

Spontaneous vegetation succession in man-made habitats, such as limestone quarries, has often been suggested as an efficient tool of restoration after abandonment of these localities. The main advantage is the fact that this process might be heading to spontaneous development of a valuable community, especially in case of proximity of a species source. The aim of this study is to describe the course of the first three years of primary succession on a limestone quarry landfill which is situated next to protected dry grassland, and also to compare the primary succession on a landfill with secondary succession running on adjacent arable land. Results based on monitoring of permanent plots and measurement of seed rain and of abiotic conditions of the site showed that besides changes in dominant species there is a rising number of species immigrating from adjacent grassland and this immigration is apparent mostly on the plots nearest to the grassland. In contrast, the number of grassland species on the arable land is not changing in time and there is also evident a massive spread of *Arrhenatherum elatius*.

Key words: primary succession, limestone quarry, seed dispersal, dry grassland, Czech Karst, recultivation, secondary succession