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TO THE SPECIES COMPOSITION OF ORIBATID MITES (ACARI, ORIBATIDA) OF RIVNENSKY NATURE RESERVE

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New data was added to the oribatid species composition of the Rivnensky Nature Reserve. Overall, 62 mite species were recorded for the territory of research in this study. The species *Acrogalumna longipluma, Micreremus brevipes, Licneremaeus licnophorus, Oribatella reticulata,* and *Porobelba spinosa* were not previously listed for the Western Polissia. Of the 60 species of Lower Oribatida mites that have been recorded by other authors in that area, only 18 are found again in the Rivnensky Nature Reserve, indicating that our results are intermediate. A representative of the genus *Mainothrus* Choi, 1996 (*Mainothrus badius* (Berlese, 1905)) is found in Ukraine for the first time.

Key words: oribatid mites, species composition, *Mainothrus*, Rivnensky nature reserve.

До видового складу орибатидних кліщів (Acari, Oribatida) Рівненського природного заповідника
О.С. Шевченко
Наведено нові дані щодо видового складу панцирних кліщів Рівненського природного заповідника. Виявлено 62 види орибатидних кліщів на території дослідження. Види *Acrogalumna longipluma, Micreremus brevipes, Licneremaeus licnophorus, Oribatella reticulata* й *Porobelba spinosa* раніше не були зазначені для Західного Полісся. З 60 видів нижчих орибатид, зареєстрованих іншими авторами цій території, в Рівненському заповіднику знайдено лише 18, що вказує на проміжних характер наших результатів. Вперше на території України знайдено представника роду *Mainothrus* Choi, 1996 (*Mainothrus badius* (Berlese, 1905)).

Ключові слова: орибатидні кліщі, видовий склад, *Mainothrus*, Рівненський природний заповідник.

К видовому составу орибатидных клещей (Acari, Oribatida) Ровенского природного заповедника
А.С. Шевченко.
Приведены новые данные о видовом составе панцирных клещей Ровенского природного заповедника. Для Западного Полесья впервые приведены A*crogalumna longipluma, Micreremus brevipes, Licneremaeus licnophorus, Oribatella reticulata* и *Porobelba spinosa*. Из 60 видов низших орибатид, обнаруженных другими авторами на этой территории, в Ровенском заповеднике найдено вновь только 18 видов, что указывает на промежуточный характер наших результатов. Выявлено 62 вида панцирных клещей на территории исследования. Впервые на территории Украины обнаружен представитель рода *Mainothrus* Choi, 1996 (*Mainothrus badius* (Berlese, 1905)).

Ключевые слова: орибатидные клещи, видовой состав, *Mainothrus*, Ровенский природный заповедник.

Introduction

The species composition of oribatid mites has been for a long time the object of studies on soils of the mixed forests of Ukraine (Yaroshenko, 2000). The faunistical studies of oribatids at the territory of Ukraine have begun as early as the XIXth century (Kulczynski, 1902), however they were spatially and temporally unevenly distributed (Chornobay et al., 2003). For example, the zone of mixed forests (also known as Polissia) covers six administrative regions of northern Ukraine. Only three of six administrative regions were considered in the most comprehensive monograph summarizing the oribatid species composition of Ukraine (Yaroshenko, 2000). In that publication, 222 oribatid species were recorded for the whole Polissia.

V.V. Melamud using his own data and summarizing the publications of other scientists (Chornobay et al., 2003), compiled what can be considered the most detailed species list of oribatid mites of Volyhn

Polissia (also known as Western Polissia) and Male Polissia and the adjacent southern regions of Ukraine. For the Western Polissia, 218 species of oribatids were listed in that work. Unfortunately, author did not specify the sampling points of material when he listed the species. This may stem from the tradition to note whole regions as data points in the faunistical studies of oribatid mites on the territory of Ukraine in the XXth century. Later, Melamud listed 60 species of Lower Oribatida mites for several nature conservation territories of the Western Polissia of Ukraine (Melamud, 2009). That publication summarized the author's long-term studies and data from other publications similarly to (Chornobay et al., 2003).

Considering that the nature conservation territories are areas least influenced by the human activities, we decided to study the oribatid species composition in the Rivnensky Nature Reserve (NR), and compared our findings with data summarized by Melamud. Unfortunately, it is impossible to determine the species in the cited publications that were found at the territory of Rivnensky NR, because the areas of collection were not specified.

Materials and methods

Material was collected in May and June, 2018 at the territory of Rivnensky NR, in the vicinities of the lake Somyne, N 51°23′07″, E 26°51′03″. This is also one of study areas of Melamud (2009).

The mites were extracted from samples of soil, litter, mosses and lichens with Berlese funnels into 70 % ethanol and mounted on slides with Hoyer's liquid using microscope MBS–9 (USSR). Species were identified with Bulanova et al. (1975) and works of Pavlichenko (1994), Sergienko (1994), Balogh (1972), Kuriki et al. (2000), Weigmann (2006) using MPI–5 (Poland) microscope. Photographs of oribatid mites were made using a camera Zeiss AxioCam HRc, Carl Zeiss MicroImaging GmbH, in the Centre of scientific devices collective usage "Animalia" of the I.I. Schmalhausen Institute of Zoology, Kyiv.

Results and discussion

The study of oribatid species composition of Rivnensky NR resulted in registration of 62 species. Among these, 44 species were not listed in the work of Melamud (2009), namely: *Achipteria coleoptrata* (Linnaeus, 1758), *Acrogalumna longipluma* (Berlese, 1904), *Adoristes ovatus poppei* (Oudemans, 1906), *Autogneta longilamellata* (Michael, 1885), *Banksinoma lanceolata* (Michael, 1885), *Carabodes labyrinthicus* (Michael, 1879), *C. marginatus* (Michael, 1884), *C. ornatus* Štorkán, 1925, *C. subarcticus* Trägårdh, 1902, *Carabodes* sp., *Cepheus cepheiformis* (Nicolet, 1855), *Ceratozetes mediocris* Berlese, 1908, *C. cisalpinus* (Berlese, 1908), *Chamobates cuspidatus* (Michael, 1884), *Ch. pusillus* (Berlese, 1895), *Ch. sergienkoae* Schaldybina, 1980, *Ch. subglobulus* (Oudemans, 1900), *Cultroribula bicultrata* (Berlese, 1905), *Dolicheremaeus montanus* Krivolutsky, 1971, *Eueremaeus silvestris* (Forsslund, 1957), *Eupelops acromios* (Hermann, 1804), *Galumna* sp., *Gustavia microcephala* (Nicolet, 1855), *Gymnodamaeus bicostatus* (Koch, 1835), *Licnodamaeus licnophorus* (Michael, 1882), *Micreremus brevipes* (Michael, 1888), *Minunthozetes pseudofusiger* (Schweizer, 1922), *Oppiella nova* (Oudemans, 1902), *Oribatella reticulata* Berlese, 1916, *Peloptulus phaeonotus* (Koch, 1844), *Pergalumna nervosa* (Berlese, 1914), *Phauloppia lucorum* (Koch, 1841), *Porobelba spinosa* (Sellnick, 1920), *Punctoribates sellnicki* Willmann, 1928, *Quadroppia quadricarinata* (Michael, 1885), *Scheloribates* sp., *Scutovertex sculptus* Michael, 1879, *Semipunctoribates zachvatkini* (Shaldybina, 1969), *Suctobelbella* spp., *Synchthonius elegans* Forsslund, 1957, *Tectocepheus velatus* (Michael, 1880), *Tectoribates ornatus* (Schuster, 1958), and *Xenillus tegeocranus* (Hermann, 1804). Comparing our findings with data of Chornobay et al. (2003), I found out that *Ac. longipluma*, *M. brevipes*, *L. licnophorus, Or. reticulata,* and *P. spinosa* were not previously recorded in the Western Polissia.

Furthermore, a representative of the genus *Mainothrus*, *M. badius* (Berlese, 1905), is recorded in Ukraine for the first time (Fig. 1).

Fig. 8. Oribatid mite *Mainothrus badius* (Berlese, 1905): a — general view (x10); b — trichobothrium (x 20).

Following 18 species listed in the work of Melamud (2009) were found in present study: *Acrotritia ardua affinis* (Sergienko, 1989), *Brachychthonius zelawaiensis* (Sellnick, 1928), *B. subcricoides* Balogh, Mahunka, 1979, *Camisia segnis* (Hermann, 1804), *Euphthiracarus cribrarius* (Berlese, 1904), *Hypochthonius rufulus rufulus* Koch, 1835, *Liochthonius horridus* (Sellnick, 1928), *L. perfusorius* Moritz, 1976, *Malaconothrus egregius* Berlese, 1904, *Microtritia minima* (Berlese, 1904), *Nanhermannia nana* (Nicolet, 1855), *Neobrachychthonius magnus* Moritz, 1976, *Nothrus ananuensis* Canestrini in Fanzago, 1876, *N. silvestris* Nicolet, 1855, *Sellnickochthonius furcatus* (Weis-Fogh, 1948), *Steganacarus carinatus* (Koch, 1841), *S. punctulatus* Sergienko, 1985 and *Trhypochthonius tectorum* (Berlese, 1896). This accounts only for 30 % of Lower Oribatida species recorded by Melamud (2009) at the nature conservation territories of the Western Polissia of Ukraine, indicating that our results are intermediate.

Conclusion

In the species composition of oribatid mites of Rivnensky NR, 62 species were identified in the present study, and five species were added to the oribatid fauna of the Western Polissia. *Mainothrus badius* (Berlese, 1905) was found in Ukraine for the first time.

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