

**Comparative demography of red squirrels (*Sciurus vulgaris*) and grey squirrels (*Sciurus carolinensis*) in deciduous and conifer woodland.**

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The demography of red and grey squirrels was studied by live-trapping and radio-tagging at 14 deciduous and conifer sites in southern Britain and at 8 conifer sites for 1 year in northern England. Densities and productivity correlated with tree seed crops for both squirrel species in deciduous and conifer habitats. Productivity was reduced by high density of full-grown squirrels relative to seed abundance. In oak-hazel woods, demography of grey squirrels correlated with abundance of acorns but not hazel nuts, whereas density and productivity of red squirrels correlated with hazel nut abundance. Correlations of female density and productivity with pine cone crops did not differ between red and grey squirrels. Predators ate many radio-tagged grey squirrels in conifers, and annual survival was only 50% compared with 80-82% for both species in other habitats. Grey squirrel populations in southern conifer sites were sustained by immigration, and at northern sites female density correlated with oak abundance within 500 m. Failure to exploit acorn crops puts red squirrels at a competitive disadvantage in deciduous woodland. Red squirrels had higher survival than grey squirrels in conifers, which may give them an advantage in that habitat, but could also have been explained by lack of predators on their island study site.