

## Abstract

The aim of this study was to determine whether oribatid mites affect the variety of fungi in litter of Scots pine (*Pinus sylvestris*), and if the dispersibility of fungi particles is related to oribatid mite species. To this end, I have prepared several semi-natural systems, in which I observed dispersion of fungi separately and in the presence of two oribatid mite species: *Phthiracarus* sp. and *Adoristes ovatus*. I assessed the experiment in two ways, by a cultivation of washed needles on agar medium and direct observation of needles under a binocular magnifier. In the next part of this study I isolated particles of fungi present on the surface and in the faeces of oribatid mites *Adoristes ovatus*, *Porobelba spinosa* and *Spatiodamaeus verticillipes* and compared it with the respective oribatid mite species.

The most frequent needles fungi spread by oribatid mites were *Oidiodendron maius* var. *maius*, *Oidiodendron muniellense*, *Oidiodendron setiferum*, *Umbelopsis ramanniana*, *Mucor hiemalis* f. *hiemalis* and *Mortierella hyalina*. On the mites body surface the most commonly recorded fungi were *Beauveria bassiana*, *Umbelopsis ramanniana*, *Cladosporium cladosporioides* s.l., *Cladosporium herbarum* s.l. and unknown species of the genus *Penicillium*. Fungi species *Acrodontium crateriforme*, *Umbelopsis ramanniana* and *Beauveria bassiana* were most frequently found in the faeces.

The influence of oribatid species on the composition of the community of fungi in litter was significant for both sets of data files evaluations. The analysis of data from the surface and from the faeces have confirmed the influence of oribatid mite species over the quantity of particles of fungi on the surface and in the faeces too. The number of fungi particles has not proved to be seasonally affected.

Key words: oribatid mite, dispersion, pine needle, body surface, faeces