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Results of the Application of Molecular Genetic Analysis for Phytosanitary Diagnostics of Forest-Forming Species of the Baikal Natural Territory

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Abstract. Increased anthropogenic load causes a decrease in the resistance of forest plantation to the effects of pathogenic fungi – the causative agents of many diseases. Their timely detection and identification are a necessary procedure for developing a strategy for organizing forest protection. Molecular genetic analysis is one of the most highly effective methods for diagnosing phytopathogenic organisms. The article presents the results of a molecular genetic examination of forest plantations and planting material from forest nurseries of the Baikal natural territory. The composition of the microbiota of coniferous woody plants has been identified. More than 80 species of fungal microflora have been identified. Fungal species with no morphological description and unknown pathogenic potential have been discovered. It has been established that a number of diagnosed mycoses, as well as bacterial dropsy are transmitted by insects. Permanent forest pathological monitoring and genetic monitoring of identified infectious diseases in forest nurseries and plantings is recommended.

Key words: forest plantation, planting material, phytopathogen, micromycete, phytosanitary examination, monitoring

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