

## SUMMARY

### **The role of post-coal mine heaps in the maintenance of regional floristic diversity in the Upper Silesia region**

The Upper Silesian region is one of the areas in Poland where anthropogenic transformations have the most spectacular character. One of the causes of this phenomenon is mining industry localized in the Upper Silesia region. Waste produced by deep coal mining is heaped up in the landscape, and remains there as a foreign matter. In this way large areas deprived of vegetation and humus are created.

Amongst plants colonizing mining heaps there are some protected and endangered species whose status is defined by "Red List of Upper Silesian Vascular Plants" (Parusel et al. 1996). The appearance of these plants on coal-mine heaps is connected with intentional and unintended human influences (reclamation, spontaneous spreading of cultivated plants etc.) or natural processes of succession.

The occurrence of these species on coal-mine heaps could contribute to the increase of biodiversity. The aim of this paper is to examine the participation of protected, rare and endangered species of vascular plants on particular postcoalmining heaps in the Upper Silesia. The field survey was carried out during the vegetation season in years 1998-2002 on 9 coalmine heaps situated in the Upper Silesia region: 6 objects in Jaworzno town, 1 object in Ruda Śląska town and 2 objects in Mikołów town.

On the investigated coalmine heaps 6 strictly protected species, 6 partly protected species, and 11 rare species in the scale of the region were recorded. As far as the degree of threat is concerned there are 3 vulnerable species, 1 endangered species and 1 indeterminate species. Most of them (12) are woodland species, 6 are typical for grasslands, 3 occur on meadows. The remaining ones represent other plant communities. Beside that, the examined heaps were rich in ancient woodland plant species indicators according to Dzwonko and Loster (2001). Its number hesitated from 2 to 10. That means that processes of succession on these objects lead to the formation of forest communities. The examined objects play an important role in the maintenance of local biodiversity.