

Physiological responses of non metallicolous and serpentine *Silene vulgaris* ecotypes cultivated in different soils

Fizjologiczna reakcja naturalnego i serpentynitowego ekotypu *Silene vulgaris* rosnących na różnych glebach

Krzysztof Bielecki¹, Anna Koszelnik-Leszek²

¹*Department of Plant Nutrition, ²Department of Botany and Plant Ecology, Wrocław University Environmental and Life Science, Poland*
e-mail: anna.koszelnik-leszek@up.wroc.pl

Silene vulgaris ecotypes “Wiry” and “Gajków” originated from serpentine heap and natural site respectively was cultivated from seeds on two substrates. One – serpentine heap located in Wiry (Poland, Lower Silesia), second – natural soil located in Gajków (Poland, Lower Silesia). Growth of both ecotypes on “soil” Wiry was strongly inhibited. Ecotype “Wiry” grown on serpentine heap accumulated more macro-, micronutrients and heavy metals (Ni, Co, Cr) than ecotype “Gajków”. Enzyme pyrogallol peroxidase was more active in leaves of ecotype “Wiry” grown only on “soil” Wiry. Ecotype “Gajków” grown on serpentine heap characterised higher non-protein thiols, total polyphenols and anthocyanins content. Results showed a heterogeneity of responses among ecotypes depending on substrate used.