

## USE OF GEOINFORMATION TECHNOLOGIES FOR BIOINDICATIONS OF URBAN TERRITORIES

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The article presents the results of a study of changes in the morphological parameters of the leaf of shrubs of the genera *Spiraea* L. and *Syringa* L., growing in conditions of transport and industrial pollution in the city of Novosibirsk. The morphological indicators of the leaf were determined on the basis of computer analysis of their digital images by means of GIS. It is established that plants of the genera *Spiraea* and *Syringa* in response to anthropogenic impact demonstrate a reaction consisting of reducing the size of assimilating organs, increasing in the value of the fluctuating asymmetry of the leaf compared to the background plants. It is shown that the environmental quality of the urbanized territory in terms of the fluctuating asymmetry of the leaf corresponds to a high level of pollution, and the background to a low level. As a bioindicator of environmental pollution spirea average, spiraea oak and two varieties of common lilac 'Hope' and 'Kolesnikov Olympiad' can be recommended.

**Key words:** geoinformation technology, transport and industrial pollution, bioindication, *Spiraea*, *Syringa*, morphometric indicators, computer analysis method, fluctuating asymmetry, lamina.

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