

Comparison of saproxylic beetle assemblages on four different broad-leaved tree species in south-eastern Sweden

Abstract

Old hollow trees have declined in Europe and many saproxylic (wood-dwelling) beetles dependent on them are threatened. Several studies have been done on old hollow oaks and they have been shown to harbour a species-rich saproxylic beetle fauna. However, other broad-leaved trees might also be important to consider as supporting habitats. The aim of this study was to investigate to what extent saproxylic beetles are tree genus specialists. Pitfall traps and window traps were used to compare the saproxylic beetle fauna in oak, ash, norway maple and small-leaved lime in an area dominated by old oaks. 5,501 specimens of saproxylic beetles were found, belonging to 239 species of which 27 species were red-listed. There were significant differences in the saproxylic species composition between the four tree species, but with large overlaps. The saproxylic species found in oak overlapped to 66 % with norway maple, to 67 % with ash and to 70 % with small-leaved lime. About one third of the species in this study seem to be oak specialists. The conclusion is that other broad-leaved trees are important to consider in models as supporting habitats for oaks. To be able to save the whole fauna of saproxylic beetles, trees of all different tree species are needed.