

LANDSCAPE FEATURES OF SOIL COVER DEVELOPMENT ON THE FLOODPLAIN ISLANDS OF THE KUIBYSHEVSKY WATER RESERVOIR

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Abstract. *Background.* Islands of rivers and water reservoirs are objects with quite a large total area. Despite their attractiveness for recreational and economic activities, these objects are little-studied, without legal account and protection. Sustainable management and environmental protection of islands are impossible without taking into account their soil cover – the foundation of island ecosystems. Nevertheless, the soil cover of islands is difficult to investigate due to the ongoing evolutionary processes caused by flooding after reservoir creation. The objective of the research was to reveal the features of soil cover distribution on the territory of the floodplain islands using the analysis of relationships of soil development with the terrain parameters, calculated from the elevation data. *Materials and methods.* The object of the study is the islands of floodplain genesis, located on the territory of the Kazan region of variable backwater. According to the results of field investigation (57 soil slits were located on the 45 islands and 2 peninsulas), natural soil cover of the island is represented by three soil groups: alluvial sod soils, alluvial meadow soils and alluvial meadow-march soils. To determine the development features of islands soils, 8 terrain attributes were calculated to be used as the predictors in logistic regression analysis. *Results.* Analysis of the affiliation dependencies of soil profile to one of the three alluvial soil groups showed that particle size distribution plays the key role in genetic features forming due to the impact on the height of a capillary border and as a result, the development of hydromorphic signs. Revealed dependencies from the terrain parameters showed the role of stream distribution in development of alluvial soils. *Conclusion.* The research results showed the ability of terrain features to characterize the development and evolution of soil cover in the territory of the floodplain islands. The logistic regression analysis showed the relief conditions significant for hydromorphic processes development that on their turn determines the genetic affiliation of soil profile.

Keywords: Republic of Tatarstan, islands, island soils, alluvial soils, water reservoir.