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**BIODIVERSITY OF XYLOFAGOUS AND  
PREDATORY BEETLES (COLEOPTERA) OF THE VALLEY  
OF THE SOUTHERN BUG (UKRAINE)**

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Results of preliminary research on beetle's biodiversity, which had been done in the vicinity of Winnica Region (Ukraine), are here presented. The following families represented by 55 species were recorded: Cerambycidae, Cantharidae, Cleridae, Coccinellidae, Elateridae and Malachiidae.

*Key words:* biodiversity, Southern Bug, Coleoptera, Cantharidae, Cerambycidae, Cleridae, Coccinellidae, Elateridae, Malachiidae.

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During a field expedition, in year 2010, to the valley of Southern Bug in Ukraine, several samples of beetles (Coleoptera) have been collected. They are represented by six families of different ecological and biological character. On the base of this small collection, a preliminary report on beetles biodiversity is here presented. Since additional field expeditions are planed in near future, only some general remarks about collected families have been done.

This paper is based on the biggest project executing by the author and concerning biodiversity of river valleys in Poland and Ukraine.

Beetles were collected by entomological net. On each plots, about two hundred strokes have been executed. Insects were stored dry for laboratory study and are deposited partly in privet collection of the author and partly in the Museum and Institute of Zoology PAS in Warsaw.

The basic field research were located on six plots (tab. 1) in the Winnica region, the middle of Southern Bug Valley. More detail characteristics has been done by Dyguś and Jędrzykowski (in print).

About three hundred specimens of insects have been collected during field expedition. They were consisted, mostly by zoophagous and xylophagous species.

Table 1

## Characteristics of the studied plots

Locality	Symbols	Latitude	Longitude	Biotopes
Gnivan	Gn	49,094	28,358	1, 2
Komorovo	Ko	49,144	28,375	3
Mogilovka	Mo	49,091	28,313	2
Tyrov	Ty	49,030	28,494	5
Urozhnoie	Ur	49,149	28,334	5
Voroshylivka	Vo	49,053	28,329	4

Xylofagous species were represented by *Cerambycidae* family to which belong 13 species (tab. 2). They mostly species of wide range of distribution but some of them, like *Agapanthia cardui* and *Theophilea subcylindricollis*, develop in grasslands and meadows. It is necessary to underline, that mention above *T. subcylindricollis* was a dominate specie of this family.

Table 2

## Species composition the Cerambycidae of the studied areas

Species	Count	Locality	Biotope
<i>Agapanthia cardui</i> (L.)	38	Gn, Ko, Ty, Ur, Vo	2, 3, 4, 5
<i>Agapanthia villosoviridescens</i> (De Geer)	1	Gn	2
<i>Alosterna tabacicolor</i> (De Geer)	6	Gn, Mo	2
<i>Anastrangalia dubia</i> (Scopoli)	1	Ur	5
<i>Anoplodera sexguttata</i> (Fabricius)	1	Gn	2
<i>Dinoptera collaris</i> (L.)	6	Gn, Mo	2
<i>Leiopus nebulosus</i> (L.)	1	Gn	1
<i>Mesosa nebulosa</i> (Fabricius)	1	Mo	2
<i>Paracorymbia maculicornis</i> (De Geer)	1	Gn	1
<i>Phymatodes testaceus</i> (L.)	2	Gn	1
<i>Phytoecia cylindrica</i> (L.)	1	Gn	2
<i>Rhagium mordax</i> (De Geer)	1	Gn	2
<i>Theophilea subcylindricollis</i> Hladil	15	Ko, Ty, Ur, Vo	3, 4, 5

Abbreviations: 1 – Ecotones, 2 – Broadleaf forest, 3 – Moisture meadows, 4 – Riverside meadows, 5 – Xerothermic grass.

Predatory beetles were represented by five families. *Cantharidae* were represented by seven species (tab. 3) of wide geographical distribution and very frequent in many biotopes. *Cantharis livida* and *Cantharis rufa* were dominants in the family.

Family of Coccinellidae were represented by 15 species (tab. 4). They are feeding on small phytophagous insects, mainly aphids and young stadiums of Chryso-

melidae. All collected species are distributed all over Europe and, in some case, in all Palaearctic (*Coccinella septempunctata*). Two dominant species, *Psyllobora vigintiduopunctata* and *Tytthaspis sedecimpunctata*, represent typical element of moisture biotope (Burakowski at all 1986) and were collected mainly on meadows.

Table 3

## Species composition the Cantharidae of the studied areas

Species	Count	Locality	Biotope
<i>Cantharis fusca</i> L.	3	Mo, Ur	2, 5
<i>Cantharis lateralis</i> L.	5	Vo	4
<i>Cantharis livida</i> L.	15	Gn, Ko, Mo	1, 2, 3, 5
<i>Cantharis nigricans</i> Müller	7	Gn, Mo, Ur	1, 5
<i>Cantharis rufa</i> L.	11	Ko, Vo	3, 4
<i>Cantharis rustica</i> Fallén	7	Ko, Ur, Vo	3, 4, 5
<i>Rhagonycha lignosa</i> (Müller)	3	Gn, Mo	2

Table 4

## Species composition the Coccinellidae of the studied areas

Species	Count	Locality	Biotope
<i>Adalia bipunctata</i> (L.)	9	Gn	1, 2
<i>Adalia decempunctata</i> (L.)	1	Gn	1
<i>Coccinella quinquepunctata</i> L.	1	Gn	2
<i>Coccinella septempunctata</i> L.	3	Gn	1, 2
<i>Hippodamia variegata</i> (Goeze)	1	Mo	2
<i>Hyperaspis reppensis</i> (Herbst)	1	Ty	5
<i>Nephus bipunctatus</i> (Kugelann)	4	Ty, Vo	4, 5
<i>Oenopia conglobata</i> (L.)	1	Gn	1
<i>Platynaspis luteorubra</i> (Goeze)	1	Ur	5
<i>Propylea quatuordecimpunctata</i> (L.)	3	Gn, Ko	1, 3
<i>Psyllobora vigintiduopunctata</i> (L.)	14	Gn, Mo, Ur, Vo	1, 2, 4, 5
<i>Scymnus frontalis</i> (Fabricius)	1	Vo	4
<i>Scymnus interruptus</i> (Goeze)	1	Gn	1
<i>Scymnus rubromaculatus</i> (Goeze)	4	Gn, Mo, Vo	1, 2, 4
<i>Tytthaspis sedecimpunctata</i> (L.)	10	Ko, Ty, Vo	3, 4, 5

Abbreviations: 1 – Ecotones, 2 – Broadleaf forest, 3 – Moisture meadows, 4 – Riverside meadows, 5 – Xerothermic grass.

To family *Elateridae* belong species partly predatory and partly phytophagous. In general larval stadium of developing are mostly predatory or polyphagous animals. Since larvae of this family develop for several years in soil or decaying wood, they are very sensitive for even small changes in environment conditions. As such, this

family is considered a good indicator of environment changes [12, 13]. This family was represented by 12 species (tab. 5) with *Agriotes sputator* and *Cidnopus pilosus* as dominant species, which are typical in meadows and grasslands.

Table 5

Species composition the Elateridae of the studied areas

Species	Count	Locality	Biotope
<i>Actenicerus siaelandicus</i> (Müller)	2	Vo	4
<i>Agriotes lineatus</i> (L.)	1	Vo	4
<i>Agriotes sputator</i> (L.)	14	Gn, Ko, Ur, Vo	2, 3, 4, 5
<i>Agrypnus murinus</i> (L.)	9	Gn, Mo, Ur	1, 2, 5
<i>Athous haemorrhoidalis</i> (Fabricius)	3	Gn, Ko, Mo	2, 3
<i>Athous jejunus</i> Kiesenwetter	1	Gn	2
<i>Athous vittatus</i> (Gmelin)	4	Mo	2
<i>Cidnopus pilosus</i> (Leske)	13	Ur	5
<i>Hemicrepidius niger</i> (L.)	1	Gn	1
<i>Pheletes aeneoniger</i> (De Geer)	3	Mo	2
<i>Prosternon tessellatum</i> (L.)	1	Ur	5
<i>Synaptus filiformis</i> (Fabricius)	3	Gn	1

Abbreviations: 1 – Ecotones, 2 – Broadleaf forest, 3 – Moisture meadows, 4 – Riverside meadows, 5 – Xerothermic grass.

Family *Cleridae* was represented there only by three species (tab. 6) which are common all over Europe. Their larvae prey on wood drilling insects or parasite bees nests but adults feed on pollen and occasionally on small insects [4].

Table 6

Species composition the Cleroidea of the studied areas.

Species	Count	Locality	Biotope
<i>Cleridae</i>			
<i>Korynetes caeruleus</i> (De Geer)	4	Gn	1
<i>Tillus elongatus</i> (L.)	2	Gn	1
<i>Trichodes apiarius</i> (L.)	2	Gn	1
<i>Malachiidae</i>			
<i>Anthocomus equestris</i> (Fabricius)	4	Gn	1
<i>Axinotarsus pulicarius</i> (Fabricius)	2	Gn	2
<i>Clanoptilus geniculatus</i> (Germar)	21	Gn, Ko, Ty, Vo	1, 3, 4, 5
<i>Malachius aeneus</i> (L.)	1	Ko	3
<i>Malachius bipustulatus</i> (L.)	20	Gn, Ko, Ur	2, 3, 5

Abbreviations: 1 – Ecotones, 2 – Broadleaf forest, 3 – Moisture meadows, 4 – Riverside meadows, 5 – Xerothermic grass.

Family *Malachiidae* is represented by five species (tab. 6). The interesting one is *Clanoptilus geniculatus*, a rare species occurring in open landscapes such as steppes and meadows. Larvae of *Malachiidae* are predacious feeding mainly on xylophages. Adults specimens, usually feeds on pollen, fungi and small insects which visit flowers [10].

The material presented here, is far to be representative for this region. Some species such as *Theophilea subcylindricollis* (*Cerambycidae*), *Hippodamia variegata* (*Coccinellidae*) or *Actenicerus siaelandicus* and *Synaptus filiformis* (*Elateridae*) indicate, that studied area preserve moisture character typical for natural fresh meadows.

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**БІОРІЗНОМАНІТТЯ XYLOFAGOUS I  
ХИЖИХ ЖУКІВ (COLEOPTERA) ДОЛИНИ  
ПІВДЕННОГО БУГУ (УКРАЇНА)**

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Представлено результати попереднього вивчення біорізноманіття жуків Вінницької області. Визначено 55 видів жуків таких родин: *Cerambycidae*, *Cantharidae*, *Cleridae*, *Coccinellidae*, *Elateridae* і *Malachiidae*.

*Ключові слова:* біорізноманіття, Південний Буг, *Coleoptera*, *Cantharidae*, *Cerambycidae*, *Cleridae*, *Coccinellidae*, *Elateridae*, *Malachiidae*.

**БИОРАЗНООБРАЗИЕ XYLOFAGOUS И  
ХИЩНЫЙ ЖУКОВ (COLEOPTERA) ДОЛИНЫ  
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