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MORPHOLOGICAL VARIABILITY AND BIOCHEMICAL INDICES OF LEAVES IN COENOPOPULATIONS OF *AEGOPODIUM PODAGRARIA* L. (APIACEAE, APIALES) UNDER VARIOUS LEVELS OF SOIL POLLUTION WITH HEAVY METALS

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The morphological variability, lipid peroxidation rate (LPR) and photosynthetic pigment content in the leaves of Aegopodium podagraria L. were studied in four coenopopulations growing in urban ecosystems whose soils were contaminated, to varying degrees, with heavy metals (HM): Pb, Zn, Cu, Cr. The increase of the HM level in the soil induced a decrease in the terminal leaflet size, the average number of phens (i.e. various variants of the leaf shape), and the chlorophyll content b in leaves but the percentage of rare phens increased. At the same time, the LPR intensity decreased, which is not typical for stress situations in plants. The level of chlorophyll a and carotenoids reduced at the medium contamination level and normalized at the highest one. The data obtained indicate that the morphological and biochemical parameters of sweeps leaves characterize differently the status of this plant species with an increase in the level of soil contamination with HM. In such conditions, the phenofonds of A. podagraria coenopopulations are depleted and individuals with smaller leaf sizes develop predominantly. But at the same time, their intensity of LPR and the content of individual pigments may remain close to normal. The results of our study suggest that A. podagraria is a species capable of maintaining biochemical homeostasis under the conditions of soil contamination with heavy metals. Thus, in contrast to the studied biochemical indicators, the morphological parameters more accurately characterized the adverse changes in the coenopopulations of goutweed, which is important in the aspect of bioindication of ecosystems under anthropogenic environmental pollution.

Key words: Aegopodium podagraria, coenopopulations, leaf morphological features, phens, lipid peroxidation, photosynthetic pigments, heavy metals.

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