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FRAGMENTA FAUNISTICA

Fragm. faun.	Warszawa, 30.06.2003	**46**	1–17

Irmina PILIPIUK

Enchytraeid fauna (*Oligochaeta, Enchytraeidae*) in the Białowieża Primeval Forest

Abstract: Enchytraeid communities were studied at 15 sites in different types of forest within the Białowieża Primeval Forest. Thirty-six species were identified. Analysis of species composition similarity revealed the presence of 2 dissimilar groups of communities, associated with broad-leaved forests and coniferous forests respectively. Within each group, the highest similarity was observed between communities from ash-alder carrs and Scots pine forests while communities inhabiting the soil in the bog birch forest and the linden-oak-hornbeam forest were the least similar. The abundance of enchytraeids was not limited by high soil acidity or moisture.

Key words: Enchytraeidae, species composition, habitat preference, Białowieża Primeval Forest

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Fragm. faun.	Warszawa, 30.06.200	**46**	19–25

Krzysztof JAŻDŻEWSKI

An invasive Ponto-Caspian amphipod – *Dikerogammarus haemobaphes* (Eichwald, 1841) – conquers Great Masurian Lakes, north-eastern Poland

Abstract: A Ponto-Caspian gammarid – *Dikerogammarus haemobaphes* – a recent invader of the Vistula and Oder rivers, appeared also in Great Masurian Lakes. Possible routes of its invasion are discussed.

Key words: *Dikerogammarus haemobaphes*, *Crustacea*, alien species, biological invasion

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FRAGMENTA FAUNISTICA

Fragm. faun.	Warszawa, 30.06.2003	**46**	27–36

Natalia A. KUZNETSOVA

The biotopic group spectrum as a *Collembola* community characteristic

Abstract: Biotopic preferences of species can be useful for community characterization. Communities of soil micrarthropod Collembola consist of four categories of species: specialized to the natural biotope being examined, specialized to a different natural biotope, eurytopic and disturbed site species. Four categories of communities (specialized, eurytopic, modular, and ruderal communities) can be distinguished according to the dominance of different biotopic groups. Spectra of biotopic groups are found to be sensitive to human activities. The ratio between specialized and eurytopic species decreases both under industrial pollution and the degree of urbanization. A high diversity (due to high evenness) of biotopic groups is characteristic of modular collembolan communities in urban soils. Specialized collembolan communities are consequently replaced by eurytopic, modular and ruderal ones along gradients of human impact.

Key words: *Collembola*, community, biotopic groups, specialized and eurytopic species, human impact

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Fragm. faun.	Warszawa, 30.06.2003	**46**	37–46

Bolesław BURAKOWSKI* and Darren POLLOCK**

Description of the immature stages of *Dircaea quadriguttata* (PAYKULL, 1798) with notes on adult copulative organs (*Coleoptera: Melandryidae*)

Abstract: The previously unknown larva and pupa of *Dircaea quadriguttata* (PAYKULL) (*Coleoptera*: *Melandryidae*: *Serropalpini*) are described and illustrated in detail; the adult is redescribed, including illustrations of the male and female copulative organs and associated sclerites. This species is a primeval forest relict from Białowieża National Park, Poland. The larva and pupa develop subcortically in the sapwood of large, fallen birch *(Betula* sp.) logs.

Key words: *Coleoptera*, *Melandryidae*, *Dircaea*, larva, pupa, copulative organs, relict, Białowieża Primeval Forest

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FRAGMENTA FAUNISTICA

Fragm. faun.	Warszawa, 30.06.2003	**46**	47–57

Alexander RADCHENKO*, Graham W. ELMES**, Wiesława CZECHOWSKA*, Anna STANKIEWICZ*, Wojciech CZECHOWSKI* and Marcin SIELEZNIEW***

First records of *Myrmica vandeli* BONDROIT and *M. tulinae* ELMES, RADCHENKO *et* AKTAÇ (*Hymenoptera*: *Formicidae*) for Poland, with a key for the *scabrinodis*- and *sabuleti*-complexes

Abstract: The first records from Poland of *Myrmica vandeli* and the recently described *M. tulinae*, both belonging to the *scabrinodis*-group, are reported. These species are poorly recorded and may be less rare than hitherto supposed. The current knowledge of their distributions and ecologies are summarised. The characteristic morphological features of the two species are illustrated and a key for separating them from their closest relatives in Poland is given.

Key words: ants, *Myrmica vandeli*, *Myrmica tulinae*, *scabrinodis*-complex, *sabuleti*-complex, morphology, key, fauna of Poland

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Fragm. faun.	Warszawa, 30.06.2003	**46**	59–67

Grażyna WINIARSKA

Butterflies and moths (*Lepidoptera*) in urban habitats: II. The butterflies (*Rhopalocera*) of Warsaw

Abstract: 104 species of *Rhopalocera* (families: *Hesperiidae, Papilionidae, Pieridae, Lycaenidae* and *Nymphalidae*) have been recorded in Warsaw to date. Of these, 98 species were recorded in historical times. Recent records from Warsaw are not available for 30 of them, but they still occur in Poland. This group consists of: *P. serratulae*, *A. crataegi*, *C. palaeno*, *C. argiades*, *G. alexis*, *P. baton*, *M. arion*, *P. optilete*, *B. daphne*, *N. xanthomelas*, *E. aurinia*, *M. phoebe, M. aurelia,* and the migratory *N. vaualbum*, which is the only species not recorded from Poland since 1922. Contemporary records (1961 – onwards) list 75 species. Most of them (e.g. *P. brassicae, P. napi. P. rapae, A. cardamines*, *C. hyale, L. sinapis*, *I. io, G. rhamni, L. phlaeas, L. tityrus)* are common throughout the country, but some are regarded as rare (*I. podalirius*, *M. teleius*). Three species: *C. croceus*, *V. atalanta* and *V. cardui*, are more or less frequent visitors.

Key words: *Hesperiidae, Papilionidae, Pieridae, Lycaenidae, Nymphalidae, Lepidoptera*, urban habitats, Warsaw

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FRAGMENTA FAUNISTICA

Fragm. faun.	Warszawa, 30.06.2003	**46**	69–91

Grażyna WINIARSKA

Long-term changes in communities of *Noctuidae, Pantheidae* and *Nolidae (Lepidoptera)* of Warsaw city centre[1]

Abstract: In the centre of Warsaw 209 species of noctuid moths (*Noctuidae, Pantheidae* and *Nolidae*) were recorded, accounting for about 69% of all species ever found in this agglomeration. Only 15 species were classified as very abundant or abundant while as many as 174 were few and single. The following species were the most abundant: *Xestia c-nigrum*, *Autographa gamma*, *Discestra trifolii*, *Mythimna pallens*, *M. l-album, Agrotis exclamationis*, *A. segetum*, *Hoplodrina ambigua* and *Luperina testacea*. These species occurred abundantly everywhere. They are chiefly associated with open-area habitats (including anthropogenic ones). Noctuid communities in the centre of Warsaw have changed considerably over the last 50 years. The most abundant species have remained a constant element but rare (few and single) species have begun to disappear from the city centre, probably as a result of unfavourable environmental changes due to intensive urbanization of this area.

Key words: *Noctuidae, Pantheidae, Nolidae, Lepidoptera*, urban habitats, big city centre, Warsaw, strong settlement pressure

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Fragm. faun.	Warszawa, 30.06.2003	**46**	93–107

Zofia MICHALSKA

Agromyzidae (*Diptera*) in urban green areas in Poland

Abstract: In Poland, 58 species of mining dipterans of the family *Agromyzidae* were found in urban green areas: parks, squares, trees beside roads. *Liriomyza brassicae* was earlier reported only from a park in the town of Zwierzyniec (SE Poland), while several other species: *L. dracunculi*, *L. eupatoriana*, *Aulagromyza hendeliana*, *A. heringi*, *A. populicola*, *A. tremulae* and *Phytomyza periclymeni*, were known from only several localities in Poland.

Key words: *Diptera*, *Agromyzidae*, mining dipterans, urban green areas, ecological and zoogeographical notes, Poland

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