

Beavers restore dead wood in boreal forests

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New research shows that beavers create significant amounts of dead wood into the lowland shore forests of boreal wetlands. Particularly snags and deciduous dead wood are formed through the beavers' actions.

Dead wood has decreased dramatically in the boreal zone due to intensive forest management. Several species dependent on dead wood have suffered from this decline. Beavers dam water systems, raising floods into surrounding shore forests. The flooding kills the trees due to oxygen deprivation.

Researchers at the University of Helsinki, Finland, compared dead wood quantities and types in southern Finland. The shore forests of beaver sites had significantly larger quantities of dead wood compared to non-beaver sites. Beavers use wood for nutrition and as the building material for their nests and dams. This wood resource is used up by the beavers' actions within a few years, forcing the beavers to change location. This creates several dead wood hotspots in the area, benefitting a large number of species.

Certain dead wood types have become exceptionally rare in managed forests, e.g. standing dead trees (snags) and deciduous dead wood. Beavers create a wide variety of dead wood types, but they particularly produce standing and deciduous dead wood. The dead wood-dependent species living at beaver sites may differ from those found in managed forests or fire areas.

Doctoral student Stella Thompson suggests: "Beavers could be used to



aid and uphold dead wood production in dead wood-poor lowland boreal forests. The species would concurrently facilitate the restoration and conservation of wetlands, which are one of the most endangered ecosystems in the world."

More information: Stella Thompson et al. Beaver-created deadwood dynamics in the boreal forest, *Forest Ecology and Management* (2016). DOI: 10.1016/j.foreco.2015.10.019

Provided by University of Helsinki

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