



# Entomofauna

ZEITSCHRIFT FÜR ENTOMOLOGIE

Band 19, Heft 2: 33-44

ISSN 0250-4413

Ansfelden, 31. März 1998

## The Casebearers of the Volga-Ural inter-river region (Lepidoptera, Coleophoridae)

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### Abstract

A check-list of the Coleophoridae (Lepidoptera) of the south-eastern part of the lower Volga region in Russia is presented with 74 recorded species. Some genitalia characters are illustrated.

### Zusammenfassung

Die Coleophoridae (Lepidoptera) des südöstlichen Teils der unteren Wolgaregion werden aufgelistet mit 74 nachgewiesenen Arten. Genitalien weniger Arten werden abgebildet.

### Introduction

The present work is a check-list of the Coleophoridae of the south-eastern part of the Lower Volga region in Russia. Ninety-four species were collected of which seventy-four were determined and are recorded here. Genitalia characters are illustrated for some little-known species, including *Orthographis uralensis* (TOLL, 1961), *Casignetella ancistron* (FALKOVITSH, 1976) and the female of *Casignetella tremula* FALKOVITSH, 1989.

The purpose of this work is to provide information from the material collected and to record other scientific information on the distribution of casebearers (Coleophoridae) in south-eastern Europe.

Most of the material was collected using a quartz-lamp (240 volt). Some information was obtained by rearing the imago from a larva. Collections were made from 1985 to 1992, in parts of Astrakhan, Volgograd and most of the Saratov provinces (Fig. 1).

The Volga-Ural inter-river region comprises steppe, semi-desert and desert zones and has typical biotopes near B. Tavoloshka, Dyakovka Nature Reserve and Lake Elton.

A general check-list of the casebearer species from the Volga-Ural inter-river region is provided. The taxonomic order corresponds mainly to S. TOLL's (1953, 1962) system but

contemporary generic names were also used. Information is provided in the check-list in the following way: 1. Material, collection dates and the number of collected specimens, or reference to the publications in which this species is recorded by an author for a particular territory. 2. Distribution, based on the latest information. 3. Biology, food-plants, including new records of the author marked by an asterisk (\*), flight period (FP), the main seasonal cycles and the habitat of species.

The main biotopes in the region where most of the material was collected by the author are described as follows: Varii-herbosus *Festuca - Stipa* steppe (surroundings of the village B. Tavolozhka, Pugachevsky district, Saratov region; N 1 in Fig. 1) on the flood-plain terrace of the B. Irgiz river with system of gullies and small ravines. Along the river-bed the floodplain groups of *Populus alba* and *Populus tremula* spread up.

The clear zonal picture of the vegetation is interrupted by a mesorelief - namely, gullies and small ravines. The southern slopes correlate with the gully system, the more gentle northern slopes with the *Stipa lessingiana - Festuca valesiaca* community. On the steep southern slopes the shrubby steppe consists of *Stipa longifolia* and *Festuca*. In the lower outfall part of the ravines the sward is much poorer, the *Stipa lessingiana* community being replaced by the *Festuca sulcata - Poa angustifolia* and *Festuca valesiaca - Artemisia austriaca* communities.

The flora of the biotope consists of the following species: *Stipa lessingiana*, *Festuca valesiaca*, *Stipa longifolia*, *S. zaleskii*, as well as *Medicago falcata*, *Cytisus ruthenicus*, *Achillea nobilis*, *Hieracium umbellatum*, *Artemisia austriaca*, *Silene multiflora*, *Gypsophila paniculata*, *Dianthus polymorphus*, *Veronica incana*, *Falcaria vulgaris*, *Euphorbia wolgensis*, *Potentilla argentea*, *Galium verum*, *Campanula sibiricum*, *Convolvulus arvensis* and others. On the southern slopes of the riverside the dominant species of the sward are the desert dwarf shrubs *Artemisia lercheana*, *Tanacetum achilleifolium*, *Kochia prostrata*, and among the grasses *Leymus ramosus* predominates.

*Stipa arenosa* (Saratov region, Krasny Kut district, surroundings of the village Dyakovka, Yeruslan river, Dyakovka Nature Reserve; N 2 in Fig. 1). The Dyakovka Nature Reserve consists of large tracts of forest which form the most southern part (in the zonal respect) of the Lower Volga region. It is situated on the right bank of the river Yeruslan in the surroundings of the villages Dyakovka, Saltovo and Shmyglino. This partly forested area is situated on the ancient terrace of the Yeruslan river, which gradually slopes to the present river bed. The vegetation surrounding the forest consists of the *Festuca sulcata - Stipa lessingiana - Stipa capillata* community on chestnut, loamy and black alkaline soils. The present forest consists of separate areas comprising 0.5 to 10.0 ha, situated in the kettle-like depressions and between the hillocks. Here the soils are light-loamy, sandy and slightly humic.

Between the river Yeruslan bed and the forest area the sandy hillocks and shallow depressions contain the *Cytisus ruthenicus - Artemisia tschernieviana - Poaceae* community, consisting of *Cytisus ruthenicus*, *Artemisia marschalliana*, *Poa angustifolia*, *Thymus kirgisorum*, *Helichrysum arenarium*, *Agropyron sibiricum*, *Euphorbia sequieriana* and *Carex acuta*. Along the forest boundaries the vegetation consists of the following species: *Spiraea crenata*, *Filipendula vulgaris*, *Festuca*, *Verbascum blattaria*, *Rumex confertus*, *Galium verum*, *Hypericum perforatum*, *Stipa pennata*, *Melampyrum arvense*, *Carex leporina*, *Veronica spuria*, *Amygdalus nana*, *Viscaria vulgaris*, *Genista tinctoria* and *Asparagus officinalis*.

The forest area consists of *Betula - Quercus* with an *Artemisia tschernieviana - Poa bulbosa* community. The vegetation consists of *Betula pendula*, *Crataegus volgensis*, *Salix*, *Populus* and *Quercus*, *Artemisia tschernieviana*, *Stipa pennata*, *Poa bulbosa*, *Melampyrum arvense*, *Jurinea multiflora*, *Gypsophila paniculata*, *Echinops sphaerocephallus*, *Helichrysum arenarium*, *Thymus kirgisorum* and *Euphorbia sequieriana*.

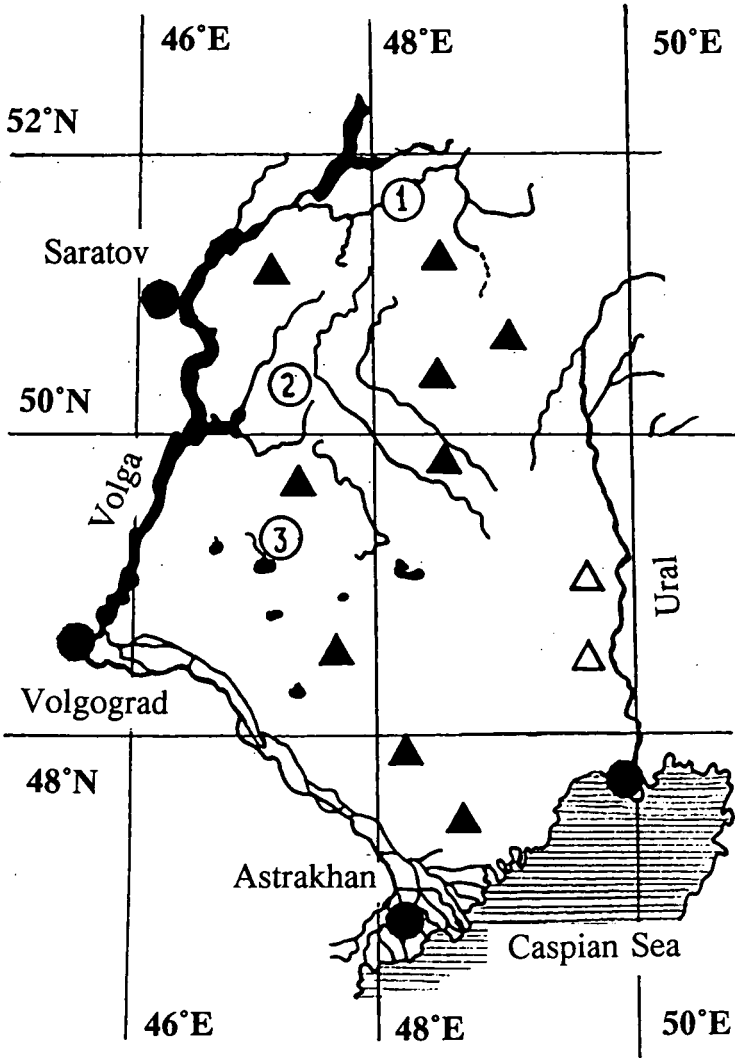


Fig. 1: Map of the Volga-Ural inter-river region.  
The main collecting sites: 1 - vill. Bolshoya Tavolozhka (surroundings); 2 - vill. Dyakovka (surroundings), 3 - Lake Elton (surroundings); ▲ - Collecting sites visited for this study; △ - Collecting sites of Dr. Helen Philipovna MARTYNOVA (1952).

In inter-hillock depressions with springs of alluvial water *Betula pendula* and *Populus tremula* predominate and the sward is represented by *Carex*, *Phragmites australis*, *Convallaria majalis*, *Agrostis*, *Lithospermum*, *Poa palustre*, *Sanguisorba*, *Rubus caesius*, *Lycopus europaeus*, *Filipendula vulgaris*, *Ribes rubrum*, *Poa nemoralis*, *Lathyrus pratensis*, *Geum urbanum*, *Veronica spuria* and others.

Desertum salsum (the riverside north-western part of Elton lake, Pallasovka district, Volgograd region; N 3 in Fig. 1).

A white alkaline beach and three terraces are recognisable. The microrelief is poorly developed and consists of small holes and hillocks made by rodents. The alkaline soils are black and white, but in the highest part of the terrace they are light chestnut.

The first terrace is occupied by patches of *Halocnemum strobilaceum*, being 2-3 km apart from each other and are here clearly mono-specific. Progressing to the second terrace other dwarf shrubs (*Limonium suffruticosum*, *Atriplex verrucifera*) are mixed with *Halocnemum strobilaceum*. The composition of the annual plants is more diverse; they consist of *Ofaiston monandrum*, *Petrosimonia oppositifolia*, *Frankenia pulverulenta*, *Echinopsilon sedoides* and other halophytes. In the ravines, where the soil layer is much deeper, the *Halocnemum strobilaceum* thicket forms a continuous band.

The second terrace has a more remarkable gradient to the lake. The vegetation consists of a community of *Atriplex cana*, *Suaeda physophora*, *Anabasis aphylla*, *Suaeda physophora* - *Anabasis aphylla*, *Artemisia lerchiana* and others. On the black alkaline soil of the second terrace, significant areas are occupied by the *Atriplex cana* community. The sward is noticeably thinner, with many lichens on the soil, such as *Parmelia vagans*, *P. ryssolea*, *Stratonostoc commune*. In addition to *Atriplex cana* there are some other dwarf shrubs (*Anabasis salsa*, *Suaeda physophora*, *Camphorosma monspeliacum*, *Artemisia lerchiana*), ephemeroïds (*Poa bulbosa*, *Tulipa biebersteiniana*), ephemeric plants (*Lepidium perfoliatum*, *Descurainia sophia*), and annual plants (*Ceratocarpus arenarius*, *Echinopsilon sedoides*) in the association.

The specimens that were collected are deposited in the Zoological Institute of the Russian Academy of Sciences (St. Petersburg) and in the Saratov University.

For comments on and help with the preparation of this check-list the author expresses his thanks to M.I. FALCOVITSH (Zoological Institute RAN, St. Petersburg). I also have great pleasure in thanking Prof. Clas M. NAUMANN (Bonn) and Dr. W. Gerald TREMEWAN (Truro, Cornwall) for editing my text.

### Species list

*Augasma aeratella* (ZELLER, 1839). Saratov prov., Dyakovka Nature Reserve, 8.VIII. 1991, 3 ♂♂. Distribution: Europe (excluding Scandinavia). Biology: The larva liveology: in fusiform galls on stems of *Polygonum aviculare* L., *P. arenarium* WALDST. & KIT., *P. lapathifolium* L. FP from late June to the middle of August. It is typical of open landscapes of forest-steppe and steppe biotopes.

*Systrophoea siccifolia* (STANTON, 1856). Saratov prov., vill. Seleznikha, 27.VII. 1992, 1 ♂. Distribution: Southern Europe; Great Britain. Biology: The larva lives on various woody plants - *Alnus*, *Betula*, *Tilia*, *Sorbus*, *Crataegus*, and has a winter diapause. FP in June, July. The moth occurs in forest-steppe biotopes.

*Agapalsa viminetella* (ZELLER, 1849). Ural river (Martynova, 1952). Distribution: Euro-pe. Biology: The larva lives on *Salix caprea*, *S. cinerea*. FP in June, July. The moth occurs in forest-steppe biotopes.

*Protocryptis sibiricella* FALCOVITSH, 1972. (= *sibirica* FALCOVITSH, 1964, nom. praeocc.). Saratov prov., river Saratovka, 16.VII.1992, 2 ♂♂. Distribution: Finland;

Sweden; north-western Russia; Siberia. Biology: The larva lives on *Larix* MILL., and has a winter diapause. FP in June, July. The moth occurs only in larch plantations in the north of the region.

*Damophila mayrella* (HÜBNER, [1813]) (= *spissicornis* HAWORTH, 1828). The species is typical for all regions in places where the larval foodplant occurs. Distribution: Europe; North Africa; Middle Asia; North America. Biology: The larva lives on the carpels of *Trifolium* L. FP in June. The moth occurs in different types of biotopes: wet meadows, edges of forest, meadow-steppe.

*Damophila deauratella* (LIENIG & ZELLER, 1846). The species is typical for entire region. Distribution: Europe; Middle Asia; Asia Minor; Tasmania. Biology: The larva lives on the carpels of *Trifolium* and has a winter diapause. FP in late May, June, July. The moth occurs in biotopes similar to those of the previous species.

*Damophila alcyonipennella* (KOLLAR, 1832) (= *cuprariella* ZELLER, 1847). The species is typical for the entire region. Distribution: Europe; Middle Asia; Iran; Iraq; Afghanistan; Japan; New Zealand; Australia. Biology: The larva lives on the carpels of *Trifolium*. FP from the middle of May to August.

*Damophila frischella* (LINNAEUS, 1758) (= *auronitella* TOLL, 1962). Vicinity of Saratov, 3.VI.1986, 1 ♂, 2 ♀♀. Distribution: Europe; North Africa; Middle Asia; Afghanistan; Australia; New Zealand; Tasmania. Biology: The larva lives on the carpels of *Trifolium*. FP in June, July. The moth occurs in forest-steppe biotopes.

*Damophila trifolii* CURTIS, 1832 (= *melilotella* SCOTT, 1861). The species is typical for the entire region. Distribution: Europe; North Africa; Middle Asia; Afghanistan. Biology: The larva lives on *Melilotus* HILL. and has a winter diapause. FP in June, July. The moth occurs in different habitats where the food plant occurs.

*Multicoloria astragalella* (ZELLER, 1849) [CHRISTOPH, 1872]. Distribution: Central and southern Europe; Middle Asia. Biology: The larva lives on *Astragalus* L. FP in June, July. The moth occurs in forest-steppe and steppe biotopes.

*Multicoloria cartilaginella* (CHRISTOPH, 1872) (= *echinella* STAUDINGER, 1880; = *medicagivora* TOLL, 1961). Saratov prov., Dyakovka Nature Reserve, 18.VII.1992, 1 ♀. Distribution: Hungary; Crimea; Yugoslavia; Lower Volga region; Middle Asia; Iran; Afghanistan. Biology: The larva lives on *Astragalus albicaulis* GROSSH., *A. glycyphyllos* L., *Medicago romanica* PROD. and has a winter diapause. FP in June. The moth occurs in forest-steppe biotopes.

*Multicoloria vibicigerella* (ZELLER, 1839) (= *didyma* TOLL, 1957). Saratov prov., Dyakovka Nature Reserve, 15.V.1991, 2 ♂♂, 5 ♀♀. Distribution: Europe; North Africa; China; Korea. Biology: The larva lives on *Artemisia campestris* L.\*, *Achillea millefolium* L. FP in May, June. The moth occurs in steppe and semi-desert biotopes.

*Suireia badiipennella* (DUPONCHEL, 1843). Ural river (MARTYNOVA 1952). Distribution: Europe. Biology: The larva lives on *Ulmus*, *Corylus*, *Prunus spinosa*, *Fraxinus* and *Acer*. FP in June, July. The moth occurs in forest-steppe biotopes.

*Razowskia coronillae* (ZELLER, 1849). Saratov prov., Dyakovka Nature Reserve, 8.IX.1991, 1 ♀ (without the male the determination of the species is doubtful). Distribution: Europe; Transcaucasia; Middle Asia; Iran. Biology: The larva lives on the carpels of *Coronilla*.

*Orthographis uralensis* (TOLL, 1961). Saratov prov., vill. Seleznikha, 28.V.1992, 1 ♂. Distribution: Europe; Ural; Afghanistan; Iran. Biology: The larva lives on *Artemisia*. FP in late May, June.

*Orthographis virgatella* (ZELLER, 1849). Volga river (STAUDINGER collection, Zoological Museum of Humboldt-University, Berlin). Distribution: Europe; Middle Asia. Biology: The larva lives on *Salvia*, *Stachys*, *Achillea* and *Globularia*. FP in late June, July.

*Coleophora bernoulliella* (GOEZE, 1783) (= *anatipennella* HÜBNER, 1796). Saratov prov., vicinity of Marks, 10.VI.1986, 2 ♂♂, 1 ♀. Distribution: Europe; Iran; Transcaucasia. Biology: The larva lives on different woody plants (*Cerasus*, *Malus*, *Prunus*, *Alnus*, *Betula*, *Corylus*, *Crataegus*, *Populus*, *Quercus*, *Salix*, *Tilia*); it has a winter diapause. FP in June, July. The moth occurs in forest and forest-steppe biotopes.

*Symphypoda partenica* (MEYRICK, 1891) (= *cygnipennella* TOLL, 1956; = *transcaspica* TOLL, 1959). Saratov, 10.VI.1986, 1 ♀; Saratov prov., Dyakovka Nature Reserve, 8.VIII.1991, 2 ♀♀. Distribution: North Africa, Cyprus; Crete; Greece; Rumania; Armenia; Turkmenia; Iran; Mongolia. Biology: The larva lives on *Salsola* boring in the pith of the stem. The adult larva has a winter diapause. FP from June to August. The moth occurs in steppe and desert-steppe biotopes.

*Oedicaula serinipennella* (CHRISTOPH, 1872). In steppe and desert zones the species is typical for the entire region. Distribution: Central and southern Europe; European Russia; Mediterranean region; Japan. Biology: The larva lives in galls on the stems of *Atriplex* L.. The adult larva has a winter diapause. FP in June-August. The moth occurs in steppe and semi-desert biotopes.

*Eupista ornatipennella* (HÜBNER, 1796). The species is typical for the entire region. Distribution: Central and southern Europe; Middle Asia. Biology: The young larva feeds in the carpels of Lamiaceae, then transfers to Poaceae (*Holcus* L., *Briza* L., *Dactylis* L., *Bromus* L.). The adult larva has a winter diapause. FP in June, July. The moth occurs in forest-steppe biotopes.

*Eupista tixella* (ZELLER, 1849). Saratov prov., vill. Penza, steppe, 28.VI.1991, 1 ♂, 1 ♀. Distribution: Europe; Caucasus; Middle Asia. Biology: The young larva feeds in the carpels of *Thymus* L., then transfers to Poaceae (*Anthoxanthum* L., *Holcus*, *Alopecurus* L., *Avena* L., *Koeleria* Pers., *Briza*, *Bromus*). The adult larva has winter diapause. FP from July to August. The moth occurs in steppe biotopes with various steppe-herbaceous plants.

*Chnoocera botatarella* (HERRICH-SCHÄFFER, 1861). Saratov prov., Dyakovka Nature Reserve, 8.VIII.1991, 1 ♂, 1 ♀. Distribution: Lower Volga region; Ural; Middle Asia; Iran. Biology: FP from June-August.

*Polystrophia calligoni* (FALKOVITSH, 1972). Astrakhan, 10.VI.1915, 1 ♂, DOINIKOV leg. Distribution: Middle Asia; Mongolia. Biology: The larva lives on the carpels of *Callygonum*. FP from June-August.

*Aporiptura klimesshiella* (TOLL, 1952). Saratov prov., Dyakovka Nature Reserve, 10.VIII.1991, 1 ♂, 1 ♀. Distribution: Hungary; Asia Minor; Middle Asia; Iran. Biology: The larva lives on *Salsola australis* R. BR. and other closely related species.

*Aporiptura physophora* FALKOVITSH, 1994. Volgograd prov., Pallasovka distr., Lake Elton, 1.V.1994, 2 ♂♂; here, 18.IX.1994, on *Suaeda physophora*, ex l. 26.XI.1994, 4 ♂♂, 5 ♀♀. Distribution: Europe, Middle Asia. Biology: The larva lives on the carpels of *Suaeda physophora*\*. FP from late April to May. The moth occurs in desert-steppe biotopes.

*Aporiptura lonchodes* FALKOVITSH, 1994. Volgograd Prov., Pallasovka distr., Lake Elton, 24.IV.1993, on *Suaeda physophora*, ex l. 20-30.VI.1993, ♂♂, ♀♀, also on 18.IX.1994, on *Suaeda physophora*, ex l. 26.XI.1994, 4 ♂♂, 5 ♀♀. Distribution: Europe, Middle Asia. Biology: The larva lives on the carpels of *Suaeda physophora*\*. FP from late April to June. The moth occurs in desert-steppe biotopes.

*Aporiptura dissecta* FALKOVITSH, 1989. Volgograd Prov., Pallasovka distr., Lake Elton, 18.IX.1994, on *Suaeda physophora*, ex l. 26.XI.1994, 6 ♂♂, 9 ♀♀. Distribution: Europe; Middle Asia. Biology: The larva lives on the carpels of *Halocnemum strobiloceum*\*. FP in early September. The moth occurs in desert-steppe and desert biotopes.

*Aporiptura eurasiatica* (BALDIZZONE, 1989). Saratov prov., vill. Raslovka, steppe, 28.V.1995, on *Kochia prostrata*\*, ex l. 16.VI.1995, 2 ♂♂, 1 ♀. Distribution: Europe;

China; Korea. Biology: The larva lives on the leaves of *Kochia prostrata*\*. FP in June. The moth occurs in steppe biotopes.

*Perygra glaucicolella* (WOOD, 1892). Saratov prov., Dyakovka Nature Reserve, forest, 15.V.1990, 2 ♂♂, 1 ♀. Distribution: Europe; Mediterranean region; European Russia; Iran; Canada; Greenland. Biology: The larva lives on the carpels of *Juncus* L. FP from the middle of May to July. The moth occurs in forest-steppe biotopes; wet meadows and meadow-steppe.

*Tritemachia teredo* FALKOVITSH, 1994. Volgograd Prov., Pallasovka distr., Lake Elton, 18.IX.1994, on *Anabasis aphylla*\*, ex l. 20-30.XI.1994, 11 ♂♂, 6 ♀♀. Distribution: Europe, Middle Asia. Biology: The larva lives on the carpels of *Anabasis aphylla*\*. FP from May to June. The moth occurs in desert-steppe biotopes.

*Ecebalia therinella* (TENGGSTRÖM, 1848). Saratov prov., Dyakovka Nature Reserve, 8.VIII.1991, 4 ♀♀; Saratov prov., vill. Seleznikha, 2.VIII.1992, 1 ♂. Distribution: Europe; Middle Asia; Japan. Biology: The larva lives on *Carlina* L., *Carduus* L. and *Cirsium* Mill., and has a winter diapause. FP July to August. The moth occurs in steppe biotopes and in anthropogenic areas.

*Ecebalia thyraenica* (AMSEL, 1951). Saratov prov., Dyakovka Nature Reserve, 9.VIII.1991, 2 ♂♂. Distribution: Austria; Italy; Yugoslavia; Bulgaria. Biology: FP in August.

*Ecebalia adpersella* (BENANDER, 1939). Saratov prov., Dyakovka Nature Reserve, 10.VIII.1991, 1 ♀. Distribution: Europe. Biology: The larva lives on *Chenopodium* L. and *Atriplex*; it has a winter diapause. FP in July, August. The moth occurs in forest, forest-steppe biotopes, and in anthropogenic landscapes where the foodplant occurs.

*Ecebalia lunensis* (FALKOVITSH, 1975). Astrakhan prov., Astrakhan Nature Reserve, 10.VIII.1968, 1 ♂, PENCHUKOVSKAYA leg. Distribution: Mongolia, Lower Volga region (Russia). Biology: FP in August.

*Ecebalia magyarica* (BALDIZZONE, 1983). Saratov prov., Dyakovka Nature Reserve, 7.VIII.1991, 3 ♂♂, 2 ♀♀. Distribution: Hungary; Middle Asia. Biology: The larva lives on *Kochia* Roth., *Camphorosma* L., feeding on the ovaries and carpels. FP in August. The moth occurs in desert and semi-desert biotopes.

*Ecebalia gaviaepennella* (TOLL, 1952). Saratov prov., Dyakovka Nature Reserve, 9.VIII.1991, 5 ♂♂, 2 ♀♀; Volgograd prov., vill. Pallasovka, 14.VIII.1991, 3 ♂♂, 2 ♀♀; Saratov prov., vicinity of Shikhany, 2.VIII.1992, 2 ♂♂, 1 ♀. Distribution: Western Palearctic (south) to Mongolia. Biology: FP in August.

*Ecebalia vestianella* (LINNAEUS, 1758) (= *laripennella* ZETTERSTEDT, 1839). This common species is typical for the entire region. Distribution: Europe; European part of Russia; Middle Asia; Afghanistan; Iran; China; Japan. Biology: The larva feeds on the carpels of *Atriplex* and *Chenopodium*. FP in June-August. The species occurs throughout the region in all cultivated landscapes where the foodplants grow.

*Ecebalia sternipennella* (ZETTERSTEDT, 1839) (= *flaviginella* LIENING & ZELLER, 1846). Saratov prov., Dyakovka Nature Reserve, 20.VII.-11.VIII.1991, 6 ♂♂, 3 ♀♀. Distribution: Europe; Caucasus. Biology: The larva lives on the carpels of *Chenopodium* and *Atriplex* and has a winter diapause. FP in July-August. The moth occurs in steppe and desert biotopes, in wasteland and uncultivated parts of anthropogenic areas.

*Ecebalia versurella* (ZELLER, 1849) (= *amaranthivora* OKU, 1965). This common species is typical for the entire region. Distribution: Holarctic; Argentina. Biology: The larva lives on the carpels of *Atriplex*, *Amaranthus* L. and *Chenopodium*, and has a winter diapause. FP from May-August. 1-2 generations. The moth occurs in areas where the foodplants grow.

*Ecebalia motacillella* (Zeller, 1849). Saratov prov., Dyakovka Nature Reserve, 9.VIII.1991, 1 ♂; Saratov prov., vill. Seleznikha, 10.VIII.1992, 1 ♂. Distribution: Europe. Biolo-

gy: The larva lives on the carpels of *Chenopodium* and *Atriplex*; it has a winter diapause. FP in July, August. The moth occurs in areas where the foodplants grow.

*Ecebalia saxicolella* (DUPONCHEL, 1843) (= *benanderi* KANERVA, 1941). The species is typical for the entire region. Distribution: Europe; Middle Asia. Biology: The larva lives on the carpels of *Chenopodium* and *Atriplex*\*; it has a winter diapause. FP in July, August. The moth occurs in areas where the foodplants grow.

*Ecebalia charadriella* (BALDIZZONE, 1988). Saratov prov., Dyakovka Nature Reserve, 15.V.1991, 1 ♂. Distribution: Ural. Biology: FP from late May to June.

*Ecebalia attalicella* (ZELLER, 1871) (= *unistriella* CARADJA, 1920). The species was originally described from the Lower Volga region. Distribution: Lower Volga region; Ural; Afghanistan. Biology: FP in June.

*Ecebalia halocnemi* (FALCOVITSH, 1994). Volgograd Prov., Pallasovka distr., Lake Elton, 18.IX.1994, on *Halocnemum strobilaceum*\*, ex l. 10.I.1995, 4 ♂, 1 ♀. Distribution: Europe, Middle Asia. Biology: The larva lives on the carpels of *Halocnemum strobilaceum*\*. FP from late May to June. The moth occurs in desert-steppe and desert biotopes.

*Ecebalia halostachydis* FALCOVITSH, 1994. Volgograd Prov., Pallasovka distr., Lake Elton, 18.IX.1994, on *Halostachys caspium*\*, ex l. 21.I.1995, 1 ♂, 2 ♀♀. Distribution: Europe, Middle Asia. Biology: The larva lives on the leaves of *Halostachys caspium*\*. FP from late May to June. The moth occurs in desert-steppe and desert biotopes.

*Ecebalia anabaseos* (FALCOVITSH, 1975). Volgograd Prov., Pallasovka distr., Lake Elton 18.IX.1994, on *Anabasis aphylla*\*, ex l. 1.II.1995, 3 ♂♂, 1 ♀. Distribution: Europe, Middle Asia. Biology: The larva lives on the leaves of *Anabasis aphylla*\*. FP from the end of May until June. The moth occurs in desert-steppe and desert biotopes.

*Ecebalia tornata* FALCOVITSH, 1989. Volgograd Prov., Pallasovka distr., Lake Elton, 18.IX.1994, on *Kochia prostrata* f. *viridens*\*, ex l. 14.XII.1994, 2 ♂♂. Distribution: Europe, Middle Asia. Biology: The larva lives on the carpels of *Kochia prostrata* f. *viridens*\*. FP from the end of May until June. The moth occurs in desert-steppe and desert biotopes.

*Ecebalia eichleri* (PATZAK, 1977). Volgograd Prov., Pallasovka distr., Lake Elton, 18.IX.1994, on *Kochia prostrata* f. *viridens*\*, ex l. 7-22.XII.1994, 7 ♂♂, 6 ♀♀. Distribution: Europe, Middle Asia. Biology: The larva lives on the carpels of *Kochia prostrata* f. *viridens*\*. FP from May to June. The moth occurs in desert-steppe and desert biotopes.

*Ecebalia kargani* (FALCOVITSH, 1989). Volgograd Prov., Pallasovka distr., Lake Elton, 18.IX.1994, on *Kochia prostrata* f. *viridens*\*, ex l. 7-22.XII.1994, 2 ♂♂. Distribution: Middle Asia. Biology: The larva lives on *Kochia prostrates* f. *viridens*\* and *Salsola dendroides*. FP from June till July. The moth occurs in semi-desert biotopes.

*Casignetella artemisiella* (SCOTT, 1861). Saratov prov., vill. Sulak, 19.VI.1991, 1 ♀. Distribution: Europe; China. Biology: The larva lives on *Artemisia campestris*. FP in June, July. The moth occurs in steppe and forest-steppe biotopes.

*Casignetella ancistrum* (FALCOVITSH, 1976). Astrakhan prov., Astrakhan Nature Reserve, 10.VIII.1968, 2 ♂♂, Penchukovskaya leg.; Saratov prov., Dyakovka Nature Reserve, 15.V.1990, 3 ♂♂; Saratov prov., vill. Seleznikha, 27.V.1992, 1 ♂. Distribution: Mongolia; Middle Asia. Biology: FP in May and August.

*Casignetella gnaphalii* (ZELLER, 1839). Saratov prov., Dyakovka Nature Reserve, 9.VIII.1991, 1 ♂. Distribution: Europe. Biology: The larva lives on *Gnaphalium* L., *Helichrisum arenarium* (L.) MOENCH. FP from July-August.

*Casignetella pseudociconiella* (TOLL, 1952). Saratov prov., Dyakovka Nature Reserve, 8-9.VIII.1991, 5 ♂♂, 2 ♀♀. Distribution: Europe; Asia Minor. Biology: FP in August.

*Casignetella niveistrigella* (HEINEMANN, 1877). River Saratovka, 25.VII.1994, 1 ♂, 2 ♀♀; Krasnopartizanskii distr., vill. Novouspenka, 28.VII.1994, ex l. 4.VIII.1994, 3 ♂♂, 1 ♀. Distribution: Europe. Biology: The larva lives on *Gypsophila fastigiata*\*. FP in May-July.



*Casignetella argentula* (STEPHENS, 1834) (= *cothurnella* DUPONCHEL, 1843). The species is typical for the steppe zone. Distribution: Europe. Biology: The larva lives on the carpels of *Achillea millefolium* L.; it has a winter diapause. FP in June, July. The moth occurs in meadow-steppe and dry meadows.

*Casignetella tremula* FALKOVITSH, 1989. Vicinity of Saratov, I.V.1992, 1 ♂; vicinity of Saratov, summer cottage, 11.V.1992, 1 ♀. Distribution: Middle Asia (Central Kopetdag). Biology: The larva was observed on *Arthrophytum iliense* ILJIN (this plant does not occur in the Lower Volga region). In the deserts of Kazakhstan and Middle Asia this species has 2-3 generation. The moth occurs in steppe biotopes.

*Casignetella occatella* (STAUDINGER, 1880). Astrakhan prov., Astrakhan Nature Reserve, 19.VIII.1968, 1 ♀, PENCHUKOVSKAYA leg. Distribution: Spain; Ukraine; Lower Volga region. Biology: FP in May, August.

*Casignetella amarchana* (FALKOVITSH, 1975). Astrakhan prov., Astrakhan Nature Reserve, 19.VIII.1968, 2 ♀♀, PENCHUKOVSKAYA leg. Distribution: Mongolia. Biology: FP in August.

*Casignetella tringella* (BALDIZZONE, 1988). Volgograd Prov., Pallasovka distr., Lake Elton, 18.IX.1994, on *Kochia prostrata* ph. *viridens*\*, ex l. 18-29.XI.1994, 6 ♂♂, 2 ♀♀. Distribution: Europe. Biology: The larva lives on the carpels of *Kochia prostrata* ph. *viridens*\*. FP from late May to June. The moth occurs in desert-steppe and desert biotopes.

*Casignetella deviella* (ZELLER, 1847). Volgograd Prov., Pallasovka distr., Lake Elton, 18.IX.1994, on *Halostachys caspium*\*, ex l. 18-29.XI.1994, ♂♂, ♀♀. Distribution: Europe. Biology: The larva lives on the carpels of *Halostachys caspium*\*. FP from late May to June. The moth occurs in desert-steppe and desert biotopes.

*Casignetella lebedella* FALKOVITSH, 1982. Volgograd Prov., Pallasovka distr., Lake Elton, 18.IX.1994, on *Atriplex nitens*\*, ex l. 27.XI.1994, 2 ♂♂, 1 ♀. Distribution: Europe, Middle Asia, Iran. Biology: The larva lives on the leaves of *Atriplex nitens*\*. FP in the end of May to June. The moth occurs in desert-steppe and desert biotopes.

*Klinzigedia phlomidella* (CHRISTOPH, 1862) Matrial. This species was originally described from Sarepta. Distribution: Lower Volga region; Middle Asia. Biology: The larva lives on *Phlomis* L.

*Klinzegedia phlomidis* (STANTON, 1867). TOLL 1952. Distribution: Lower Volga region; Middle Asia; Iran; Syria. Biology: The larva lives on *Phlomis*. FP from the middle of July to the middle of August.

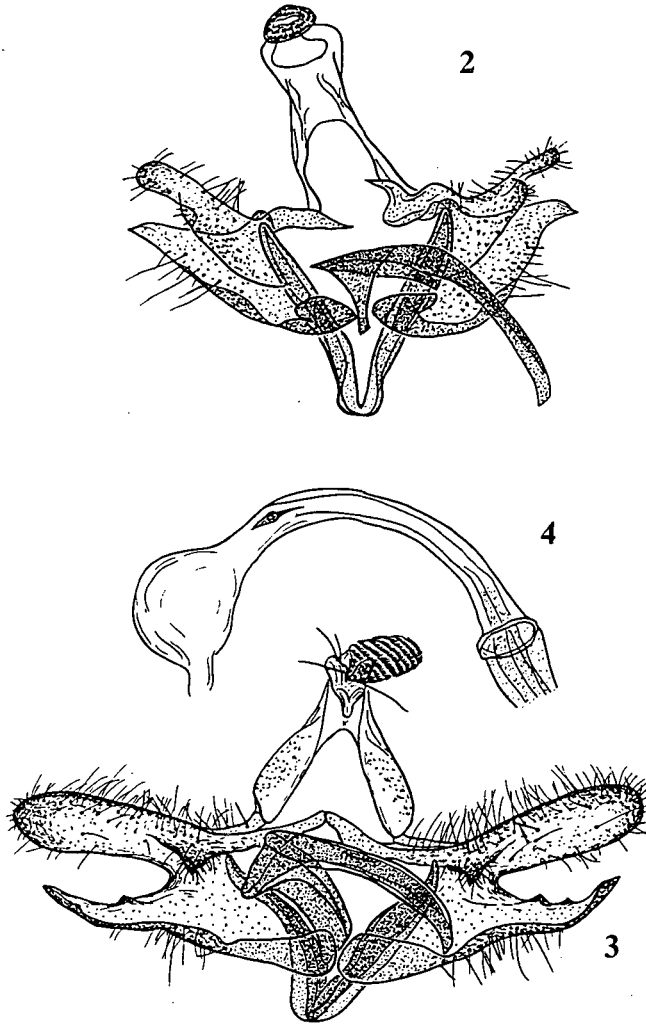
*Carpochena unipunctella* (ZELLER, 1849). In the vicinity of Saratov, summer cottage, 30.VI.1991, 1 ♂, 1 ♀. Distribution: Central Europe. Biology: The larva lives on the carpels of *Chenopodium*, *Atriplex*. FP in June-July. The moth occurs in forest-steppe.

*Carpochena binotapennella* (DUPONCHEL, 1843) (= *delibuteilla* CHRISTOPH, 1872). The species is typical for the steppe zone. Distribution: Southern Europe; Caucasus. Biology: The larva lives on the carpels of *Chenopodium*\* and *Atriplex*\*. FP in July, August.

*Carpochena squalorella* (ZELLER, 1849). Saratov prov., Dyakovka Nature Reserve, 8.VIII.1991, 5 ♂, 1 ♀. Distribution: Northern and central Europe; Lower Volga region; Ural. Biology: The larva lives on the carpels of *Chenopodium* and *Atriplex*. FP in August. The moth occurs in steppe and semi-desert biotopes.

*Carpochena armeniae* (BALDIZZONE & PATZAK, 1991). Astrakhan prov., Astrakhan Nature Reserve, 19.VIII.1968, 2 ♂♂, PENCHUKOVSKAYA; Saratov prov., Dyakovka Nature Reserve, 9.VIII.1991, 3 ♂♂. Distribution: Ukraine; Armenia; Middle Asia. Biology: FP in August.

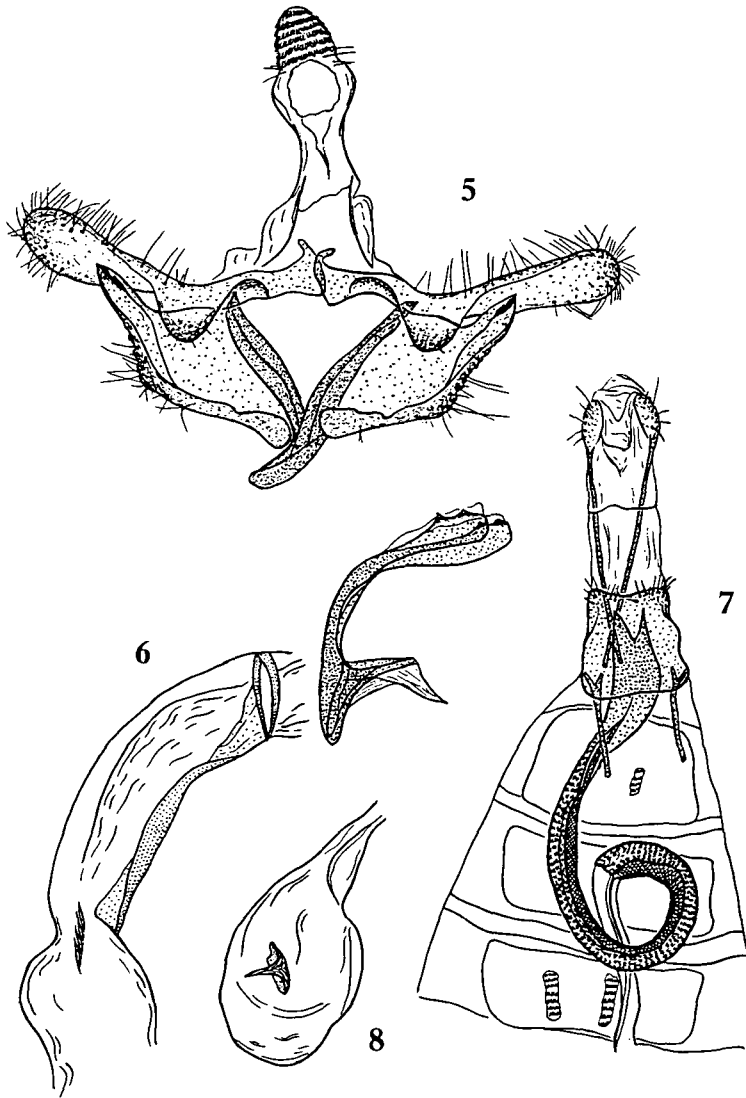
*Carpochena salicorniae* (HEINEMANN & WOCKE, 1877). The species is typical for all the region. Distribution: Europe; Great Britain; Middle Asia; Iran; Canary Is. Biology: The first instar larva lives in the carpels of *Salicornia europaea* L., boring in the tip of a



Figs 2-4: Coleophoridae spp., male genitalia. 2 - *Orthographis uralensis* (TOLL, 1961); 3 - *Casignetella ancistrum* (FALKOVITSH, 1976); 4 - *Casignetella ancistrum* (FALKOVITSH, 1976), vesica and cornuti.

carpel. FP in August. The moth occurs in desert biotopes and salt-marshes.

*Carpochena asperginella* (CHRISTOPH, 1872) (= *nigrosquamella* FILIPJEV, 1925). Saratov prov., Dyakovka Nature Reserve, 8.VIII.1991, 2 ♂♂, 3 ♀♀. Distribution: Lower Volga region; Middle Asia. Biology: The first instar larva lives in the carpels of *Coryspermum* boring in the tip of the carpel. FP in August. The moth occurs in desert biotopes.



Figs 5-8: *Casignetella tremula* FALKOVITSH, 1989, genitalia. 5 - male; 6 - aedeagus and vesica; 7 - female; 8 - corpus bursae.

*Carpochena trientella* (CHRISTOPH, 1872). Saratov prov., Dyakovka Nature Reserve, 8.VIII.1991, 2 ♀♀. Distribution: Palestine; Lower Volga region; Middle Asia. Biology: The larva lives in the carpels of *Coryspermum*, feeding therein. FP in August. The moth occurs in desert biotopes and in salt-marshes.

*Carpochena aequallella* (CHRISTOPH, 1872) (= *heratella* TOLL & AMSEL, 1967). This species was originally described from the environs of Sarepta. Distribution: Lower Volga region; Ural; Uzbekistan; Afghanistan; Iran. Biology: FP in May, June.

*Ionescumia clypeiferella* HOFMANN, 1871). Saratov prov., Dyakovka Nature Reserve, 9.VIII.1991, 3 ♂♂, 2 ♀♀. Distribution: Northern and central Europe; Great Britain; Caucasus; Ural. Biology: The larva lives in the carpels of *Chenopodium*, hibernates. FP in July, August. The moth occurs in steppe and cultivated areas.

*Ionescumia dilabens* FALKOVITSH, 1982. Volgograd Prov., Pallasovka distr., Lake Elton, 18.IX.1994, on *Salsola orientalis*\*, ex l. 18-29.XI.1994, ♂♂, ♀♀. Distribution: Middle Asia; Afghanistan. Biology: The first instar larva lives in the carpels of *Salsola orientalis*. FP in June, July. The moth occurs in semi-desert biotopes.

*Goniodoma aurogutella* ZELLER, 1849. Saratov prov., Dyakovka Nature Reserve, 9.VIII.1991, 2 ♂♂ and 29.V.1992, 1 ♂. Distribution: Southern Europe; European Russia; Asia Minor. Biology: The first instar larva lives in the carpels of *Atriplex*. FP from late June to August. The moth occurs in steppe and semi-desert biotopes.

To conclude, seventy-four species are recorded from the Volga-Ural inter-river region. For some little-known species, *Orthographis uralensis* (TOLL, 1961), *Casignetella ancistron* (FALKOVITSH, 1976), and for *Casignetella tremula* FALKOVITSH, 1989, whose female was hitherto unknown, the genitalia are illustrated.

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Druck, Eigentümer, Herausgeber, Verleger und für den Inhalt verantwortlich:

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Eibenweg 6, A-4052 Ansfelden

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