



16th International Congress of Myriapodology

Book of Abstracts
Ivan H. Tuf & Karel Tajovský (editors)



FACULTY OF SCIENCE,
PALACKÝ UNIVERSITY OLMOUC



BIOLOGY CENTRE ASCR,
ČESKÉ BUDĚJOVICE



Distribution of millipedes (Diplopoda) along an altitudinal gradient in the south of Lake Teletskoye, Altai Mts

Julia S. NEFEDIEVA¹, Pavel S. NEFEDIEV², Miroslava B. SAKHNEVICH³
& Iurii V. DYACHKOV²

¹Barnaul Branch of OJSC “GIPRODORNII”, Barnaul, Russia

²Department of Ecology, Biochemistry and Biotechnology, Altai State University, Barnaul, Russia

³Altai State Nature Biosphere Reserve, Gorno-Altaiisk, Russia

j.nefedieva@mail.ru

Since 1998 the Altai State Nature Biosphere Reserve and a buffer zone around Lake Teletskoye are inscribed as one of three separate areas of UNESCO World Natural Heritage Site under the name “Golden Mountains of Altai”. Lake Teletskoye, being the deepest and largest body of freshwater in southwest Siberia, exerts the great warming influence on local climate, in its southern part especially. Situated at a height of 435 m above sea level, the lake lies between the mountain ridges of Altyntu and Korbu, and the Chulyshman river highlands in the south. In 1959-1961 in the south of Lake Teletskoye in the territory of watershed of the Kyga and Bayas rivers was laid 22 numbered sites at different altitudes (= Kyga Biogeocenosis Profile), comprising a relic *Pinus sibirica* forest from the Tertiary period. The vertical vegetation zonation here is characterized by the presence of forest and high-mountain belts. There are widespread dark coniferous forests with *Betula pendula* and *Populus tremula*, also called chern taiga, and sparse growths of *Pinus sibirica* in the former belt, whereas alpine meadows does not occur almost at all in the latter. Above the timberline at a height of 2100 m above sea level, all hilltops are occupied by shrub, moss-lichen and rocky tundras. The distribution of millipedes along an altitudinal gradient in the south of Lake Teletskoye, based on new samples from Kyga Profile sites, as well as on partly published and freshly revised material (Mikhajlova *et al.* 2007, 2008, Nefedieva & Nefediev 2008, Nefediev & Nefedieva 2013), is established.

Thus, the millipede diversity in the south of Lake Teletskoye is estimated to be at least 13 species and 2 subspecies from 10 genera, 6 families and three orders: *Julus ghilarovi ghilarovi*, *J. insolitus*, *Orinisobates sibiricus*, *Pacifiulus amurensis*, *Sibiriulus altaicus*, *Ghilarovia kygae*, *Kirkayakus pallidus* (synonym of *Altajella pallida*), *Teleckophoron montanum*, *Altajosoma bakurovi bakurovi*, *A. deplanatum*, *A. katunicum*, *A. kemerovo*, *Shearia teletskaya*, *Schizoturanius clavatipes* and *S. tabescens*. The bulk of species diversity is confined both to low- and mid-mountain chern taiga forests and high-mountain shrub tundras with *Betula rotundifolia* and *Salix glauca*, whereas mid-mountain sparse growths of *Pinus sibirica* are characterized by the lowest millipede diversity.

The numbers of diplopods range from 5 to 65 ind./m² in the subzone of low- and mid-mountain chern taiga forests, and from 5.5 to 8 ind./m² in high-mountain shrub tundras. Despite of the lowest species diversity in the mid-mountain sparse growths of *P. sibirica*, they show the highest numbers, reaching up to 130 ind./m², evidently caused by the abundance of plant debris of dwarf vegetation that appear to be more suitable for feeding of millipedes.

POSTER