

MUSEUM & INSTITUTE OF ZOOLOGY
POLISH ACADEMY OF SCIENCES

FRAGMENTA FAUNISTICA

Fragm. faun.	Warsaw, 30.06.2000	43	1	1-13
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Przemysław TROJAN

The meaning and measurement of species diversity

Abstract. Studies of species diversity give rise to a number of questions related to theoretical aspects and methodology. The questions deal with 1) estimation of the number of species inhabiting an area, 2) the measurement of species diversity by means of statistical indices, 3) the relation between changes in diversity and the structure of animal communities, 4) estimation of diversity in succession series of biocenoses 5) defining species diversity in a landscape, 6) reduction in species diversity due to anthropogenic pressure. The application of quantitative measurements that afford precise answers to these questions has given contemporary students of fauna tools with which to evaluate habitat quality and produce evidence-based directives for nature conservation.

Key words: species diversity, concepts, measurement, perspectives

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Fragm. faun.	Warsaw, 30.06.2000	43	2	15-27
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Irmina PILIPIUK

Diversification of enchytraeid communities (*Enchytraeidae*, *Oligochaeta*) of the South Basin of the Biebrza National Park

Abstract. Species composition and community structure was studied in enchytraeid communities in the soil of plant associations in the Biebrza River valley situated at various distances from the river trough. Thirty species of *Enchytraeidae* were registered. Considerable similarity was observed for communities inhabiting reed beds, sedge and moss fens. These types of community were different from communities occupying a mineral elevation, a meadow and a swamp alder wood. Habitat location and plant association type have a much smaller effect on the characteristics of a community than the type of soil, mowing frequency and tree cover.

Key words: *Enchytraeidae*, community structure, Biebrza NP, peatland

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Fragm. faun.	Warsaw, 30.06.2000	43	3	29-33
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Wojciech CZECHOWSKI, Wiesława CZECHOWSKA

***Epimyрма ravouxi* (ANDRÉ, 1896) (Hymenoptera, Formicidae)
in the Pieniny Mts - notes on its occurrence and biology**

Abstract. Data are presented on the occurrence of *Epimyрма ravouxi* (ANDRÉ) in the Pieniny Mts (Western Carpathians), the only known locality of this dulotic ant species in Poland. The composition of mixed colonies of the social parasite with its host species [*Leptothorax unifasciatus* (LATR.), *L. albipennis* CURTIS and *L. nadigi* KUTTER)] found there is given.

Key words: ants, social parasites, dulosis, *Epimyрма ravouxi*, *Leptothorax*, fauna of Poland.

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Fragm. faun.	Warsaw, 30.06.2000	43	4	35–45
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R. Henry L. DISNEY* and Marina V. MICHAILOVSKAYA**

New species of *Pseudacteon* Coquillett (Diptera: Phoridae) from the Far East of Russia

Abstract. Four new species of *Pseudacteon* are described from Primorskii krai and a key to the species of the region provided.

Key words: *Phoridae*, *Pseudacteon*, new species, Russia, parasitoids, ants, *Formicidae*.

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Fragm. faun.	Warsaw, 30.06.2000	43	5	47-54
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Regina BAŃKOWSKA

Syrphid flies (*Diptera, Syrphidae*) from Mongolia collected by Polish expeditions

Abstract: The paper contains a list of 18 species of dipterans of the family *Syrphidae* collected by Polish expeditions to central Mongolia. Among them *Paragus compeditus* WIED. and *Eristalis abusiva* COLL. are recorded from this area for the first time. Also a new species of *Syrphidae* - *Paragus mongolicus* sp. n. is described and illustrated.

Key words: *Diptera, Syrphidae*, new species, Mongolia

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Fragm. faun.	Warsaw, 30.06.2000	43	6	55-58
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Regina BAŃKOWSKA

New species of *Paragus* LATR. from Middle Asia (*Diptera*, *Syrphidae*)

Abstract: A new species of the genus *Paragus* LATR.: *P. gussakovskii* BAŃKOWSKA from Middle Asia is described. Materials were collected by V. GUSSAKOVSKII from Tajikistan (Hissar mountain ridge, Kondara Valley) also from Uzbekistan (environs of Tashkent).

Key words: New species, *Diptera*, *Syrphidae*, *Paragus* LATR., Middle Asia

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Fragm. faun.	Warsaw, 30.06.2000	43	7	59–89
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Wojciech STARĘGA

Spinnen (*Araneae*) aus Roztocze und den anliegenden Gebieten

Abstract. Spiders collected during one-year investigations of Roztocze Upland (SE Poland) were determined and as far as possible analysed. Together with the results of a M.A. degree paper 279 species were found, and the total number of species known from the Polish part of Roztocze amounts 330. The richest forest association is the Carpathian beech forest (*Dentario glandulosae-Fagetum*) – 109 species. This community – together with the mountain fir forest (*Abietetum polonicum*) – connects the Upland with the Polish Carpathians and is important from the zoogeographic point of view. Some spider species of mountain character were indeed found in these two plant associations: *Asthenargus paganus*, *Kratochwiliella bicapitata*, *Saloca kulczyński* and *Troxochrus nasutus*. Some further relatively rare species originated also from the other biotopes: *Enoplognatha latimana*, *Robertus scoticus*, *Agynera ramosa*, *Centromerus cavernicola*, *Macrargus excavatus*, *Maro minutus*, *Meioneta fuscipalpis*, *Peponocranium orbiculatum*, *Walckenaeria nodosa*, *Alopecosa pinetorum*, *Haplodrassus dalmatensis*, *Poecilochroa conspicua*, *Xysticus luctator*, *Asianellus festivus* and *Sitticus inexpectus*.

Key words: *Araneae*, Roztocze, Poland.

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Fragm. faun.	Warsaw, 30.06.2000	43	8	91-95
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Dariusz J. GWIAZDOWICZ, Rafał SZADKOWSKI

Mites (*Acari*, *Gamasida*) of the Narew National Park

Abstract. This paper presents a list of mites of the *Gamasida* order in the Narew National Park.

Key words: mites, *Acari*, *Gamasida*, Narew National Park.

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Fragm. faun.	Warsaw, 30.12.2000	43	9	97-108
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Joachim ADIS*, Sergei I. GOLOVATCH**

**Notes on the unique structure of the spiracles and legs
in *Pandiroidesmus disparipes* SILVESTRI, 1932
(*Diplopoda*, *Polydesmida*, *Chelodesmidae*), with some possible
implications concerning its mode of life**

Abstract: *Pandiroidesmus disparipes* SILVESTRI, 1932, a remarkable diplopod from Guyana taken from an unknown habitat, was restudied from type material. Based on some rare traits (erect metatergal spines; swollen distal parts of most tibiae plus the basal parts of the tarsi; apical part of most tarsi with numerous long but stiff setae instead of a claw) and unique (extruding tubiform spiracles; extremely long legs, with the posterior pair per segment being considerably longer than the anterior one; legs and sternites beset with ramose, tree-like setae) as well as some circumstantial evidence derived from fossils and a few Recent taxa, the mode of life and the environment in this species are presumed as climbing on humid vegetation and/or swimming/gliding on the water surface in floodplains or savannahs, by all means in very close if not direct contact with water.

Key words: *Diplopoda*, *Pandiroidesmus*, plastron, structure, ecology, Neotropics.

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Fragm. faun.	Warsaw, 30.12.2000	43	10	109-122
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Elena V. MIKHALJOVA*, Sergei I. GOLOVATCH**, Jolanta WYTWER***

On some new or poorly-known millipedes (*Diplopoda*) from North Korea

Abstract: A collection of *Diplopoda* from North Korea appears to contain 14 identifiable species, of which three are described as new to science: *Angarozonium munsunum*, *Megalotyta glabra*, and *Orientyta kjongsonica*, and further three are new to the Korean fauna: *Diplomaragna kedrovaya*, *Levizonus variabilis*, and *Epanerchodus polymorphus*. Remarks are provided for all the species encountered, including notes on the variation of both *Diplomaragna kedrovaya* and *Levizonus variabilis*.

Key words: *Diplopoda*, taxonomy, new species, faunistics, North Korea

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Fragm. faun.	Warsaw, 30.12.2000	43	11	123-125
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Wiesława CZECHOWSKA

***Sialis morio* KLINGSTEDT, 1932 (*Megaloptera, Sialidae*), an alderfly
species new to Poland**

Abstract: *Sialis morio* KLINGSTEDT, 1932 is reported from Poland for the first time. It was found in two sites in the Masurian Lake District in the years 1998-1999.

Key words: *Neuropteroidea, Megaloptera, Sialis morio*, Poland.

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Fragm. faun.	Warsaw, 30.12.2000	43	12	127-129
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Wojciech CZECHOWSKI, Alexander RADCHENKO

Formica glauca RUZSKY, 1895 (Hymenoptera, Formicidae) in Poland

Abstract: Data are presented on the occurrence of *Formica glauca* RUZSKY in Puszcza Białowiecka (the Białowiecka Forest), the only known locality (with the only known nest) of this steppe ant species in Poland.

Key words: ants, *Formica glauca*, Poland.

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Fragm. faun.	Warsaw, 30.12.2000	43	13	131-133
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Wojciech CZECHOWSKI, Wiesława CZECHOWSKA

***Formica cinerea fuscocinerea* FOR. in the Pieniny Mts;
its untypical habitat and plesiobiosis with *Lasius flavus* (F.) (Hymenoptera, Formicidae)**

Abstract: Presented is the occurrence of *Formica cinerea fuscocinerea* FOR. in the Pieniny Mts, S Poland in a habitat not typical for this ant subspecies in a grassy mountain slope far from a river. The colonies nest under stones, usually in plesiobiosis with *Lasius flavus* (F.).

Key words: ants, *Formica cinerea*, social symbiosis, Poland.

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Fragm. faun.	Warsaw, 30.12.2000	43	14	135-193
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Józef BANASZAK

A checklist of the bee species (*Hymenoptera, Apoidea*) of Poland, with remarks on their taxonomy and zoogeography: revised version

Abstract: The list of bee species (*Hymenoptera, Apoidea*) and their synonyms reported from the present area of Poland was made on the basis of literature and original research. A total of 469 species and subspecies of 52 genera found within Poland are listed. Of this number, the occurrence of 15 species is considered doubtful, and another 9 species are likely to occur in Poland. Some information on the taxonomy and distribution of less frequent taxa is supplied.

Key words: fauna of Poland, bees, *Apoidea*

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Fragm. faun.	Warsaw, 30.12.2000	43	15	195-201
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Regina BAŃKOWSKA

Syrphid and conopid flies (*Diptera*) from Vietnam collected by Polish expeditions

Abstract: The paper contains a list of 24 species of flies of the family *Syrphidae* and 1 species of the family *Conopidae* collected by three Polish expeditions in Vietnam. The material of hover flies used in this study included five species rarely recorded at these latitudes: *Dideoides kempi* BRUN., *Spheginobaccha melancholia* HULL, *Sph. demejerei* VAN DOESBURG, *Eristalinus obtusus* HULL and *Xylota steyskali* THOMPS.

Key words: *Diptera*, *Syrphidae*, *Conopidae*, Vietnam

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Fragm. faun.	Warsaw, 30.12.2000	43	16	203-207
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Regina BAŃKOWSKA

Notes on syrphid flies (*Diptera, Syrphidae*) of Japan

Abstract: The paper contains a list of 21 species of flies of the family *Syrphidae* collected on the Japanese islands of Honshu and Hokkaido. A few rare species were identified, namely: *Chrysotoxum sapporensis* MATS., *Cheilosia latifaciella* (SHIR.), *Microdon japonicus* YANO, *Dideoides latus* (COQ.) and *D. coquilletti* VAN DER GOOT.

Key words: *Syrphidae*, *Diptera*, Japan

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Fragm. faun.	Warsaw, 30.12.2000	43	17	209-213
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R. Henry L. DISNEY* and Marina V. MICHAILOVSKAYA**

A new genus of scuttle fly (*Diptera: Phoridae*) from Russia

Abstract: *Trispiniphora kuenburgoidea* n. gen., n. sp. is described from the far east of Russia.

Key words: *Phoridae*, new genus, new species, Russia.

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