The Norwegian Forest Habitat Inventory

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The MiS project

Forests cover about 38% of the land area in Norway. Except for a small proportion in reserves and national parks, the forest areas are managed for multiple purposes, including timber production. Consequently, the habitats that managed forests can offer will be of great importance for the overall conservation of forest biodiversity. On this background a large project was launched in 1997 by the Norwegian Ministry of Agriculture and Food: *Miljøregistrering i Skog* (MiS). The project was carried out by the Norwegian Forest and Landscape Institute in cooperation with several other institutions and stakeholders. The main goals of the project were to increase knowledge of biodiversity in Norwegian forests, and to develop a method for mapping important habitats for biodiversity that could be integrated in forestry planning. Following three initial years of research a basic model for such a habitat inventory was presented in 2000. The inventory was tested in the field, and in 2001 an instruction manual was printed. Since then the habitat inventory has been carried out in most of the productive forest area in Norway.

The inventory

The purpose of the inventory is to localise and map habitats in managed forests that are of particular importance for biodiversity. In the initial part of the project we therefore identified forest habitat types that tend to be inhabited by relatively large numbers of rare and threatened species. We found that such species were to a large degree associated with habitats that are either less common in managed forests than in unmanaged forests (e.g. coarse woody debris, old trees, burned forest), highly nutritious forest habitats (e.g. calcareous soils, trees with nutrient-rich bark), or highly humid forest habitats (e.g. clay ravines, stream gorges, north-facing rock walls). Twelve main habitats types were selected for the inventory, and they were delimited in the field according to specified criteria, either by using densities of habitat elements or by using vegetation or topographic criteria.

In essence, the habitat inventory sorts the investigated forest landscape in three area categories: (1) areas exceeding 0.2 hectare containing high quality occurrences of one or more habitat types, (2) forest stand units with more scattered distribution of important habitats, and (3) areas with no or very few occurrences of the investigated habitats. During the inventory tree species, vegetation types, and topography are also recorded. This information is used for identifying the main environmental context of the recorded habitats, based on the two major environmental gradients determining species composition in northern forests at the forest stand scale: humidity and nutritional status.