

In the last few decades numerous studies and scientific publications many times confirmed the fact that squirrels have significant positive effect on seed dispersal and subsequently forest regeneration (Vander Wall 1990, 2001, Steele et al. 1993, 1996, Goheen & Swihart 2003, Zong et al. 2009).



Considering the fact that squirrels – like many other animals – can rarely cause damage to trees, below we'll analyse scientific research that discuss the extent of this problem and ways to prevent it.

### Effect of squirrels on trees in non-commercial woodlands (gardens, parks, nature reserves)

As we mentioned earlier squirrels like many other wild animals can on rare occasions (mainly in the times of hunger) strip bark from trees and feed on the juicy phloem.

British Forestry Commission, conducting continuous monitoring of the incidents for 30 years, concludes that the **damage to – some of – the trees caused by squirrels extremely rarely leads to the tree death** (Forestry Commission 2006). Statistically low impact of squirrels on tree health has been confirmed by many scientific studies conducted for a few decades in the UK (Taylor et al. 1968, Mountford & Perkins 1999, Huxley 2003, Rayden & Savill 2004, Harris et al. 2006, Mayle et al. 2009).

The research has also shown that incidental damage caused by squirrels is beneficial ecologically because the damaged places are sites of development of many fungi and invertebrates which are the main food source for many species of wild birds (Humphrey et al. 2002, Forestry Commission 2006, Harris et al. 2006).

According to the report of English Forestry Commission **such rare damage** – with the aim to create suitable habitats for wild birds – **could be created artificially but it would involve additional management costs** – probably reaching a few millions pounds annually (Forestry Commission 2006).

As shown by the above mentioned numerous scientific studies and report of the Forestry Commission the **presence of squirrels in non-commercial woodlands is very beneficial** – and even crucial – not only for the reasons of forest

regeneration by squirrels via seed dispersal, but **it also has a positive effect on the increase of habitat quality for wild birds**. As the most research has shown a good quality habitat is the priority for sustaining a diversity of species of wild birds in the UK (Newson et al. 2009,

Bonnington et al. 2014).

### Effect of squirrels on trees in commercial woodlands

Similarly like in non-commercial woodlands squirrels can cause statistically incidental damage to trees. It's hard not to notice that the problem of tree damage that may be caused by squirrels has been overly demonised in the UK for the last 100 years. In many scientific and environmental publications one can easily come across information that **one of the main reasons used to justify the killing of hundreds of thousands of red squirrels in the UK in 20th century was allegedly high number of trees damaged by them** (Ritchie 1920, Shorten 1954, Tittensor 1970, Harris et al. 2006, Lovegrove 2007). Of course all the red squirrels killings were conducted using taxpayers money which found its way to the pockets of a small group of people performing "the control of the red pests" (Duncan 1927).

After over 100 years of research (and experience in forest management) **it's been proven beyond any doubt that killing squirrels** – as the answer to incidental tree damage they can cause – **is not only ineffective and uneconomical** (Taylor et al. 1968, Mountford 1999, Huxley 2003, Forestry Commission 2006, Harris et al. 2006) compared to the required resources **but usually has the opposite effect than intended** (Lawton & Rochford 1999, Harris et al. 2006, Forestry Commission 2006). **Even the English Forestry Commission admitted in their report that spending public money for killing squirrels** – in order to limit tree damage that squirrels could potentially cause – **not only has little effect but also usually does not pay off financially**. This opinion is also confirmed – directly or indirectly – by many scientific studies (Taylor et al. 1968, Lawton & Rochford 1999, Mountford 1999, Huxley 2003, Harris et al. 2006, Mayle et al. 2009). In addition to that scientists over 20 years ago proved that in commercial forest plantations the greatest damage result usually form incorrectly

planned tree thinning. In the forests where the thinning is performed at the appropriate time the risk of damage to trees by wild animals is decreased several times. (Kenward & Parish 1986, Kenward 1989).

**Decades of studies, scientific and environmental experiments proved many times that correct forest management and planting suitable – more resistant to damage – tree species not only minimises the probability of tree damage by wild animals more effectively but is also much more economical** (Kenward et al. 1989, Mountford 1999, Huxley 2003, Forestry Commission 2006, Harris et al. 2006, Mayle et al. 2009).

### Summary

From the point of view of scientific research the UK is undoubtedly the European leader when it comes to determining the most effective – and the most beneficial financially – methods of preventing tree damage that do not require killing squirrels.

Those effective methods and experience in forest management determined by British scientists and

environmentalists for many years are used – to a lesser or greater extent – successfully by many European countries where often the state of the forests is many times better than currently in the UK. It is not possible to scientifically explain how it happened that such knowledge is only sparingly used currently in the UK where still the dominant method of limiting incidental damage that squirrels can cause is killing them.

The present dominant policy in the UK for the prevention of incidental tree damage by squirrels based on killing them is not only decades behind currently known results of scientific research, for the most part conducted in the UK, but is also completely ineffective and economically inefficient and in addition to that also harmful ecologically and socially.

In practice **the only beneficiaries** – and main supporters – of methods of limiting incidental squirrel damage to trees by organising local or nationwide culls which are currently used in the UK **are a small group of big landowners and a small group of people killing grey squirrels for a living**, costing the UK taxpayers millions of pounds a year.

References and more about squirrels: [www.i-csrs.com/effect-squirrels-trees](http://www.i-csrs.com/effect-squirrels-trees)

Visit the Facebook page and sign the petition to stop grey squirrel cull:  
[www.facebook.com/StopSquirrelCull](http://www.facebook.com/StopSquirrelCull)

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