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***Lamprodila mirifica* (Mulsant, 1855) (Buprestidae: Chrysochroinae: Poecilonotini) – new for the fauna of Poland. Key to the identification of Polish species of the genus *Lamprodila* Motschulsky, 1860**

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Abstract: The paper introduces *Lamprodila mirifica* (Mulsant, 1855) as a beetle new for the Polish fauna. This is a monophagous species whose larvae develop under bark of branches and trunks of elms, preferably well insulated. It was recently found on the Wiekopolsko-Kujawska Lowland, in Krajkowo near Poznań – hitherto the only locality in Poland and the northernmost in Europe. A key to the identification of Polish species of *Lamprodila* Motschulsky, 1860 is provided.

Key words: Coleoptera, *Lamprodila mirifica*, elm, fauna of Poland



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What species of owlflies (Neuroptera: Ascalaphidae), an extinct family in Poland, have occurred in Poland in the past?

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Abstract. Literature data on Ascalaphidae in Poland are critically discussed. *Libelloides macaronius* has never been found in the present-day territory of Poland. *Libelloides coccajus* most likely occurred in Poland at the end of the 18th century. Evidence for this statement comprises a drawing and a note in a manuscript of Charles de Perthées from 1802–1803.

Key words: Neuroptera, Ascalaphidae, *Libelloides coccajus*, *Libelloides macaronius*, Poland, distribution, extinct species.



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Pollinating insects (Hymenoptera: Apoidea, Apiformes) as an example of changes in fauna

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Abstract: Changes in the Apiformes fauna are discussed on the basis of the fauna of Poland and other European countries, starting from historical times. The presentation of contemporary changes accounts for different trends: (a) population decline or disappearance of some species (shrinking ranges), (b) population increases or expansion of other species. The fauna is described dynamically against the background of environmental change (fluctuation hypothesis). It is postulated that updated comprehensive studies of faunal resources need to be undertaken, concentrating on species diversity and density.

Key words: bees, wild bees, bumble bees, honey bees, Apiformes, changes in fauna, species extinction, species expansion, permanence of fauna, Białowieża Primeval Forest.



How does a strip of clearing affect the forest community of ants (Hymenoptera: Formicidae)?

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Abstract: The species composition, nest density, structure and ecological profile of an ant community were studied within a transect encompassing the forest interior, forest edge and a belt-shaped clearing in a moist mixed pine forest habitat (*Quercus roboris-Pinetum*) in the Kampinos Forest (Central Poland) in the context of direct and indirect human impact and the bioindicator importance of ants. Altogether, 19 ant species were found; the most abundant ones (in respect of number of nests) in the entire habitat under study were *Temnothorax crassispinus* (Karav.) and *Myrmica rubra* (L.). All analysed parameters of individual subcommunities, except for nest density (highest on the forest edge, lowest in the cleared belt), showed a gradient pattern of variability, with species richness and the index of general diversity increasing and the dominance index decreasing within the transect from the forest interior to the cleared belt. Differences between the two subcommunities from the forested area (forest interior and forest edge), both highly dominated by *T. crassispinus*, were, in every way, much smaller than those between either of them and the subcommunity from the cleared area, where *M. rubra* prevailed.

Key words: ants, mixed pine forest, community structure, clearcutting impact, ecology, *Formica cinerea*, *Formica fusca*, *Myrmica rubra*, *Myrmica ruginodis*, *Temnothorax crassispinus*



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Decrease of faunal diversity in a disturbed lake, as exemplified by Tanytarsini chironomids (Diptera: Chironomidae) of Jezioro Żarnowieckie

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Abstract: Diversity of the Tanytarsini chironomids (Diptera: Chironomidae) collected on the Żarnowieckie Lake (northern Poland) in the early 1980s and in 2008–2009 was compared. The analysis demonstrated a significant impoverishment of the Żarnowieckie chironomid fauna. Within less than 30 years, the number of Tanytarsini species dropped from 21 to 14, and the fauna became dominated by common eurytopic species *Cladotanytarsus atridorsum* Kieffer (more than 73% of all individuals collected in 2008), *C. mancus* (Walker) (more than 8%), and *Paratanytarsus inopertus* (Walker) (more than 9%). The four species rare in Poland [*Tanytarsus niger* Andersen, *Rheotanytarsus muscicola* Thienemann, *Stempellinella brevis* (Edwards), *Paratanytarsus tenellulus* (Goetghebuer)], recorded in the area in the 1980s, were absent in 2008–2009. The reduction in the Tanytarsini diversity is interpreted as an effect of unstable environmental regime of the lake following its artificial modification in 1983 to serve the needs of the "Żarnowiec" pumped storage power station, and interventions related to the planned construction of a nuclear power plant on the lake.

Key words: Diptera, Chironomidae, Tanytarsini, Lake Żarnowieckie, biodiversity



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Diagnosis of *Forcipomyia sahariensis* Kieffer (Diptera: Ceratopogonidae) with the first description of immature stages

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Abstract: *Forcipomyia sahariensis* Kieffer, 1923 is diagnosed in all stages. Larvae and pupae reared from rotting roots are described for the first time. *Forcipomyia tuzeti* Huttel et Huttel, 1952 from France and *F. acanthophora* Remm in Havelka, 1976 from Germany are recognized as new junior synonyms of *F. sahariensis*. A supplemented key for identification of known larvae and pupae of Polish species of the subgenus *Forcipomyia* s. str. is also provided.

Key words: Diptera, Ceratopogonidae, *Forcipomyia*, diagnosis, larva, pupa, new synonymy, Poland.



The characteristics of the most troublesome mosquito species (Diptera: Culicidae) in Poland

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Abstract: Twelve of the 47 Polish mosquito species can pose serious health problems to man or at least heavy nuisance. They fly from breeding sites (where huge numbers can be produced) into houses and/or farm buildings transmitting severe human and animal diseases. Problematic ones are: *Anopheles messae* and *An. atroparvus*, *Ochlerotatus communis*, *Oc. cataphylla*, *Oc. punctor*, *Oc. cantans*, *Oc. sticticus*, *Aedes cinereus*, *Ae. vexans*, *Coquillettia richardii*, *Culex pipiens* and *Culiseta annulata*. The problems of distribution, phenology under different climatic conditions, habitat requirements and preferences both of larvae and adults, behaviour, fertility and vector competence of all these species are analyzed. Most of the species in the Temperate Zone produce more than one generation during the growing season or at least have several emergences. Only *Oc. communis* and *Oc. cataphylla* are early spring univoltine species, although they can breed twice or more during the growing season when there are favourable conditions. Univoltine *Oc. cantans*, which can develop several times during a season, occurring in the breeding sites often together with multivoltine *Oc. punctor*. The period of their occurrence is usually much longer than that of *Oc. communis* and *Oc. cataphylla*. Flood–water mosquitoes – *Oc. sticticus* and both *Aedes* species occur along river valleys and their larvae can breed in different pools situated in a variety of environments. *Culex pipiens*, especially its form *molestus* and *Culiseta annulata* can breed in natural and artificial ponds, even in heavily polluted water. Although mosquitoes are known to be competent vectors of serious human and animal diseases, in Poland they are considered to cause nuisance only. Despite the fact that malaria was eradicated in Poland in 1960-s, at least two Polish anopheline species can still transmit the human malarial parasite very effectively. The remaining species (except for only one) described in the paper can transmit several arboviruses, while several species are vectors of filariasis (*Dirofilaria* sp.).

Key words: mosquito, Culicidae, Poland, vectors, arbovirus, filariasis



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Heleomyzid flies of the Ojców National Park, with notes on *Suillia lineitergum* (Pandellé, 1901) – a species new to the fauna of Poland (Diptera: Heleomyzidae)

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Abstract. There is a faunistic review of 28 species of Heleomyzidae reported in the Ojców National Park (S. Poland). Most heleomyzids were collected at carrion of a fox and in caves. In the Ojców National Park 35% of Polish heleomyzids occur including *Suilla lineitergum* (Pandellé, 1901) recorded for the first time in Poland.

Key words: *Suilla lineitergum*, faunistics, Heleomyzidae, carrion, caves, Ojców National Park, Poland



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Distribution and ecology of the saproxylic hoverfly *Chalcosyrphus eunotus* (Loew, 1873) (Diptera: Syrphidae) in Poland

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Abstract: *Chalcosyrphus eunotus* is one of the most endangered saproxylic hoverflies in Poland. Almost 80 years since its first record in Pomerania, this fly has been found in a few new localities in Poland: Ojców National Park, Białowieża Primeval Forest, and in the vicinity of following cities: Toruń, Gdańsk, Łódź and Inowłódz. The actual map of its range in Poland is presented and the current state of knowledge of its phenology, ecology, behavior and conservation status is discussed. The authors advance the hypothesis that the increasing occurrence of *Ch. eunotus* is directly proportional to an increase in the number of beavers over the last 20 years.

Key words: hoverflies, saproxylic indicator, streams, semi-submerged wood, beavers, protection



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The tachinid *Euthera fascipennis* (Loew, 1854) (Diptera, Tachinidae) new to the fauna of the Tunisia, with a description of the female and the puparium

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Abstract: *Euthera fascipennis* (Loew, 1854) is recorded from Tunisia for the first time. The puparium of this species was collected in a ruderal environment (a kind of sward) in the stem of the inflorescence of *Thapsia villosa* L., near a larval gallery of *Acmaeoderella lanuginosa* (Gyll.) (Coleoptera, Buprestidae). The female and the puparium are described and illustrated.

Key words: *Euthera fascipennis*, Diptera, Tachinidae, morphology, faunistics, Coleoptera, Buprestidae, Tunisia, North Africa



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Two species of supranivale insects new for Kampinos National Park

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Abstract: *Chionea (Niphadobata) lutescens* Lundstr. and *Boreus westwoodi* Hagen were caught in Moericke's trap during a snowy December in the year 2004 in Kampinos National Park.

Key words: *Chionea lutescens*, *Boreus westwoodi*, Kampinos National Park.