

THE ESTIMATION OF THE ECOLOGICAL CONDITION OF DRUZHBY NARODOV PARK

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The paper estimates the ecological condition of Druzhby Narodov Park in Minsk.

Keywords: city park, bioindication, assessment, ecological status.

Green plantations are an integral part of urban area. They fulfill very important functions. Green plantations are the main means of city air renewal. They also have recreational functions. The main issue is the connection between Minsk parks and air pollution. As it's commonly known, green plantations clean the air from harmful emissions, gases and aerosols and make the technological method of air protection more efficient.

Druzhby Narodov Park has attracted our attention as it is located near our school.

The relevance of our research is in the estimation of the ecological condition of this recreational area.

As it was mentioned before the aim of our research is our personal estimation of the greenery and trees based on public ecological monitoring of environmental condition in Minsk Druzhby Narodov Park.

For accomplishment of our aim we have set the following tasks:

- To estimate the ecological condition of green plantations in Druzhby Narodov Park using botanical methods.
- To study the species of green plantations in Druzhby Narodov Park and to make the lists of general and most frequent species.
- To identify the index of anthropogenic load.
- To identify the level of air pollution in Minsk Druzhby Narodov Park using bioindicational method.

For solving these problems we have used the methodologies and tasks from the self-guided practicum for first year students of the faculty of ecological medicine of Minsk State ecological university by E.U.Zhuk, O.V.Kolesnikova, A.V. Kamornikova.

Used methods:

- Routing method of research.
- the method of green plantation estimation.

Routing method of research was used for revealing the presence of life forms of organisms, ecological groups, phytocenosis, their diversity and occurrence on the researched territory. The main techniques were: direct observation, estimation of condition, description, mapping.

As the result of our research we have identified that Druzhby Narodov Park in its condition has 2 out of 3 possible points. We also have estimated the ecological condition of the park, and have given the ecological assessment of the park as a recreational area. It's necessary to improve the infrastructure of the park as a recreational area, that will protect trees plantations and reduce the level of anthropogenic load on the park biotypes.

THE MEASUREMENT SYSTEM OF NUTRIENTS IN THE SYSTEM FOR MONITORING AND CONTROL OF THE CLOSED WATER ENVIRONMENT

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Aquarium fish are extremely sensitive to the change in the composition of mineral substances in the water, and therefore it should be carefully observed, otherwise it can lead to deterioration of their health or even death. The nutrient measurement system in the closed water environment monitoring and control system will allow the measurement of the amount of nutrients and, if necessary, adding them.

Keywords: test strip, computer vision, single-board computer, nutrients.