



New records of Eutardigrada from Belarus with the description of three new species

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Abstract

The list of tardigrade species recorded from Belarus is provided; nine were new records for this geographic area and three, *Macrobotus sottilei* **sp. nov.**, *Paramacrobotus klymenki* **sp. nov.** and *Hypsibius valentinae* **sp. nov.** were new to science. *Macrobotus sottilei* **sp. nov.** had smooth cuticle; eye spots present; the dorsal transverse ridges of the buccal armature joined to form a continuous arc; pharyngeal bulb with two macropylacoids and micropylacoid; eggs with processes in shape of inverted goblets with indented distal discs; egg shell with a very dense reticular design.

Paramacrobotus klymenki **sp. nov.** had smooth cuticle; eye spots absent; buccal armature similar to that of *P. areolatus*; buccal tube not very wide; stylet supports inserted on the buccal tube at about 80% of its length; pharyngeal bulb with three macropylacoids; micropylacoid absent; eggs with conical processes with a reticular design similar to that of *P. areolatus*; egg shell areolated; central area of each areola slightly thickened but not subdivided.

Hypsibius valentinae **sp. nov.** had smooth cuticle; eye spots present; buccal tube very narrow; pharyngeal bulb with two macropylacoids and a small septulum, claws of the *Hypsibius* type; small, smooth, flexible lunules present; a short cuticular bar is present between the bases of the claws of the hind legs; no cuticular bar on the first three pairs of legs.

Key words: taxonomy, Tardigrada, East Europe

Introduction

Belarus is a relatively flat landlocked country of East Europe with the highest point (Dzyarzhynskaya Hara) at 345 metres and an average elevation of 160 metres above sea level. Northern Belarus has a hilly landscape with many lakes and gently sloping ridges created by glacial debris. In the south, about one-third of the territory is taken up by the low-lying swampy plain of Palyessye, shared with Ukraine, Poland and Russia. There are also large tracts of forests. Climate of Belarus may be considered transitional between the continental and the maritime type.

Tardigrades of Belarus remain very poorly known, and no previous extensive tardigradological studies have ever been conducted in this country. Until recently, the only published information was limited to a dubious reference by Guseva (1928) to a number of records for *Macrobotus lacustris* Dujardin, 1851—today considered a synonym of *Hypsibius dujardini* (Doyère, 1840).

Kiosya (2010) studied 30 samples of mosses and lichens from several regions of Belarus and reported 20 species of eutardigrades. However, this material should be studied more in depth and some specimens were identified to genus level only.

Material and methods

In this paper we re-evaluate data from samples previously studied by Kiosya (2010) as well as provide new reports about tardigrades that we found in other moss and lichen samples collected in the city of Minsk. In addition, the Museo Civico di Storia Naturale di Verona, Italy, where the collection of V.I. Biserov is deposited, kindly allowed