Small acts, large impacts on biodiversity

A forest is viable when it has plenty of hustle and bustle. While many species lead their lives invisible to the human eye, they have important roles in their habitats, and without them other species could not survive.

These are the species that the Beetles Life project focuses on helping. By restoring their habitats, a brighter future can be provided for eight endangered insects. Forest owners can use the same measures to help the species do better and enhance biodiversity in their forests.

Supporting forest biodiversity is easy: leave decaying wood lie

Decaying wood is a hot issue for forest species: it offers shelter, food and other individuals of their species. Dead and decaying wood provides habitats for the natural enemies of insects that cause forest damages, and species that compete with them and can prevent their spread.

Decaying wood does not put the health of the forest at risk and, for example, decaying deciduous trees present practically zero risk. No risks of insect or fungal damage are associated with completely dead and decomposing wood. The type of tree that the decaying wood comes from matters: different animal species may specialise in certain trees, such as aspens or spruces.

Retention trees benefit forest species – particularly in large groups

Continuity is vital in the forest and forest management – and this also applies to retention trees excluded from fellings year after year. Retention trees can improve forest biodiversity optimally when they are allowed to grow, die and decay in the forest.

Trees of various ages benefit different species. Sufficiently large groups of retention trees should be left especially in the vicinity of ecological sites or water bodies. Undergrowth around the retention trees should not be cleared. Many other species, especially birds, benefit from the shelter and food offered by a thicket.

Seedlings and deciduous trees can also be preserved elsewhere if this does not hamper harvesting. Artificial snags, or tall stumps, are also a helping hand for biodiversity: their wood provides food for many species, and others can shelter in their hollows.

Drained mires restored: allowing water to do its work

Bog woodlands provide habitats for both forest species and species adapted to a moist microclimate. In addition to other organisms, restoration also helps game birds: the restoration of pine mires greatly benefits such species as the willow grouse and bean goose.

Water has an important role in this work: when ditches are blocked and dammed, the water level in the mire rises. While restoration is not a quick fix, over time the water economy of the mire normalises, mire plants come back, and peat starts building up. The microclimate of the mire also starts to recover. Over longer periods, mire restoration also improves carbon sequestration, slows down meltwater flows and prevents flooding.

Aspen is the tree of life

While the aspen is not the preferred tree for commercial forestry, it is one of the key species for forest organisms. The aspen is vital for hundreds of organisms, many of which are endangered. A versatile range of species, many of which specialise in a certain developmental stage of the tree, live on aspens: some benefit from a sturdy trunk, while others need different stages of decomposition.

The aspen is a treasure for woodpeckers: its soft wood is ideal for looking for food and carving holes. Many other hole-nesting species, including owls, tits and other small birds, also benefit from holes created by woodpeckers. The aspen is also important for many game birds, including the wood grouse.

Fire creates new life

Today, the number of forest fires in Finland is only a fraction of what it was a century or two ago. Finnish nature is adapted to recurring forest fires, for example those started by lightning. As the number of forest fires declines, many habitats and species that depend on them have become endangered.

Some species benefit from scorched wood. More habitats for endangered species can be created by means of prescribed burning in which retention trees are also burned.

Prescribed burning increases the volume of decaying and charred wood and releases soil nutrients. The nutrient cycle was historically exploited in slash-and-burn farming, but it also improves the early development of seedling stands.

For more information about the project, visit: https://www.metsa.fi/en/project/beetles-life-eng/

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