



City plants as ecological indicator of environment quality in St. Petersburg

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Under increase of natural hazard activity and anthropogenic pressure the effective and cheap monitoring methods become necessary. Majority of modern methods of monitoring, such as space and air, needs significant foundation. The simplest monitoring method is biological indication, basing on essay of variability, sex ration and sexual dimorphism. Such a method does not need long time efforts and may be realized by short observation. Urban plants are natural indicators of ecological pressure. Check or their state may give us significant information on area pollution by use of principles of phenogenic indication. Genetic and phenotypic variability of different organism have general principles and constants. The per cent of abnormal organisms and coefficient of variability are stable for majority of species under favorable state and increase under unfavorable conditions. The basis for indication is both state of adult trees and morphological variability of pollen grains. The part of dried threes and threes infected by parasites-xylophagous is correlated with toxic pollution. Float asymmetry of lives is measure of mutagenic pollution. Abnormal form of three (dichotomy, curved) is criteria of teratogenic pollution. Importance of such an indication is increased by such incidents as Chernobyl, Fucusima and so on. Algorithm for analyze of such a data is considered. The map of ecological pressure of St. Petersburg is presented.