



## **SQUIRRELS IN THE UK – PAST, PRESENT AND FUTURE**

### **Introduction**

There are two species of squirrel living wild in Britain today – the red squirrel (*Sciurus vulgaris*) and the grey squirrel (*Sciurus carolinensis*). Unfortunately, the introduced American grey squirrel is replacing the native red squirrel at an alarming rate with local and regional extinctions in large areas of England and Wales, and some areas of Scotland. It is estimated that Scotland supports three quarters of the 160,000 red squirrels thought to be living in Britain today, with south Scotland accounting for a quarter of the Scottish population. South Scotland remains one of the few remaining strongholds of the red squirrel in Britain, and the Red Squirrels in South Scotland project has been established to maintain this status.

### **The Beginning**

The first signs of the red squirrel appeared at the end of the last ice age, almost 10,000 years ago, when the land bridge between Britain and Europe was starting to disappear.

### **Ups and Downs**

Records from the 15th and 16th centuries indicate that red squirrel numbers dropped in Scotland and Wales, and by the 18th century the red squirrel had virtually become extinct in Scotland. This decline can largely be attributed to the need for timber in industry, agriculture and war, and the subsequent felling of large areas of woodland. With a new drive to replace the trees which had been lost, new planting in the 19th century boosted red squirrel numbers, and by the start of the 20th century there was a thriving population of red squirrels across Britain. The red squirrel recovered to such an extent, that in some places it became known as a pest. Between 1903 and 1933 the Highland Squirrel Club recorded the destruction of 82,000 red squirrels! Unfortunately, through the course of the 20th century red squirrel numbers plummeted to very low levels, and today the future of our only native species of squirrel is threatened.

### **Relatives from Abroad**

But what caused this problem? During the course of the 20th century the red squirrel had a particularly hard time, with further tree clearances during both world wars, and outbreaks of two fatal diseases – Coccidiosis and Squirrelepox virus. However, perhaps of most importance was the arrival of a new squirrel species from abroad. The American grey squirrel is an animal of the oak and hickory forests of north east America, where it is part of the area's native wildlife. As with many non-native plants and animals now found in Britain, the introduction of the grey squirrel can be blamed on us! It was 1876 when the first pair of grey squirrels were released in Henbury

Park, Cheshire by a Mr Brocklehurst, and the appeal of these 'new' squirrels spread with further releases during the following fifty years. The first grey squirrels in Scotland were released in 1892, at sites including Edinburgh Zoo. It was initially thought that aggression from the larger grey squirrel was to blame for the replacement of red squirrels by greys, but research has shown that this is not the case...

The grey squirrel's efficiency in digesting large seeds from broadleaved trees (such as acorns and hazelnuts), gives them a competitive advantage over red squirrels in broadleaved and mixed woodland. They are able to feed on these seeds before they are fully ripe, and gain more nutritional benefit from them than red squirrels. Grey squirrels are also thought to steal nuts and seeds from red squirrel winter stores. This results in weight loss in red squirrels and therefore reduced breeding success, as red squirrels need good body fat reserves in order to reproduce and successfully rear young in spring. In mixed broadleaf woodlands, red squirrels are unlikely to remain within fifteen years of the appearance of grey squirrels.

With numbers already low, the spread of grey squirrels across Britain spelled disaster for many red squirrel populations, leading to their disappearance throughout most of England, Wales and the Scottish central belt. It is estimated that there could be in the region of 3 million grey squirrels living in Britain today, compared with only 160,000 red squirrels.

### **The Future of Red Squirrels in Britain**

With evidence to suggest that the grey squirrel is continuing to benefit from British woodlands at the expense of red squirrels, the future seems bleak for our native species. However, if we commit ourselves to the task of ensuring a future for red squirrels in Britain, there are positive steps, which can be taken.

Studies have shown that where red and grey squirrels exist, red squirrels can survive where there are large areas of spruce dominated coniferous woodland. Therefore, managing conifer forests in a way which favours red squirrels and discourages grey squirrels is one way to help ensure the long-term survival of red squirrels in the UK.

The other major approach to red squirrel conservation currently being utilised is grey squirrel control. By reducing the numbers of grey squirrels we can first reduce the impacts of competition and second reduce the risk of disease transmission. Many grey squirrels entering Scotland from England are carrying the [Squirrelpox virus](#), which while harmless to grey squirrels, is lethal to red squirrels. Red squirrel conservation efforts in south Scotland are now focussing on a coordinated and broad scale grey squirrel control program so that the spread of pox carrying greys from the south is halted.

The plight of the red squirrel is recognised in the UK Biodiversity Action Plan as a 'Priority Species' in need of urgent conservation action. Regional Action Plans for red squirrel conservation have been produced for Dumfries and Galloway and the

Scottish Borders, and are being implemented by the Red Squirrels in South Scotland project.

With a co-ordinated approach to red squirrel conservation across Britain, combining direct action with education, the red squirrel will remain a part of our natural heritage for future generations to admire.