

Ophiostomatoid Fungi Associated with *Dendroctonus micans* (Coleoptera: Curculionidae) in a Resort Area (Bakhmaro) of Western Georgia

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Abstract

Dendroctonus micans is a widely distributed beetle that pest coniferous plants and spread phytopathogenic fungi in coniferous forest of in Europe and Asia; however, as a vector of phytopathogenic fungi have been poorly studied in Georgia. Therefore, our aim was to study diversity and spread of ophiostomatoid fungi associated with *D. micans* in the western Georgia, forest ecosystem of Bakhmaro. This study recorded the diversity and distribution of ophiostomatoid fungi associated with *D. micans* collected from forest of Bakhmaro resort, during 2024–2025. Bark beetle specimens were sampled from four localities (Adjara Street, Leknari I, Leknari II, and Chokhatauri–Bakhmaro road). Fungal isolates were obtained under laboratory conditions and identified using morphological characteristics and molecular analyses. Four fungal taxa were detected: *Ophiostoma piceae*, *Ophiostoma* sp., *Leptographium* sp., and *Graphilbum* sp. In 2024, *Graphilbum* sp. and *Ophiostoma* spp. were widely distributed across sampling sites, with the highest frequencies recorded at Adjara Street (20 and 15 isolates, respectively). *Leptographium* sp. occurred at lower frequencies, while no fungi were detected from the Chokhatauri–Bakhmaro road samples that year. In contrast, collections from 2025 showed a shift in species composition, with *Ophiostoma* sp. becoming dominant, particularly at Leknari II and Chokhatauri–Bakhmaro road (18 and 28 isolates, respectively), whereas *Graphilbum* sp. was not recovered. The preliminary results recorded diversity of ophiostomatoid fungi associated with *D. micans*, in forest ecosystem of bakhmaro, Western Georgia. This research contributes to understanding pest–pathogen interactions in coniferous forest ecosystems and provide a basis for future forest health monitoring and management studies.

Keywords

Bark Beetles, Ophiostomatoid Fungi, Insect-fungus Interactions