

WESTMORLAND RED SQUIRREL SOCIETY

Newsletter

Issue 2 Spring 2011

In this second issue of the WRSS newsletter we aim to give a flavour of some of the many aspects of red squirrel conservation work going on beyond our immediate area. David Everest of the Veterinary Laboratories Agency writes about the diagnosis of viral infections in the red squirrel using Transmission Electron Microscopy. Andrew Kendall, of the European Squirrel Initiative (ESI), describes the current red squirrel situation in Italy and we have recent news from the Red Squirrels South Scotland (RSSS) project. There have been significant developments at regional level over the last few months, and we bring you an update on our umbrella group Northern Red Squirrels (NRS), as well as on the recently launched Red Squirrels Northern England (RSNE) project. Closer to home, we have news from our neighbours, the Grasmere Red Squirrel Group, and from the newly-formed Arnside and Silverdale group.

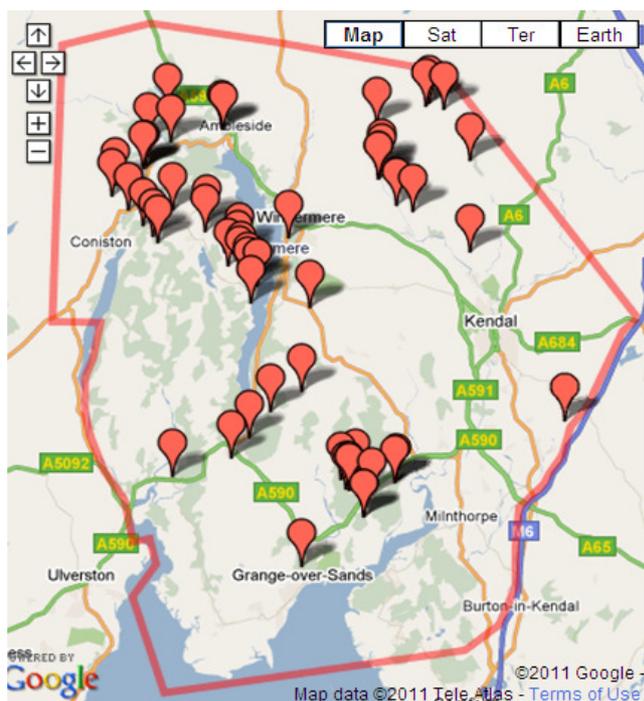
WRSS has come on in leaps and bounds over 2010, and I would like to thank all our volunteers for their hard work which made this such a successful year. I would particularly like to thank all our trappers, who between them have done a really fantastic job. Mike and Dave are doing sterling work as area co-ordinators, and I must give a special thanks to Jeff Scovell whose dedication has achieved such magnificent results in the Ambleside & Langdale area. We are also indebted for the support we receive from our members, for the generosity of our corporate sponsors and for the donations from charitable trusts. All these different contributions have fed in to making a successful 2010, and we are very hopeful that together we can carry this momentum forward into making 2011 an even better year!

Geoff Hetherington - Chairman

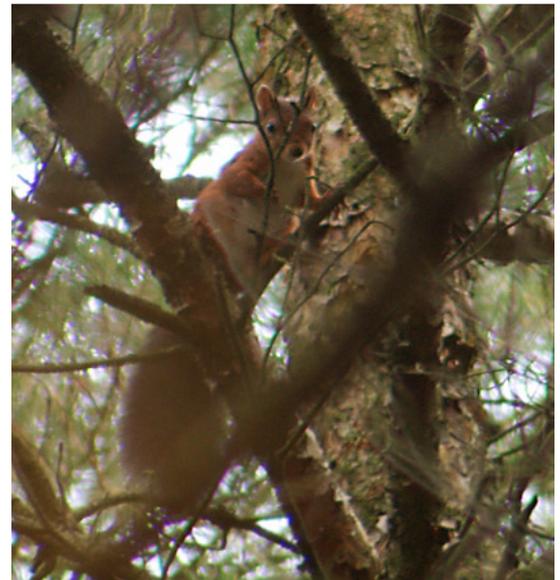
WRSS records

Our reported red sightings are vital to show where our red squirrels are in need of protection – many thanks to all of you who have taken the trouble to send in this data. The 2011 map is now on our website so please continue to report your sightings - see back page for details.

In 2010 we had recorded sightings of over 70 reds. The numbers recorded do not indicate population density, but when mapped out as below they do indicate the (minimum) range of our red populations. Our 2010 statistics are not quite finalised, but we can report that across our whole WRSS area over 600 greys were culled in 2010.



WRSS 2010 red sightings map



A red squirrel photographed at Foulshaw on 14th October 2010. Grid reference: SD 463841

Foulshaw Moss

Cumbria Wildlife Trust (CWT) has announced plans to fell 114 hectares of conifers from Foulshaw and Meathop Mosses in order to enhance the raised mire. These are areas where red squirrels are present, so there is a particular urgency to ensure that there are plans in place to accommodate any reds displaced by this proposed felling activity. Representations have been made to the Forestry Commission which is considering CWT's proposal, and we now await the outcome.

Ambleside & Langdale area

The intensive trapping effort in 2010 has resulted in red squirrel sightings in locations where they have not been sighted for many years (eg Neum Crag), indicating that reds are moving back into their old territory. At the same time, reports indicate fewer greys being seen than in previous years and the 350+ culled in our A&L area will have made a significant contribution to this (appreciation to Jeff whose commitment and effort accounted for 212 of these). However, there is no doubt that greys are still present. Grasmere Red Squirrel Group, who manage to eradicate greys altogether from their area, are vulnerable to greys moving back in from our area in the south, and so the plan for 2011 is to have a joint focused effort with Grasmere RSG in and around the Rydal area, with the aim of extending this grey-free area southwards.

Kentmere & Longsleddale area

Previously, the numbers of greys in the K&L area had been gradually increasing, but in the two areas of the main trapping focus, the valleys of Kentmere and Long Sleddale, there is now a marked decrease in grey sightings after 81 greys were culled during 2010. Both valleys have existing red populations, and red sightings were reported throughout the 2010 season. Despite the lower numbers of greys now being seen, reports indicate that there are still small 'pockets' of greys present and these will be the first priority for the control effort in 2011. The very good news from Kentmere is that in late 2010 and early 2011 there have been several red sightings recorded nearly as far south as Staveley, which is definitely a case of old territory being reclaimed. We are very grateful for the local support we are receiving which is really helping to protect these reds.

Events 2011

Starting with Damson Day on Saturday 16th April, we are currently in the process of booking WRSS stands for country shows and fairs. We are also aiming to attend: Country Fest, Holker Garden Festival, Langdale Gala, Coniston Country Fair, Cartmel Show, the Lakeland Country Fair at Torver, Westmorland County Show and Squirrel Fest. Please check our website for final dates, and we hope to see you there!



Chris Bonington addresses Squirrel Fest in 2010

Witherslack & Grange area

Witherslack – Carrying on with the work of 2009, my 2010 target was to reduce the grey squirrel numbers in the closest proximity to the current populations of red squirrel on the Witherslack Mosses. I trapped every few weeks or when greys were sighted and/or detected with permanently sited traps and pre-bait feeders in the high priority woods. At the same time I was trapping intensively in the highly grey-populated woods further out, also using pre-bait feeders and pre-baited traps, catching quite large numbers (although less in the woods I trapped last year). I am hoping to see a difference this year as quite a number of over-wintering greys have been caught or shot.

I have seen and photographed reds on both Foulshaw and Meathop Mosses during 2010 and I am very concerned that if CWT get a licence to clear-fell these plantations, which hold the vast majority of the area's remaining red squirrels, that the reds are in danger of vanishing altogether from the whole locality. There are woods at Ulpha that CWT are planning to conserve for the reds by felling in such a way as to push the reds into them. I find this plan well-meaning but flawed in that these woods already have a full population of red squirrels. Unlike grey squirrels, reds do not tend to live at a high density, so the most likely outcome is that the displaced red squirrels will move into the rest of Witherslack's woods instead. I feel that there is every possibility of eventually making Witherslack's woods safe from greys for these 'refugee' red squirrels and I have launched an appeal on the Witherslack village website to engage more local support to do so, however, it is going to take both time and more resources than we have at present. For 2011, we will continue with what we have been doing, but obviously the threat of felling the woods at Foulshaw and Meathop Mosses has made it even more urgent to make the Witherslack woods safe for the reds.

Bob Bradley's captive breeding programme has been very successful with five reds released and living somewhere in the higher part of the village. We have had several confirmed red squirrel sightings in the deciduous woods, both in the higher part of village towards the Church and at Halecat - some will be the captive-bred ones, but fully wild ones from Foulshaw have also been seen.

Grange-over-Sands - We have some great Grange residents who have been trapping throughout 2010 and judging from the numbers caught and fewer seen this has really made a difference. Merlewood woods and grounds have been bought by a holiday apartment company, who are employing a forester who will be trapping greys. Jackie Foott and I met them and they are very keen on red squirrel conservation, which is good news. I also know there are many people in the Grange area who are trapping greys independently of WRSS and this is evident in the relatively low numbers of greys being seen. Grange is important as there are red squirrels present in many of the conifer plantations not far away.

Dave Marshall

WRSS grants & sponsors

WRSS would like to thank **The Hadfield Trust** for their generous grant towards our awareness-raising effort in 2011. This funding has enabled us to purchase a gazebo to use at shows across our area, to obtain the necessary public liability insurance and also contributes towards other publicity material.



Trial run of the gazebo in February

WRSS also thanks its corporate sponsors for their continuing support which is very much appreciated:

Westmorland County Agricultural Society
I Whittaker Décor Service
Whitestiles Filling Station
Bluefin Insurance
Natwest
Pestforce South Lakes
TH Wiggans Ironmonger
Glen Rothay Hotel/ Badger Bar
Builders Supply, Kendal
Howden's Joinery

WRSS has just heard that it has been successful in its application to the **Cumbria Community Foundation** (CCF) for grant aid from the HSBC fund. This funding is towards volunteer costs for our 2011 project and is very welcome and timely news, coming as it does just at the start of the season. WRSS would like to thank all concerned at CCF.



Grasmere Red Squirrels - update

The reds are alive and well in all our usual areas: Greenhead, Brackenfell, Red Bank and Easedale. Overall the numbers in 2010 have been similar to 2009. One was spotted on the Riverside Walk in the summer and just recently one was seen running across the field from Tanner Croft and climbing the wall into the grounds of Ryelands.

With regard to greys, United Utilities, who own the forests around Thirlmere, have caught very few greys and these were at the NW end of the lake. They carried out trial trapping at the southern end adjacent to Dunmail Raise and this did not catch any greys so we can be sure our efforts in Grasmere are effective. We have had a meeting with the Borrowdale/Keswick group who have similar terrain and issues as ourselves. We have also spoken to the Patterdale group and they are reasonably sure that greys are not coming from Grasmere. We are working closely with the Westmorland Red Squirrel Society who cover Rydal and Langdale.

So what about Grasmere? Our strategy in the spring/summer was to trap intensively on our frontiers with adjacent areas: to the South (Red Bank) and to the SE (White Moss) as these are the main incursion corridors to Grasmere. This was undoubtedly successful because in August no greys were caught or seen.

However the autumn has had a different outcome. Greys (and reds if conditions are right) have a second litter in the summer and we see a new influx of greys. The main problem is that there is so much natural food about that the greys won't go in traps. This means that our frontier trapping strategy doesn't work in the autumn. *Continued over...*



The Trail camera



Two reds caught on camera

Grasmere update *continued*

The result is that we have had a continuous stream of grey sightings around the Allan Bank area and more greys in Allan Bank and Lancrigg than we had expected. The total number of greys caught behind the frontier areas (i.e. in Greenhead, Easedale and the central village area) in 2010 was down 70% on 2009.

We now have the use of a 'Trail' camera. The camera is activated by movement and takes stills or video. We are using this to good effect and have got some footage of reds on a feeder. The camera enables us to see whether reds or greys are taking food and allows us to monitor behaviour.

Grasmere Red Squirrel Group



And two other visitors

Red Squirrels Northern England launched

The new Red Squirrels Northern England (RSNE) project was launched at Hutton-in-the-Forest on 17th February 2011 by HRH The Prince of Wales with more than thirty red squirrel volunteers present - including some from WRSS!

*Our thanks to Sarah McNeil
for the photograph*



RSNE is a new £2.5 million five year project to co-ordinate red squirrel conservation in northern England. It is the first time that a single, unified project has co-ordinated action across the North East, the North West and parts of Yorkshire. RSNE is a partnership project between the Red Squirrel Survival Trust, Natural England, the Forestry Commission and The Wildlife Trusts. The project will be based around 17 red squirrel strongholds in northern England, with government grants for the project being spent primarily in these areas. The project partners have also pledged to contribute funding to conduct vital grey squirrel control in key areas across the wider landscape of northern England.

Funding is being provided by all partners, with the largest contributions coming from Natural England and the Forestry Commission. To keep costs down and ensure strong community involvement, volunteers are being given a central role in delivery.

As a part of the RSNE project, the Forestry Commission is currently conducting a Review of Red Squirrel Reserves in Northern England which could be of vital importance to our area, depending on what is decided. WRSS has taken part in the Reserves Review Consultation and we await the outcome with interest.

Northern Red Squirrels

After three years of being an informal umbrella group to bring together volunteer red squirrel groups, Northern Red Squirrels (NRS) has become fully constituted with two County Committees, one in Northumberland and one in Cumbria. NRS took the opportunity to have a Core Committee Meeting at the official launch of the Red Squirrels Northern England (RSNE) project at Hutton-in-the-Forest, where the new NRS Constitution was formally signed. It was agreed that Sally Hardy (Ponteland) and Jackie Foott (Sedbergh) would be joint-Chairpersons of the Core Committee. Others on the Core are Jan Kippax (Greenhead & Gilsland), Carolyn Robinson (Hexham), Jo Kirkbride (Allerdale) and Robert Benson (Penrith).

NRS currently has 32 volunteer group members with an additional 20 sub-groups and another three new groups who will soon be up and running. Each group remains totally independent, but member groups of NRS work together to communicate, to collaborate and above all to have a voice in today's complicated world of Red Squirrel Conservation.

The launch of the new RSNE project represents a major step forward in red squirrel conservation in our area, and it has never been more important that volunteer groups are heard and represented. We are therefore delighted to announce that NRS has two places on the Project Advisory Group for the new RSNE project - this is a truly remarkable achievement and ensures that the volunteer groups will have a voice at the heart of this new project. WRSS would like to thank Jackie and Sally who have put in a tremendous amount of work behind the scenes in order to bring this about. Inevitably, this has entailed endless meetings and 'paperwork' which they have endured with fortitude, but as Jackie points out:

"With all the exciting developments taking place in the Greater Red Squirrel World, it is often easy to forget that the most important work on the ground is continually being carried out by the volunteers."

Arnside & Silverdale AONB Red Squirrel Conservation Group

An initial public meeting was held in Arnside in November 2010 and was attended by 22 people. Jackie Foott of Northern Red Squirrels and Dave Marshall of the Westmorland Red Squirrel Society kindly lent their support and encouragement and since then nearly 30 people have expressed an interest in getting involved. Tony Riden, the Countryside Officer for Arnside & Silverdale Area of Outstanding Natural Beauty (AONB), is the group coordinator and Gail Armstrong has volunteered to deal with the administrative role for the group. The group was officially registered with Northern Red Squirrels and a consignment of traps was ordered from the Red Squirrel Survival Trust.

Red squirrels were once common in Arnside & Silverdale AONB but sadly disappeared about 25 years ago as grey squirrels rapidly moved in and displaced them. The greys have remained dominant in spite of ad-hoc control by several local conservationists and gamekeepers over the years. However, there have been the odd sightings in the AONB, particularly in recent years, of red squirrels that are thought to have found their own way from successful breeding seasons in neighbouring districts. This gives hope that by controlling greys, the red squirrel will once again be a regular sight in the AONB. Arnside & Silverdale AONB has special qualities of breeding habitat suited to the red squirrel, with over thirty percent woodland cover providing a source of food, particularly hazelnuts and pine cones, and many sites in the AONB are managed as nature reserves.

Dave Marshall held a training morning at a local caravan park where grey control is already being carried out. Ten people attended, some of them



Training morning for Arnside & Silverdale AONB RSCG

already experienced in grey squirrel control, but everyone picked up really useful information and expert tips and were all able to benefit from the session. Dave kindly gave his time to answer questions and demonstrate some of his techniques. Whilst some attendees are already employing the traps on their own land, other appropriate locations are now being identified and the various land owners are being contacted to gain permission to trap. Reports of grey squirrel sightings are being passed to us from the Northern Red Squirrel forum. Thanks to Dave Marshall for his expert advice and guidance, to Adrian Coates, the Site Manager, the lads at Beetham Caravan Park for their hospitality and to Tony Riden for setting up the session.

Gail Armstrong, Volunteer Administrator, Arnside & Silverdale AONB RSCG.

See www.arnsidesilverdaleaonb.org.uk for information on other conservation work carried out in the AONB

The Italian Campaign

By Andrew Kendall, ESI

Earlier this year, ESI organised a meeting in Milan for individuals and organisations from the UK, Italy and Switzerland concerned about grey squirrels. There are three, expanding, grey squirrel colonies in Italy, near Turin, in the Ticino National Park and in Genoa Nervi.

The meeting, attended by over 20 individuals, was one of the most positive to be held by ESI in Italy, and bodes well for future activity in the country. Miles Barnes and Andrew Kendall from ESI gave an overview of the UK experience and a stark warning about the projected spread of the grey squirrel population within the UK. The concern of the Swiss authorities to the potential spread of grey squirrels from Italy was highlighted by Dr Thomas Briner, from the Swiss Federal Office of the Environment, which has stated its support for eradication in Ticino. Dr Briner explained that under Swiss law, all alien species have to be eradicated.

The possibility of eradicating the grey and reintroducing the red squirrel in Genoa Nervi was also

discussed. ESI suggested that with experience gained in Anglesey, Dr Craig Shuttleworth could provide valuable guidance to the Italian Authorities. Since this meeting there has been a welcome development – the EU has provided a grant under LIFE+ to carry out an eradication programme in Ticino, supported by a communication plan which will highlight to the Italian public the problems caused by the grey squirrel and the benefits to biodiversity of eradication.

The European Squirrel Initiative (ESI) was founded in 2002. The aim of the organisation is to create, develop and maintain a campaign to win the support and commitment of governments throughout Europe in securing the future of the red squirrel through the effective control of the grey squirrel. See: www.europeansquirrelinitiative.org

Red Squirrels in South Scotland - project update

The main focus of Phase IV of the Red Squirrels in South Scotland (RSSS) Project is still by necessity on grey squirrel control. RSSS now has three full time grey squirrel control officers including their newest officer, Jim McColm, who is working in the upper Nith Valley and into East Ayrshire where he has been recruiting local landowners to help him clear the valley of greys.

After only one season of grey squirrel trapping red squirrels are starting to show up in areas throughout the Valley where they hadn't been seen all year. Scottish Rural Development Programme (SRDP) funded landowners have also been successfully controlling grey squirrels throughout the Nith, Annan, Esk and Liddel Valleys for the past 12 to 24 months and have freed up the RSSS professional controllers to work in new areas.

There has been some bad news in terms of the distribution of seropositive (pox carrying) grey squirrels in the South. Five grey squirrels were confirmed to be positive for Squirrelpox virus antibodies indicating that they had almost certainly originated from England. Despite these isolated incidences of seropositive grey squirrels and an apparent increase of grey squirrels in the west country, RSSS are feeling positive about the progress of their project. They have had no further incidences of the Squirrelpox disease amongst red squirrels since July 2009, and are tentatively beginning to believe that this major disease outbreak, which saw the death of an estimated 350 red squirrels, has now burnt out.

In areas where grey squirrel control has been carried out by SRDP participants, professional controllers and

volunteers they are beginning to see real reductions in grey squirrel numbers and the return of red squirrels to areas where they haven't been seen in a decade or more.

RSSS are now looking to expand their area of concentrated control so that they can push grey squirrels further out of the South of Scotland, and are looking for help from their neighbours in the North of England and from the recently launched Red Squirrels Northern England initiative.

RSSS relies heavily upon volunteers to help deliver their work, acknowledging that "without the dedicated support from members of the public, volunteer groups and landowners, encounters with our much loved red squirrels would be an ever increasing rarity." With South Scotland being at the frontline in protecting Scotland's red squirrels from seropositive greys coming in over the Scottish border, they find that local volunteer groups are key to raising awareness locally and encouraging local action to save red squirrels. They emphasise that anyone and everyone can make a difference to red squirrel populations. Over the course of their project there have been a number of inspiring success stories from individuals involving the return of red squirrels to areas from which they had previously vanished.

Based on information from the 2010 Winter edition of the RSSS Red Bush Telegraph and reproduced with the kind permission of RSSS.

See <http://www.red-squirrels.org.uk>

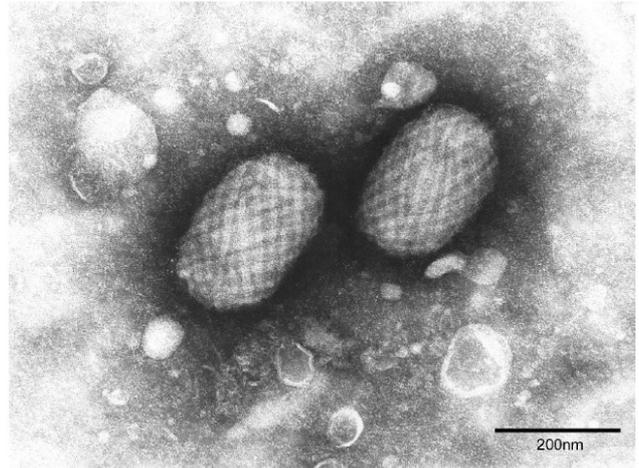
An overview of the diagnosis of viral infections in the red squirrel (*Sciurus vulgaris*) by Transmission Electron Microscopy (TEM)

By David Everest

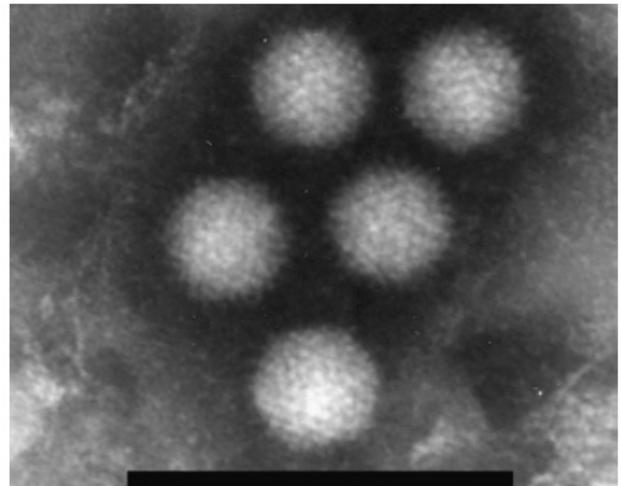
The Veterinary Laboratories Agency's (VLA) electron microscopy unit, at Weybridge, established in 1965, undertakes analyses in biological samples from many species, with samples submitted by our regional laboratories, other institutes and private veterinary practitioners. An aspect of the work involves the confirmation of viral particles using the negative staining TEM technique. This is particularly used for the diagnoses of viral infections, both squirrel pox and adenovirus in the red squirrel. The technique involves grinding the scab, skin lesion or faecal material in phosphate buffer, drying a drop of extract onto a support grid, negatively staining it with phosphotungstic acid, and subsequently observing virus particles when examined by TEM. A micrograph (photograph) is taken as a permanent record and we possess both micrograph and negative archives from every positive since 1971 and since 2009, digital images. In 1998, the VLA formed its Diseases of Wildlife Scheme (*VLADoWS*) as part of the Defra Food and Farming Group (FFG) surveillance programme. The project is co-ordinated by Paul Duff at our Penrith laboratory and under this project, tissue from suspect pox squirrels and other species of British wildlife could be sent for analysis alongside the Institute of Zoology (IOZ) red squirrel surveillance scheme. This scheme has now been expanded with other collaborative laboratories and is known as the GB Wildlife Disease Surveillance Partnership (*GBWDSP*) which is also funded by the Defra. Of all the confirmed squirrelpox viral disease cases in Great Britain, we at Weybridge have confirmed the vast majority. We have also confirmed every case of adenovirus in the UK.

The first squirrel pox case came from Norfolk in 1981, with the next ones in 1993 from Suffolk, submitted by the IOZ. We confirmed isolated cases in 1994, from Cumbria, Durham and from Dorset, resulting from a re-introduction trial in Lancashire and Suffolk in 1995. Additionally, in 1994, we confirmed the only case from a grey squirrel. However, only around 1998, when cases were identified from across Cumbria and Northumberland, was the real significance of this infection's virulence realised. Since that time, cases have been confirmed throughout Cumbria and more latterly from numerous Northumberland locations. The situation in Southern Cumbria is precarious, with few fragmented and isolated colonies remaining, such as around Grasmere, whereas 10 years ago, they were widespread throughout the county. 2010 saw a peak in the number of cases identified in the county many of which were identified in the Eden Valley. In contrast there have only been a small number of cases in Northumberland, a pattern which has continued for the last couple of years.

The first case of squirrel pox virus detected in a red squirrel in 1981



Adenovirus particles detected in a red squirrel

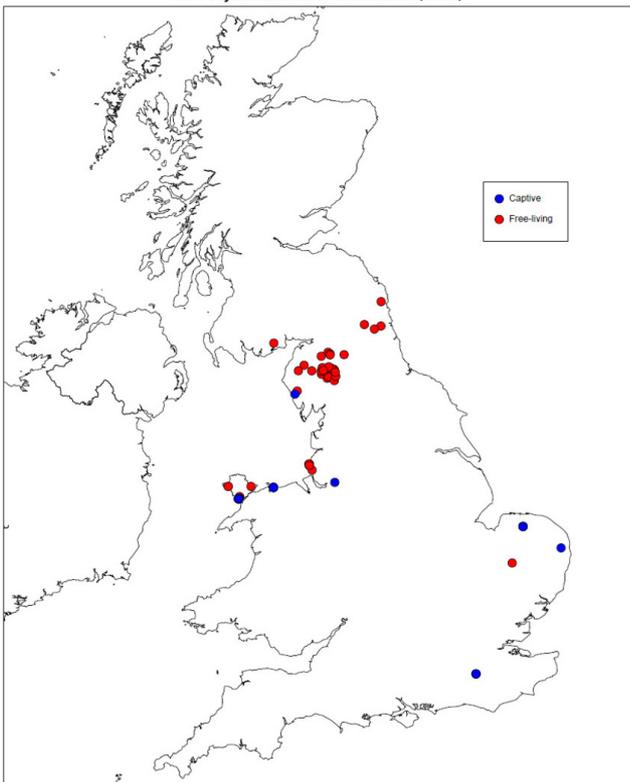


In Scotland, the Moredun Research Institute confirmed the first cases of squirrel pox in May 2007 using molecular biological techniques. We readily offered our services and obtained material from these cases and confirmed the virus by TEM. Since April 2008, we have confirmed all 40 confirmed cases, all in Dumfries and Galloway region. There has, however, been only a single case identified since early 2010. From our previous experience of confirming cases in England, the present outbreaks could well be just the beginning and we might expect there to be more cases in areas around the present sites of infection with others possibly occurring in new locations along the border. *Continued over*

Red squirrel adenovirus was first identified in 1997 in Suffolk, in animals trans-located from Cumbria, but not until 2006, in Cumbria, were additional cases, now numbering twenty nine, diagnosed. A common symptom is diarrhoea but, unlike squirrelpox virus, there appear to be no exterior signs and the decay of most bodies discovered make definitive disease diagnosis difficult to determine. Additionally, three cases were discovered in 2007 on Anglesey, the first documented in Wales. These now number thirty two, both captive from the re-introduction programme and free-living wild animals. There has been a single case in Scotland and cases have been identified in Merseyside and Northumberland, with captive collections across the country also having cases. Although these captive cases will not alter the impact on conserving the species, they will be invaluable in supplying future re-introduction programmes.

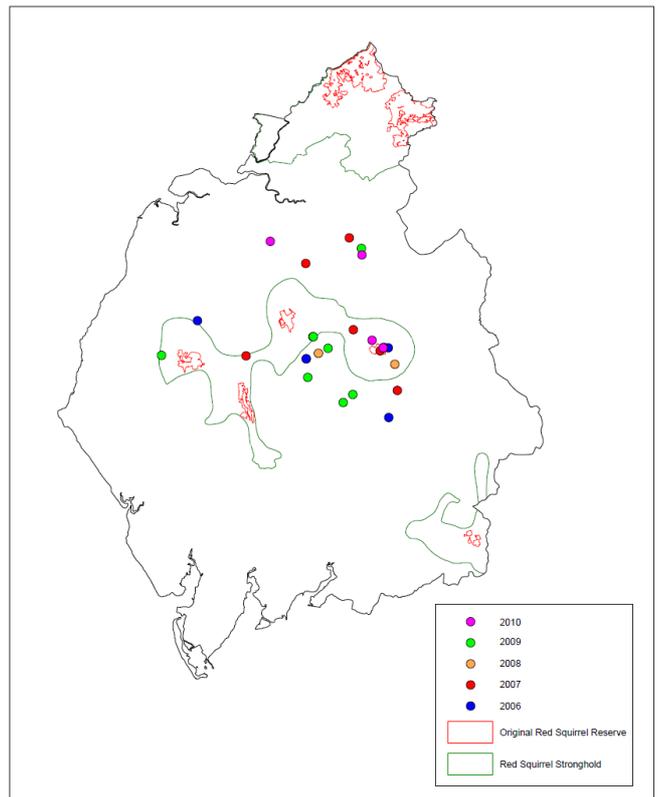
Therefore, co-operation between all parties, from landowners, funded and volunteer conservation bodies, to analytical institutes and government laboratories on both sides of the border will be vital, to pool information to minimise possible future losses amongst the red squirrel population. Therefore, we have produced a series of maps through Save our Squirrels and now Red Squirrels Northern England giving locations of every pox and adenovirus case confirmed since 1981 as a way of helping this aim. Grateful thanks must go to the VLA, University of Edinburgh, Moredun, IOZ, Anglesey squirrel group and Save our Squirrels and anonymous members of the public for submitting the samples for analysis.

Adenovirus positive cases in red squirrels in the UK from 1997 to 2010. Confirmed using Transmission Electron Microscopy (TEM) or Polymerase Chain Reaction (PCR)



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Free-living red squirrel adenovirus cases in Cumbria 2006-2010 Confirmed using Transmission Electron Microscopy (TEM)



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David Everest

Electron Microscopy Unit, Specialist Scientific Services Dept., Veterinary Laboratories Agency-Weybridge

To join our group, to report your sightings of red or grey squirrels, or to find out more about the Westmorland Red Squirrel Society, visit our website at: www.westmorlandredsquirrels.org.uk

Or enquiries can be made to: Geoff Hetherington (Chairman), Side House Farm, Staveley, Kendal, Cumbria LA8 9AA. Telephone: 01539 822089 Mobile: 07836 584201 Email: geoff@westmorlandredsquirrels.org.uk