

Results

Vegetation

The original survey in 1973 showed that vegetation was sparse and limited to only eleven species. Non-fruiting species included the Scots Pine. Fruiting and seeding species included rosebay willow herb, (*Epilobium angustifolium*) and sheep's sorrel (*Rumex acetosella*) as well as bramble (*Rubus fruticosus*): these would be of more importance as a food source for small mammals. The establishment of a litter layer was also monitored.

In 1974 and 1975, the Forestry Commission carried out some weed control by cutting bracken (*Pteridium aquilinum*) and spraying rosebay willow herb. From 1975, the vegetational development followed the expected pattern of secondary succession; this is summarised in Figure 2.

Bracken was the dominant plant, declining a little in frequency as the Scots pine matured. Of the seeding and fruiting species, sheep's sorrel was the most widespread, but declined to small proportions as the shading increased. Bramble and unidentified species are now the predominant species of importance to small mammals.

Small mammals

Three species were regularly trapped: woodmouse (*Apodemus sylvaticus*), bank vole (*Clethrionomys glareolus*) and the common shrew (*Sorex araneus*). Field vole (*Microtus agrestis*) and pygmy shrew (*Sorex minutus*) were trapped rarely.

The woodmouse was the first species to recolonise the new plantation and flourished in the early period from 1974-1978. The numbers trapped showed marked seasonal fluctuations with low catches in July and high catches in December. This is probably a reflection of low food availability in December.

Recapture rates were reasonably high with a mean value of 72.6%.

The sex ratio was significantly different from unity: more males than females were caught.

The above results are summarised in Figure 3.

The bank vole was trapped only occasionally until December 1977. From then numbers increased to reach a peak in 1981. Seasonal variations were only marked in 1977 and 1981; the results are summarised in Figure 4.

Recapture rates were 77% on average, and the sex ratio did not differ significantly from unity.

Captures of the minor species are summarised in Figure 5.

The first field voles were trapped in 1978 and in December a peak of 19 individuals was reached.

From July 1979, common shrews were caught regularly. High catches from 1983 onwards may be attributable to the use of pupae as shrew bait. The pygmy shrew appeared at both 1976 traps but has not been caught since.

Edge Effect

Analysis of the results from 1974 to 1985 is summarised in Table 1. The student's t-test shows that in December traps there was a significant edge effect for both species. For woodmouse this is significant at 1% level, for bank vole it is significant at 2% level.

Fig.3 POPULATION ESTIMATES: *A.sylvaticus*

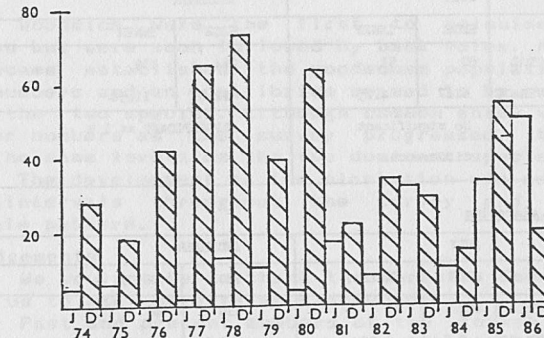


Fig.4 POPULATION ESTIMATES: *C.glareolus*

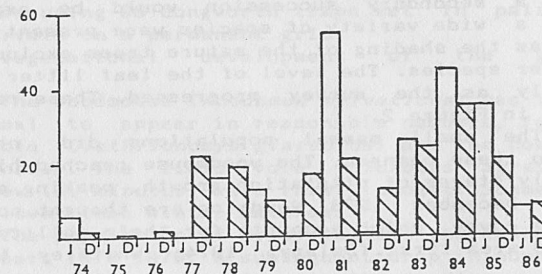
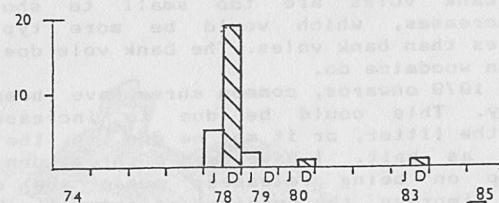


Fig.5 Numbers of *M.agrestis*



Numbers of *S.araneus*

