

Westmorland Red Squirrels

making the future safe for our red squirrels

Newsletter

Issue 11, Autumn 2015

The possibility of re-introducing the Pine Marten for controlling grey squirrels is causing quite a stir in squirrel circles. In this issue we have two articles to put you in the picture – one by Dr Emma Sheehy of the University of Aberdeen and the other by David Bavin, Project Officer for The Vincent Wildlife Trust. There will be an opportunity to find out more about the ongoing debate when Dr Emma Sheehy speaks at Red Squirrels Northern England's Red Squirrel Conservation Day on the 17th October. You will need to contact RSNE [to book a place](#)>>.

Even with the significant progress we've made in the last five years, our returning reds still face threats—from grey squirrels, and also from sudden loss of habitat caused by the accelerated felling that's taking place owing to Larch disease. Bob Bradley writes about how to give our reds a helping hand, and also about the need for the strategic planting of trees to ensure the reds' future recovery.

I would like to welcome our new members on board, and thank all our existing volunteers. Thanks to your hard work with grey control, with fundraising and with all the other essential tasks, we can be proud of Westmorland Red Squirrels and everything it has achieved. For the sake of our red squirrels, please help us to keep this momentum going into 2016 and beyond. Finally, thank you to all who have given us your financial support through memberships, generous donations, sponsorships and grants. As we expand into new areas, it becomes ever more important that we have sufficient funds to sustain our activity year on year.

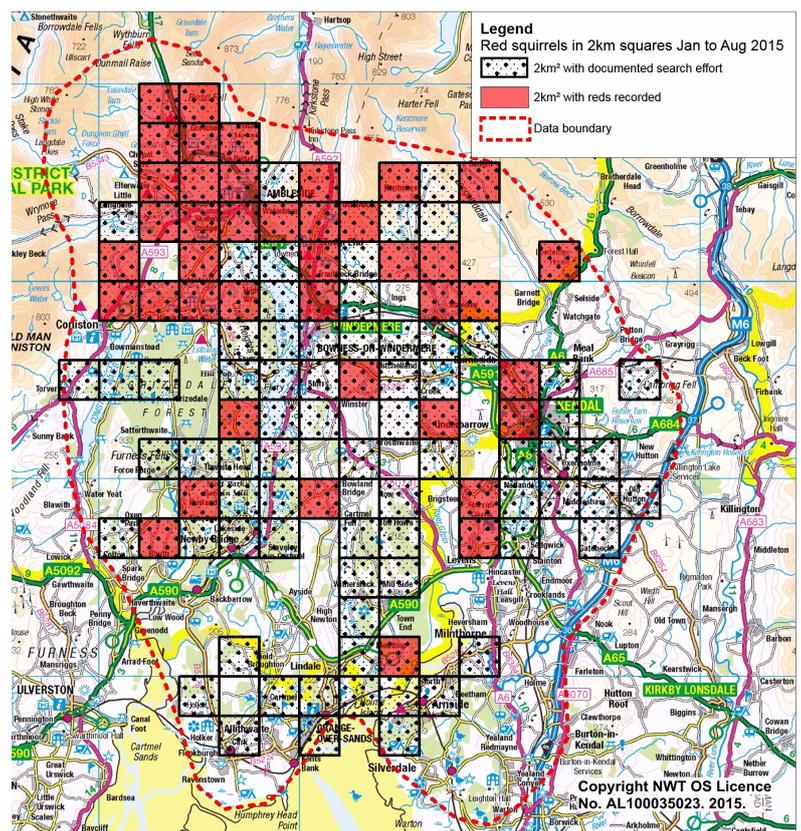
Geoff Hetherington, Chairman

Red Squirrels seen in South East Cumbria to the end of August in 2015

The 2km squares marked in red show where red squirrels were seen up until the end of August of 2015 using Red Squirrels Northern England's own data combined with data supplied by Westmorland Red Squirrels and the Grasmere Red Squirrel Group.

Compared with the same period in 2014 (our best year ever for reds), the range of reported red squirrel sightings has decreased, but red squirrels have been spotted near Levens and Brigsteer, and continue to be seen in Troutbeck and Windermere. A couple of reds have been seen in the Rusland area, which bodes well for the start of the Rusland Horizons project—see page 8.

The 2km squares with dots show monitoring and grey control activity. Our thanks to all those who have worked so hard to provide the data, and to RSNE for producing the map for us.





Forestry Commission

We have a terrific relationship with the Forestry Commission, who support grey squirrel trapping in many of their woodlands in our area. Their financial support, including grants channelled through Red Squirrels Northern England and their Green Grants, sponsored by First Transpennine Express, has also enabled us to increase our activities with tangible results. The Commission currently don't allow volunteers or contractors to shoot greys in their woodlands, however, and while it's not a particular issue in our more accessible woodlands, we and other red squirrel groups feel that a blanket ban reduces our shared ability to protect our reds against the greys. Through Northern Red Squirrels, the umbrella association of voluntary red squirrel groups in the north of England, we have been discussing the scope to allow two pilot sites where a policy of shooting and trapping might be tested. Red squirrel conservation is said to be a Government priority: we see the active engagement of the public forest estate as essential in implementing the full range of cost-effective grey control measures. Unfortunately this proposal has been rejected by the Forestry Commission at regional level but, undaunted, we now plan discussions with the European Squirrel Initiative and with Ministers at the Department of Environment, Food and Rural Affairs. I'll keep you posted...

South Lakeland District Council support grey control

In recent years we have succeeded in securing the support of many public and third sector organisations in controlling greys in order to protect our red squirrels. The National Trust, National Park Authority and Woodland Trust have been pioneers in this respect. Now, I'm delighted to say we have the support of the District Council to control greys on many of their Kendal properties. More grey sightings and an increased number of requests for grey control have made this permission both timely and welcome. We now need more trappers to add to our stalwart band in the Kendal area. If you know someone who can help, please let me know. We can offer full training and support.

Recruitment

Talking of recruitment, we are on the lookout for more people to help share our increasing workload. Can you help with secretarial or administrative support? Or fundraising? Or what about editing this newsletter? Then there's attending our stand at shows, giving talks, and supporting our area sub-groups. The opportunities are almost endless but if you're interested please call me or any of our trustees for a chat. Westmorland Red Squirrels needs you!

Bob Cartwright

Secretary, Westmorland Red Squirrels

Arnside and Silverdale

Over the past year we've worked with landowners, trappers and a host of organisations to prepare a strategy for the recovery of red squirrels in the Arnside and Silverdale and surrounding area. A strategy is now in place and a new, enthusiastic sub-group has started trapping greys with great success. The larger private estates have begun to share their figures with us, as have the National Trust, the Woodland Trust and many individual owners. The idea of a concerted approach has been widely welcomed locally, which is most encouraging. If you know of anyone interested in joining our campaign, let us know.



Aerial view of Far Arnside and Silverdale
by Joan Bryden Photography

Staveley-Sizergh area

Last year I was covering much of the woodland in and around Staveley. This year I've extended my area to the south right down to Sizergh. I now have a moped, which is great for getting around but not

so good for moving traps, thank you to everyone who has helped with this task.

I've been working closely with Rob Pocklington from the National Trust at Sizergh, trapping a lot of grey squirrels on their land particularly where Rob can't

shoot them. I've caught over 400 greys across the area with over 100 of them coming from Garth Row right next door to the woodland at Barrowfield.

It's been a relatively wet summer, which has been annoying but it could lead to a lower food supply for the grey squirrels this Autumn/Winter. Also, despite my late start (I didn't get trapping until the end of March) the season has been running a little late and I'm still catching greys, compared to the unusually early finish last year when I caught my last grey at the end of July.

The feeder and string method has been working well and I've been surprised at the number of sites where I've been able to trap successfully not just week after week but month after month. I hope that continued trapping at so many sites over the season will have a lasting impact.

The red squirrels are still very thin on the ground in this area, but there have been some encouraging sightings in recent weeks so I think that all the signs are good for the coming year.

Jeff Scovell

Troutbeck

Troutbeck Village Association held its biennial Open Garden event on Monday 25 May 2015. This was a great opportunity to help the red squirrels. The RED TEAM raised £250.00 on the day with the sale of donated plants, guess the number of hazelnuts and donations. Thank you team!

More Reds, more worry...

The Red Squirrel sightings in the Troutbeck Valley have increased in 2015. Some seen by human eyes, local and visitors, and some recorded on camera. 'Kirk' appeared 14/06/2015, his first appearance in very poor light—is it red or is it grey? To feed or not to feed? Have we got all the greys? It was decided to feed him and monitor for greys. Catching the greys is the easy part of red squirrel conservation...



Unfortunately he wasn't the sharpest squirrel!



Then along came the stoat...



Phew! He made it...



And then on then 29th August we saw double. Very emotional!

THE WAR OF THE SQUIRRELS

Bob Bradley B Med. Vet., MRCVS

A personal view of the competition between the Red and the Grey Squirrel in 2015

This article has been produced to draw attention to ways in which we can contribute in favour of the Red Squirrel in its struggle with the introduced foreign Grey. In particular, supporters of the Red can still contribute to the preparation for the return of the Reds into your areas, even if your locality has only the Grey or even no squirrels at all. I feel that we are at a stage in the battle in Cumbria where some sort of a review of the current situation may be useful.

Continued persecution of the grey is essential. We have shown that some improvement in the breeding performance and in the distribution of reds has occurred in spite of some greys still being present at diminished levels. What should we now be doing to consolidate and improve the current position?

We cannot expect much help from the scientific fraternity because of the difficulties of working in the wild environment with elusive animals and a complicated virus disease as well. However, we can make intelligent suppositions based on strong and steadily increasing circumstantial evidence about lots of unproven hypotheses. We must now be using what we 'know' to extend and join up the populations of reds that we have.

Our two competing squirrel species have developed separately for thousands of years on opposite sides of the Atlantic Ocean and it is not surprising that there are important differences between them.

Competition for food

The grey squirrel is adapted to the conditions of deciduous forest of the eastern part of the U.S.A. These forests consist primarily of 4 species of oak tree, the hickory and the walnut, all of which produce large fruit and are fairly reliable year to year. The trees flower in the spring and the fruits ripen on the tree until the autumn when they fall to the ground. All stages are grey squirrels' primary source of food. Fruits are also stored for winter, primarily in tree holes (as our red squirrel stores hazel nuts in the ground).

All parts of these trees, including the flowers and fruit, contain large concentrations of tannin, a bitter and sometimes poisonous substance. No one is sure whether tannin is developed accidentally by the trees or if the tannin production has been developed as a kind of protection against animals eating its leaves and fruit. However it came about, the grey squirrel has become immune to this poisonous character and acorns together with similar fruit provide the predominant food of grey squirrels for well over half the year.

In the USA in the spring the acorns have gone and the greys have a change of diet. They now resort to the barking of trees to obtain the nutritious sap which is liberated. They also become considerable predators of the eggs and young of birds. (As the greys in the UK do now).

Our red squirrel in contrast, originated and developed in conifer woodlands and has only recently been forced to live in mixed woodland. The reds have not had time (in evolutionary terms) to become tolerant to tannin and cannot therefore use acorns as a food source. Unripe hazel nuts also contain tannin and are eaten by greys before they become available to the reds. The red squirrel, although originally a specialist on the scots pine over the ages, has been forced by climate and man to become a specialist of tree seeds in general, excepting the oaks. The main trees important to the red are the hazel, larch, elm and yew, in addition to the scots pine.

All these trees take years to mature from seedlings before they will fruit and so we should bear this in mind and should be encouraging strategic planting now to have mature trees for the recovery of the red squirrel in the future.

In addition, our reds have never, until the arrival of the greys, had a competing squirrel at all. The grey is larger, heavier, more predatory and accustomed to raiding structures in the treetops looking for food and shelter. In view of all this, artificial feeding of the reds where under pressure can be a very valuable factor.

Predation

A glut of the acorn crop allows the greys to build up their numbers dramatically in the winter. As this food supply becomes exhausted in the spring, the territorial behaviour of the greys becomes more influential and the less dominant animals are driven

out of the core territories. This produces a roving, hungry incursion, usually of younger adults, into the surrounding areas. Such animals are known to travel big distances. (2 to 3 kilometres in a day have been recorded). These animals constitute a considerable threat to red squirrels living in such areas. We can envisage what such animals would do when looking for food and shelter in an area strange to them, confronted perhaps by night fall or deteriorating weather and finding a drey containing a nursing red squirrel with young. Remember how we suddenly saw no more juvenile reds when greys first arrived with us!

How good do you think a red squirrel might be at defending itself when inside a drey? Until the arrival of the grey, they have never had much necessity to develop and practice such defence. In fact there is one behaviour trait which might discourage an aggressive response to any threat. I call this the "sanctuary effect". During observations of my captive red squirrels, I kept an observation camera inside the top of a well-used nest box. Often the box contained 3 or 4 squirrels inside in a heap. At no time did I ever witness any aggression and the occupants spent their time sleeping or grooming themselves and each other. However, two of these squirrels did not get on with each other when outside in the big cage. One would not allow another particular squirrel within a distance of about a metre without driving it away. Inside the two were quite at ease together!

Imagine an emergency where a red is threatened or being chased by a predator (eg. Pine Marten or Goshawk). The threatened squirrel has only one safe retreat – a drey. It would be a ridiculous behaviour trait if access to a drey was prevented by an occupying squirrel, resulting in the death or injury to the fleeing squirrel. I am not aware of this behaviour involving the sanctuary of the drey being reported in the literature.

Squirrel Pox Disease

The disease requires:-

1. A supply of virus. About 50% of all greys secrete virus for a few weeks during their life time until they develop antibodies. Diseased reds should be removed from the environment wherever and whenever they are found.
2. General distribution of the virus will be aided by grooming, scent marking, feeders, dreys etc and we can't do much about this. Some disinfection

might help.

3. Some injury (however small) in healthy skin is necessary before the virus can infect a healthy squirrel.
 4. Avoid unnatural population densities of the reds.
- My answer to all the above is that we should try to limit the contact areas. Feeding hoppers and artificial nestboxes should be made unavailable to greys. Metal birdfeeders which could cause injury to the face of a red should be avoided. Heavy external parasite infestation will cause excessive scratching and sharp claws could then cause the skin injuries. (Is this why we see SPV lesions on the ears of infected animals?). Flea powder can be sprinkled in nest boxes occasionally. Boxes and feeders protected by a circular 46mm hole in a metal plate will exclude adult grey squirrels and prevent them using the facility and prevent contamination with virus.

The designs for the nestboxes and feeders are not ideal, I know, being clumsy, time-consuming to make and somewhat expensive. They also do not last more than a few years – but they do what they are intended to do. I am working on modifications of their designs and I would be delighted to receive comments from anyone about this or, indeed anything else that I have written here.

Major natural foods of Lake District Red Squirrels

(Allow for much overlapping)

Jan.	Fallen Yew Seeds
Feb.	Fallen Beech Mast
Mar.	Sap from barked branches
Apr.	Some insects, leaf and flower buds
May	Fresh Yew seeds. Elm seeds
Jun.	Green cones from Scots Pine and other conifers
Jul.	Flowers and fruit on ground e.g. bilberry/wild strawberry
Aug.	Some fungi and other tree seeds (including hawthorn, rowan and two species of cherry)
Sep.	Fresh Hazelnuts (and hoarding)
Oct.	Conifer seeds, (food value depending on seed size)
Nov.	Fungi
Dec.	Buried Hazelnuts

Bob Bradley, April 2015

The designs for Bob's feeder and nestbox are on our website: westmorlandredsquirrels.org.uk/helping-reds/ . There are also details of his new-design long-lasting nestbox, now available to buy for £45.

PINE MARTENS AND SQUIRRELS

Dr Emma Sheehy

Pine martens and squirrels in Ireland

In 2014, the highly anticipated findings of a four-year research project investigating the role of the pine marten in Irish squirrel population dynamics were published in *Biodiversity and Conservation (Population crash in an invasive species following the recovery of a native predator: the case of the American grey squirrel and the European pine marten in Ireland, 2014, Vol 23, Issue 3)*. After several years of anecdotal reports from foresters and gamekeepers alike, the study provided conclusive evidence that the return of the native predator to the Irish midlands had caused such a significant decline in grey squirrel numbers, that the once beleaguered red squirrel population was able to recolonize its former range, including large broadleaved woodlands, which had been dominated by grey squirrels for more than 30 years. The study found that where pine martens had returned to healthy numbers, grey squirrels had all but disappeared (from an area of about 9000km²). But in areas



where pine martens were absent, or present only in low numbers, grey squirrels persisted at 'invasive' levels. Red squirrels on the other hand, have co-existed with pine martens over evolutionary time through much of their European range, and although they are preyed upon occasionally, they are found in healthy numbers alongside pine martens. Indeed, in the Irish study, the areas that red squirrels had recolonized naturally were exclusively those with healthy pine marten populations.

Do pine martens eat grey squirrels?

In 2013, the first evidence of the pine marten preying on the American grey squirrel was also recorded in Ireland. Indeed the frequency of occurrence of grey squirrels in the diet was significantly higher than that of the red squirrel, confirming that grey squirrels

are more likely to be preyed upon by martens where their ranges overlap. However, it is not yet known whether direct predation by pine martens is the cause of the negative correlation between the distributions of pine martens and grey squirrels. Other possible effects of having a healthy predator population present include behavioural impacts such as predator avoidance and changes in foraging behaviour that lead to reduced fitness, or physiological effects such as a stress induced reduction in reproductive success.

Pine martens and squirrels in Scotland

The Scottish landscape is largely similar to Ireland in terms of both squirrel and pine marten habitat. Indeed, there have been similar anecdotal reports of regional grey squirrel declines after pine marten recolonisation in Scotland since the early 2000's.

However, there are several subtle but potentially important differences between the Scottish and Irish pine marten populations, and crucial research is now underway at the University of Aberdeen, with the support of Forestry Commission Scotland, to determine whether the recovering pine marten population

is also playing a role in Scottish squirrel population dynamics, with the ultimate aim of determining the potential for the pine marten to act as a natural biological control for the grey squirrel in Britain.

Implications for Britain

Although the pine marten population in England and Wales are practically extinct, the recovering Scottish population are just a few miles away from the Scottish/English Border. Pine marten numbers are low at the population frontier, however, their recovery will be closely monitored through natural and experimental conditions, in order to ultimately increase our understanding of the interactions between all three species. Our ultimate goal is to determine conclusively the potential for the pine marten to control grey squirrel numbers throughout

Britain. We will also determine whether a reduction in grey squirrel densities as a result of pine marten activity might influence the transmission and prevalence of disease such as squirrel pox virus, and crucially, in terms of forestry, the potential for pine martens to reduce grey squirrel numbers to a level where bark-stripping damage no longer threatens the viability of planting hardwood trees.

The pine marten and grey squirrel project is led by Dr Emma Sheehy and Professor Xavier Lambin of the University of Aberdeen, with funding from the Irish Research Council, Marie Curie and Forestry Commission Scotland. For further information please contact emmasheehy@abdn.ac.uk

PINE MARTEN REINFORCEMENT IN SOUTHERN BRITAIN

David Bavin

In a historic first, the Vincent Wildlife Trust has embarked on a ground-breaking Pine Marten Recovery project to actively recover one of Britain's most charismatic, elusive native carnivores to parts of its former range in southern Britain.

The VWT has been carrying out research and monitoring of the pine marten for 30 years, and have taken the decision to actively facilitate the recovery of the pine marten in southern Britain. Following an exhaustive feasibility study, our first phase of work begins in Wales, where there is a vanishingly small population in the Cambrian Mountains. We intend to translocate a number of healthy adult animals from robust populations in the Scottish Highlands, providing an injection of numbers and fresh genetics into the population in mid Wales. It is a process that has similar parallels to what was done with the red kite, and which has resulted in their spectacular recovery. All the pine martens translocated in our project will be radio-collared and studied intensively, hopefully providing a wealth of information which can be applied to achieve practical conservation outcomes.

It is unlikely that pine martens will have any detrimental effects on forestry. Indeed, Dr Sheehy's research indicates that pine martens have the potential to contribute to healthy, robust woodlands, and might encourage foresters to plant broadleaves again.

The two main phases of forestry management that

are most relevant to pine martens are the planning and design stage, and the pre-operational phase. Whilst planning, features that are important to martens (such as veteran trees, shrub cover, dead wood, grassy areas and arboreal connectivity), should be taken into account, particularly as many larger forest plans operate over long time scales. In the pre-operational phase, it is important that woodland owners are aware of whether they have pine martens present. The VWT can provide guidance on what field signs to look out for, and will also have an approximate idea of the population's range. It is desirable that the features that are important for pine martens are protected before operations, and these tend to be areas that are also beneficial for other wildlife. Sensitive clearfell design, long-term retention of stands, and continuous cover management, are all methods that can be considered to improve woodlands for pine martens. More comprehensive advice can be sought from the VWT, who have collaborated with forester and conservationist Huw Denman to produce guidance for forest owners.

The challenges we face in restoring the pine marten are not necessarily ecological; we have more woodland now than we have done for centuries, and are increasingly managing them for biodiversity. The challenge comes from working in the countryside where there are a variety of different pressures and interests from a wide range of stakeholders. Our project is involving landowners, country businesses and local communities in order to ensure we take everyone's views into consideration and work with those who fear there may be conflicts with our proposals. We strongly believe that the return of the pine marten will bring great benefits to woodland health – and we hope that as woodland managers, you are able to become involved and support our work! For further information visit our project website: www.pine-marten-project.org.uk.

David Bavin, Project Officer for The Vincent Wildlife Trust's Pine Marten Recovery Project.

*These two articles on the Pine Marten were first published in Confor's **Forestry & Timber News**, Issue 69. Our thanks to Stefanie Kaiser of Confor and the two authors for allowing us to reproduce them here. Also thanks to Maurice Flynn for the use of his Pine Marten photo.*



Rusland's Reds

We are now on the threshold of an exciting new project to restore red squirrel populations in the Rusland Valley and surrounding area. As part of the [Rusland Horizons Landscape Scheme](#), which embraces woodland management and crafts, moth and butterfly conservation, and local history and archaeology, we will be working with the local community and landowners. The scheme starts in earnest in September 2016 but the first step has been to prepare a project plan, which will be considered by the Heritage Lottery Fund this autumn. Once we get the thumbs-up we will be



Extensive native woodland in the Rusland area

Ambleside & Langdale

It's been a difficult year with so much fruit being available and following such a mild winter. The greys never stopped breeding so it has been hit and miss trying to trap the numbers in the circumstances – we merely carry on as we have been doing. Whatever we do all helps the bigger picture.

An example being when I had a call from a lady who had "seen a grey destroying her bird feeders." I went to see her, where she advised that her neighbour had seen 4 greys, but added "he won't do anything about it". As our leader frequently tells us: "There is nothing logical about squirrels". This

proved to be the case, as from a single trap we caught 10 greys over the next two weeks. I spoke to the lady recently, who advised that her neighbour had mentioned he'd not seen any greys recently – she smiled and added: "I didn't tell him anything."

This just highlights that if someone takes the interest, then we can do something about it, but we do need to have people on board with what we are trying to achieve.

Otherwise, we're still seeing reds in areas where we've not seen them in 10 or more years, so we just keep plugging away.

Area Co-ordinator, Ambleside & Langdale



Westmorland Red Squirrels

making the future safe for our red squirrels

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