDINGER, 1882: 2 m. Pieridae: *Anthocaris cardamines* (LINNAEUS, 1758): 1 m; *Leptidea sinapis* (LINNAEUS, 1758): 2 m, 1 f.

Heterocera: Noctuidae: Cucullinae: *Bryoxena centralasiae* (STAUDINGER, 1882): 1. Hadeninae: *Hadena confusa iliensis* HACKER, 1996: 1; *Hadula furca* (EVERSMANN, 1852): 1. Heliothidinae: *Isochlora viridis* STAUDINGER, 1882: 1. Plusiinae: *Autographa camptosema* (HAMPSON, 1913): 1; *Euchalcia renardi* (EVERSMANN, 1844): 1.

8. Kazakhstan, Prov. Almaty, 9 km N of Kegen Pass, 1700 m, N43°10'; E079°13', 17.VI.2007. – Closed *Artemisia* steppe on rocky ground; butterfly collecting in a small seasonal stream valley. Windstorm started right after sunset and remained for the whole night.

Rhopalocera: HesperIIDae: *Muschampia staudingeri* (SPEYER, 1879): 1 m; *Muschampia tessellum* (HÜBNER, [1803]): 1 m; *Pyrgus sidae*: (ESPER, [1782]): 3 m; *Spialia orbifer* (HÜBNER, [1823]): 3 m. Lycaenidae: *Alpherakya sarta* (ALPHÉRAKY, 1881): 2 m; *Aricia agestis* (DENIS et SCHIFFERMÜLLER, [1775]): 9 m, 1 f; *Aricia eumedon* (ESPER, [1780]): 7 m, 3 f; *Cupido osiris* (MEIGEN, 1829): 4 m, 1 f; *Cyaniris semiargus* (ROTTEMBURG, 1775): 3 m, 1 f; *Glaucopsyche laetifica* (PÜNGELER, 1898): 3 m; *Polyommatus amandus* (SCHNEIDER, 1792): 8 m; *Polyommatus icarus* (ROTTEMBURG, 1775): 3 m. Nymphalidae: *Coenonympha mahometana* ALPHÉRAKY, 1881: 6 m, 1 f; *Hipparchia autonoe* (ESPER, [1783]): 2 m, 1 f; *Melanargia russiae* (ESPER, [1786]): 6 m, 1 f; *Melitaea arduinna* (ESPER, [1784]): 1 m; *Philotes schifferruelleri* HEMMING, 1929: 1 f. Pieridae: *Metaporia leucodice* (EVERSMANN, 1843): 7 m, 2 f; *Pieris daplidice* LINNAEUS, 1758: 1 f.

Heterocera: Noctuidae: Acronictinae: *Oederemia lithoplasta* HAMPSON, 1908: 2. Catocalinae: *Autophila cerealis* (STAUDINGER, 1871): 2; **Autophila lia* (PÜNGELER, 1906): 6; *Autophila gracilis* (STAUDINGER, 1874): 1; *Autophila vespertalis* (STAUDINGER, 1901): 2; *Drasteria obscurata* (STAUDINGER, 1882): 1. Cucullinae: *Cucullia dracunculi* (HÜBNER, [1809–1813]): 1; *Cucullia santonici* (HÜBNER, [1809–1813]): 1; *Cucullia spectabilisoides* POOLE, 1989: 1; *Cucullia tanacetii* (DENIS et SCHIFFERMÜLLER, [1775]): 1; *Cucullia tristis* BOURSIN, 1934: 1; *Cucullia vicina* BANG-HAAS, 1912: 2; *Omphalophana serratula* (STAUDINGER, 1888): 7. Hadeninae: *Hadena albimacula* (BORKHAUSEN, 1792): 1; *Hadena cailinita* (DRAUDT, 1934): 5; *Hadena confusa iliensis* HACKER, 1996: 1; *Hadula dianthii lukhtanovororum* HACKER, 1998: 1. Noctuidae: *Parexarnis ala* (STAUDINGER, 1881): 1; *Protextarnis confinis* (STAUDINGER, 1881): 1; *Spaelotis ravida* (STAUDINGER, 1881): 1; *Spaelotis*

deplorata defuncta (STAUDINGER, 1896): 3; *Netrocerocora quadrangula* (EVERSMANN, 1844): 1; *Opigena polygona* (DENIS et SCHIFFERMÜLLER, [1775]): 2.

9. Kazakhstan, Prov. Almaty, Syugeti Mt., 8 km NW of Kok-Pek, 980 m, N43°29'; E078°37', 18.VI.2007. – Rocky gorge with xerophytic vegetation in a stream valley with willow stands and different bushes (*Berberis*, *Lonicera*) in the bottom.

Rhopalocera: Lycaenidae: *Aricia agestis* (DENIS et SCHIFFERMÜLLER, [1775]): 1 m, 1 f; *Athamanthia alexandra* (PÜNGELER, 1901): 1 f; *Satyrrium lunulata* (ERSCHOFF, 1874): 1 m, 1 f; *Thersamonia thersamon* (ESPER, [1784]): 3 f. Nymphalidae: *Esperarge eversmanni* (EVERSMANN, 1847): 10 m, 6 f; *Hyponephele lupinus* COSTA, [1836]: 2 m; *Melitaea didyma* (ESPER, [1779]): 1 f; *Nymphalis xanthomelas* (DENIS et SCHIFFERMÜLLER, [1775]): 1 m, 2 f.

Heterocera: Noctuidae: Acronictinae: *Cryphia miltophaea* (HAMPSON, 1908): 5. Amphipyridae: *Amphipyra tetra* (FABRICIUS, 1787): 5; *Apterogenum ypsilon* (DENIS et SCHIFFERMÜLLER, [1775]): 1. Catocalinae: *Autophila cerealis* (STAUDINGER, 1871): 1; *Autophila gracilis* (STAUDINGER, 1874): 1; *Catocala nupta* (LINNAEUS, 1767): 1; *Catocala repudiata* STAUDINGER, 1888: 1; *Catocala neglecta* STAUDINGER, 1888: 1; *Drasteria rada* (BOISDUVAL, 1848): 2. Cuculliinae: *Lophoterges centralasiae* (STAUDINGER, 1901): 23; *Oncocnemis exacta* CHRISTOPH, 1887: 2. Hadeninae: *Cardepija irrisor* (ERSHOV, 1874): 1; *Enterpia picturata* (ALPHÉRAKY, 1882): 1. Noctuidae: *Spaelotis ravidata* (DENIS et SCHIFFERMÜLLER, [1775]): 4; *Spaelotis deplorata defuncta* (STAUDINGER, 1896): 10; *Yigoga orientis* (ALPHÉRAKY, 1882): 6; *Chersotis sordescens* (STAUDINGER, 1900): 14; *Dichagyris kongur* VARGA, 1996: 2; *Dichagyris acutijuxta* (BOURSIN, 1957): 12; *Dichagyris ulrici* (CORTI et DRAUDT, 1933): 4; *Euxoa aquilina* (DENIS et SCHIFFERMÜLLER, [1775]): 2; *Opigena polygona* (DENIS et SCHIFFERMÜLLER, [1775]): 5; *Parexarnis obumbrata* (STAUDINGER, 1889): 1; *Parexarnis ala* (STAUDINGER, 1881): 3. Plusiinae: *Diachrysia chrysitis* (LINNAEUS, 1758): 1. Xyleninae: *Eremohadena pexa* (STAUDINGER, 1889): 2; *Rhiza commoda* (STAUDINGER, 1889): 5; **Rhiza gnorima* (PÜNGELER, 1907): 2; *Rhiza laciniosa* (CHRISTOPH, 1887): 7; *Phoebophilus amoenus* STAUDINGER, 1888: 2.

10. Kazakhstan, Prov. Almaty, Boguty Mt., 830 m, N43°34'; E078°39', 19.VI.2007. – Rocky semi-desert with sparse vegetation; windy night.

Rhopalocera: Lycaenidae: *Alpherakya sarta* (ALPHÉRAKY, 1881): 1 m; *Aricia agestis* (DENIS et SCHIFFERMÜLLER, [1775]): 1 f; *Athamanthia alexandra* (PÜNGELER, 1901): 2 m, 10 f; *Polyommatus icarus* (ROTTEMBURG, 1775): 4 m; *Satyrrium lunulata* (ERSCHOFF, 1874): 1 f. Nymphalidae: *Hyponephele dysdora* (LEDERER, 1869): 1 m; *Hyponephele kirghisa* (ALPHÉRAKY, 1881): 1 m; *Hyponephele naricina* (STAUDINGER, 1870): 2 m, 1 f; *Melitaea didyma* (ESPER, [1779]): 1 m, 2 f; *Satyrus ferula* (FABRICIUS, 1793): 1 m, 1 f.

Heterocera: Noctuidae: Amphipyridae: *Amphipyra tetra* (FABRICIUS, 1787): 1. Apameini: **Protarchanara abrupta* (EVERSMANN, 1854): 2; **Sidemia stoliczkana* (MOORE, 1878): 1. Catocalinae: *Autophila gracilis* (STAUDINGER, 1874): 1; *Drasteria rada* (BOISDUVAL, 1848): 2. Metopiniinae: *Aegle subflava* (ERSHOV, 1874): 1. Cuculliinae: **Cucullia asteris* (DENIS et SCHIFFERMÜLLER, [1775]): 1. Hadeninae: *Enterpia picturata* (ALPHÉRAKY, 1882): 1. Noctuidae: *Dichagyris clara* (STAUDINGER, 1888): 2; *Dichagyris kongur* VARGA, 1996: 3; *Dichagyris ulrici* (CORTI et DRAUDT, 1933): 8; *Euxoa aquilina*

(DENIS et SCHIFFERMÜLLER, [1775]): 6; *Spaelotis deplorata defuncta* (STAUDINGER, 1896): 2; *Opigena polygona* (DENIS et SCHIFFERMÜLLER, [1775]): 3; *Parexarnis ala* (STAUDINGER, 1881): 3. Xyleninae: *Phoebophilus amoenus* STAUDINGER, 1888: 2.

REMARKS

Athamanthia dimorpha (ZHDANKO, 1983) – The genus *Athamanthia* (no. 4) is typical to the steppe region of Central Asia, where entomological exploration became very intense in the last decades. As a result of this activity many *Athamanthia* taxa were described. More than a dozen species are distinguished according to the most recent overview (ZHDANKO 2000). The specimen we listed as *A. dimorpha* is small with dark wing upper-side and whitish grey underside without orange scalings in the marginal area. It does not fit any *Athamanthia* diagnosis given by ZHDANKO (2000). Therefore our identification is conditional.

Autophila lia (HÜBNER, [1823]) – This is one of the rarest *Autophila* (no. 8) species in scientific collections. Most specimens originate from the last decade of the nineteenth century (the “Staudinger era”), taken in the classical locality “Aksu” in Chinese Turkestan. It is one of the characteristic noctuid species of the lower parts of the eastern Tien Shan range. The species was recorded in the more western areas of the Tien Shan massif as well. There are records from the Afghan part of the Pamirs (Badakhshan, leg. NAUMANN) and from the Karakorum mountains in Pakistan (leg. HERCZIG, LÁSZLÓ & G. RONKAY).

Cucullia asteris RONKAY & RONKAY, (2009) – According to RONKAY & RONKAY (2009), the populations occurring in the Tien Shan system represent a distinct subspecies named as ssp. *heptapotamica* (nos 1, 10), while the nominotypical *C. asteris* is widespread along the forest steppe belt from Western Europe via the southern Urals to Mongolia and Transbaikalia.

Cucullia sabulosa (no. 3) – According to our best knowledge it is the first known larger series of this poorly known species. Most of the records are based on single or few specimens collected in the South Ural region or in the western part of Kazakhstan (Malye Barsuky Desert). It flies sympatrically and syntopically with the sister species *Cucullia balsamitae*. Both species can be observed in the same night, and they appear to be characteristic of the sand dunes covered with relatively rich vegetation. Their behaviour is identical.

Eremohadena immunda (nos 1, 2, 3, 4) – A very long series was collected at Kapchagai. Most of the specimens were caught by walking with head torch and butterfly net, not on the illuminated sheet or in the portable light-traps. The moths were feeding on the flowers of *Allium coeruleum*. Just after emerging, the individuals feed intensively and then they start to aestivate. They appear again in September and early October, when vagrant specimens can be found often far from their original habitats, migrating westwards sometimes as far as to north-eastern Europe and, very rarely, to the Carpathians (RÁKOSY 1996).

Megahadena megaptera (no. 3) – A very rare species, it is found always sporadically and only very few records are known. All specimens observed during this trip were sitting a few meters away from the portable light traps. This kind of behaviour, avoiding strong light and hiding in shade at the border of the illuminated area, is characteristic for most *Pseudohadena* sensu lato species.

Protarchanara abrupta (no. 10) – A relatively widespread but local species, its range extends from the southern Russian steppes to Mongolia. It occurs in the steppe and semi-desert belts, in the vicinities of temporary lakes and water sources. An externally highly variable taxon, the different colour forms were described three times as distinct species (*abrupta* EVERS-MANN, 1854, *contumax* PÜNGELER, 1902 and *johni* PÜNGELER, 1914).

Rhiza gnorima (no. 9) – Relatively widespread but sporadically occurring species, its range extends from Armenia to Western Mongolia. The known populations are treated as different subspecies (RONKAY & VARGA 1989). The moth always occurs in small numbers, usually one or two individuals per night in steep rocky gorges or slopes of the driest mountains surrounded by arid areas.

Sidemia stoliczkana (no. 10) – This species is typical to Himalayan montane steppe regions. It occurs sporadically in more northern areas such as the Sayan Mts and the eastern Kazakh steppes in Central Asia. This new record represents the westernmost known locality of the species.

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