

References to research quoted in this leaflet can be found below.

We also recommend reading "Analyses of scientific research" on www.i-csrs.com.

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Red squirrels (*S. vulgaris*) & Grey squirrels (*S. carolinensis*) in the UK

6 scientific facts about squirrels living in the UK that most people don't know about.

6 scientific facts about squirrels living in the UK that most people don't know about.

~~~ 1 ~~~

Red squirrels (*S. vulgaris*) became extinct in the UK in 18th century mainly because of the destruction of their habitats [4], [9], [13]. Similarly, red squirrels were extinct in Portugal by 16th century although in nearby Spain their population remained stable [12]. In the second half of 20th century in Portugal the focus was on the restoration of red squirrels' natural habitats. Within less than two decades the population of red squirrels in Portugal was restored naturally (they migrated from Spain) and it continues to expand [15].

~~~ 2 ~~~

The current population of red squirrels in the UK, as confirmed by genetic analysis, are descendants of squirrels brought to the UK mainly from Scandinavia, so are technically an introduced species themselves. This was done largely after grey squirrels were introduced [7], [9], [14].

~~~ 3 ~~~

All scientific studies done in the UK in the last 24 years confirm that the main reason for unnatural deaths of red squirrels is human activity. All those reasons for red squirrels' mortality attributed to man can be eliminated or significantly reduced [2], [11], [17], [19]. Unfortunately, the majority of funds for so called "red squirrel conservation" are spent on killing grey squirrels. This depletes potential funds for the support of red squirrels in the UK, such as planting appropriate trees or providing hygienic feeding stations or wildlife bridges and corridors.

~~~ 4 ~~~

Red squirrels brought to the UK from Scandinavia evolved for thousands of years in coniferous forests rich in seeds. Today, for financial reasons, the habitats in most of the UK (apart from Scotland) consist mainly of broadleaved forests (natural habitat of grey squirrels) and/or woodlands that generate poor seed crops, like American Sitka spruce which for 40 years has been the dominant tree species planted in the UK [3], [4], [5], [9], [16].

~~~ 5 ~~~

Studies in the last 14 years show that grey squirrels (*S. carolinensis*) are the biggest natural regenerators of (broad-leaved) forests, and without them natural forest regeneration is significantly less likely [6], [8], [20], [21], [22].

~~~ 6 ~~~

The biggest outbreak of SQPV (pox) among red squirrels took place in 1930s in 14 counties. Grey squirrels were absent from 10 of the counties where the outbreak occurred [9], [13]. In the last 24 years around 700 cases were recorded of red squirrels that probably died of SQPV (less than half were confirmed with laboratory tests). Most of the pox cases occurred after the introduction of supplementary feeding of red squirrels using shared feeders. It's known since at least 2014 that shared feeders can be vector for diseases such as adenovirus or pox [10], [18].

Grey squirrels are absolutely essential if we're going to have (deciduous forest) regeneration.

They provide the only mechanism by which acorns and other nuts can get far enough away from the shade of the parent tree to have a chance of succeeding.

Prof. Robert Swihart

