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**Fauna and ecology of millipedes (Diplopoda)
in the Tigirek State Nature Reserve, Russian Altai**

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The Tigirek State Nature Biosphere Reserve, being the only one reserve in the Altai Province, situated in the south-west part of the region and encompasses 3 sites, namely Khankhara, Tigirek and Beloretsk sites. The dark-coniferous taiga is the main land cover of the Tigirek Mt. Range. Aspen and fir forests predominate in the most territory of the Reserve. In the river valleys there are pure fir forests whilst pine and fir forests occupy mountain taiga area. Prior to undertaking the research about two species of Diplopoda had been known to inhabit the Tigirek State Nature Biosphere Reserve: *Julus ghilarovi ghilarovi* (Gulička, 1963) and *Schizoturanius clavatipes* (Stuxberg, 1876) (Mikhailjova & Nefediev, 2003). We have researched 20 localities both in the low-mountain and mid-mountain vegetation belts at a height up to 900 m and ranging from 900 to 1400 m above sea level, respectively, and further to the upper forest line, being formed by pine and fir sparse growth with some areas of subalpine tall grass meadows. In low-mountain terrain large areas of meadow steppes and shrub thickets have been also researched.

The species diversity of Diplopoda in the Tigirek State Nature Biosphere Reserve is represented by at least 7 species: *Megaphyllum sjaelandicum* (Meinert, 1868), *Orinisobates sibiricus* (Gulička, 1963), *J. ghilarovi ghilarovi*, *S. clavatipes*, Polydesmidae gen. sp., Diplomaragnidae gen. sp. and undescribed species of Julidae. The julidan millipedes, *M. sjaelandicum* and undescribed species of Julidae, appear to be the most widespread, whereas the former predominates in light coniferous forests (up to 95% of the total abundance) and the latter in shrub thickets and dark-coniferous forests (up to 74% in both types of biotopes). The polydesmid millipede, *S. clavatipes* predominates in birch forests amount to 83%. The species of the family Diplomaragnidae and the julid *O. sibiricus* appear to be quite rare. Thus, the highest millipede species wealth has been found in forest ecosystems, inhabited by no less than 4-5 species. In meadow steppes and shrub thickets the species wealth includes no more than 1-2 species.

The character of vertical distribution shows that the maximum abundance of millipedes can be observed in low-mountain forests and shrub thickets, wherein their total density ranges from 11.5 to 32.5 ind./m². In mid-mountain areas diplopods are quite rare to find, wherein their numbers are less than 1.5 ind./m². The highest locomotor activity of millipedes has been found in low-mountain forests, ranging from 4 to 30 ind./100 trap-days. In low-mountain shrub thickets the dynamic density of diplopods ranges from 4 to 10 ind./100 trap-days.

Juveniles predominate in the sex-age structure of dominant species, such as *M. sjaelandicum*, *S. clavatipes* and undescribed species of Julidae.

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