ABSTRACT

The aim of this bachelor thesis is to examine the question if there is any connection between the rate of decomposition of litter, removal of litter from the soil surface by bioturbation and the frequency and intensity of wildfires. The work describes in detail the mechanism of fire, factors influencing the frequency and intensity of wildfires and their ecological impacts. It pays particular attention to the role of fuel availability for the fire. It describes the relationship between the quality of fuel, its quantity and the rate of its accumulation on soil surface and the frequency and intensity of wildfires. In particular, study brings forvard an idea that the accumulation of fuel on the soil surface in the form of more or less decomposed litter. The work points out that the amount of this fuel depends on the quality of the litter, but its production is based on the rate at which the litter (fuel) decomposes on the soil surface and how fast it is possibly incorporated into the soil by bioturbation of soil organisms.

The work also pays attention to factors influencing the intensity of bioturbation and the rate of decomposition, presents the factors influencing the formation of overlying forms of humus. The work points out the possible dependence between these forms of humus and the frequency of fires. At the same time, despite the very intensive search in the literature, there are almost no works that would explicitly test this idea, when the work brings observations that indirectly suggest that faster removal of soil debris reduces the risk of wildfires, som brings this idea as a presumption, on which they they often base their for further speculations. The work highligt an obvious gap in our knowledge and the need for rigorous testing of the relationships between the quality of litter, soil organisms, the speed of decomposition and bioturbation, and the occurrence and properties of wildfires.

Key words: wildfires, soil oranic metter, humus forms, edaphon