Conservation of wood-inhabiting fungi is complicated

December 5 2018

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Many wood-inhabiting fungi suffer from the changes caused by forest management. For that reason, the different fungal groups and tree species should be better addressed in the conservation planning. New

information about the wood-inhabiting fungi of boreal forest helps to assess the effects of forest management more precisely than before.

Recommendations for conservation should be at least group specific

In her ecology and evolution biology Ph.D. thesis, Jenna Purhonen from University of Jyväskylä (Finland) studied, what kind of relationship there was between forest naturalness as well as the quality of dead wood and the diversity of different fungal groups inhabiting standing dead pines, and large grounded dead wood of birches, Norway spruce, Scotch pine and European aspen. Based on the results, it can be estimated on what kind of species or species groups forest management has positive or negative effect.

"Different fungal groups had different responses to forest management history and the response of a certain group depended on the tree species in question. Broadleaved dead wood had communities with higher species richness than coniferous dead wood. However, the species inhabiting conifers suffered most from the forest management. Thus, the conservation of wood-inhabiting fungi should be at least group specific," Purhonen explains.

Unnoticeable is also important

Jenna Purhonen studied also the most poorly known fungal groups.

"I sampled also the smallest species visible to the naked eye and thus got new information from many unnoticeable sac fungi, corticioids and heterobasidiomycetes. This is important, as the current knowledge about the effects of forest management is based mostly on species that are easy to detect, like polypores," Purhonenpoints out.

Jenna Purhonendefends her doctoral dissertation "Dead wood and fungi: detection, diversity and conservation in boreal forests" on Friday14th of December 2018 at 12:00in the lecture hallYAA303at Ylistönrinne. The opponent is Associate professor Mari T. Jönsson (ArtDatabanken, Sweden) and custos is Docent Panu Halme (University of Jyväskylä). The doctoral dissertation is held in English.

More information: Dead wood and fungi : detection, diversity and conservation in boreal forests. urn.fi/URN:ISBN:978-951-39-7620-0

Provided by University of Jyväskylä