Small mammal use of a managed secondary succession

C. Sharp & K.A. Wilson
on behalf of the Yorkshire Mammal Group
The College of Ripon & York, St. John, York.

Introduction

It was decided in December 1973 that the Yorkshire Mammal Group would undertake a long-term survey of a replanted area of Scots pine (*Pinus sylvestris*) in Blackwoods, Wheldrake, near York (grid reference SE 661468). Permission to set up a permanent grid was kindly granted by the Forestry Commission. The replanted area was approximately 250m x 90m, roughly cleared and ploughed before planting. The soil was a sandy heath type, podsolysed in places and with limited vegetation. Except for the Scots pine, the area could be considered as at an early stage of succession.

The study area, shown in Figure 1, was bounded on two sides by nursery beds growing various species of conifers, on the third by a narrow band of mature Scots pine, and on the fourth side by 20 year old Corsican pine (*Pinus nigra* var. *maritima*). Previous trapping in 1973 had shown the presence of *Apodemus sylvaticus* and *Clethrionomys glareolus* in small numbers. Traps in different coniferous habitats such as mature pine stands, nursery and closed canopy areas within Blackwoods had indicated that vegetation possibly affected the numbers and species of small mammals trapped. The newly planted area was an opportunity to study small mammal use of an area undergoing rapid successional change.

Methods

Vegetation

In 1973 a thorough survey of the vegetation was made to determine the species present. Vegetation was then sampled in early August for the years 1974-78, 1980, 1983 and 1986.

The method of sampling was to take five random points in each 10m square of the grid. At these points, the species in contact with a 5 foot (1.52m) cane were noted. This gave 175 sampling points and percentage cover for each species was measured up to the height of 5 feet (1.52m).

Small Mammals

A permanent grid was set up as shown in Figure 1. There were 48 trap points at 10 metre intervals. Two Longworth traps were set at each point.

Trapping sessions were held each year in mid-July and mid-December, avoiding full moons. Traps were laid mid-week and pre-baited until the Friday evening when they were set. The bait used was rolled oats and maize, with a variety of shrew baits.

Traps were visited at 08.00 and 20.00 hours on the Saturday and lifted at 08.00 hours on the Sunday. Captures were identified, sexed and weighed. Their breeding condition was noted and they were marked by fur clipping.

A simple Lincoln index was used to give a population estimate for each species.

The study area in 1974

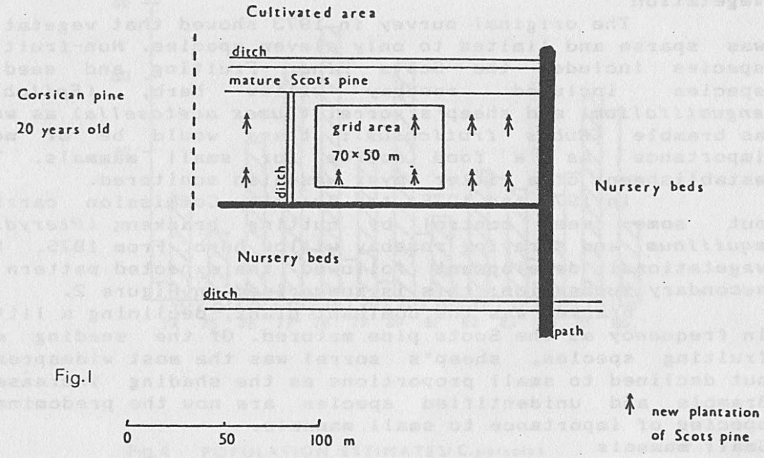

Fig.1

Fig.2 VEGETATION % COVER