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## **A List of Sphingidae (Lepidoptera) of Georgia and neighbouring countries with special attention to material from the Simon JANASHIA Museum of Georgia**

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### **Abstract**

30 species of the Sphingidae are recorded here from the territory of Georgia and neighbouring countries. Short bionomics data are given for all species. Distributional maps are given for all species.

### **Zusammenfassung**

30 Sphingidae-Arten werden hier aus dem Staatsgebiet von Georgien und benachbarten Ländern gemeldet. Kurze Angaben zur Bionomie werden für alle Arten gemacht. Verbreitungskarten werden ebenfalls für alle Arten beigegeben.

## Introduction

The article continues the series of publications started in 2007 (DIDMANIDZE & YAKOVLEV, 2007; ZOLOTUHIN & DIDMANIDZE, 2009; ZOLOTUHIN, DIDMANIDZE & PETROV, 2011) and has as its aim to compile the available information on the distribution of some families of so-called Bombyces and Sphingines in Georgia and adjoining areas of Transcaucasus. This article is devoted to Sphingidae.

Available literature analysis was already given by DIDMANIDZE & YAKOVLEV, 2007. It should be noted here that some works were devoted especially to the study of the families listed in Georgia and Transcaucasus. The start for the investigations was made by F. A. KOLENATI (1846) and Great Duke Nikolay M. ROMANOV (ROMANOFF, 1884, 1885). They were continued in the 20th Century by MILJANOVSKY (1957-1971), DIDMANIDZE (1969-2005), and DIDMANIDZE & SIKHARULIDZE (1974). We can find some notes on the species collected in Georgia in the work of WOJTUSJAK & NIESIOŁOWSKI (1947). Most useful works on Transcaucasus were published for Armenia by GEVORKJAN (1986) and MIRZOJAN (1977); for Azerbaijan, by EFFENDI (1968).

Since that time, more material became available for study from Russian collections and especially from the Simon JANASHIA Museum of Georgia.

At present, 30 species of the Sphingidae are known from the region under consideration and it is highly probable that the specific composition is completely known.

The main part of the material studied is kept in the collection of Simon JANASHIA National Museum of Georgia (Tbilisi – given in the text as GNMT), but also in the Zoological Institute of Russian Academy of Science (St. Petersburg) (ZISP) and Zoological Museum of Kiev State University. Some specimens are known from other museums, e.g. Zoologisches Forschungsinstitut und Museum A. Koenig, Bonn, Germany (ZFMK). For some rare taxa the place of storing is listed in protologue; TL means there “type locality”.

Distributional maps are given for all species known from the Caucasus, not only Georgia.

## Annotated check-list

*Acherontia atropos* (LINNAEUS, 1758)

*Agrius convolvuli* (LINNAEUS, 1758)

*Sphinx ligustri* LINNAEUS, 1758

*Hyloicus pinastri* (LINNAEUS, 1758)

*Smerinthus ocellatus* (LINNAEUS, 1758)

*Smerinthus kindermannii* LEDERER, 1852

*Mimas tiliae* (LINNAEUS, 1758)

*Akbesia davidi* (OBERTHÜR, 1884)

*Marumba quercus* ([DENIS & SCHIFFERMÜLLER], 1775)

*Laothoe populeti* (BIENERT, 1870)

*Daphnis nerii* (LINNAEUS, 1758)  
*Neopterodonta gorgoniades* (HÜBNER, [1819]) 1916  
*Proserpinus proserpina* (PALLAS, 1772)  
*Theretra alecto* (LINNAEUS, 1758)  
*Hippotion celerio* (LINNAEUS, 1758)  
*Hyles euphorbiae* (LINNAEUS, 1758)  
*Hyles gallii* (ROTTEMBERG, 1775)  
*Hyles hippophaes* (ESPER, [1793])  
*Hyles livornica* (ESPER, [1779])  
*Hyles nicaea* (PRÜNNER, 1798)  
*Hyles vespertilio* (ESPER, [1780])  
*Hyles zygophylli* (OCHSENHEIMER, 1808)  
*Rethera komarovi* (CHRISTOPH, 1885)  
*Deilephila elpenor* (LINNAEUS, 1758)  
*Choerocampa porcellus* (LINNAEUS, 1758)  
*Choerocampa suellus* (STAUDINGER, 1878)  
*Macroglossum stellatarum* (LINNAEUS, 1758)  
*Hemaris fuciformis* (LINNAEUS, 1758)  
*Hemaris tityus* (LINNAEUS, 1758)  
*Hemaris croatica* (ESPER, [1800])

## SPHINGIDAE

### SPHINGINAE

#### ***Acherontia* LASPEYRES, 1809**

Jena allg. Lit. -Ztg 4: (240): 100.

Type-species: *Sphinx atropos* LINNAEUS, Syst. Nat. (Edn 10) 1: 490, by original designation.

#### ***Acherontia atropos* (LINNAEUS, 1758)**

*Phalaena Sphinx atropos* LINNAEUS, Syst. Nat. (Edn 10) 1: 490. TL: "Habitat in Europa; Aegypti...".

**References:** ROMANOFF, 1884: 69-73; RADDE, 1899: 422; MILJANOVSKY, 1964: 116-120 (*Manduca*); Affendi, 1967: 51; MIRZOJAN & ARUTUNJAN, 1975: 165; MIRZOJAN, 1977: 253; MIRZOJAN & BATIASHVILI, 1982: 88; DIDMANIDZE, 1973: 99; 1976a: 163; 1976b: 300; 1978: 76; 1981: 149; 2005: 14-27; DIDMANIDZE, KVAVADZE, 2006: 103 (*Manduca*); DIDMANIDZE, SUPATASHVILI, GOGINASHVILI, 2010: 35 (*Manduca*); GEVORKJAN, 1986: 685 (*Acherontia (Manduca)*).

**Comments.** This species is known from lowland to mid altitudes and is on the wings from late May to November, is a migrant but successfully hibernates on the lower elevations. In Georgia, the caterpillars were found on *Philadelphus*, *Lycium*, *Datura*, *Zygophyllum*, *Fraxinus*, *Solanum melongena*, *S. tuberosum*, *Lycopersicum* (ROMANOFF, 1884; DIDMANIDZE, 1978). In Abkhazia the caterpillars were collected from *Solanum tuberosum*, *Philadelphus*, *Liguster*, *Datura*, *Belladonna*, *Pogostemon cablin*, *Orthosiphon stamineus* and *Hyoscyamus* (MILJANOVSKY, 1964).

**Material: Russia (Daghestan):** 1♂, Ekaterinoslav, 3.VI. 1900, G. GAMAZOV leg.; **Georgia:** ♂, Zugdidi, outsk. Dzhagir, 1.IX. 1917, N. KORJAKIN leg.; 1♂, Mayakovskij, ent. Sairme, forest, 22.VII. 1981, E. DIDMANIDZE leg.; 1♂, Adzharia, Batum, 1.VIII. 1907, ROMANOV coll.; 1♀, Adjara, Kintrishi Reserve, m. Tzvermaghala, 28.VIII. 1970, E. DIDMANIDZE leg.; 3 ♂♂, 2♀♀, Borshom, 26.V. 1899, ROMANOV coll.; 1♂, Borshom, Vinogradov-Nikitin leg.; 1♂, Tiflis, ROMANOV coll.; 1♂, Karajazy prov., Tiflis, VII. 1916, J. PRINZ leg.; 1♂, 1♀, Lagodechi, 22. X. 1910, MLOKOSSEVICZ leg.; 1♂, Lagodekhi Nature Reserve, 21.VIII. 1958, PRK-4, E. DIDMANIDZE leg. (all GNMT).

### ***Agrius HÜBNER, [1819] 1816***

Verz. bekannter Schmett.: 140.

Type-species: *Sphinx cingulata* FABRICIUS, 1775, Syst. Ent.: 545, by subsequent designation by TUTT, 1902, Nat. Hist. Br. Lepid. 3: 355.

### ***Agrius convolvuli* (LINNAEUS, 1758)**

*Phalaena Sphinx convolvuli* LINNAEUS, Syst. Nat. (Edn 10) 1: 490. TL: originally not given.

**References:** ROMANOFF, 1884: 69-73; RADDE, 1899: 422; MILJANOVSKY, 1964: 118 (*Herse*); EFFENDI, 1967: 54 (*Herse*); MIRZOJAN & ARUTUNJAN, 1975: 165 (*Herse*); DIDMANIDZE, 1973: 100 (*Herse*); 1974: 215 (*Herse*); 1976a: 299-302; 1978: 76 (*Herse (Protoparse)*); 1981: 149; DIDMANIDZE, SIKHARULIDZE, 1974: 215; GEVORKJAN, 1986: 685 (*Herse (Protoparse)*); POSPELOV & PUKHAEV, 1986: 152.

**Comments.** In spite the species is known from May, it is more typical and sometimes occurs in mass in late summer until November. Caterpillars usually on *Convolvulus arvensis* but sometimes also on *Calystegia*, *Calonyction* and *Ipomoea batatas* in Abkhazia (MILJANOVSKY, 1964: 118) which can be very strongly damaged; is a serious pest of *Orthosiphon stramineus* (Lamiaceae) in Kobuleti.

**Material: Russia (Ciscaucasus):** 1♂, Mineralnye Vody, VI-VII. 1907, ROMANOV coll.; **Georgia:** 5 ♂♂, Tsebelda, distr. Suchum, VII. 1913; 2♂♂, VIII. 1913, VORONOV leg.; 1♂, Gagry, 10.VIII. 1946, KASPARIANI leg.; 1♂, Svanetia, Ushguli, 30.VIII. 1980, PRK-4, E. DIDMANIDZE leg.; 1♂, Adjara, Batumi, 20.VIII. 2004, V. PETROV leg.; 4♂♂, Adjara, Kobuleti, VII. 1957, A. WASCHAKIDZE leg.; 2 ♂♂, 1♀, Adjara, Batumi, botanical garden, 10.VIII. 1958, A. WASCHAKIDZE leg.; 1♂, Batumi, Chulo, VIII. 1958, A. WASCHAKIDZE leg.; 2♂, Guria, Lanchkhuti, V. 1943, A. WASCHAKIDZE leg.; 3♂♂, Samtredia, Kolchida lowland, VII. 1975, E. DIDMANIDZE leg.; 1♂, Mayakovskij, ent. Sairme, 22.VII. 1981, E. DIDMANIDZE leg.; 1♂, Kutaisi, 25.VIII. 2001, Ts. BREGVADZE leg.; 1♂, 1♀, Dusheti, Pasanauri, 29.VII. 1952, N. SIKMASHVILI leg.; 1♂, Dusheti, Ksanka river, 12.V. 1914, S. ENIKOPOLOV leg.; 1♂, Lagodekhi Nature Reserve, 28.VIII. 1957; 2♂♂, 4.VII. 1958, 1♂, forest, 450 m, 27.V. 1959, PRK-4, E. DIDMANIDZE leg.; 2♂♂, Vashlovani Nature Reserve, 2.IX. 1984, E. DIDMANIDZE leg.; 2♂♂, Achbulagh (now Tetratskaro), distr. Tiflis, 10.VII.

1927, ROMANOV coll.; 2♂♂, Borschom, 16. 28.VII. 1899; 3♂♂, 1-22.IX. 1899; 1♂, 22. X. 1899; 2♂♂, 29.V; 1.IX. 1900; 4♂♂, 19.VII. 1907; 17, 24.VIII. 1907; 1♂, 17.VI. 1914, ROMANOV coll.; 1♂, Borschom, 8.VIII. 1911, A. WASSILININ leg.; 5♂♂, Tiflis, prov. Karajazy, VI. 1916; 1-2.VIII. 1916, J. PRINZ leg.; 6♂♂, Tiflis, 25.V. 1904; 6.V. 1906; 6. X. 1906; 25.V. 1909; 25.VI. 1909; 1.IX. 1911, ROMANOV coll.; 3♂♂, Caucasus, Tiflis, 3,23.VIII. 1910, E. KOENIG leg.; 7♂♂, Tiflis, Caucasus. 1.VIII. 1914, BOCQUILLON leg.; 2♂♂, Tiflis et vicina, 1915, A. BOCHARNIKOV leg.; 1♂, Tiflis, 10.VII. 1927, Krell leg.; 1♂, Tiflis, 1.X. 1932; 4♂♂, 20, 23.VII. 1933, V. PCHAKADZE leg.; 2♂♂, Tiflis, VIII. 1920; 3♂♂, IX. 1932; 1♂, IX. 1937, A. WASCHAKIDZE leg.; 1♀, Tbilisi, mons Mamadaviti, 13.VII. 1961; 1♂, 1♀, Mtatsminda park, 5. X. 1979, E. DIDMANIDZE leg.; **Armenia**: 1♂, Khosrov Nature Reserve, 9.VI. 1980, PRK-4, E. DIDMANIDZE leg.; **Azerbaijan**: 2♂♂, Elisavethpol, 3.VII. 1911, ROMANOV coll.; 1♂, Turjancha Nature Reserve, 5.VI. 1972, E. DIDMANIDZE leg.; 1♂, Kobystan, 6.VI. 1974; 1♂, 17.VII. 1974, E. DIDMANIDZE leg.; 2♂♂, Nizovaja, Mill steppe, 11.VII. 1980, E. DIDMANIDZE leg. (all GNMT).

### *Sphinx* LINNAEUS, 1758

Syst. Nat. (Edn 10) 1: 489.

Type-species: *Phalaena Sphinx ligustri* LINNAEUS, 1758, Syst. Nat. (Edn 10) 1: 490, by subsequent designation by the International Commission on Zoological Nomenclature, 1957, Opin. Decl.Int. Commn zool. Nom. 11 (Opinion 379): 423.

### *Sphinx ligustri* LINNAEUS, 1758

*Phalaena Sphinx ligustri* LINNAEUS, 1758, Syst. Nat. (Edn 10) 1: 490. TL: originally not stated [Europe].

**References:** ROMANOFF, 1884: 69; RADDE, 1899: 422; MILJANOVSKY, 1964: 116; EFFENDI, 1967: 54; MIRZOJAN & ARUTUNJAN, 1975: 165; MIRZOJAN, 1977: 252; DIDMANIDZE, 1976b: 300; 1978: 77 (*Sphynx*); 1981a: 150; GEVORKJAN, 1986: 685; DIDMANIDZE, KUPATASHVILI & GOGINASHVILI, 2010: 35 (*Hyloicus*).

**Comments.** This species is known from late May to July and more typical for settlements but generally inhabits different biotopes from agrocoenoses to mountain forests. *Syringa*, *Ligustrum*, *Fraxinus* are hostplants in Transcaucasus.

**Material:** **Georgia:** 1♂, Gr. Caucasus, Lentekhi, 28.V. 1978, PRK-4, E. DIDMANIDZE leg.; 1♂, 5♀♀, Borshom, 1-16.VI. 1899; 1♂, 8.VII. 1899, ROMANOV coll.; 1♂, Mtskheta, near Shiomghvime, 3.VI. 1975, E. DIDMANIDZE leg.; 3♂♂, Tiflis, 16.VI. 1904; 23.IV. 1909; 1♂, Tbilisi, 5.VII. 1940, KHACHUTASHVILI leg.; 1♀, Saguremo Reserve, near Tzitzamuri, 17.VII. 1966; 1♂, 14.VII. 1967, E. DIDMANIDZE leg.; 2♂♂, Gr. Caucasus, Khevsureti, Mutso, 8.VII. 1981, E. DIDMANIDZE leg.; 1♂, Lagodekhi Reserve, 20.VII. 1958, E. DIDMANIDZE leg.; **Armenia:** 1♀, Khosrov Reserve, sparse forest, 10.VI. 1973; 2♂♂, 21.VI. 1979, E. DIDMANIDZE leg.; **Azerbaijan:** Kobustan Reserve, 1♂, 17.VI. 1979, DIDMANIDZE leg. (all GNMT).

### *Hyloicus* HÜBNER, [1819]

Verz. bekannter Schmett.: 139.

Type-species: *Sphinx pinastri* LINNAEUS, 1758, Syst. Nat. (Edn 10) 1: 492, by subsequent designation by Grote, 1873, Bull. Buffalo Soc. nat. Sci. 1: 27.

### ***Hyloicus pinastri* (LINNAEUS, 1758)**

*Phalaena Sphinx pinastri* LINNAEUS, 1758, Syst. Nat. (Edn 10) 1: 492. TL: originally not stated [Europe].

*Hyloicus pinastri euxinus* DERZHAVETS, 1979, Entomol. Obozr. 58: 112. TL: "Borshom". Holotype: male (ZISP).

**References:** ROMANOFF, 1884: 69 (*Sphinx pinastri*); RADDE, 1899: 422 (*Sphinx*); EFFENDI, 1967: 54 (*Sphinx*); MIRZOJAN & ARUTUNJAN, 1975: 165; MIRZOJAN, 1977: 252 (*Sphinx*); DIDMANIDZE, 1975: 308 (*Sphinx*), 1981a: 150 (*Sphinx*); DIDMANIDZE, KVAVADZE, 2006: 109; DIDMANIDZE, SUPATASHVILI, GOGINADZE, 2010: 36; DERZHAVETS, 1979: 112.

**Comments.** This species is rare and local through the region and is known from middle altitudes of the mountains in April-May and June-July; apparently rarely producing an occasional second generation in August and September. Conifers seem to be hostplants. The caterpillars recorded solitary on *Pinus nigra* ARNOLD, *P. sosnovskyi* NAKAJ., *P. eldarika* MEDW. (DIDMANIDZE, 2005). DERZHAVETS (1979) described a subspecies characterized by its browner ground colour from Borshom (Fig. 1); the character was not confirmed later. Neither in external characters nor in genitalia the Caucasian specimens differ from European ones and therefore the name *euxinus* DERZHAVETS, 1979 was placed into synonymy with the nominotypical subspecies in the monograph of DANNER et al. (1998).

**Material: Russia (Daghestan):** 1♂, Daghestan, Tlyarat Reserve, 1.700 m, 8.VII. 1980, E. DIDMANIDZE leg.; **Georgia:** 1♂, Svanetia, Kheladura river Valley, env. Tskhumaldy, 30.VI. 1979, E. DIDMANIDZE leg.; 7♂♂, Borjomi, 10, 20.V. 1899; 1♂, 29.VII. 1899; 20.IV. 1900; 19.V. 1901.20.VII. 1907, ROMANOV coll.; 1♂, Borjomi, 1.VII. 1909, VINOGRADOV-NIKITIN leg.; 3♂♂, Abastumani, 19.VI. 1964, E. DIDMANIDZE leg.; 3♂♂, Akhaltsikhe, vill. Merenia, 4.VII. 1976, E. DIDMANIDZE leg.; 1♂, Eldari steppe, 26.IX. 1973, PRK-2, E. DIDMANIDZE leg. (all GNMT).

ROMANOFF (1884) also listed the species from Borshom, Tiflis and Manglisi; MIRZOJAN (1977) cited it from north Armenia and EFFENDI (1967) recorded the species as very common for loc. Giok-giol.

## **SMERINTHINAE**

### ***Smerinthus* LATREILLE, [1802]**

In Sonnini's BUFFON, Hist. nat. gén. Particulière Crustacés Insectes 3: 401.

Type-species: *Phalaena Sphinx ocellata* LINNAEUS, 1758, Syst. Nat. (Edn 10) 1: 489, by subsequent designation by LATREILLE, 1810, Considérations generals sur l'Ordre naturel des Animaux: 440.

### ***Smerinthus ocellatus* (LINNAEUS, 1758)**

*Phalaena Sphinx ocellata* LINNAEUS, 1758, Syst. Nat. (Edn 10) 1: 489. TL: originally not stated [Europe].

**References:** ROMANOFF, 1884: 72; RADDE, 1899: 422; MILJANOVSKY, 1964: 117; EFFENDI, 1967: 53; MIRZOJAN & ARUTUNJAN, 1975: 166; MIRZOJAN, 1977: 253;

DIDMANIDZE, 1973: 100; 1975: 308; 1976b: 301; 1978: 74; 1980: 148; 1981a: 151; DIDMANIDZE & JOBAVA, 1987: 226; DIDMANIDZE, SUPATASHVILI, GOGINASHVILI, 2010: 37; GEVORKJAN, 1986: 685.

**Comments.** Not rare and sometimes common species with flight period May-August, with occasional second generation. Inhabits lowlands and valley forests but also is known from mountain forests. *Malus* (incl. *M. orientalis* Uglitz.), *Pyrus*, *Prunus*, *Salix* (incl. *S. alba* L. and *S. caucasica* Andr.), *Populus* (incl. *P. tremulae* L. and *P. sosnowskyi* GROSSH.) are hostplants in Transcaucasus. MIRZOJAN (1977) recorded the species also from *Elaeagnus* and *Hippophae* but supposedly mistakenly. Sometimes, may be a minor pest.

**Material: Russian Caucasus:** 3♂♂, Daghestan, Distr. Gumbatov, Tljarata, 8.VII. 1980, E. DIDMANIDZE leg.; **Georgia:** 1♂, 1♀, Abkhazeti, Pitsunda-Myussera Reserve, 27. 29.VII. 1982, E. DIDMANIDZE leg.; 2♂♂, 1♀, Adjara, Batumi, VIII. 1916; 1♂, Svaneti, gorge riv. Laskadula, 9.V. 1978, PRK-4, E. DIDMANIDZE leg.; 1♀, Racha, Shovi, distr. Oni, 1.500 m, 10.VII. 1975, E. DIDMANIDZE leg.; 1♂, Adjara, Chkhutuneti, 7.VI. 1969, 1♂, Tzoniari, 8.VI. 1969, E. DIDMANIDZE leg.; 2♂♂, Caucasus, Pshavi, Magharoskari, 17.VII. 1970, E. DIDMANIDZE leg.; 7♂♂, Khevsureti, Barisakho, 15-28.VI. 1970, E. DIDMANIDZE leg.; 2♂♂, Khevsureti, Shatili, 10.VII. 1981; 2♂♂, Mutso, 3.VII. 1981, E. DIDMANIDZE leg.; 4♂♂, 1♀ Tusheti, 1.900-2.000 m, Dochu, 24.VII. 1975, Bochorna, 26.VII. 1975, E. DIDMANIDZE leg.; 1♂, Tbilisi, gorge riv.Vera, 28.VII. 1990, KAKABADZE leg.; 1♂, Mtskheta, near Shio-mghvime, 7.VIII. 1983, E. DIDMANIDZE leg.; 2♂♂, Gardabani forest, distr. Tbilisi, 22.V. 1972, E. Didmanidze leg.; 1♀, Telavi, IV. 1907, ROMANOV coll.; 2♂♂, 2♀♀, Lagodekhi Reserve, 27.VII. 1958; 11.VI. 1959, E. DIDMANIDZE leg.; 1♀, Borzhom, 7.V. 1898; 5♂♂, 2♀♀, 22.V. 1899; 19, 22, 25.VI. 1899; 2♂♂, 22.VII. 1899, ROMANOV coll.; Borzhom, 5♂♂, 5, 15, 20, 25.V. 1901; 1♂, 13.V. 1902; 2♂♂, Akhaltsikhe, 27.VII. 1964, E. DIDMANIDZE leg.; 1♂, Akhaltsikhe, vill. Uraveli, 25.VII. 1964, E. DIDMANIDZE leg.; 1♂, Abastumani, 12.VI. 1964, E. DIDMANIDZE leg. **Armenia:** 1♂, Khosrov Nature Reserve, 7.VII. 1977, E. DIDMANIDZE leg.; **Azerbaijan:** 1♂, Adjikend, Caucasus, A. WASSILININ leg.; 1♂, 1♀, Helenendorf (now Khanlar), 1890, ROMANOV coll.; 1♂, Elizavethpol (now Gandja), 8.V. 1910, A. WASSILININ leg.; 1♂, Nakhichevan, riv. Paragachai, vill. Bilav, 19.VI. 1973, E. DIDMANIDZE leg. (all GNMT).

### ***Smerinthus kindermannii* LEDERER, 1852**

*Smerinthus Kindermannii* LEDERER, 1852, Verh. (Abh.) zool.-botan. Ver. Wien 2: 92. TL: "in Begattung 15 Stunden westlich von Diarbekir, wo das Gebirge bei Argana Maden anfängt".

**References:** ROMANOFF, 1884: 72; RADDE, 1899:422; EFFENDI, 1967: 5; MIRZOJAN & ARUTUNJAN, 1975: 166; MIRZOJAN, 1977: 252; DIDMANIDZE, 1978: 75; 1981a: 151; 2005: 26; DIDMANIDZE, ZURASHVILI, 1981b: 91; DIDMANIDZE, SUPATASHVILI, GOGINASHVILI, 2010: 37; GEVORKJAN, 1986: 685.

**Comments.** In Georgia known from dry light forests of Vashlovani Reserve (The Bear Canyon) from altitudes of 300 m; in other locations of Caucasus the native habitats are flood-land forests of desert and semi-desert rivers. Produces one generation per year, the moths are on the wings in May and June; a very few specimens are known from August in Armenia. Caterpillars feed on *Populus* (*Turanga*) sp. in Vashlovani Reserve and on *Salix caprea* in Nakhichevan and on *Salix alba* L., *Populus pyramidalis* Roz. and *P. tremula* L. in Armenia.

**Material:** Georgia: 1♂, Adjara, Batum, VIII. 1916; Armenia: 1♂, Khosrov Reserve, 7.VII. 1977, E. DIDMANIDZE leg.; Azerbaijan: 1♂, Helenendorf (now Khanlar), 1890, ROMANOV coll.; 1♂, Elisavetpol (now Gandja), 8.V. 1910, A. WASSILININ leg.; 1♂, Nakhichevan, riv. Paraga-chai, vill. Bilav, 19.VI. 1973, E. DIDMANIDZE leg.; 1♂, Arešch, SCHELKOVNIKOV leg. (all GNMT).

ROMANOFF (1884) recorded the species from Lenkoran, Aralykh (du Grand Ararat) and Helenendorf; MIRZOJAN (1977) cited it from Armenia (Razdan, Megri) and EFFENDI (1967) also listed the species from Azerbaijan (Agdash, Garagan, Norashen).

### ***Mimas* HÜBNER, [1819]**

Verz. bekannter Schmett.: 142.

Type-species: *Sphinx tiliae* LINNAEUS, 1758, Syst. Nat. (Edn 10) 1: 489, by monotypy.

### ***Mimas tiliae* (LINNAEUS, 1758)**

*Phalaena Sphinx tiliae* LINNAEUS, 1758, Syst. Nat. (Edn 10) 1: 489. TL: originally not stated [Europe].

**References:** ROMANOFF, 1884: 71 (*Smerinthus tiliae*); RADDE, 1899: 422 (*Smerinthus*); MILJANOVSKY, 1964: 117; EFFENDI, 1967: 53 (*Dilina*); MIRZOJAN & ARUTUNJAN, 1975: 166; MIRZOJAN, 1977: 253; DIDMANIDZE, 1973: 100, 1976b: 300; 1981a: 151; DIDMANIDZE & JOBAVA, 1987: 226; DIDMANIDZE, SUPATASHVILI, GOGINASHVILI, 2010: 36 (*Smerinthus*).

**Comments.** This species is restricted to humid biotopes and is on the wings from late April to August developing up to two generations; rare and very local, more common on forest openings. MILANOVSKY (1964: 117) recorded the species in Abkhasia from *Ulmus* and *Tilia*, rarely also from *Populus*. DIDMANIDZE et al. (2010: 36) listed *Ulmus foliacea* GILIB, *U. scabra* MILL., *Tilia caucasica* Rupr., *T. platyphyllos* SCOP., *Acer campestre* L. and *A. Ibericum* M. B. as hosts. In Azerbaijan, the main hosts are *Tilia* and *Alnus* (EFFENDI, 1967: 53). For SE. Caucasus a very dark form with prominent wing pattern is typical, its status is as yet unclear.

**Material:** Georgia: 1♂, Adjara, vill. Tzoniarisi, 18.VI. 1969, E. DIDMANIDZE leg.; 1♂, Adjara, Shuakhevi, 19.VI. 1969, E. DIDMANIDZE leg.; 1♂, Kobuleti, vill. Chakhati, 26.VI. 1970, E. DIDMANIDZE leg.; 2♂♂, 1♀, Borshom, 2,23,29.V. 1899; ROMANOV coll.; 11♂♂, 4.VII. 1900; 3♂♂, 10-22.IV. 1901; 2♂♂, 21.V. 1902; 26.VI. 1902; 2♂♂, Tiflis. 25.III. 1909; 10.V. 1909, ROMANOV coll.; 1♂, Tbilisi, Khudadovi forest, 1.VIII. 1995, KAKABADZE leg.; 2♂♂, Caucasus, Lagodekhi Reserve, 25.VI. 1958, E. DIDMANIDZE leg. (all GNMT).

The species was also listed by EFFENDI (1967) from Azerbaijan (Shemakha-Pirkuli, Djary and Lenkoran: Aurora) and by MIRZOJAN (1977) from Armenia (Sevan, Razdan).

### ***Marumba* MOORE, [1882] 1882-1883**

Lepid. Ceylon 2: 8.

Type-species: *Smerinthus dyras* WALKER, 1856, List Specimens lepid.Insects Colln Br. Mus. 8: 250, by subsequent designation by KIRBY, 1883, in RYE, Zool. Rec. 19 (Insecta): 183.



***Marumba quercus* ([DENIS & SCHIFFERMÜLLER], 1775)**

*Sphinx Quercus* [DENIS & SCHIFFERMÜLLER], 1775, Ankündigung syst. Werkes Schmett. Wienergegend: 41. Type locality: [Austria] Vienna.

**References:** ROMANOFF, 1884: 71 (*Smerinthus*); RADDE, 1899:422 (*Smerinthus*); MILJANOVSKY, 1964: 117; EFFENDI, 1967:52; MIRZOJAN & ARUTUNJAN, 1975: 166; MIRZOJAN, 1977: 252; MIRZOJAN, BATIASHVILI, 1982: 90; DIDMANIDZE, 1974: 215, 1976b: 301; 1978: 75; 1981a: 150; DIDMANIDZE & ZURASHVILI, 1981b: 91 (*Smerinthus*); DIDMANIDZE, SUPATASHVILI, GOGINASHVILI, 2010: 36.

**Comments.** This large species is local but sometimes not rare in suitable biotopes – xerophytous and light oak forests. It is on the wings from June to early August, according to elevation and develop a single generation. Hostplants are different oaks: *Quercus iberica* STEV., *Q. Imeretina* STEV., *Q. macranthera* F. & M., *Q. longispes* STEV. (DIDMANIDZE & al., 2010).

**Material: Georgia:** 1♂, Less. Caucasus, Guria, mt. Bakhmaro, distr. Chokhatauri, 9.VII. 1963, 2♂♂, 5.VIII. 1963, E. DIDMANIDZE leg.; 1♀, Borshom, 4.V. 1899; 3♂♂, 24, 25, 27.V. 1899; 3♂♂, 1.25.VI. 1899; 1♂, 1♀, 29.V. 1900; 1♀, 19.VI. 1900, ROMANOV coll.; 1♂, Likani, distr. Borshom, 6.VII. 1914, A. WASSILININ leg.; 2♂♂, Tiflis et vicina, VI. 1915, A. BOCHARNIKOV leg.; 6♂♂, Tiflis, prov. Karajaz, 24.VI. 1916, PRINTS leg.; 2♂♂, Saguramo Reserve, 1♂, 23.V. 1969, mt. Zedazeni, 17.VII. 1966; E. DIDMANIDZE leg.; 1♂, Mtskheta, around Shiomghvime, 7.VIII. 1983, E. DIDMANIDZE leg.; 1♂, Mtskheta, near Khekordzi, 3.VII. 2003, V. PETROV leg.; 1♂, Less. Caucasus, Kiketi, distr. Tbilisi, V-VII, 1915, A. BOCHARNIKOV leg.; 1♂, Gr. Caucasus, Pshavi, Shuafkho, 24.VII. 1981, E. DIDMANIDZE leg.; 1♂, Lagodechi, VIII. 1914; 1♂, Lagodekhi Reserve, 19.VII. 1958, E. DIDMANIDZE leg.; **Armenia:** 1♀, Megri, 1.500 m, vill. Gudermis, 26.VI. 1974, E. DIDMANIDZE leg.; 1♂, Khosrov Reserve, 900-1.000 m, 7.VII. 1977, DIDMANIDZE leg.; **Azerbaijan:** 1♂, Ajikend (now Khanlar), 28.VI. 1910, A. WASSILININ leg.; 1♂, Riv. Paraga-chay, canyon, vill. Bilav, 6.VII. 1977, DIDMANIDZE leg.; 2♂♂, Areš, 1906, SCHELKOVNIKOV leg.; 2♂♂, Areš, Caucasus, 1906, A. WASSILININ leg.; 2♂♂, Areš, 26.V; 5.VI. 1912, A. WASSILININ leg.; 1♂, 1♀, Geok-Tapa, distr. Areš, 26, 29.V. 1915; 11♂♂, 1♀, 9-24.VI. 1915; 1♂, 2, 4.VII. 1915, 2♂♂, 1.VIII. 1915, SCHELKOVNIKOV leg. (all GNMT).

***Laothoe FABRICIUS, 1807***

Magazin Insektenk. (Illiger) 6: 287.

Type-species: *Sphinx populi* LINNAEUS, 1758, Sys. Nat. (Edn 10) 1: 489, by subsequent designation by GROTE, 1873, Bull. Buffalo Soc. nat. Sci 1: 24.

***Laothoe populeti* (BIENERT, 1870)**

*Smerinthus populeti* BIENERT, 1870, Lepidopterologische Ergebnisse einer Reise nach Persien in der Jahren 1858 und 1859. Inauguraldissertation, Leipzig. TL: [NE. Iran, Mashad] “in Meschhet und Charlog”.

**References:** ROMANOFF, 1884: 72 (*Smerinthus populi*, also as *Populeti* BIENERT and *Populetorum* STAUDINGER); MILJANOVSKY, 1964: 117 (*Amorpha* (*Smerinthus*)); EFFENDI, 1967:52 (*Laothoe populi* L.); MIRZOJAN & ARUTUNJAN, 1975: 166 (*Amorpha populi*); MIRZOJAN, 1977: 253 (*Amorpha populi* L.); DIDMANIDZE, 1973: 99 (*Amorpha populi*), 1976a: 163 (*Amorpha populi* L.), 1976b: 301 (*Amorpha populi* L.); 1981a: 152

(*Laothoe populi*); DIDMANIDZE, SUPATASHVILI, GOGINASHVILI, 2010: 38 (*Amorpha populi* L.); GEVORKJAN, 1986: 685 (*Laothoe (Amorpha) populi*); POSPELOV & PUKHAEV, 1986: 152 (*Laothoe populi*).

**Comments.** For the long time, the species was confused with the related *Laothoe populi* (LINNAEUS, 1758) and only in DANNER et al. (1998) both taxa were separated and it was shown that the Caucasus was populated exclusively by *L. populeti* BIENERT, 1870. This species can be identified usually without doubts having a reddish anal spot not reaching the medial fasciae in the hind wings. We especially tried to find if there is a sympatric zone between both congeners and so large samples were analyzed from Daghestan, Kuban and Stauropolie Regions due to the assistance of Valery STSCHUROV (Krasnodar) and Igor KOSTJUK (Kiev). However, not a single specimen of *L. populi* LINNAEUS, 1758 was found in this region and therefore it is presumed that the whole Caucasian range is inhabited by *L. populeti* BIENERT, 1870. The species is known from lowland to mid altitudes and is on the wings from late April to September (up to two generations per season), according to elevation. Different *Populus* (*P. pyramidalis* ROZ., *P. tremula* L.) and *Salix* (*S. babilonica* L.) species are hostplants.

**Material: Georgia:** 3♂♂, Gr. Caucasus, Svaneti, Tourist base "Shukhra", 4.VIII. 1970, E. DIDMANIDZE leg.; 1♀, Distr. Lentekhi, vill. Ailama, 22.VI. 1974, E. DIDMANIDZE leg.; 1♂, Svaneti, gorge riv. Dolra, 14.VIII. 1979, E. DIDMANIDZE leg.; 1♂, Racha, Shovi, 1.500 m, 10.VII. 1975, DIDMANIDZE leg.; 1♂, Samegrelo, vill. Salchino, 11.VII. 1962, DIDMANIDZE leg.; 1♂, Samegrelo, Gegechkori (now Martvili), 30.VI. 1962; E. DIDMANIDZE leg.; 3♂♂, Gegechkori, 21, 25, 26.IX. 1962, A. WACHAKIDZE leg.; 1♂, Samegrelo, Chkhorotsku, 1.VI. 1968, E. DIDMANIDZE leg.; 1♂, Adjara, Mtsvane kontskhi, distr. Batumi, 7.V. 1969, E. DIDMANIDZE leg.; 2♀♀, Surami, Distr. Khaschuri, ROMANOV coll.; 2♂♂, Kartli, Gori, gorge riv. Ateni, 25.VI. 1976, E. Didmanidze leg.; 1♀, Tiflis, 2.VIII. 1905, ROMANOV coll.; 1♀, Tiflis, 8.VI. 1908; 1♂, 1910, KOENIG leg.; 1♀, Tiflis, 16.VI. 1912, K. A. SATUNIN leg.; 2♂♂, Tiflis, 1.VIII. 1914, BOSQUILLON leg.; 8♂♂, 1♀, Tiflis et vicina. 1915, BOCHARNIKOV leg.; 1♂, Tbilisi, 2. X. 1969, A. WASCHAKIDZE leg.; 1♀, Tbilisi. 5.VIII. 1970, GAMREKELI leg.; 1♀, Saguramo Reserve, near Tsitsamuri, 17.VII. 1966, E. DIDMANIDZE leg.; 1♀, Mtscheta, prov. Tbilisi, 11.VI. 1914, Tkachukov leg.; 4♂♂, Karajazy, Prov. Tiflis, 7, 20, 28.VIII. 1916, J. PRINTS leg.; 1♂, Tskhneti, distr. Tbilisi, 16.VI. 1977, E. DIDMANIDZE leg.; 1♂, Less. Caucasus, Manglisi, 15.VIII. 1933, ROSTOMBEOV leg.; 1♂, Manglisi, 3.VIII. 1991, E. DIDMANIDZE leg.; 1♂, Borschom, 20.IV. 1899; 4♂, 3, 5, 23, 28.V. 1899; 3♂♂, 5, 17, 18.VI. 1899; 6♂♂, 8, 10, 21, 24, 27.VII. 1899, 1♂, 1♀, 16.VIII. 1899, Borschom, 24.IV. 1900; 31.VII. 1900, ROMANOV coll.; 3♀♀, 15, 20.IV. 1901; 1♂, 1♀, 9, 22.V. 1901, 1♂, 23.V. 1902; 1♂, Licani, prov. Borschom, 18.VII. 1914; 1♂, Borjomi-Kharagauli park, Atskuri, 20.VII. 2005, E. DIDMANIDZE leg.; 1♂, Abastumany, 21.VI. 1964, E. DIDMANIDZE leg.; 2♂♂, Akhaltsikhe, 21.VII. 1969, E. DIDMANIDZE leg.; 1♂, Bediani, distr. Tzalka, 8.VIII. 1966, E. DIDMANIDZE leg.; 1♂, Dmanisi, 23.VII. 1966, 1♂, 25.VII. 1975, E. DIDMANIDZE leg.; 1♂, Gr. Caucasus, Khevsureti, Barisakho, 9.VI. 1939; 5♂♂, Khevsureti, Barisakho, 15,24,25.VI. 1970, E. DIDMANIDZE leg.; 1♂, Lagodechi Preserve, gorge Shromistskali, 22.VII. 1957; 7♂♂, 1♀, forest, 1.600 m, 20, 21, 26.VII. 1958; 2♂♂, mt. Hochalo, Khochalo, 2.200-2.400 m, 18.VII. 1958, 4♂♂, forest, 450-600 m, 20,27.V. 1959, 31.VIII. 1959, E. DIDMANIDZE leg.; **Armenia:** 1♀, Khosrov Reserve, 23.VII. 1977, E. DIDMANIDZE leg.; 1♂, Distr. Agarak, vill. Gudermis, 1500m, 26.V. 1974, E. DIDMANIDZE leg.; 1♂, 1♀, Echmiadzin, Erashaun, 6.V. 1973, 15.VI. 1973, DIDMANIDZE leg.; **Azerbaijan:** 1♀, Lenkoran, prov. Baku, 19.IV. 1905, SEREIDOVICH leg.; 2♂♂, Elisavetpol, vicina, 29.V. 1900; 2♂♂, 2, 18.V. 1910; 3♂♂, 17, 20.V. 1911, WASSILININ leg.; 1♂,

Lenkoran, prov. Baku, 21.VIII. 1912, PASTUCHOV leg.; 1♀, steppe Saliani, lac. Geok-Gol, 8.VI. 1972. E. DIDMANIDZE leg.; 1♂, around lac. Sari-su, 11.IV. 1973, 1♂, Turian-chay Reserve, 23.IV. 1973, DIDMANIDZE leg.; Gosmoljan, 17.V. 1975, DIDMANIDZE leg.; 1♂, Nakhichevan, vill. Areni, 15.VI. 1973, E. DIDMANIDZE leg.; 1♂, Nakhichevan, vill. Bilav, 5.VII. 1977, E. DIDMANIDZE leg.; 1♂, Gosmolian, 17.VI. 1974, E. Didmanidze leg.; 1♂, Shakh -Dag, vill. Loza, 29.VI. 1975, E. DIDMANIDZE leg.; 1♂, Geok-Tapa, Distr. Areš, 27.III. 1915; 9♂♂, 1♀, 1-27.V. 1915; 7♂♂, 6-24.VI. 1915; 10♂♂, 4-25.VII. 1915; 6♂♂, 1.12,13.VIII. 1915; 2♂♂, 23.VII. 1916, SCHELKOVNIKOV leg.; 1♂, Areš, 11.VII. 1902; 1♂, Areš, summer, 1906; 1♂, 7.VII. 1911; 4♂♂, 7,13,17.V. 1915, A. SCHELKOVNIKOV leg.; **Iran:** 2♂♂, Teheran, Leškerek prope, VIII. 1916, BOCQVILLON leg. (all GNMT).

### ***Akbesia* ROTHSCILD & JORDAN, 1903**

Novitates Zoologicae 9: 191.

Type-species: *Smerinthus davidi* OBERTHÜR, 1884, Bull. Soc. ent. Fr. (6) 4: XII.

### ***Akbesia davidi* (OBERTHÜR, 1884)**

*Smerinthus davidi* OBERTHÜR, 1884, Bull. Soc. ent. Fr. (6) 4: XII. TL: [Akbes, Syria].

**References:** NAUMANN, ZOLOTUHIN, 2000: 124.

**Comments.** A single specimen collected in *Pistacia-Quercus* forest is known very far from the main area of the species.

**Material: Georgia:** 1♂, Yorskoe lowhills, Vashlovani NR, 400-600 m, 4.VI 1998, leg. C. NAUMANN (ZFMK, Bonn).

## **MACROGLOSSINAE**

### **Choerocampini**

### ***Daphnis* HÜBNER, [1819] 1816**

Verz. bekannter Schmett.: 134.

Type-species: *Sphinx nerii* LINNAEUS, 1758, Syst. Nat. (Edn 10) 1: 490, by subsequent designation by CURTIS, 1837, Brit. Ent. 14: 626.

### ***Daphnis nerii* (LINNAEUS, 1758)**

*Phalaena Sphinx nerii* LINNAEUS, 1758, Syst. Nat. (Edn 10) 1: 490. TL: originally not stated [Europe/Africa].

**References:** ROMANOFF, 1884: 71 (*Deilephila*); RADDE, 1899: 422 (*Deilephila*); MILJANOVSKY, 1964: 117; EFFENDI, 1967: 53; MIRZOJAN & ARUTUNJAN, 1975: 167; MIRZOJAN, BATIASHVILI, 1982: 89; DIDMANIDZE, 1981a: 152; 2005: 16; DIDMANIDZE, KVAVADZE, 2006: 107 (*Deilephila*); DIDMANIDZE, SUPATASHVILI, GOGINASHVILI, 2010: 38.

**Comments.** Polycyclic species in Caucasus, known from May to December; produces

three generations, completely overlapping. The caterpillars are found mostly on *Nerium oleander*, but also on *Cinchona*, *Hedera*, *Ipomoea batatas* and *Ligustrum vulgaris* (MILJANOVSKY, 1964: 117). For Borzhom, ROMANOFF (1884: 71) noted that they are found only from “*Vinca major* et non sur l’oléandre”.

**Material: Georgia:** 1♂, Abkhasia, Gagry, 1.VII. 1911, GASPARIAN leg.; 1♀, Batum, 25.VIII. 1893, ROMANOV coll.; 2♂♂, Borshom, 28.VII. 1899; 1901, ROMANOV coll.; **Azerbaijan:** 1♂, Elisavetopol (now Gandja), 17.VII. 1911, WASSILININ leg. (all GNMT).

EFFENDI (1967) also recorded the species from Apsheron, Lenkoran, Astara, Kuba, Khudat and Nabran.

### ***Neopterodonta* EITSCHBERGER, 1999**

Atalanta, Würzburg 30: 392.

The objective replacement name for *Pterodonta* AUSTAUT, 1905: 29, nec *Pterodonta* R. L. 1817 (Noctuidae). Type-species: *Proserpinus gorgoniades* HÜBNER [1819] 1816, Verz. bekannter Schmett.: 132, by original designation.

### ***Neopterodonta gorgoniades* (HÜBNER, [1819] 1916)**

*Proserpinus gorgoniades* HÜBNER, [1819] 1916, Verz. bekannter Schmett.: 132. TL: [Russia] Middle Volga. Types: lost.

**References:** ROMANOFF, 1884: 72 (*Pterogon*); RADDE, 1899: 422 (*Pterogon*); EFFENDI, 1967: 57; MIRZOJAN, Batiashvili, 1982: 90 (*Pterogon*); DIDMANIDZE, 1974: 215 (*Pterogon*), 1978: 81 (*Pterogon*); 1981a: 153 (*Pterogon gorgon*); 2005: 27 (*Pterogon*); DIDMANIDZE & ZURASHVILI, 1981b: 92 (*Pterogon*); DIDMANIDZE, KVAVADZE, 2006: 112; GEVORKJAN, 1986: 686 (*Pterogon gorgon* Esp.); POSPELOV & PUKHAEV, 1986: 152 (*Sphingonaepiopsis*).

**Comments.** In Georgia only a single generation per year known, moths in May and June. Typical biotopes – mountain xerophytous slopes; the species is much more common in Southern Caucasus. Caterpillars on different *Galium* species and pupa is the overwintering stage.

**Material: Georgia:** 1♂, Gr. Caucasus, Pshavi, Shuafkho, 28.VI. 1981, E. DIDMANIDZE leg.; 3♂♂, Saguramo Reserve, 24.V. 1969, E. DIDMANIDZE leg. (GNMT); 1♂, Vashlovani Reserve, arid gorge Datvis-khevi, 9.V. 1972, E. DIDMANIDZE leg.; 1♂, Eldari steppe, 12.V. 1972, E. DIDMANIDZE leg.; 3♂♂, Vashlovani Reserve, light forest, 6.V. 1979, E. DIDMANIDZE leg.; **Armenia:** 2♂♂, Khosrov Reserve, 9.VI. 1980, E. DIDMANIDZE leg.; **Azerbaijan:** 2♂♂, 2♀♀, Elisavetpol (now Gandja), 3.V. 1911; 27.VI. 1911, A. WASSILININ leg.; 2♂♂, Turjan-chay Reserve, 6.V. 1972, DIDMANIDZE leg. (all GNMT).

### ***Proserpinus* HÜBNER, [1819] 1916**

Verz. bekannter Schmett.: 132.

Type-species: *Sphinx oenotherae* [DENIS & SCHIFFERMÜLLER], 1775, Ankündigung syst. Werkes Schmett. Wienergegend: 239, by subsequent designation by GROTE, 1873, Bull. Buffalo Soc. nat. Sci 1: 20, a junior subjective synonym of *Sphinx Proserpina* PALLAS, 1772, Spicilegia Zool. quibus novae ... et obscurae anim. Species ... illustrantur 1(9): 26, pl. 2, fig. 7.

***Proserpinus proserpina* (PALLAS, 1772)**

*Sphinx Proserpina* PALLAS, 1772, Spicilegia Zool. quibus novae ... et obscurae anim. Species ... illustrantur 1(9): 26, pl. 2, fig. 7. TL: "In media Germania praefertim circa Francofurtum ad Moenum" [Germany: Frankfurt/Main].

**References:** ROMANOFF, 1884: 72 (*Pterogon proserpina*); RADDE, 1899: 422 (*Pterogon*); MIRZOJAN & Arutunian, 1975: 167; MIRZOJAN, Batiashvili, 1982: 91; DIDMANIDZE, 1976b: 301; 1978: 81; 1981a: 154; 2005: 27; DIDMANIDZE, KVAVADZE, 2006: 111; GEVORKJAN, 1986: 686.

**Comments.** In Georgia the species inhabits foothills and mountain forests of Eastern Caucasus on the altitudes of 300-2.200 m; rare everywhere. The species produces one generation per year and is on the wings in May-June. Caterpillars on *Epilobium*, *Oenothera* and *Lithium*.

**Material: Georgia:** 1♂, Kolkhida Reserve, near Poti, 27.VII. 1980, E. DIDMANIDZE leg.; 1♂, 1♀, Borshom, 26.IV. 1898; 2♂♂, 14, 18.V. 1899; 11♂♂, 1♀, 16-28.IV. 1900, ROMANOV coll.; **Armenia:** 1♀, Erivan, mt. Thacaltu, 7000', 28.V. 1913, A. WASSILININ leg.; **Azerbaijan:** 3♂♂, Nakhichevan, gorge riv. Nakhichevan-chay, mt. Shakhbuz, vill. Arindj, 19.V. 1974, E. DIDMANIDZE leg. (all GNMT).

***Theretra HÜBNER, [1819] 1916***

Verz. bekannter Schmett.: 135.

Type-species: *Sphinx equestris* FABRICIUS, 1793, Syst. Ent. 3 (1): 365, by subsequent designation by KIRBY, 1892, Synonymic Cat. Lepid. Heterocera 1: 659, but cited as *Sphinx nessus* DRURY, 1773.

***Theretra alecto* (LINNAEUS, 1758)**

*Phalaena Sphinx alecto* LINNAEUS, 1758, Syst. Nat. (Edn 10) 1: 492. TL: "Habitat in India".

**References:** ROMANOFF, 1884: 71 (*Deilophila alecto*); RADDE, 1899: 422 (*Deilephila*); EFFENDI, 1967: 56 (as var. *cretica* BSD.); MIRZOJAN, 1977: 254; DIDMANIDZE, 1976a: 302 (as v. *craetica* L.); 1978: 79; 1980: 148, 1981a: 158 (as ssp. *cretica* Bsd.); POSPELOV & PUKHAEV, 1986: 152.

**Comments.** The species is known everywhere in Georgia in lowlands and in lower elevations although more typical for humid biotopes along the coastal line. It is on the wings from late May to August but more common in July and August. *Vitis vinifera* is a host; sometimes it is a pest and strongly damages grape-vine.

**Material: Georgia:** 1♂, Adjara, mt. Tsvermaghala, 23.VII. 1969, E. DIDMANIDZE leg.; 1♂, Tiflis, 15.VII. 1906, ROMANOV coll.; 1♂, Tiflis, 6.VIII. 1914, Bocqvilion leg.; 10♂♂, 2♀, Tiflis et vicina, VI. 1915, D. BOCHARNIKOV leg.; 1♂, Tiflis, IX. 1932, V. PCHAKADZE leg.; 1♂, Tusheti, Iljurt, 23.VII. 1976, 1♂, Farsma, 28.VII. 1976, E. DIDMANIDZE leg.; 2♂♂, Lagodekhi Reserve, 16, 20.VII. 1958, E. DIDMANIDZE leg.; **Armenia:** 1♂, Erevan, Echmjadzin, 7.VII. 1975; **Azerbaijan:** 1♂, Zurnabad, distr. Elisavetpol, 7.VIII. 1905; 1♂, 1♀, Lenkoran, prov. Baku, 24.V. 1907, 25.VI. 1907, PASTUCHOV leg.; 1♂, Ordubad, 17.V. 1916; 1♂, Helenendorf (now Khanlar), 1890, ROMANOV coll.; 1♂, Elisavetpol (now Gandja), 17.VI. 1911, A. WASSILININ leg.; 1♂, Kush, distr. Nukha, 25.VI. 1916; 1♂, Nakhichevan, mt. Arindj, 20.V. 1974, E. DIDMANIDZE leg.; 1♂, Nizovaja, steppe, 11.VII. 1981, E. DIDMANIDZE leg.; 4♂♂, 1♀, Aresch, summer 1906, 2♂♂, Aresch, 13, 17.VII.

1911; 4♂♂, Aresch, Geok-Tapa, 1♂, 27-29.VI. 1915; 4♂♂, 24-27.V. 1915; 1♂, 2-4.VIII. 1915, SCHELKOVNIKOV leg. (GNMT); 3♂♂, Aresch, 28.VII. 1910; 2♂♂, 18.VII. 1911; 2♂, 4.VIII. 1911, 4♂♂, 3♀, 15, 21.V. 1912, WASSILININ leg.; **Turkey:** ♂, Kasikoporan, ROMANOV coll. (all GNMT).

### ***Hippotion* HÜBNER, [1819] 1916**

Verz. bekannter Schmett.: 135.

Type-species: *Sphinx celerio* LINNAEUS, 1758, Syst. Nat. (Edn 10) 1: 491, by subsequent designation by KIRBY, 1892, Synonymic Cat. Lepid. Heterocera 1: 747.

### ***Hippotion celerio* (LINNAEUS, 1758)**

*Phalaena Sphinx celerio* LINNAEUS, 1758, Syst. Nat. (Edn 10) 1: 491. TL: originally not stated [Africa/Europe].

**References:** ROMANOFF, 1884: 71 (*Deilephila*); RADDE, 1899: 422 (*Deilephila*); MILJANOVSKY, 1964: 120; MIRZOJAN & ARUTUNJAN, 1975: 167; MIRZOJAN, 1977: 253 (*Chaerocampa*); MIRZOJAN, BATIASHVILI, 1982: 90; DIDMANIDZE, 1981a: 158 (*Chaerocampa* (= *Hippotion*)); DIDMANIDZE, SUPATASHVILI & GOGINASHVILI, 2010: 39 (*Chaerocampa*).

**Comments.** This strongly migratory tropical species is known only in a very few specimens from whole Caucasus. Except of these three specimens, it is also known from Gagry (MILJANOVSKY, 1964: 120) and Ekhegnadzor (MIRZOJAN, 1977: 253) found in September. Caterpillars were never found in the region.

**Material: Georgia:** 2♂♂, Borshom, IX. 1899, 1901, ROMANOV coll.; 1♂, Borshom, SCHELKOVNIKOV leg. (all GNMT).

### ***Hyles* HÜBNER, [1819] 1916**

Verz. bekannter Schmett.: 137.

Type-species: *Sphinx euphorbiae* LINNAEUS, 1758, Syst. Nat. (Edn 10) 1: 492, by subsequent designation by TUTT, 1902, Nat. Hist. Br. Lepid. 3: 355.

### ***Hyles euphorbiae* (LINNAEUS, 1758)**

*Phalaena Sphinx euphorbiae* LINNAEUS, 1758, Syst. Nat. (Edn 10) 1: 492. TL: originally not stated [Europe].

**References:** ROMANOFF, 1884: 70 (*Deilephila*); RADDE, 1899: 422 (*Deilephila euphorbiae* L. ab. *paralias* Nick.); WOJTUSIAK & NIESIOŁOWSKI, 1947: 64 (*Celerio*); MILJANOVSKY, 1964: 119 (*Celerio*); EFFENDI, 1967: 55 (*Celerio euphorbiae lathyrus*); MIRZOJAN & ARUTUNJAN, 1975: 167 (*Celerio*); DIDMANIDZE, 1975: 308 (*Deilephila*), 1976a: 302 (*Celerio*); 1978: 78 (*Celerio*); 1981a: 154 (*Celerio*); GEVORKJAN, 1986: 686 (*Celerio* (*Deilephila*)); POSPELOV & PUKHAEV, 1986: 152.

**Comments.** This species is known from lowland to mid altitudes and is on the wings from late April to September developing 2-3 generations per season. Caterpillars on different species of *Euphorbia*; it was listed by ROMANOFF (1884) from *Euphorbia girardiana* and by WOJTUSIAK & NIESIOŁOWSKI (1947: 64) from a broad-leaved

*Euphorbia* sp. In mid August not rare. MILJANOVSKY (1964: 116) lists caterpillars from Abkhasia as very common on the south coast.

**Material: Russian Caucasus:** 1♂, Steppe, Ciscaucasia, Karanggaica, 1906; 2♂♂, Dagestan, 1700 m, distr. Gumbatov, vill. Tljarata, 3, 8.VII. 1980, PRK-4, E. DIDMANIDZE leg.; 3♂♂, Daghestan, Giryusi, 30.V. 1912, A. WASSILININ leg.; **Georgia:** 1♂, Adjaria, Chulo, 16.VIII. 1958, DJAMBAZISCHVILI leg.; 1♂, Gr. Caucasus, Mamisoni pass, needles forest, 28.VIII. 1972, E. DIDMANIDZE leg.; 1♂, Racha, Ambrolauri, 14.VIII. 1961, E. DIDMANIDZE leg.; 1♀, Racha, Oni, 19.VII. 1971, E. DIDMANIDZE leg.; 1♂, Racha, Shovi, 1.500 m, 10.VII. 1975, E. DIDMANIDZE leg.; 2♂♂, Sairme, distr. Mayakovsky, 22.VII. 1984, E. DIDMANIDZE leg.; 1♂, Gr. Caucasus, Kazbegi (now Stefantsminda), 1.900 m, 20.VII. 1978, E. DIDMANIDZE leg.; 2♂♂, Khevsureti, Barisakho, 15.VI. 1970, E. DIDMANIDZE leg.; 1♀, Tusheti, Omalo, 8.VI. 1978, E. DIDMANIDZE leg.; 1♂, 1♀, Lagodekhi Reserve, forest, PRK-4, 5.VII. 1958, 1♀, mt. Khochalo, 21.VIII. 1958; 1♂, gorge riv. Shromis-tskali, 450-600 m, 27.V. 1959, E. DIDMANIDZE leg.; 1♀, Tiflis, 23.IV. 1906; 1♂, 1♀, 16.VI. 1907; 5♂♂, 23.IV. 1909, 1♂, 25.V. 1909; 2♂♂, 10, 23.VII. 1909; 3♀♀, Tiflis, 1-6.V. 1906, PRINTS leg.; 1♂, Tiflis, 23.IV. 1909, GRENTZENBERG; 1♀, Tiflis, Caucasus, 22.VI. 1910; 2♂♂, 12, 15.VI. 1911; 3♂♂, 2, 10, 11.VII. 1911, E. KOENIG leg.; 1♂, Tiflis, Caucasus, 3.V. 1913, Ph. ZAITSEV leg.; 6♂♂, Tiflis, Caucasus, 1, 10, 29.VIII. 1914; 1♂, 1.VIII. 1918, N. BOCQUILLON leg.; 1♂, Tiflis, 3.V. 1924, W. ROSTOMBEKOV leg.; 1♂, Tiflis, Caucasus, IX. 1932, V. PCHAKADZE leg.; 3♂♂, Tbilisi, mt. Mamadaviti park, 14.VI. 1959, 10.VII. 1961, mt. Shavnabada, 15.VII. 1959, E. DIDMANIDZE leg.; 13♂♂, Aghbulagh, prov. Tiflis, 10-19.VII. 1927, K. KRELL leg.; 1♂, 1♀, Tskhneti, Distr. Tbilisi, 1200 m, 2.VIII. 1967, E. DIDMANIDZE leg.; 1♂, Saguramo Reserve, 24.V. 1969, E. DIDMANIDZE leg.; 1♀, Gardabani, defended place, distr. Tbilisi, 22.V. 1972, E. DIDMANIDZE leg.; 2♂♂, Mtskheta, Shiomghvime, 23.VII. 1980, IIRK-2, E. DIDMANIDZE leg.; 2♂♂, Less. Caucasus, Kojori, prov. Tiflis, 12.VII. 1908, 16.VI. 1912; 3♂♂, Less. Caucasus, Manglis, prov. Tiflis, 20.VII. 1910; 2♂♂, Manglis, 18.VI. 1930, W. ROSTOMBEKOV leg.; 6♀♀, Borschom, 11, 14, 18.20.V. 1896; 2♀♀, 1.VI. 1899; 2♂♂, 2♀♀, 8, 13, 19.VII. 1899; 2♂♂, 2, 17.VIII. 1899; 1♂, 1.IX. 1899; 1♂, 10.VIII. 1900; 1♂, 7. X. 1900, GRENTZENBERG, 3♂♂, 4, 18, 22.V. 1901, ROMANOV coll.; 1♀, Licani, prov. Boršhom, 18.VII. 1914, WASSILININ leg.; 2♂♂, Abastumani, 14-15.V. 1964, E. DIDMANIDZE leg.; 4♂♂, Akhaltsikhe, 4.VI. 1964, E. DIDMANIDZE leg.; 1♀, Uraveli, distr. Achaltsiche, 25.VII. 1964, E. DIDMANIDZE leg.; 1♂, Balcho, distr. Achalkalaki, 10.VII. 1964, E. DIDMANIDZE leg.; 1♂, 1♀, Chando, distr. Achalkalaki, 14.VII. 1964, E. DIDMANIDZE leg.; 1♂, Vashlovani Reserve, 3.VI. 1974; 1♂, 8.V. 1979, E. DIDMANIDZE leg.; **Armenia:** 5♂♂, Khosrov Reserve, semi-desert, 1.650 m, 13.VI. 1973, PRK-4; 1♂, light-forest, 1.000-1.700 m, 4, 16.V. 1974; 3♂♂, 7.VII. 1977, PRK-2; 2♂♂, 1.000 m, PRK-2, 9.VI. 1980, E. DIDMANIDZE leg.; **Azerbaijan:** 1♂, Ordubad, 20.VIII. 1907, ab. *minima*, E. KOENIG leg.; 1♂, Ajikend, 12.VIII. 1911; 1♂, 10.VIII. 1918; A. WASSILININ leg.; 9♂♂, Elisavetpol, Ganja, 2-21.V. 1910; 1♂, 17.IV. 1911, A. WASSILININ leg.; 2♂♂, 1♀, Elisavetpol et vicina, Caucasus, 1, 27, 29.V. 1910; 5♂♂, 6, 7, 10, 14.VI. 1910; 1♂, 20.VIII. 1910, A. WASSILININ leg.; 1♂, Tschai-kent, prov. Šuša, 12.VIII. 1911; 1♂, lac. Ag-gjol, steppe hills, 8.VI. 1972, E. DIDMANIDZE leg.; 4♂♂, Nakhichevan, gorge riv. Arpa-chai, vill. Bilav, 14, 19.VI. 1973; 1♀, vill. Naservaz, 24.V. 1975, E. DIDMANIDZE leg.; 4♂♂, Gosmolian, 1330 m, 19.VI. 1975, E. DIDMANIDZE leg.; 1♂, Kobustan, semi-desert, 25.VI. 1980, E. DIDMANIDZE leg.; 1♂, Aresch, 26.V. 1912, A. WASSILININ leg.; 1♂, 1♀, Aresch, 2.VII. 1912; 1♂, 13.V. 1915, SCHELKOVNIKOV leg.; 1♀, Aresch, Caucasus. Geok-Tapa, 28.VIII. 1914; 2♂♂, 22.IV. 1915; 5♂♂, 6-27.V. 1915; 1♂, Geok-Tapa, distr. Aresch, 2.VIII. 1915, A. SCHELKOVNIKOV leg.; **Iran:** 1♂, Benarve, Šamsdinan, 10.VI. 1916, exp. URMIANA leg. (all GNMT).

***Hyles gallii* (ROTTEMBERG, 1775)**

*Sphinx Gallii* ROTTEMBERG, 1775, *Naturforscher* 7: 107. TL: [Germany].

**References:** ROMANOFF, 1884: 70 (*Deilephila gallii*); RADDE, 1899: 422 (*Deilephila*); WOJTUSIAK & NIESIOŁOWSKI, 1947: 64 (*Celerio*); MILJANOVSKY, 1964: 120 (*Celerio*); EFFENDI, 1967: 55 (*Celerio*); DIDMANIDZE, 1978: 78 (*Celerio*); 1981a: 155 (*Celerio*).

**Comments.** Mountain species on the Caucasus, recorded by WOJTUSIAK & NIESIOŁOWSKI (1947: 64) by 2.500 m at 11.VIII. *Galium* and *Euphorbia* are hostplants.

**Material:** Surprisingly the species is very rare in the region and no material is at disposal. ROMANOFF (1884) listed it from Borzhom, WOJTUSIAK & NIESIOŁOWSKI (1947: 64) found it over the Bezenghi glacier; MILJANOVSKY (1964: 116) without specification recorded it from Abhasia and DIDMANIDZE (1978) gave it from Adzharia: Shuahevi – Zablan; Kaheti: Kasriszkali (Eldari steppe).

***Hyles hippophaes* (ESPER, [1793])**

*Sphinx hippophaes* ESPER, [1793], Die Schmett. Suppl. (Abschnitt 2): 6, pl. 38, figs 1-3. TL: [Romania] Wallachen, Milkowfluß bei Foxan.

**References:** ROMANOFF, 1884: 70 (*Deilephila hippophaes*); EFFENDI, 1967: 54 (*Celerio hippophaes transcucasica* Gehl.); MIRZOJAN & ARUTUNJAN, 1975: 168 (*Deilephila*); MIRZOJAN, 1977: 253 (*Deilephila*); DIDMANIDZE, 1978: 77 (*Celerio*); 1981a: 156 (*Celerio hippophaes transcucasica* Gehl.); DIDMANIDZE, SUPATASHVILI, GOGINASHVILI, 2010: 39 (*Deilephila*).

**Comments.** A species of arid biotopes, gardens and parks with its hostplants. It is known from lowland to mid altitudes and is on the wings from late May to late August producing 2 generations. DIDMANIDZE et al. (1978, 2010) recorded the species from *Hippophae rhamnoides* and *Elaeagnus angustifolia* L.

**Material: Russian Caucasus:** 1♂, Daghestan, Distr. Gumbatov, vill. Tjarata, 8.VII. 1980, E. DIDMANIDZE leg.; **Georgia:** 1♂, Tiflis, 22.VI. 1909; 1♂, 10.VII. 1909, ROMANOV coll.; 3♂♂, Tiflis et vicina, sommer 1915, BOCHARNIKOV leg.; 1♂, Kojori, distr. Tiflis, 12.VII. 1908, ROMANOV coll.; 3♂♂, Karajazy, prov. Tiflis, 24.VI. 1912; 28.VII. 1916, J. PRINTS leg.; 1♂, Karajazy, prov. Tiflis, 3.VII. 1916, SCHELKOVNIKOV leg.; 3♂♂, Borschom, 8.VII. 1899; 21.VIII. 1899; 10.VII. 1900, ROMANOV coll.; 1♂, Meskheti, Akhaltsikhe, 4.VI. 1964, E. DIDMANIDZE leg. (GNMT); **Armenia:** 2♂♂, Khosrov Reserve, 9.VI. 1973, PRK-4; border 1.500 m, 7.VII. 1974, PRK-4; 3♂♂, arid gorge, 900–1000 m, 7.VII. 1977; 10♂♂, semi-desert, 1.000 m, 9.VI. 1980, PRK- 4, E. DIDMANIDZE leg.; **Azerbaijan:** 1♂, steppe, Shirin-kum, 7.VI. 1972, E. DIDMANIDZE leg.; 2♂♂, Turjan-chai Reserve, 23.IV. 1973, E. DIDMANIDZE leg.; 1♂, Nakhichevan, 9.V. 1974, PRK-4. E. DIDMANIDZE leg.; 1♂, Gosmoljan, 1.330 m, 19.VI. 1975, E. DIDMANIDZE leg.; 2♂♂, Nizovaia steppe, 11.VII. 1980, PRK-2, E. DIDMANIDZE leg.; 1♂, Areš, summer 1906; 1♂, V. 1915, SCHELKOVNIKOV leg.; 3♂♂, Areš, 26.V. 1912, 2, 10.VII. 1912, 3.IX. 1912. WASSILININ leg.; 1♂, Geok-Tapa, distr. Areš, 28.VIII. 1914; 3♂♂, Geok-Tapa, distr. Areš, 13, 27.V. 1915; 4♂♂, 1, 17, 24.VI. 1916, 6♂♂, 4, 25.VII. 1915, SCHELKOVNIKOV leg. (all GNMT).

***Hyles livornica* (ESPER, [1779])**

*Sphinx livornica* ESPER, [1779], Die Schmetterlinge 2: 88. TL: [Italy] Livorno.

**References:** ROMANOFF, 1884: 71 (*Deilephila livornica*); RADDE, 1899: 422



(*Deilephila*); MILJANOVSKY, 1964: 119 (*Celerio*); BABAJAN, 1965; EFFENDI, 1967: 55 (*Celerio lineata livornica*); MIRZOJAN & ARUTUNJAN, 1975: 168 (*Deilephila*); BATIASHVILI, DEKANOIDZE, 1974; MIRZOJAN, 1977: 253 (*Deilephila lineata* F.Var. *livornica* Esp.); DIDMANIDZE, 1973: 100; 1975: 308 (*Deilephila lineata livornica*), 1976a: 163 (*Deilephila*); DIDMANIDZE, 1976b: 302 (*Celerio lineata livornica* Esp.), 1978: 79 (*Celerio lineata* F. ssp. *livornica* Esp.); 1980: 148 (*Celerio*), 981a: 155 (*Celerio lineata livornica*); DIDMANIDZE & ZURASHVILI, 1981b: 91 (*Deilephila*); DIDMANIDZE & JOBAVA, 1987: 226 (*Deilephila*); DIDMANIDZE, SUPATASHVILI & GOGINASHVILI, 2010: 39 (*Deilephila*); GEVORKJAN, 1986: 686 (*Celerio (Deilephila) lineata livornica*); POSPELOV & PUKHAEV, 1986: 152 (*Hyles lineata livornica*).

**Comments.** This is the most common sphinx everywhere in the region from April to September. Different *Euphorbia* and *Polygonum* (also *P. hydropiper*) are hostplants, also often found on *Galium*, *Peucedanum* and rarely on *Hippophae* and *Elaeagnus*. Was reported seriously damaging *Eucommia* and *Vitis vinifera*.

**Material: Georgia:** 1♀, Abkhazeti, Bichvinta Reserve, 27.VII. 1980, E. DIDMANIDZE leg.; 1♀, Adjara, Mtsvane kontskhi, Hortus botanicus, 2.VII. 1969, PRK-4, E. DIDMANIDZE leg.; 1♂, Kintrishi Reserve, mt. Tsvermaghala, 250 m, 3.VII. 1989, E. DIDMANIDZE leg.; 4♂♂, Racha, Oni vill., Mtskalta, 1.800 m, 4.VII. 1975, E. DIDMANIDZE leg.; 1♂, Gr. Caucasus, Mamisonis pass, 28.VIII. 1978, E. DIDMANIDZE leg.; 3♂♂, Kazbegi, 1.800 m, 26.31.VII. 1978, E. DIDMANIDZE leg.; 1♂, 1♀, Gr. Caucasus, Pshavi, vill. Shuapkho, 1.300 m, 22.VI. 1981, E. DIDMANIDZE leg.; 2♂♂, 2♀♀, Gr. Caucasus, Khevsureti, Akhmeta, 560 m, 20.VI. 1978, PRK-4; 1♂, vill. Shatili, 16.IX. 1980; 2♂♂, 6.IX. 1982, PRK-4, E. DIDMANIDZE leg.; 1♂, Gr. Caucasus, Tusheti, vill. Dartlo, 15.VII. 1978, 1♂, Distr. Omalo, 11.VIII. 1988, E. DIDMANIDZE leg.; 2♂♂, Tiflis, 6, 8.V. 1906; 1♂, 19.V. 1907; 2♂♂, 23.IV. 1909; 1♀, 22.VI. 1909; 1♂, 1♀, mt. Mamadavit, 8.VII. 1911; 1♂, Kojori, prov. Tiflis, 27.VII. 1911.; 3♂♂, 2♀♀, Tiflis, 10.VIII. 1914; 1♂, 1♀, vicina, V-VII, 1915, M. BOSQUILLON leg.; 1♂, Karajazy, prov. Tiflis, 20.V. 1916, J. PRINTS leg.; 1♂, Mtskheta, near Shio-mghvime, 25.VII. 1983, PRK-4, E. DIDMANIDZE leg.; 1♂♂, 1♀, Borjom, Caucasus, 1.V. 1900; 29.VI. 1900, BOCHARNIKOV leg.; 2♂♂, Borjom, VII. 1916; 1♂, Gorelovka, distr. Akhalkalaki, 8.IV. 1915; 1♂, Balcho, distr. Akhalkalaki, 10.VII. 1964, E. DIDMANIDZE leg.; 3♂♂, Akhaltsikhe, 3, 4, 5.VI. 1964, E. DIDMANIDZE leg.; 1♂, Uraveli, Distr. Akhaltsikhe, 25.VII. 1964, E. DIDMANIDZE leg.; 2♂♂, Minadze, Distr. Akhaltsikhe, 5.VI. 1964, PRK-4, E. DIDMANIDZE leg.; 1♂, Borjom-Kharagauli National park, near Atskuri, 20.VII. 2005, E. DIDMANIDZE leg.; 1♂, Less. Caucasus, Abastumani, 15.VI. 1964, E. DIDMANIDZE leg.; 1♂, Dmanisi, hill, 10.VIII. 196, E. DIDMANIDZE leg.; 1♂, Lagodekhi, 25.VI. 1937, A. WASHAKIDZE leg.; 2♂♂, Lagodekhi Reserve, 25.VII. 1957, E. DIDMANIDZE leg.; 1♂, Eldari steppe, 18.IV. 1910, WINOGRADOV-NIKITIN leg.; 1♀, Shiraki steppe, 2.V. 1970, E. DIDMANIDZE leg.; 1♀, Vashlovani Reserve, arid gorge Kumuroskhevi, 19.V. 1973, E. DIDMANIDZE leg.; **Armenia:** 1♂, 1♀, Khosrov Reserve, 1.200-1.700 m, 6, 11.V. 1974; E. DIDMANIDZE leg.; 1♀, Khosrov Reserve, Gorovani sendy, 23.V. 1979, PRK-4, E. DIDMANIDZE leg.; **Azerbaijan:** 1♂, Elisavetpol, 12.IV. 1910; 2♂♂, 1♀, vicina, 20.V. 1910; 1♂, 1♀, 20.V. 1911, 19.VI. 1911, A. WASSILININ leg.; 1♂, Elenendorf, IV. 1916; 1♂, Karabakh, Günsel, distr. Šuša, 17.VII. 1914; 2♂♂, Ag-Giol, steppe, 8.VI. 1972, PRK-4, E. DIDMANIDZE leg.; 1♀, Turian-chai Reserve, 5.VI. 1972, E. DIDMANIDZE leg.; 2♂♂, Nakhichevan, vill. Bilav, desert, 9, 18.VI. 1973, PRK-4, E. DIDMANIDZE leg.; 10♂♂, 2♀♀, Kobustan, semi-desert, 17, 25.VI. 1980, PRK-4, E. DIDMANIDZE leg.; 2♂♂, Nizovaja, near Caspian sea, grove forest, 19.VI. 1974, PRK-4, E. DIDMANIDZE leg.; 1♂, 1♀, Talish, Hircani's Reserve, 14, 15.V. 1979, E. DIDMANIDZE leg.; 1♂, Apsheron, 8.VI. 1980, f. *minima*, PRK-2, E. DIDMANIDZE leg.; 4♂♂, Aresch, 15.VI. 1911; 4, 5, 13.VII.

1911, A. WASSILININ leg.; 2♂♂, 2♀♀, Geok-Tapa, Aresch, 7.V. 1915; 27.VI. 1915, A. SCHELKOVNIKOV leg. (all GNMT).

### *Hyles nicaea* (PRUNNER, 1798)

*Sphinx nicaea* PRUNNER, 1798, Lepid. Pedemontana: 86. TL: "Nice en Provence".

**References:** ROMANOFF, 1884: 70 (*Deilephila Nicaea*); EFFENDI, 1967: 55 (*Celerio*); DIDMANIDZE, 1975: 308 (*Deilephila*), 1978: 78 (*Celerio*); 1980, 1981a: 155 (*Celerio*); GEVORKJAN, 1986: 686 (*Celerio (Deilephila) nicaea*).

**Comments.** This species is halophilous and very locally known from dry steppe and rocky slopes with high level of insolation; moths are on the wings from May to July. Caterpillars feed on *Euphorbia*.

**Material: Russian Caucasus:** 1♂, Steppae Karangaicae, Ciscaucasia, 1906; 2♂♂, North Ossetia, Vladikavkas, 8.VII. 1912, S. ENIKOLOPOV leg.; 1♂, Daghestan, Čadakala, distr. Gunib, 6.V. 1909, GALKIN leg.; 1♀, Daghestan, Distr. Gumbatov, vill. Tliarata, 1.700 m, 8.VII. 1980, PRK-4, E. DIDMANIDZE leg.; **Georgia:** 2♂♂, Abkhazia, St. Gagry, abb. *minima*, 31.VII. 1957, 15.VIII. 1957, CHINCHALADZE leg.; 1♂, Adjaria, Kobulety, prope Batum, VI. 1911; 1♂, Adjaria, Batumi, 28.IV. 1916, ROMANOV coll.; 10♂♂, 2♀♀, Adjaria, Batumi, H. Botani, 10.VIII. 1958, A. WASCHAKIDZE leg.; 1♂, Adjara, distr. Shuakhevi, vill. Gogadzeebi, 23.VI. 1969, E. DIDMANIDZE leg.; 1♂, Kintrishi Reserve, mt. Tzvermaghala, 23.VII. 1969, PRK-2, E. DIDMANIDZE leg.; 2♂♂, Zugdidi, 24.V. 1968, PRK-2, E. DIDMANIDZE leg.; 1♂, Kolkhida National park, near Poti, 23.VII. 1980, E. DIDMANIDZE leg.; 3♂, Kolkhida lavian, Khashuri, near Sairme, 20.VI. 1981, 1♂, 22.VII. 1981, E. DIDMANIDZE leg.; 1♂, Svaneti, vill. Mulakhi, 21.VII. 1982, PRK-4, E. DIDMANIDZE leg.; 1♀, Gr. Caucasus, Racha, vill. Mtskalta, 4.VII. 1975, E. DIDMANIDZE leg.; 1♂, Caucasus, Kazbegi, 1800-1900 m, 26.VII. 1978, E. DIDMANIDZE leg.; 1♂, Lagodekhi Reserve, forest, 16.VI. 1968, E. DIDMANIDZE leg.; 1♂, Vashlovani Reserve, Eldari steppe, 2.V. 1970, E. DIDMANIDZE leg.; Tiflis, 23.IV. 1909, 1♂, 1♀, 10.VII. 1909, ROMANOV coll.; 1♂, Tiflis, 1.VIII. 1914, N. BOCQRILLON leg.; 1♀, Tiflis et vicina, V-VII. 1915, BOCHARNIKOV leg.; 1♂, Tbilisi, mt. Mamadavit'i park, 5.VI. 1969, E. DIDMANIDZE leg.; 1♂, Mtskheta, around Shiomghvime, 25.VII. 1983, PRK-4, E. DIDMANIDZE leg.; 1♂, Borschom, 25.VII. 1898, 1♀, 2.V. 1900, ROMANOV coll.; 1♂, Bakuriani, prov. Gori, 5.VII. 1916, V. KOZLOVSKY leg.; 3♂♂, Less. Caucasus, Akhaltsikhe, 4.VI. 1964; 1♂, 16.VII. 1982, E. DIDMANIDZE leg.; 1♂, Uraveli, distr. Achaltsiche, 25.VII. 1964, E. DIDMANIDZE leg.; 1♀, Balcho, Distr. Achalkalaky, 10.VIII. 1964, E. DIDMANIDZE leg.; 2♂♂, Khanckoi, distr. Tzalka, 6.VIII. 1966, E. DIDMANIDZE leg.; 1♂, Gomareti, distr. Dmanisi, 22.VII. 1966, E. DIDMANIDZE leg.; 1♂, Mamulo, distr. Dmanissi, 23.VI. 1966, E. DIDMANIDZE leg.; **Armenia:** 3♂♂, 1♀, Khosrov Reserve, 1650 m, 13, 19.VI. 1973, PRK-4; 1♂♂, sparce forest, 7.VII. 1977, PRK-2; 6♂♂, 1♀, semi-desert, 21, 23.V. 1979; 2♂, canyon 1500 m, 9.VI. 1980, E. DIDMANIDZE leg.; 1♂, Eraskhaun, PRK-4, 5.VI. 1973, E. DIDMANIDZE leg.; **Azerbaijan:** 2♂♂, Elisavetpol et vicina, 10, 29.V. 1910, A. WASSILININ leg.; 1♂, Steppe, prov. Elisavetpol, V. 1911, I. Voronov leg.; 1♂, Kara-gush, prov. Shusha, 8.VI. 1915, P. SVIRIDSKY leg.; 1♂, Nakhichevan, vill. Bilav, 19.V. 1973; 2♂♂, gorge riv. Arpa-chai, 14, 19.VI. 1973, PRK-4, E. DIDMANIDZE leg.; 1♀, Nakhichevan, vill. Arindj, 19.V. 1974, PRK -4, E. DIDMANIDZE leg.; 1♂, Nakhichevan, Julpha, 21.VII. 1974, 3♂, 13.VI. 1980, E. DIDMANIDZE leg.; 1♂, Kobustan, arid canyon, 17.VI. 1974, E. DIDMANIDZE leg.; 9♂♂, 1♀, Gosmolian, 900-1350 m, 17, 19.VI. 1975, E. DIDMANIDZE leg.; 1♂, Nizovaia, steppe, 11.VII. 1980, PRK-2, E. DIDMANIDZE leg.; 1♀, Aresch, 1911; 3♂♂, Geok-Tapa, Caucasus, 6, 7, 8.V. 1915; 1♂, 27.VI. 1915; 1♂, 4.VII. 1915, A. SCHELKOVNIKOV leg. (all GNMT).

***Hyles vespertilio* (ESPER, [1780])**

*Sphinx vespertilio* ESPER, [1780], Die Schmett. 2: 178, pl. 22, fig. 4. TL: [Italy] "Gegend von Verona".

**References:** ROMANOFF, 1884: 70 (*Deilephila*); RADDE, 1899: 422 (*Deilephila*); MILJANOVSKY, 1964: 119 (*Celerio* (*Deilephila*)); EFFENDI, 1967: 54 (*Celerio*); MIRZOJAN & ARUTUNJAN, 1975: 165 (*Celerio*); MIRZOJAN, BATIASHVILI, 1982: 89 (*Celerio*); DIDMANIDZE, 1976b: 302 (*Celerio*); 1981a: 156 (*Celerio*); 2005 : 25 (*Celerio*); DIDMANIDZE, KVAVADZE, 2006: 110 (*Celerio*).

**Comments.** This species develops two generations in coastal zone of Georgia, with flight in April – mid June and again in August-September; and in one generation in mountains, from June to August. *Chamaenerium angustissimum* (after MILJANOVSKY, 1964: 119), *Epilobium* and *Galium* are known host plants. Pupa is the overwintering stage.

**Material: Russian Caucasus:** 2♂♂, Daghestan, Gumbatovo Distr., vill. Tljara, 8.VII. 1970, E. DIDMANIDZE leg.; **Georgia:** 3♂♂, Gr. Caucasus, Svaneti, vill. Mulakhi, 21-23.VII. 1982, E. DIDMANIDZE leg.; 1♂, Gr. Caucasus, Lechkhumi, Distr. Lentekhi, vill. Ailama, gorge Korul-dash, 22.VI. 1974, E. DIDMANIDZE leg.; 1♂, 1♀, Gr. Caucasus, Khevsureti, Barisakho, 15, 24.VI. 1970, E. DIDMANIDZE leg.; 1♂, Gr. Caucasus, Khevi, Kazbegi, 1.900 m, 26.VII. 1978, E. DIDMANIDZE leg.; 1♂, Gr. Caucasus, Phshavi, Magarokari, 17.VII. 1970, E. DIDMANIDZE leg.; 2♂♂, 1♀, Less. Caucasus, Dmanisi, canyon, 10, 23.VII. 1966, E. DIDMANIDZE leg.; 3♂♂, 1♀, Borschom, 5, 21.VII. 1899; 2.VIII. 1899, ROMANOV coll.; 2♂♂, Borschom, 15.VII. 1900; 10.VIII. 1900; 3♂♂, 1♀, 1902; 1♂, 1♀, Mtskheta, near Shiomghvime, 7.VIII. 1983, E. DIDMANIDZE leg.; ♂, 1♂, Mariamjvari Reserve, 24.VII. 1989, E. DIDMANIDZE leg.; Lagodekhi, 28.VIII. 1937, WASCHAKIDZE leg.; 2♂♂, Lagodekhi Reserve, 15.VII. 1957; 28.VIII. 1957, 4♂♂, forest, 5, 21.VIII. 1958, PRK-4, E. DIDMANIDZE leg.; **Armenia:** 1♂, Khosrov Reserve, 1.500 m, 9.VI. 1980, E. DIDMANIDZE leg.; **Azerbaijan:** 5♂♂, 1♀, Mt. Shakh-Dag, 1.440 m, vill. Loza, 28-29.VI. 1975, E. DIDMANIDZE leg.; 1♀, Lenkoran, Talysh, Hirkanian forest Reserve, 22.VII. 1975, PRK-2. E. DIDMANIDZE leg. (all GNMNT).

***Hyles zygophylli* (OCHSENHEIMER, 1808)**

*Sph[inx]. zygophylli* OCHSENHEIMER, 1808, Schmett. Eur. 2: 226. TL: "aus dem südlichen Rußland".

**References:** ROMANOFF, 1884: 70 (*Deilephila*); RADDE, 1899: 422 (*Deilephila*); EFFENDI, 1967: 55 (*Celerio*); DIDMANIDZE, 1978: 77 (*Celerio*); 1981a: 156 (*Celerio*); DIDMANIDZE & ZURTASHVILI, 1981b: 91 (*Smerinthus*).

**Comments.** This arid species is known only from biotopes there its hosts are growth, mostly from clay semideserts and therefore it is restricted to southern Transcaucasus. It develops a single generation with flight period falling on May – mid July. *Zygophyllum fabago* is a hostplant.

**Material: Georgia:** 6♂♂, Tiflis et vicina, VI-VII, 1915, BOCHARNIKOV leg.; 1♂, Karel, Distr. Gori, 12.VII. 1914, GMENYK leg.; **Armenia:** 1♂, Mt. Agh-dag, 5.VI. 1909; 2♂♂, Burulan, prope Ararat, 2.VI. 1911, A. SCHELKOVNIKOV leg.; **Azerbaijan:** 2♂♂, Elisavetpol et vicina, 28.IV. 1910; 17.VI. 1910, A. WASSILININ leg.; 1♂, Peropavlovsk, Mughan steppe, 27.VI. 1917, J. PRINTS leg.; 1♂, Ag-Giol, Mill steppe, 8.VI. 1979, PRK-4, E. DIDMANIDZE leg.; 1♂, Aresch, A. WASSILININ leg.; 2♂♂, Aresch, 3.VI. 1906, SCHELKOVNIKOV leg.; 6♂♂, Geok-Tapa, distr. Aresch, 1, 28.V. 1915; 24.VI. 1915; 13.VIII. 1915, leg. SCHELKOVNIKOV (all GNMT).

### ***Rethera* ROTHSCILD & JORDAN, 1903**

Novit. Zool. 9 (Suppl): 500 (key), 547.

Type-species: *Deilephila komarovi* CHRISTOPH, 1885, in ROMANOFF, Mém. Lépid. 2: 169, pl. 15, figs 2a, 2b, by original designation.

### ***Rethera komarovi* (CHRISTOPH, 1885)**

*Deilephila Komarovi* CHRISTOPH, 1885, in ROMANOFF, Mém. Lépid. 2: 169, pl. 15, figs 2a, 2b. TL: [Turkmenistan] "in der Umgegend von Askhabad, bei Germob". Holotype (by monotypy): male (ZISP).

*Rethera komarovi rjabovi* O. BANG-HAAS, 1935, Entomologische Zeitschrift 48: 184. TL: "Russisch-Armenien, Ordubad, Gebirgszug Sojud 900 m".

**Referencens:** EFFENDI, 1967: 56; DIDMANIDZE, 1975: 308; 1978: 81; 1981a: 153; 2005: 15; DIDMANIDZE, KVAVADZE, 2006: 104, MIRZOJAN & BATIASHVILI, 1982: 91; GEVORKJAN, 1986: 686.

**Comments.** The xerophylous species, in Georgia is found in dry canyons and on dry rocky slopes of mountains and foothills. Produces the only generation per year with moths flying from May to July accordingly the altitude. Caterpillars on *Euphorbia*.

**Material: Georgia:** 2♂♂, Borshom, 4, 15.VI. 1899, ROMANOV coll.; 2♂♂, Borshom, 8, 29.VI. 1900, VINOKUROV leg.; 1♂, Uravely, distr. Achalecyche, 4.VI. 1964, E. DIDMANIDZE leg.; 1♂, 1♀, Lagodekhi Reserve, 26.VII. 1958, E. DIDMANIDZE leg.; 1♂, Vashlovani Reserve, 26.IX. 1973, E. DIDMANIDZE leg.; **Armenia:** Khosrov Reserve, 900-1000 m, 6♂♂, 1♀, 7.VII. 1974; 3♂♂, 9.VI. 1977; 7♂♂, 21, 22, 23.V. 1979; 4♂♂, 9.VI. 1980, E. DIDMANIDZE leg.; **Azerbaijan:** 1♀, Nakhichevan, Ordubad, 17.V. 1916; 1♂, Riv. Arpa-chay, vill. Chananab, 14.VI. 1973, E. DIDMANIDZE leg.; 1♂, Djulfra, mt. Dari-dagh, 950 m, 21.V. 1974, 3♂♂, 1♀, 6-13.VI. 1980, E. DIDMANIDZE leg.; 2♂♂, Arindj, 19.V. 1974, E. DIDMANIDZE leg. (all GNMT).

### ***Deilephila* LASPEYRES, 1809**

Jena allg. Lit.-Ztg 4 (240): 100.

Type-species: *Phalaena Sphinx elpenor* LINNAEUS, 1758, Syst. Nat. (Edn 10) 1: 491, by subsequent designation by CURTIS, 1824, Brit. Ent. 1: 3.

### ***Deilephila elpenor* (LINNAEUS, 1758)**

*Phalaena Sphinx elpenor* LINNAEUS, 1758, Syst. Nat. (Edn 10) 1: 491. TL: originally not stated [Europe].

**References:** ROMANOFF, 1884: 71; RADDE, 1899: 422 (*Deilephila*); MILJANOVSKY, 1964: 120 (*Pergesa (Chaerocampa)*); EFFENDI, 1967: 56 (*Pergesa*); DIDMANIDZE, 1973: 100, 1976b: 302 (*Pergesa*); 1978: 80 (*Deilephila (Pergesa)*); 1981a: 157 (*Pergesa*); DIDMANIDZE & JOBAVA, 1987: 226 (*Chaerocampa*); DIDMANIDZE, SUPATASHVILI & GOGINASHVILI, 2010: 40 (*Pergesa*).

**Comments.** Locally a common species, on the wings from May to early September, according to elevation, more typical not higher as 1.800 m. *Galium*, *Epilobium*, *Vitis* (both *vinifera* L. and *silvestris* GML.), and *Impatiens* are hostplants. Sometimes can damage grape-vine.

**Material: Georgia:** 2♂♂, Gr. Caucasus, gorge Koruldash, Ailama, distr. Lentekhi, 22.VI. 1974, E. DIDMANIDZE leg.; 1♀, Adjara, Mtvane kontskhi, H. Botani, 2.V. 1969; 4♂♂, Chkhutuneti, 500 m, 7.VI. 1969, Gogadzebi, distr. Keda, 18.VI. 1969; 2♀♀, Mt. Tzvermaghala, 200 m, 3.VII. 1969; 1♂, gorge riv. Kintrishi, vill. Barsimeli, 12.VII. 1969, PRK-2, E. DIDMANIDZE leg.; 1♀, Engurhesi, distr. Zugdidi, VIII. 1943, WASCHAKIDZE leg.; 1♂, 1♀, Samegrelo, Gegetshkory, 21, 30.VI. 1962; 3♂♂, Chkhorotsku, 7-9.VI. 1968, PRK-2, E. DIDMANIDZE leg.; 6♂♂, 1♀, Kolkhida Reserve, Poti, 23.VII. 1980, PRK-4, E. DIDMANIDZE leg.; 1♂, Dusheti, distr. Phasanauri, vill. Kaishauri, 29.VII. 1952, N. SIKMASVILI leg.; 1♂, Gr. Caucasus, Khevsureti, Barisakho, 1300-1600 m, 15.VII. 1970; 1♂, Mutso, distr. Barisakho, 1500 m, 8.VII. 1981, PRK-4, E. DIDMANIDZE leg.; 1♂, Lagodekhi Reserve, 28.VIII. 1957, E. DIDMANIDZE leg.; 1♂, Less. Caucasus, Akhaltsikhe, vill. Rustavi, 13.VII. 1973, E. DIDMANIDZE leg.; 3♂♂, 1♀, Borschom, 1, 13, 15.VII. 1899, ROMANOV coll.; 4♂♂, Borschom, 30.VI. 1900; 5, 8, 10.VII. 1900, 2♂♂, Borschom, 1902; 1♂, Karajazy, prov. Tiflis, 19.V. 1916, J. PRINTS; 1♂, Tiflis et vicina, V-VII. 1915, BOCHARNIKOV leg.; **Armenia:** 1♂, 1♀, Gudermis, 1500 m, distr. Megri, 1500 m, 26.V. 1974, E. DIDMANIDZE leg.; **Azerbaijan:** 1♂, Nakhichevan, vill. Bilav, 19.VI. 1973, PRK-4, 1♂, Arindj, gorge riv. Nakhichevan-chay, E. DIDMANIDZE leg.; 1♀, Kobistan, arid canyon, semi-desert, 17.VI. 1974, E. DIDMANIDZE leg.; 2♀♀, Aresch, 10, 17.VI. 1911, A. WASSILININ leg.; 6♂♂, Geok-Tapa, distr. Aresch. 1, 27.V. 1915; 1♂, 27.VI. 1915; 1♂, 2.VII. 1915; 2♂♂, 23, 28.VIII. 1915, SCHELKOVNIKOV leg. (all GNMT).

### ***Choerocampa DUPONCHEL, 1835***

In GODART & DUPONCHEL, Hist. nat. Lepid. Papillons Fr. (Suppl.) 2: 159.

Type-species: *Phalaena Sphinx porcellus* LINNAEUS, 1758, Syst. Nat. (Edn 10) 1: 492, by subsequent designation by DUPONCHEL, [1843] 1849, Dict. Univl Hist. nat. 3: 613.

### ***Choerocampa porcellus (LINNAEUS, 1758)***

*Phalaena Sphinx porcellus* LINNAEUS, 1758, Syst. Nat. (Edn 10) 1: 492. TL: originally not stated [Europe].

**References:** ROMANOFF, 1884: 71 (*Deilephila*); RADDE, 1899: 422 (*Deilephila porcellus* L. var. *suellus* STGR, partim); WOJTUSJAK & NIESIOŁOWSKI, 1947: 64 (*Pergesa*); MILJANOVSKY, 1964: 120 (*Pergesa*); EFFENDI, 1967: 56 (*Eumorpha*); MIRZOJAN & ARUTUNJAN, 1975: 168 (*Deilephila (Pergesa)*); DIDMANIDZE, 1976a: 163 (*Pergesa*); 1976b: 302 (*Eumorpha*); 1978: 80 (*Deilephila*); 1980: 149 (*Deilephila*), 1981a: 157 (*Pergesa*); DIDMANIDZE & ZURTASHVILI, 1981b: 92 (*Metopsilus*); GEVORKJAN, 1986: 686 (*Deilephila (Pergesa)*); POSPELOV & PUKHAEV, 1986: 152 (*Deilephila*). (

**Comments.** This species is rather rare and more typical for lowland and lower altitudes

and is on the wings in June and August developing two generations. *Galium* and *Epilobium* are hostplants.

**Material: Russian Caucasus:** 1♂, Kuba Gebiet, Nord Caucasus, 5. X. 1890, leg. E. KOENIG;  
**Georgia:** 2♂♂, Gr. Caucasus, Racha, pass ad mt. Mamisoni, 28.VIII. 1972, E. DIDMANIDZE leg.; 1♀, Less. Caucasus, Guria, mt. Bakhmaro, 1.700m, 17.VII. 1983, E. DIDMANIDZE leg.; 1♂, Suram, ROMANOV coll.; 1♂, around Kutaisi, 25.VIII. 2001, Ts. BREGADZE leg.; 1♂, Khevsureti, Barisakho, 27.VI. 1970, PRK-4, E. DIDMANIDZE leg.; 3♂♂, Khevsureti, Shatili, 1500 m, 10.VII. 1981, PRK-2, E. DIDMANIDZE leg.; 1♂, Farsma, 8.VII. 1976, E. DIDMANIDZE leg.; 1♂, Borschom, 11.V. 1898, 1♂, 15.VII. 1898; 7♂♂, 2♀♀, 24-30.IV. 1899; 11♂♂, 1♀, 3, 7, 9, 11, 12, 14, 29, 30.V. 1899; 5♂♂, 1♀, 1, 6, 8, 17.VI. 1899; 1♂, 2♀♀, 8, 10, 30.VII. 1899, ROMANOV coll.; 1♂, Borschom, 1901, 2♂♂, 28.IV. 1907; 2♂♂, Abastumany, distr. Achalcyche, 4.VI. 1964, E. DIDMANIDZE leg.; 2♂♂, Less. Caucasus, Akhaltsikhe, 14.VI. 1964, 27.VII. 1964; 2♂♂, Uraveli, distr. Achalcyche, 4,16.VI. 1964, PRK-4, E. DIDMANIDZE leg.; 1♂, Gr. Caucasus, Phshavi, Chargali, 1.300 m, 24.VI. 1981, E. DIDMANIDZE leg.; 1♂, Tiflis et vicina, summer 1915, BOCHARNIKOV leg.; 4♂♂, Tbilisi, mt. Mamadaviti park, 1.VII. 1963, E. DIDMANIDZE leg.; 1♂, 1♀, Less. Caucasus, Meskheti, Akhalcikhe, 4.VIII. 1964, E. DIDMANIDZE leg.; 1♂, Gardabani, coppice forest, distr. Tbilisi, 22.V. 1972, E. DIDMANIDZE leg.; 1♂, Dmanisi, 16.VII. 1966, 1♂, Gomareti, 21.VII. 1966, 1♂, lac. Pantiani, 26.VII. 1966, Tsalka, 4.VIII. 1966, E. DIDMANIDZE leg.; 1♂, Eldari steppe, 6.V. 1979, E. DIDMANIDZE leg.; 1♂, Shiraki steppe, vill. Dedoplistskaro, 2.V. 1970, E. DIDMANIDZE leg.; 1♂, Vashlovani Reserve, 24.V. 1972; 1♂, 2.IX. 1984, E. DIDMANIDZE leg.; **Armenia:** 1♂, Khosrov Reserve, 1000 m, 9.VI. 1980, E. DIDMANIDZE leg.; **Azerbaijan:** 1♂, Turian-chay Reserve, steppe, 2.V. 1970, 1♂, 23.IV. 1974, E. DIDMANIDZE leg.; 1♂, Mear Baki, desert, 16.VII. 1974, E. DIDMANIDZE leg.; 1♂, mt. Shakh-dagh, Loza, 26.VI. 1975; 1♂, Nizovaia, steppe, 11.VII. 1980, E. DIDMANIDZE leg.; 2♂♂, Geok-Tapa, distr. Aresch, 6. 27.V. 1915; 2♂♂, 12, 22.VIII. 1915, SCHELKOVNIKOV leg. (all GNMT).

### ***Choerocampa suellus* (STAUDINGER, 1878)**

*Deil[ephila]. Porcellus* L. var.? *Suellus* STAUDINGER, Horae Soc. ent. Ros. 14: 298. TL: "von Tokat, ... bei Amasia ... im Kerasdere, .... aus Borschom".

**References:** ROMANOFF, 1884: 71 (*Deilephila Porcellus* L. Var. *Suellus* STGR); RADDE, 1899: 422 (*Deilephila porcellus* L. var. *suellus* Stgr.); EFFENDI, 1967: 56 (*Eumorpha*); DIDMANIDZE, 1975: 308 (*Pergesa porcellus suellus*), 1976b: 302 (*Eumorpha*); 1978: 80 (*Deilephila (Eumorpha)*); 1981a: 158 (*Pergesa*); GEVORKJAN, 1986: 686 (*Deilephila (Pergesa)*).

**Comments.** Mountain common species, developing 1-2 generations per a season, with moths being on the wings from May to mid August. Native hosts are not known; moths are often observed sicking on flowering *Lonicera*.

**Material: Russian Caucasus:** 1♂, Vladikavkaz, 6.VIII. 1912, S. K. ENIKOLOPOV leg. (GNMT);  
**Georgia:** 1♀, Less. Caucasus, Adjaria, mt. Tsvergmala, 200 m, 3.VII. 1969, E. DIDMANIDZE leg.; 1♂, Less. Caucasus, Guria, Bakhmaro, 1.700 m, 17.VII. 1983, E. DIDMANIDZE leg.; 1♂, Gr. Caucasus, Kazbegi, 1900 m, 26.VII. 1978, E. DIDMANIDZE leg.; 1♂, Passanauri, distr. Dusheti, 12.VII. 1913, N. K. SATUNIN leg.; 2♂♂, 1♀, Gr. Caucasus, Khevsureti, Shatili, 1.500 m, 10.VII. 1981, 2♂♂, Mutso, 1500 m, 8.VII. 1981, E. DIDMANIDZE leg.; 1♂, 1♀, Gr. Caucasus, Omalo, distr. Akhmeta, 20.VI. 1978, E. DIDMANIDZE leg.; 1♂, Batzara-Babanuri Reserve, forest, 3.VIII. 1990, E. DIDMANIDZE

leg.; 4♂♂, Borschom, 20, 24, 27, 28.IV. 1899; 2♂♂, 6, 7.V. 1899; 3♂♂, 29.V. 1900; 21.VII. 1900; 5.VIII. 1900, 4♂♂, Borschom, 1901; 15-27.IV. 1901; 2♂♂, 2.V. 1901; 1♂, 8.VI. 1901 ROMANOV coll.; 2♂♂, Less. Caucasus, Abastumani, 15.VI. 1964, E. DIDMANIDZE leg.; 1♂, Borjomi, lake Tabatskuri, 1990, forest, 9.VII. 1990, E. DIDMANIDZE leg.; 2♂♂, Akhaltsikhe, forest, 16.VI. 1964, 2♂♂, Uraveli, distr. Achalciche, 4,25.VI. 1964, E. DIDMANIDZE leg.; 1♂, Less. Caucasus, Kikety, distr. Tbilisi, V-VII. 1915, BOCHARNIKOV leg.; 1♂, Tiflis, 29.VII. 1910, ROMANOV coll.; 1♂, Tiflis et vicina, V-VII. 1915, BOCHARNIKOV leg.; 1♂, Tbilisi, Mt. Mamadavit park, 1.VII. 1973, E. DIDMANIDZE leg.; 1♂, Mtskheta, near Shiomghvime, 7.VIII. 1983, E. DIDMANIDZE leg.; 1♂, Bortschalo, gorge riv. Maschavera, VII. 1907, ROMANOV coll.; 1♂, Gomareti, distr. Dmanisi, 22.VII. 1966, E. DIDMANIDZE leg.; 1♂, Vashlovani Reserve, light forest, 24.VI. 1972; 1♂, 8.V. 1979, E. DIDMANIDZE leg.; **Armenia:** 1♂, Erevan, semi-desert, 2.V. 1970, E. DIDMANIDZE leg.; 1♂, Khosrov Reserve, 1000 m, 9.VI. 1980, E. DIDMANIDZE leg.; **Azerbaijan:** 1♀, Elisavetpol, 29.V. 1910, WASSILININ leg.; 2♂♂, 1♀, Turian-chai Reserve, Eldari steppe. 2.VI. 1970, E. DIDMANIDZE leg.; 1♂, Nizovaia, near lake Giok-Gol, 7.VI. 1972, PRK-4, E. DIDMANIDZE leg.; 1♂, 1♀, Nizovaia, Mill steppe, 11.VII. 1980, E. DIDMANIDZE leg.; 2♂♂, Nakhichevan, gorgr riv. Paraga-chay, vill. Bilav, 4.VII. 1977, DIDMANIDZE leg.; 2♂♂, Aresh, 9.IV. 1912; 1♀, Aresch, 5.VI. 1912, A. WASSILININ leg.; 1♂, Aresh, Caucasus, summer 1915, SHELKOVNIKOV leg.; 3♂♂, Geok-Tapa, distr. Aresch, 6, 14.V. 1915; 2♂♂, 20, 29.VI. 1915; 7♂♂, 1♀, 2, 21, 23, 24.VIII. 1915, SHELKOVNIKOV leg.; **Turkey:** 1♂, Artvin, 1896, ROMANOV coll.; **Iran:** 1♂, Persia, Tegheran et vicina, 14.V. 1916, BOCQVILLON leg. (all GNMT).

### ***Macroglossum* SCOPOLI, 1777**

Introd. Hist. nat.: 414.

Type-species *Phalaena Sphinx stellatarum* LINNAEUS, 1758, Syst. Nat. (Edn 10) 1: 493, by monotypy.

### ***Macroglossum stellatarum* (LINNAEUS, 1758)**

*Phalaena Sphinx stellatarum* LINNAEUS, 1758, Syst. Nat. (Edn 10) 1: 493. TL: originally not stated [Europa].

**References:** ROMANOFF, 1884: 72 (*Macroglossa*); RADDE, 1899: 422 (*Macroglossa*); WOJTUSJAK & NIESIOŁOWSKI, 1947: 64; MILJANOVSKY, 1964: 120 (*Macroglossa*); EFFENDI, 1967: 57; MIRZOJAN & ARUTUNJAN, 1975: 168; DIDMANIDZE, 1973: 100, 1974: 215, 1975: 308, 1976b: 301; 1978: 82 (*Macroglossa*); 1980: 149, 1981a: 154; DIDMANIDZE & ZURTASHVILI, 1981b: 92; DIDMANIDZE & JOBAVA, 1987: 226; GEVORKJAN, 1986: 686; POSPELOV & PUKHAEV, 1986: 152.

**Comments.** A common species with high migratory activity. WOJTUSJAK & NIESIOŁOWSKI (1947: 64) recorded it up to 3. 100 m and noted it was in all localities common, especially on higher altitudes. It is on the wings from late April to October and hibernates as a moth. *Rubia* and *Galium* spp. (*Galium aparine* in Armenia) are hostplants. MILJANOVSKY (1947) recorded the species also from *Eucalyptus* and *Laurus nobilis*. Sometimes, it is a pest.

**Material:** **Russian Caucasus:** 1♂, 2♀, Daghestan, Čadacolo, distr. Gunib, 6.V. 1904, GALKIN leg.; 1♂, Khosta, pr. Sochi, 22.VIII. 1906, ROMANOV coll.; 5♂♂, Alania (Ossetia), gorge riv. Ardoni, near. "Tsei", 4.VI. 1977, E. DIDMANIDZE leg.; **Georgia:** 1♂, Mt. Apiancha

near Sukhumi, 31.VII. 1913, Y.VORONOV leg.; 2♂♂, Gagry, 17.VIII. 1946, SIKMASHVILI leg.; 4♂♂, Sukhumi, Kelasuri, 20.VI. 1956, CHINCHALADZE leg.; 2♂♂, Tzageri, pg. Dechviri, 4, 11.VIII. 1960, DZAMBAZASHVILI leg.; 1♂, Samegrelo, Zugdidi, A. 1933, A. WASCHAKIDZE leg.; 1♂, Zugdidi, 26.V. 1968, E. DIDMANIDZE leg.; 2♂♂, Tschawaschi, distr. Tzalenzicha, 24.VI. 1968, E. DIDMANIDZE leg.; 1♂, Less. Caucasus, Gurja, Bachmaro, 15.VII. 1939, THOCHADZE leg.; 1♂, Lanchkhuti, V. 1943, A. WASCHAKIDZE leg.; 1♀, Bakhmaro, mt. Didi-Fafara, 16.VII. 1961, E. DIDMANIDZE leg.; 2♂♂, Adjara, Batumi, H. Botani, 25.VIII. 1958, A. WASCHAKIDZE leg.; 1♂, 1♀, Batumi, Mtvane kontskhi, H. Botani, 2,8.VII. 1969, E. DIDMANIDZE leg.; 2♂♂, Kintrishi Resrve, mt. Kochoria, 22, 25.VIII. 1973, E. DIDMANIDZE leg.; 1♂, Adjameti (prope Kutaisi), VII. 1917, ROMANOV coll.; 8♂♂, Tschinvali, pg. Edischi, VIII. 1933, GUTIEVA leg.; 4♂♂, Gr. Caucasus, Kazbegi, 1.IX. 1982, E. DIDMANIDZE leg.; 2♂♂, Barissacho (Chevsureti), 15.VII. 1939, exp. museum Georgia; 1♂, Tusheti, Tzovata, 2. 200 m, 22.VII. 1976, E. DIDMANIDZE leg.; 1♂, Lagodekhi Reserve, mt. Kochalo, 9.VIII. 1958; 3♂♂, forest, 1.300-1.600 m, 20.IV. 1959; 3♂♂, gorge Shromis-khevi, 27.VI. 1978, E. DIDMANIDZE leg.; 2♂♂, Tiflis, 9.IX. 1910; 15.VIII. 1912, exp. Mus. Cauc.; 1♂, Tiflis, 1913, SATUNIN leg.; 1♂, Tiflis, Caucasus.VI. 1913, Ph. ZAITZEV leg.; 2♂♂, Tiflis et vicina, V-VII. 1915, BOCHARNIKOV leg.; 1♀, Tiflis et vicina, VII. 1925, ROSTOMBEKOV leg.; 1♀, Tiflis, 12.VII. 1931; 7♂, 1♀, VIII, XI. 1932; 1♂, III. 1933, 3♂♂, 12.VII.13. X. 1934; 15.VIII. 1937; 20.V, 3.VII. 1938, WASCHAKIDZE leg.; 6♂♂, Tiflisi, 2, 15.III, 15.V, 23.VII. 1933, V. PHCHAKADZE leg.; 2♂♂, 2♀♀, Tiflis, 5.V. 1937, CHACHUTASCHVILI leg.; 2♂♂, Tbilisi, 15.I. 1958, BUMBIASHVILI leg.; 1♂, Tbilisi, near Agricultural Institut, 10.V. 1965; 1♂, mt. Narikala, 25.VII. 1976, E. DIDMANIDZE leg.; 1♂, Saguramo Reserve, 14.VII. 1969, DIDMANISZE leg.; 1♂, Mzheta, Caucasus, 30.VI. 1912, E. KOENIG leg.; 2♂♂, Mtscheta, prope Tiflis, 11.VII. 1914, N. BOCQVILLON leg.; 1♂, Mtskheta, near Shiomghvime, 7.VII. 1983, E. DIDMANIDZE leg.; 2♂♂, Karajazy, prov. Tiflis, 20.21.V. 1916, I. PRINTS leg.; 1♂, Manglis, prov. Tiflis, VIII. 1918, RIMANSON leg.; 1♂, Stary Manglis, 15.VIII. 1930, L. M. BURDZANADZE leg.; 3♂♂, Telavi, prop. Kachetia, 28.VII. 1907; 1♂, 23.IX. 1907, N.I. FURTSOV leg.; 1♂, 1♀, Vashlovani Reserve, 28.IX. 1972; 8.V. 1979, E. DIDMANIDZE leg.; 1♂, Borjom, 3.IV. 1909, WINOGRADOV-NIKITIN leg.; 2♂, Bakuriani, distr. Gori, 5. 500 m, 13.VIII. 1916, L. D. KOZLOVSKY leg.; 6♂♂, 1♀, Borjom-Kharagauli NP, Atskuri, 20.VII. 2005, E. DIDMANIDZE leg.; 1♂, Sapharlo, silva distr. Dmanissi, 10.VII. 1966, E. DIDMANIDZE leg.; 1♀, Uraveli, distr. Achalkalaki, 4.VI. 1964, E. DIDMANIDZE leg.; 1♂, Adigeni, distr. Achalcyche, 27.VI. 1964, E. DIDMANIDZE leg.; **Armenia:** 1♂, Sardar-Bulagh, dectiv. Ararat, 30.V. 1911, SATUNIN leg.; 1♂, Mt. Djalal-Oghli, Stepanavan, 29.VI. 1914, GETLING leg.; 1♂, Kush-zastava, 20.VI. 1916, GALKIN leg.; **Azerbaijan:** 6♂♂, 3♀, Mughan steppe, prov. Baku, V. 1913, N. KOSTIN leg.; 1♂, Elisavetpol, lake Giok-Giol, 4.VIII. 1913, Getling leg.; 1♂, Kazi-Kend, 12.VIII. 1914; 1♂, Shushinsky uezd, Karagush, 8.VI. 1915, P. SVIRIDENKO leg.; 4♂♂, 1♀, Murzalinskaja steppe, 25.V. 1915, P. SVIRIDENKO leg.; 1♀, Shushinsky uezd, Skobelevka, V. 1916; 2♂♂, Karabakh, Kush, 20.VI. 1916, P. GOLENIAC leg.; 1♀, Nakhichevan, Djulfa, geizer, 6.VII. 1971, 1♂, Nakhichevan, Ordubad, 22.VI. 1973, E. DIDMANIDZE leg.; 2♂♂, Ag-Giol, Mill steppe, 8.VI. 1972, E. DIDMANIDZE leg.; 1♂, Mt. Torgay, 17.VI. 1973, E. DIDMANIDZE leg.; 1♂, Gobustan Reserve, 16.VI. 1976, PRK-4, E. DIDMANIDZE leg.; 3♂♂, 1♀, Geok-Tapa, distr. Aresch, 6, 12, 23, 25.VIII. 1915, SCHELKOVNIKOV leg.; **Turkey:** 1♂, Ani et vicina, Prov. Kars, 16.VII. 1908, R. SCHMIDT leg.; 1♂, Čiĝo, 23.VII. 1937, exp. Museum Georgia; 1♂, Vra Bubnevi, 26.VII. 1946, exp. Museum Georgia; **Iran:** 1♂, Pag.Iersi, distr. Tabasaran, 20.V. 1911, P. GALKIN leg.; 4♂♂, 2♀♀, Persia, Tegheran et vicina, 9, 14.V. 1915, 3♂♂, 4♀♀, 8.VI. 1916, N. BOCQVILLON leg. (all GNMT).



## Dilophonotini

### *Hemaris DALMAN, 1816*

K. svenska Vetensk Akad. Handl. 1816 (2): 207.

Type-species: *Phalaena Sphinx fuciformis* LINNAEUS, 1758, Syst. Nat. (Edn 10) 1: 493, by original designation.

### *Hemaris fuciformis* (LINNAEUS, 1758)

*Phalaena Sphinx fuciformis* LINNAEUS, 1758, Syst. Nat. (Edn 10) 1: 493. TL: originally not stated [Europe].

**References:** ROMANOFF, 1884: 73 (*Macroglossa*); RADDE, 1899: 422 (*Macroglossa*); MILJANOVSKY, 1964: 120; EFFENDI, 1967: 57; DIDMANIDZE, 1975: 308, 1976b: 302; 1978: 82; 1980: 149, 1981a: 152; DIDMANIDZE & ZURTASVILI, 1981b: 92.

**Comments.** The species is local but not rare in meadow slopes and forest biotopes up to subalpine zone; restricted to mountain ridges. Moths in May – July; sometimes an occasional second generation is developed, with imagoes in August and September. Different *Lonicera* species (*Lonicera caprifolia* in Abhasia – MILJANOVSKY, 1964: 120); also *Symphoricarpos* and *Deutzia* (EFFENDI, 1967) are known hosts in the Region.

**Material:** **Georgia:** 1♀, Khevi, Kazbegi, 21.IX. 1982, E. DIDMANIDZE leg.; 2♂♂, Phshavi, Magharoskari, 8, 9.VI. 1970, E. DIDMANIDZE leg.; 1♂, Tusheti, Omalo, 29.VI. 1976; 1♂, Farsma, 8.VII. 1976, E. DIDMANIDZE leg.; 5♂♂, Borshom, 19.V. 1898; 12.V. 1899; 21.V. 1901, ROMANOV coll.; 1♂, Borshom, 10.VII. 1916, JUNKOVSKY leg.; 2♂♂, Bakuriani, distr. Gori, VI. 1914, ROMANOV coll.; 1♂, Vashlovani Reserve, arid gorge Kumuros-khevi, 25.VI. 1970, E. DIDMANIDZE leg.; 2♂♂, Uraveli, distr. Achalcyche, 4.VI. 1964, E. DIDMANIDZE leg.; 1♂, Meskheti, Akhaltsikhe, 4.VI. 1964, E. DIDMANIDZE leg.; **Armenia:** 3♂♂, Khosrov Reserve, 12.VI. 1973; 14.VI. 1977; 12.VII. 1984, E. DIDMANIDZE leg.; **Azerbaijan:** 1♂, Gosmoljan, 17.V. 1975, DIDMANIDZE leg.; **Iran:** 2♂♂, Tabasaran, Jersi, distr. Kait, 17.VI. 1911, GALKIN leg. (all GNMT).

### *Hemaris tityus* (LINNAEUS, 1758)

*Phalaena Sphinx tityus* LINNAEUS, 1758, Syst. Nat. (Edn 10) 1: 490. TL: originally not stated [Europe].

*Haemorrhagia tityus* L. f. *karaugomica* WOJTUSJAK & NIESIOŁOWSKI, 1947, Polska Akademia umiejętności, Krakow 6: 63. TL: [Kabardino-Balkaria] “Karaugom, on alpine meadow 2. 400 m”. Holotype (by monotypy): “1 specimen”.

**References:** ROMANOFF, 1884: 73 (*Macroglossa Bombyliiformis* O.); RADDE, 1899: 422 (*Macroglossa bombyliiformis*); WOJTUSJAK & NIESIOŁOWSKI, 1947: 63 (*Haemorrhagia*); MILJANOVSKY, 1964: 120; EFFENDI, 1967: 58 (*H. scabiosae* Z.); MIRZOJAN & ARUTUNJAN, 1975: 168; DIDMANIDZE, 1978: 82, 1980: 149, 1981a: 152 (= *scabiosae*); GEVORKJAN, 1986: 686.

**Comments.** The species prefers more xerothermic conditions than the previous one and therefore is restricted to slopes, dry meadows, steppes and alpine meadows up to 2. 500 m; not typical for subcostal zone. *Scabiosa* is reported to be a host (MILJANOVSKY, 1964:

120; EFFENDI, 1967). DIDMANIDZE (1978: 83) reported smaller and paler specimens of the species from Hevi: Kazbegi, Gergeti Mt.; Tusheti: Omalo as *Hemaris scabiosae* Z.

**Material: Russian Caucasus:** 1♀, Daghestan, Čadakolo, distr. Gunib, 20.V. 1909, GALKIN leg.; **Georgia:** 1♀, Gr. Caucasus, Racha, Pass ad mt. Mamisoni, 19.VI. 1977, E. DIDMANIDZE leg.; 5♂♂, 1♀, Adjaria, Batum, 4-8.VI. 1916; 1♀, Omana, distr. Batum, 17.VII. 1937, exp. Mus. Georgia; 1♀, Chevsureti, vill. Akneli, 17.VI. 1970, E. DIDMANIDZE leg.; 1♀, Tusheti, vill. Shenaqo, 1.VII. 1976; 1♂, Omalo, 8.VII. 1978, E. DIDMANIDZE leg.; 1♀, Bakuriani, distr. Gori, 1914, KOZLANSKI leg.; 1♂, Meskheti, Akhaltsikhe, vill Zvara, 9.VII. 1974, E. DIDMANIDZE leg.; **Armenia:** 1♀, Mt. Murov-Dag, 21.VII. 1912, A. WASSILININ leg.; **Azerbaijan:** 1♂, Nakhichevan, vill. Naservaz, 24.V. 197, DIDMANIDZE leg.; **Turkey:** 1♂, Mont Saribaba, prov. Kars, 1912, WASSILININ leg. (all GNMT).

### *Hemaris croatica* (ESPER, [1800])

*Sphinx croatica* ESPER, [1800], Die Schmetter. Eur., Suppl. (Abschnitt 2): 33, pl. 45, fig. 2. TL: "aus der Gegend von Carlstadt in Croatien".

**References:** ROMANOFF, 1884: 72 (*Macroglossa*); RADDE, 1899: 422 (*Macroglossa*); EFFENDI, 1967: 57 (*Macroglossa*); DIDMANIDZE, 1976b: 302 (*Theretra alecto croatica* L.); 1978: 82 (*Macroglossa*); 1981a: 154 (*Macroglossum*).

**Comments.** This local xerophytous species is known mostly from old collections and is extremely local now. Recently it is reliably known from Meskheth-Dzhavakheti: Aspindza (Didmanidze, 1978); its biology is unknown in the Region.

**Material: Georgia:** 1♂, Tiflis, 28.VIII. 1897, E. KOENIG leg.; 1♂, Tiflis, 1905, ROMANOV coll.; 1♂, Tiflis, forest plantations, 30.VI. 1919, ENIKOPOLOV leg.; 1♂, Borshom, 23.V. 1901, ROMANOV coll. (all GNMT).

Thus, 30 species of Sphingidae are indicated here from the territory of Caucasus and Transcaucasus.

### Acknowledgements

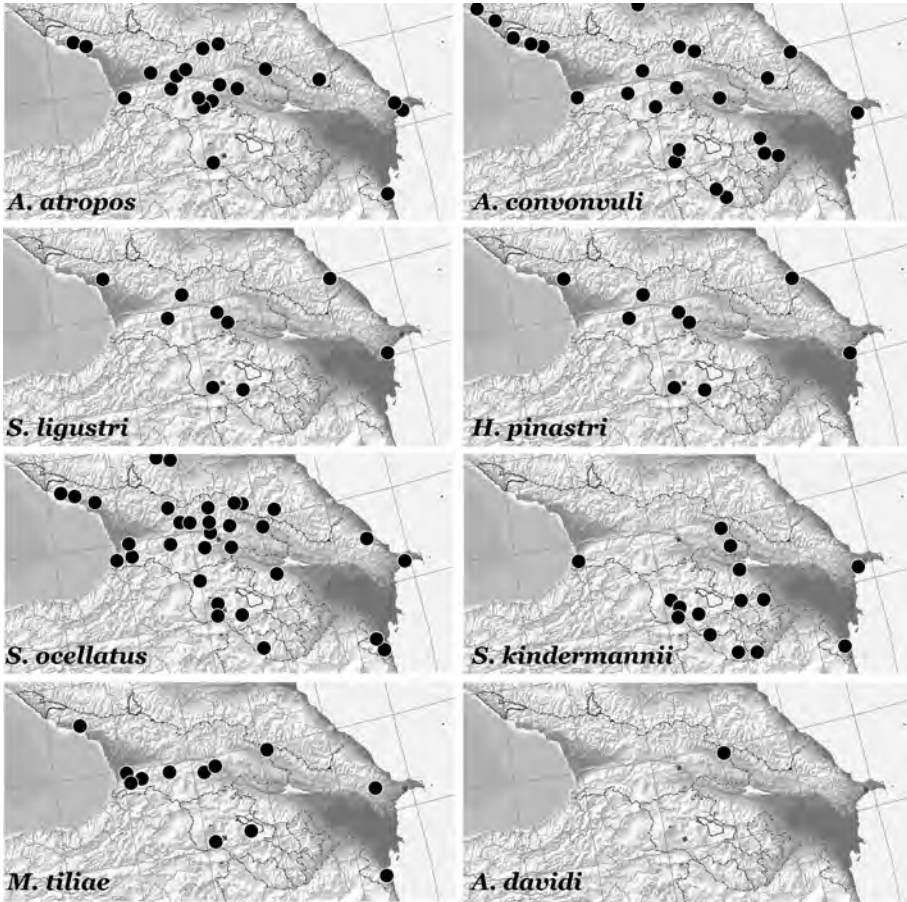
We would like to express our sincere thanks for help in our work to Valery STSCHUROV (Krasnodar), Valentin TIKHONOV (Pjatigorsk) and Igor KOSTJUK (Kiev) who kindly supplied us with some rare literature sources and new faunistic dates on the species of the family.

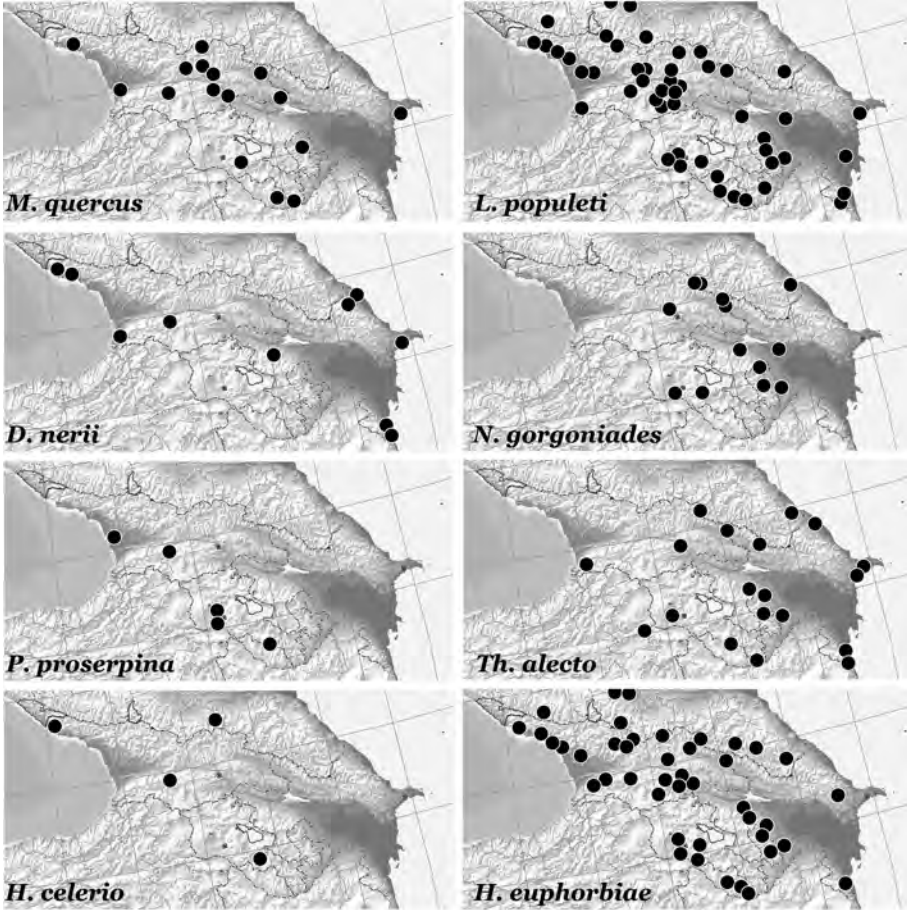
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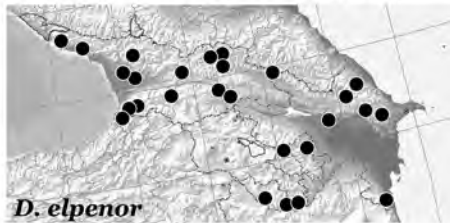
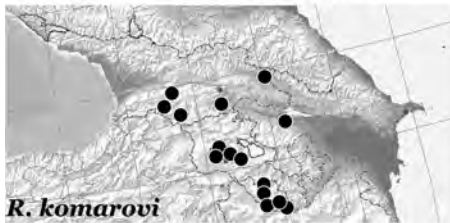
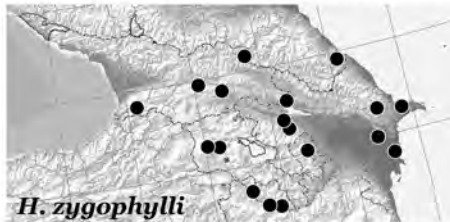
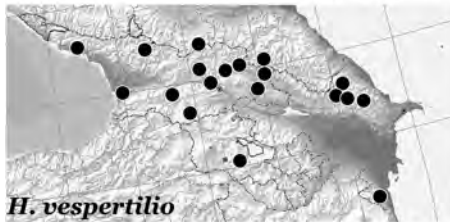
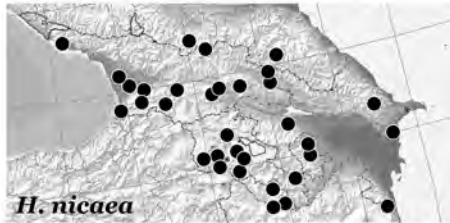
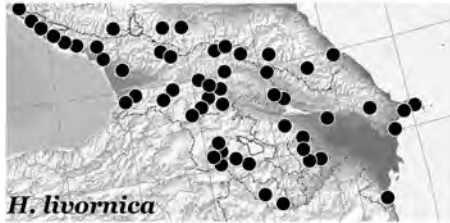
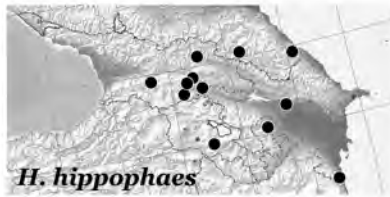
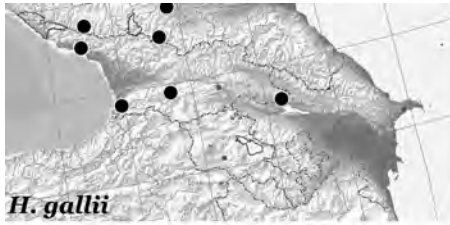
- BABAJAN, G. A. (1965): [Lineichatyj brazhnik v vinogradnikakh Armenii] — Izvestija selskokhozjajstvennykh nauk MSH ArmSSR, Erevan **1**: 69–72 (in Armenian).
- BATIASHVILI, I. D. & G.I. DEKANOIDZE (1974): Lepidoptera as pests on a grape-wine in Western Georgia — Materials VII Congress All-Union entomol. Society, Leningrad **2**: 20–21 (in Russian).
- DANNER, F., EITSCHBERGER, U. & B. SURHOLT (1998): Die Schwärmer der westlichen Palaearktis. Bausteine zur einer Revision (Lepidoptera: Sphingidae) — *Herbipoliana* **4** (1+2): 1–368 + 1–720.

- DIDMANIDZE, E. A. (1973): To a study of Macrolepidoptera of Gegechkory District — Moambe of S. JANASHIA Museum, Georgian National Museum, Tbilisi, **24-25-A**: 92–120 (on Georgian).
- DIDMANIDZE, E. A. (1975): Materials on fauna of Macrolepidoptera of Lesser Caucasus (Meskhet-Dzhabakheti, Southern Georgia). — Moambe of S. JANASHIA Museum, Georgian National Museum Tbilisi **28-A**: 293–336 (on Russian).
- DIDMANIDZE, E. A. (1976): To a knowledge of Macrolepidoptera of Lesser Caucasus (Tzalka-Dmanisi District). — Moambe of S. JANASHIA Museum, Georgian National Museum, Tbilisi **29-A**: 154–184 (on Russian).
- DIDMANIDZE, E. A. (1976a): The SpHINGIDAE and Notodontidae in the fauna of Lagodekhi Nature Reserve (Lepidoptera) — Nature reservations of Georgia, Tbilisi **4**: 229-316 (on Georgian).
- DIDMANIDZE, E. A. (1978): Moths (Lepidoptera, Heterocera) of arid landscapes of Georgia. — Tbilisi: Metzniereba. 318 p. (in Russian).
- DIDMANIDZE, E. A. (1980): Materials on Macrolepidoptera of Tusheti. — Moambe of S. JANASHIA Museum, Georgian National Museum, Tbilisi **30-A**: 126–167 (on Russian).
- DIDMANIDZE, E. A. (1981a): Materials on Lepidoptera Heterocera of arid landscapes of Transcaucasus (without Geometridae and Noctuidae) Part 2. — Moambe of S. JANASHIA Museum, Georgian National Museum, Tbilisi **31-A**: 124–181 (on Russian).
- DIDMANIDZE, E. A. (2005): The Butterflies of Georgia – on some Endemic, Relic [sic!] and other Rare Species of Butterflies of Georgia. — Catalogue. Tbilisi: 88 p.
- DIDMANIDZE E. A. & DZHOBAVA D. B. (1987): Moths and Butterflies of Kintrishi State Nature Reserve (Macrolepidoptera) — Moambe of S. JANASHIA Museum, Georgian National Museum, Tbilisi **24-A**: 220–240 (on Georgian).
- DIDMANIDZE E. A. & KVAADZE E. (2006): The Butterflies of Borjom-Kharagauli National park, Tbilisi: 1–186.
- DIDMANIDZE, E. A. & SIKHARULIDZE, Z. N. (1974): The Macrolepidoptera of Saguramo Nature Reserve. — Nature Reserves of Georgia **3**: 213–226 (in Georgian).
- DIDMANIDZE E. A., SUPATASHVILI A. & GOGINASHVILI N. (2010): Butterflies of Georgian Forests. — Tbilisi: 1–384 (on Georgian)
- DIDMANIDZE, E. A. & YAKOVLEV, R.V. (2007): Cossidae (Lepidoptera) of Georgia. — Entomofauna **28** (1): 1–16.
- DIDMANIDZE E. A. & ZURASHVILI T. M. (1981): Materials on the study of Lepidoptera of Vashlovani Nature Reserve. — Nature Reservations of Georgia. Tbilisi, Sabchota Sakartvelo Publish. House **5**: 75–118.
- EFFENDI R. E. (1967): To a study of sphingid fauna of Azerbaijan (Lepidoptera, SpHINGIDAE) — Scientific Papers of Azerbaijan State University. Ser. Biology, №2: 51–58 (in Russian).
- GEVORKJAN, M. R. (1986): Fauna of Heterocera (Lepidoptera) of gorges of the Razdan river and its tributary Marmarik (Armenian SSR) — Entomologicheskoe Obozrenie 65: 683–691 (in Russian).
- MILJANOVSKY, E. S. (1964): Fauna of Lepidoptera of Abkhasia. — Trudy Sukhum opytnoj stantzii efirmomaslichnykh kultur. Sukhum **5**: 91–190 (in Russian).
- MIRZOJAN, S. A. (1977): Dendrophilous Insects of forest and parks of Armenia. — Erevan. 452 p. (in Russian).

- MIRZOJAN, S. A., ed. -in-chief (1982): Rare Insects [Redkie nasekomye]. — Moskva, Lesnaja promyshlennost. 166 p. (in Russian).
- MIRZOJAN S. A., ARUTUNJAN KH. M. (1975): Materials on Sphingidae of Armenia. — Materials on Transcaucasus Session on Scientific works in Plant Defence. Baku: 165–168 (in Russian).
- MIRZOJAN, S. A., BATIASHVILI, I. D. (1982): Rare Insects [Redkie nasekomye]. — Moskva, Lesnaja promyshlennost. 166 p. (in Russian).
- NAUMANN C. M. & V. V. ZOLOTUHIN (2000): Arealverbreitung für *Akbesia davidi* (Oberthür, 1884) (Lepidoptera: Sphingidae) — Entomologische Zeitschrift Stuttgart **110** (4): 124.
- POSPELOV, S. M. & R. V. PUKHAEV (1986): To a fauna of the Sphingidae of foothills of Nagorno-Karabakh Autonomic District — 1. Transcaucasian Conference on Entomology. Theses. Erevan, 1986: 152–153 (in Russian).
- ROMANOFF, N. M. (1884): Les Lépidoptères de la Transcaucasie. Première partie — Mémoires sur les Lépidoptères **1**: 1–92, Petersburg.
- ROMANOFF, N. M. (1885): Les Lépidoptères de la Transcaucasie. Deuxième partie — Mémoires sur les Lépidoptères **2**: 1–118, Petersburg.
- WOJTUSIAK, R. J. & NIESIOŁOWSKI, W. (1947): Lepidoptera of the Central Caucasus, collected during the Polish Alpine Expedition in 1935, with ecological and zoogeographical remarks. I. Part. Macrolepidoptera. — Polska Akademia umiejętności, Krakow **6**: 1–75.
- ZOLOTUHIN V.V. & E. A. DIDMANIDZE (2009): The Lasiocampidae (Lepidoptera) of Georgia and neighbouring countries — Entomofauna **30**: 301–328.
- ZOLOTUHIN V.V., DIDMANIDZE E. A. & V. A. PETROV (2011): A List of Bombycidae, Endromididae, Saturniidae, Lemonyiidae and Brahmaeidae (Lepidoptera) of Georgia and neighboring countries. — Neue entomologische Nachrichten **67**: 63–72.







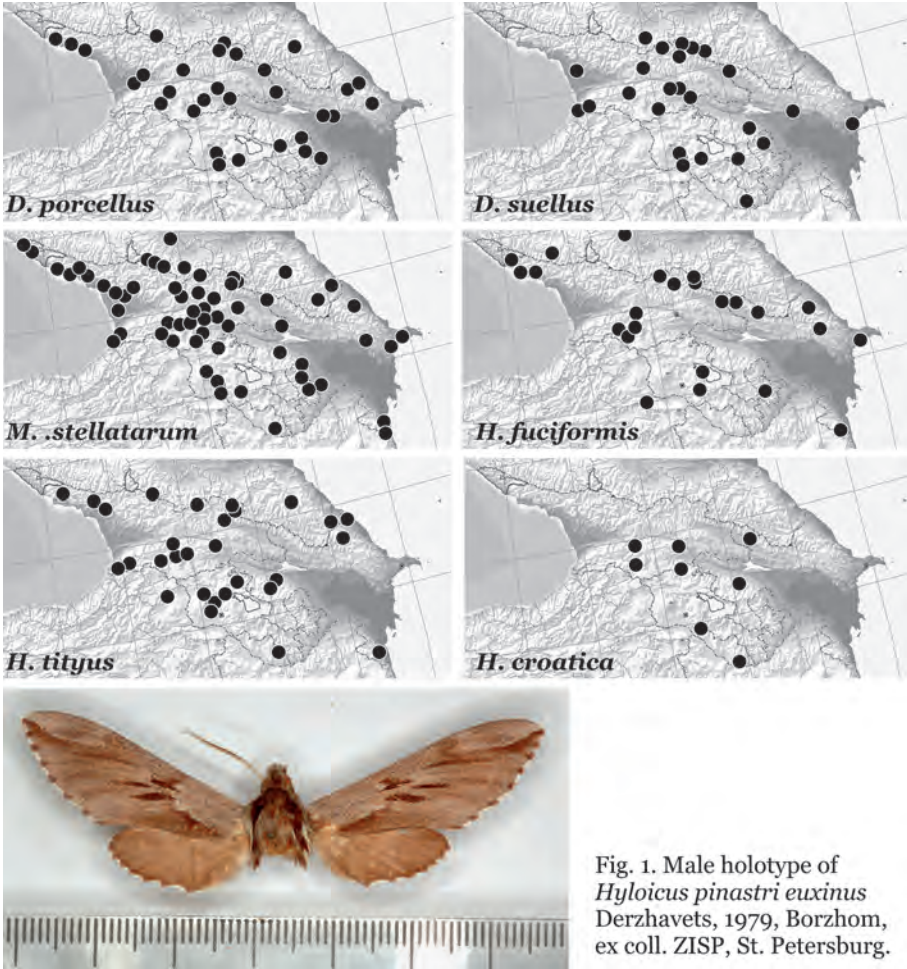


Fig. 1. Male holotype of *Hyloicus pinastri euxinus* Derzhavets, 1979, Borzhom, ex coll. ZISP, St. Petersburg.



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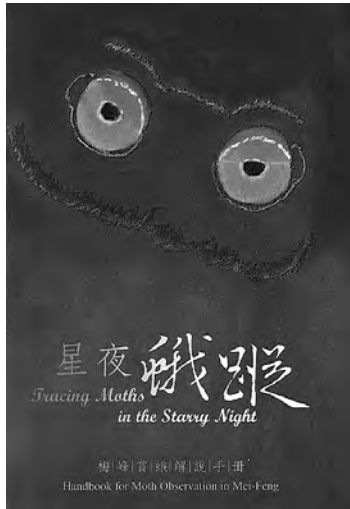
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## Buchbesprechung

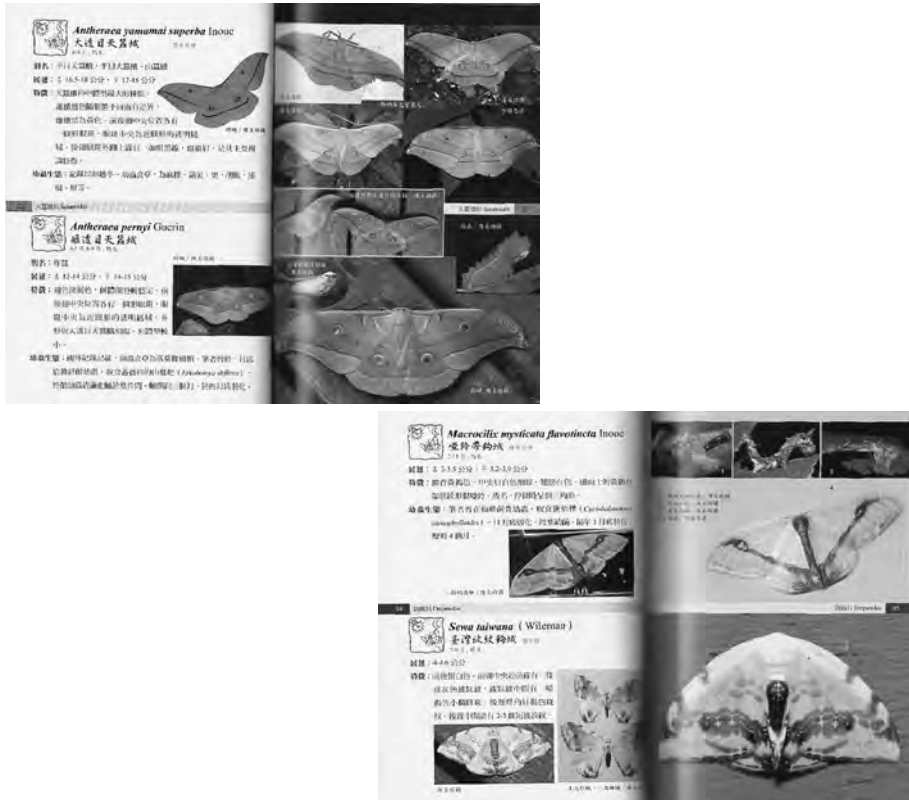
**CHEN, Mei-Yu (2011): Tracing Moths in the Starry Night. Handbook for Moth Observation in Meifeng.** – Meifeng Highland Experimental Farm, National Taiwan University Verlag. 240 Seiten, durchgehend farbige Fotos und Zeichnungen, 200 Farbtafeln, zahlreiche weitere farbige Fotos und Zeichnungen. Preis: 25,00 € ISBN: 978-986-02-7198-0. Zu bestellen via: [my.chen@web.de](mailto:my.chen@web.de)



Taiwan ist bekannt als kleine Insel mit sehr großer (hoher) Biodiversität. Bedingt durch die Lage Taiwans, wie auch zusätzlich die auf kleinstem Raum vorhandenen unterschiedlichen Höhenstufen und damit verbunden auch entsprechender Biotopvielfalt, hat Taiwan eine sehr breite Insektendiversität zu bieten, die zwischen der Palaearktis und der Orientalis vermittelt. Einen kleinen Ausschnitt davon zeigt das Buch von Mei-Yu CHEN anhand der Schmetterlingsfauna von Meifeng. Meifeng ist eine kleiner Ort in Zentral-Taiwan, der in den Bergen auf einer Höhe von ca. 2.200 m NN liegt und sich nahe der höchsten zentralen Paßstraße, die zum Taroko National Park führt, befindet. Die biologische Station „Meifeng Highland Experimental Farm“ ist eine Außenstelle der National Taiwan University in Taipei. Mei-Yu (gesprochen Mei-Yü) hat seit 2001, seit dem Beginn Ihrer Forschungen, die zusammen mit mir im Rahmen eines Projektes zwischen der Zoologischen Staatssammlung München und der National Chung Hsing University stattfanden, systematisch Lichtfang durchgeführt und darüber hinaus auch Beobachtungen am Tage angestellt und vor allem auch die Biologie von vielen Arten untersucht. Sie hat Raupen gesucht, Zuchten durchgeführt und alle diese Informationen festgehalten. Ein Teil davon ist in diesem Buch dokumentiert. Viele weitere ihrer Beobachtungen und Untersuchungen sind in verschiedenen Artikeln bereits publiziert oder im Druck. Kaum ein anderes Buch dieser Welt enthält so viele Details und Informationen zur Schmetterlingsfauna eines Bereiches, wie es Mei-Yu CHEN hier dokumentieren konnte. Das Buch, ausgestattet mit hervorragenden Zeichnungen der Autorin und ebenso wunderbaren Fotos, fast ausschließlich von ihr, zeigt von vielen

Arten erstmals Lebendfotos. Beginnend mit einer Einleitung und Erklärung zur Methodik des Lichtfangs und den geeigneten Biotopen anhand von Fotos und Zeichnungen, folgt die weitere Einleitung zur Biologie der Nachtfalter und Lebensweise. Außerdem werden die natürlichen „Feinde“ gezeigt. Die Entwicklungsstadien der Schmetterlinge werden anhand verschiedener Raupenformen beschrieben und mit Fotos und Zeichnungen dargestellt. Ausführlich geht Mei-Yu CHEN auf die unterschiedlichen Entwicklungsstadien von Ei, Raupe, Puppe und Falter ein, indem sie die Eier, Raupen und Puppen der verschiedenen Nachtfalterfamilien explizit darstellt, auch hier meist in Form von Fotos, viele aber auch durch ihre eigenen Zeichnungen. Ebenso wird hier auf Mimikry mit Fotos und Erklärungen eingegangen, wie auch auf die unterschiedliche Ernährungs- und Lebensweise der Imagines. Diesem Einleitungsteil folgt der „systematische“ Teil, der zwar nicht der gängigen Systematik folgt (die ist ja sowieso fast jeden Tag anders), aber die unterschiedlichen Familien der Nachtfalter abhandelt. Es werden hier Arten der Saturniidae, Brahmaeidae, Sphingidae, Eupterotidae, Lasiocampidae, Bombycidae, Limacodidae, Notodontidae, Lymantriidae, Callidulidae, Drepanidae, Arctiidae, Noctuidae, Geometridae, Pyralidae, Crambidae und Thyrididae behandelt und abgebildet. Von allen diesen Familien werden die wichtigsten Arten gezeigt, meist mit Lebendfotos am Licht. Von vielen Arten dieser Familien gibt es darüber hinaus Fotos oder Zeichnungen von den Jugendstadien und auch Fotos von präparierten Tieren anhand derer z. B. Unterschiede zu ähnlichen Arten erläutert werden. Viele Jugendstadien von bisher unbekanntem Raupen einiger Arten werden ebenso gezeigt wie auch der Verpuppungs- oder Schlupfvorgang. Am Ende des Buches wird noch anhand ausgewählter Beispiele über die Variabilität einiger Arten diskutiert und ebenso über eine besonders interessante, neu beschriebene Art aus Meifeng berichtet. Abschließend folgt der Artenindex der wissenschaftlichen Namen und der taiwanischen Namen der im Buch behandelten Tiere. Was bleibt zu sagen? Ein Buch das durch seine besondere „Ausstrahlung“ besticht. Besonders durch die so bisher noch nicht gezeigten Lebendfotos und den Zusammenhang zwischen detailgenauen Zeichnungen und Fotos. Es ist einfach ein Genuß das Buch zu sehen und darin zu blättern. Zum Bestimmen der Tiere ist es auf jeden Fall geeignet (Artnamen lateinisch), wenn auch für die Leute, die der chinesischen Sprache (also in dem Fall der Schriftzeichen) nicht mächtig sind, die näheren Informationen zu den Arten nicht lesbar sind. Es ist, auch wenn man sich nicht mit taiwanischen Nachtfaltern beschäftigt, jedem zu empfehlen.





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