## **EVALUATION OF THE ECOLOGICAL CONDITION OF PARKS IN MINSK**

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The possibility of using tree plantations of Minsk parks as bio-indicators of the state of green spaces of the city is shown.

Keywords: ecological state of parks, stand ratio.

Minsk is one of the largest industrial centers of Belarus, and as a result there is a high intensity of anthropogenic impact on the ecological system, especially on the plants, in city. Anthropogenic factors (salt pollution, sulfur dioxide and nitrogen oxides, exhaust gases) provoke appreciable damage to plants, which lead to changes in leaf blades, premature fall of leaves, weakening and drying of trees. According to the Minsk City Committee of Natural Resources and Environmental Protection, more than 41% of the city's area is occupied by green areas, including 47 parks, 172 squares and 30 boulevards. Green planting occupies an important place in creating favorable conditions for life: they act as filters, absorbing various chemicals emitted by industrial enterprises and vehicles; secrete bacte-ricidal substances - phytoncides; participate in maintaining micro-climate; protect from noise [1].

During the summer training practice, we carried out research work to assess the ecological status of the parks in Minsk, within the framework, we explored the state of green planting of the Central Children's Park named after M. Gorky, Loshitsky park, "Drozdy" park, park named after Yanka Kupala, Victory Park. The state of the timber stands was estimated by the following indicators: species composition, state coefficient of the timber stand of each species, state coefficient of the stand as a whole (K).

During the research it has been revealed that in the parks M. Gorky, "Drozdy" and Victory Park, healthy trees significantly prevail over weakened ones:

- Park named after M.Gorky: 68 % of healthy trees, 29 % of weakened trees, 3 % of strongly weakened trees. K = 1.412;
  - "Drozdy": 73 % healthy, 20 % weakened, 7 % very weakened, K = 1.23;
  - Victory Park: 84 % healthy, 12 % weakened, 4 % strongly weakened trees, K = 1.1

The state coefficient of the timber stand in the listed parks corresponds to the category "healthy stand" (K < 1.5).

The state of tree plantations of the park named after Y. Kupala showed that 43,3 % are healthy trees, the same is weakened trees, and 13,3 % are heavily weakened trees. The state coefficient of the timber stand is 1.53, which corresponds to a weakened timber stand (K from 1.5 to 2.5 – weakened stand).

The state of the stand of the Loshitsky manor and park complex is as follows: 35% - healthy trees, 47% - weakened trees, 18% - strongly weakened trees. The total state coefficient of the stand is 1.67, that is this stand also refers to weakened. It should be noted, that the high state coefficient of the timber stand of Pine ordinary, which is due to its sensitivity to air pollution. The adverse factor to preserving the nature of the park is its location in the con-centration zone of industrial enterprises.

In general, the state of the data of the examined parks can be assessed as satisfactory. No drying out and dry trees were found in the analyzed test sites. The presented parks are interesting ecological objects, which need care. It is necessary to regain their current state and contribute to its improvement. Everyone can contribute to the improvement and cleanup of parks and squares, to participate in campaigns that contribute to the increase in green plantings.

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