



## **MID-WALES RED SQUIRREL RECOVERY PROJECT**

**2009-2010**

**FINAL REPORT**



**Carried out by the Mid-Wales Red Squirrel Partnership (MWRSP)**

**Co-ordinated by Brecknock Wildlife Trust (BWT)**

**Funded by the People's Trust for Endangered Species (PTES) and the Countryside Council for Wales (CCW)**



**Mid-Wales  
Red  
Squirrel  
Partnership**



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Figure 1 – Red squirrel in action ©Phil Sutton, BWT

## **1.0 EXECUTIVE SUMMARY**

The Mid-Wales Red Squirrel Project (MWRSP) is a partnership of Carmarthenshire, Powys and Ceredigion County Councils, Forestry Commission Wales (FCW), Countryside Council for Wales (CCW), Wildlife Trust of South and West Wales (WTSWW), Brecknock Wildlife Trust (BWT), private forest managers and interested individuals. It was established in 2002 with the purpose of helping to preserve the last remaining viable population of red squirrels in the mid-Wales area. The red squirrels of mid-Wales are unique as DNA analysis has revealed that they belong to a relatively narrow lineage that may include an ancestral Welsh population.

The aim of this project was to maintain and enhance the current population of red squirrels in the mid-Wales area through a two pronged approach of surveys to establish population extent & distribution and awareness raising of the uniqueness of this population and red squirrel ecology.

The surveys of the mid-Wales forests did not find red squirrels, or even any squirrels, in the numbers we had previously come to expect. It is possible that both red and grey squirrels were disturbed by forestry operations in the survey areas. However a red squirrel was caught in the western part of the red squirrel core area and illustrated that the red squirrels were widespread across the mid-Wales forests, this has implications for forestry management in the area which up until then had worked on the premise that the squirrels lived in discrete areas of the forest.

In response to the awareness raising campaign there has been a significant increase in red squirrel records including sightings in places where squirrels have not been seen for ten years. Several sightings were within the red squirrel buffer zone and some have even been seen outside the current red squirrel project area altogether which may have implications for the project boundaries. Other public awareness raising events included a red squirrel walk which took place during national red squirrel week and a programme of educational visits to local schools in the red squirrel area including Welsh language speaking schools.

To build on this project work a costed action plan to safeguard the mid-Wales red squirrel population for the next five years was produced by the MWRSP. The produced plan was well received by the Forestry Commission who have now in turn requested that Forest Research use the data gathered by the partnership to undertake an analysis of the habitat potential, both present and future, of the Mid-Wales area for Red squirrels.

The Mid-Wales Red Squirrel Partnership (MWRSP) is very grateful for funding given by the People's Trust for Endangered Species (PTES) and the Countryside council for Wales (CCW) towards this project.

## **2.0 INTRODUCTION & BACKGROUND**

### **2.1 Background to the project**

The Mid-Wales Red Squirrel Project is a partnership of Carmarthenshire, Powys and Ceredigion County Councils, Forestry Commission Wales (FCW), Countryside Council for Wales (CCW), Wildlife Trust of South and West Wales (WTSWW), Brecknock Wildlife Trust (BWT), private forest managers and interested individuals. The partnership group was established in 2002 with the purpose of determining whether red squirrels still existed in mid-Wales specifically around the Tywi Forest area. Tywi forest and its surroundings make up a very large remote upland area (approximately 15,000 hectares) of predominately coniferous forests owned and managed by both Forestry Commission Wales and other private forestry owners (see figure 5 in appendix for map of the project area).

A CCW funded survey of Tywi forest in 2005 live trapped the first red squirrel confirming that they were still in the area, following these findings further surveys took place. During two survey periods over 18 months a targeted trapping programme caught 32 red (from three sites) and 121 grey (from all sites) squirrels.

DNA analysis from hairs taken from the squirrels revealed four different mitochondrial DNA haplotypes within the Mid Wales. Three of the four haplotypes had been previously recorded in Wales, however this was the first time their presence had been recorded within a single locality and two of the haplotypes would appear to be unique to the mid Wales population. It is thought that red squirrels in Wales belong to a relatively narrow lineage that may include an ancestral Welsh population. Other British populations comprise more widely mixed lineages, influenced by the introduction of European reds to the UK in the 19th century. The result of the genetic analysis has implications for both the conservation of local populations and the conservation of red squirrels in Wales as a whole.

### **2.2 Aims of the project**

The aim of this PTES/CCW funded project was to maintain and enhance the current population of red squirrels in the mid-Wales area. This was to be carried out through a two pronged approach of surveys to establish population extent & distribution and an awareness raising campaign highlighting the uniqueness of this population and red squirrel ecology.

Once common throughout the UK, red squirrels have disappeared from many areas of England and Wales and are threatened in Scotland and Northern Ireland. Here in Wales it has been identified by the Wales Squirrel Forum that there are only three areas left where enough squirrels are left for the population to have a chance of survival, two in North Wales and one in the mid-Wales Forest squirrel area.

It was identified that further survey work needed to be carried out to achieve the partnership's target of establishing effective management of the forestry for red squirrels, as it is this factor that is critical to the survival of our native populations. The knowledge gained from this project will be used to work closely with forest managers to influence forest management practices. The objective is to maintain suitable habitat for the reds and reduce future risk from the greys. In particular we will work with foresters to maintain areas of pine and connectivity between pine stands.

Raising awareness of our unique red squirrel population is designed to bring together all those interested in mammal conservation and will engage more partners. Inviting the public to carry out squirrel surveys and actively running an education programme in schools, should raise the profile of red squirrels in the area and promote the enjoyment of our natural heritage.

### **2.3 Project objectives and scope**

The project had five main objectives:

**Objective 1:** To systematically survey a large geographic area for squirrels using a live capture trapping programme.

**Objective 2:** As part of this programme to remove grey squirrels from the red squirrels key areas and buffer zones.

**Objective 3:** To involve the local communities and general public in sending in their red squirrel records and participating in squirrel surveys.

**Objective 4:** To raise awareness of red squirrels in the area through both an education & an events programme.

**Objective 5:** To use all data collected to work towards implementing habitat management that is sympathetic to red squirrels and to promote red squirrel key areas.

### 3.0 RESULTS

The results of the project are listed below under each objective heading

**Objectives 1 & 2: To systematically survey a large geographic area for squirrels using a live capture trapping programme. As part of this programme to remove grey squirrels from the red squirrels key areas and buffer zones**

The locations of the areas to be used for intensive trapping survey were decided by using a combination of volunteer survey data and existing sightings. It was decided to trap in two areas known as Bryn mawr and Esgair goch both near to the Forestry Commission plantation of Clywedog. Other trapping also took place at Bryn Arau Duon plantation, Bwlch-y-rhiw and Aber Branddu woodlands in the Cothi valley in liaison with private landowners.

The first red squirrel was trapped on 3<sup>rd</sup> March 2010 and squirrel hairs were sent off for DNA analysis. This was great news for the project as it was the first red squirrel to be caught in the western part of the red squirrel core area and illustrated that the red squirrels were as widespread across the mid-Wales forests as the partnership believed them to be. This has implications for forestry management in the area which up until then had been dictated by a policy that the squirrels lived in discrete areas and only existed where records had been found.

Unfortunately the only other squirrels found were grey squirrels; we think that both the red and the grey squirrels may have been scared off by the forestry operations occurring in the area at that time.

It is uncertain whether the lack of grey squirrels is a good sign as it means they haven't penetrated this far into the forest or it means that like the red squirrels they moved away from the disturbance.

All squirrel records received as a result of this project have been inputted into the two local records centres covered by this project. An up to date map of red squirrel records was produced by the Biological Information Service for Powys and the Brecon Beacons National Park (BIS) and this can be found in the Appendix (Figure 5).

**Objective 3: To involve the local communities and general public in submitting red squirrel records and participating in squirrel surveys.**

The aim of this part of the project was to increase the general public's awareness of the squirrels with the aim of generating red squirrel sightings and therefore having a better idea of their distribution.

The squirrel volunteer survey scheduled for the autumn was put off by the weather and this proved impossible to carry out in the winter due to the extreme weather conditions (The site is extremely remote and potentially very hazardous in poor conditions.)

As the survey was not able to be carried out we released press releases over the course of the year through various media asking for both red and grey squirrel sightings.

In response to this we received a number of new red squirrel records this has been a significant increase in red squirrel returns and there have been sightings in places where squirrels have not been seen for ten years. Several sightings were within the red squirrel buffer zone which may have implications for our boundaries and some have even been seen outside the current red squirrel project area altogether.

Important red squirrel sightings like this sent into the partnership over the duration of the project showed that the awareness raising campaign (leaflets, websites, and squirrel walk) had an important impact. Below are red squirrel pictures sent in by members of the public as a result of this campaign.



Figures 2 & 3 Photos sent in by volunteers, confirmed red squirrel sightings in the project area

**Objective 4: To raise awareness of red squirrels in the area through an education & events programme.**

Despite appalling weather conditions a red squirrel walk took place during national red squirrel week on Sunday 11<sup>th</sup> October 2009. The interest in red squirrels was high with many people driving for over an hour to get to the walk. There were requests from attendees for more involvement in the project and therefore we had new volunteers to add to our volunteer data base for future work.

A programme of educational visits to local schools in the red squirrel area took place including at Welsh language speaking schools. The juniors learnt about the ecology and importance of squirrels through watching a squirrel power point, playing squirrel games and colouring in comparative squirrel pictures. The infants particularly enjoyed the story of

Squirrel Nutkin acted out with puppets which led into a discussion of how reds were once commonly seen at the time the story was written but are now confined to just a few areas and the reasons behind this.

Feedback from the schools has been excellent and the children have particularly enjoyed the opportunity to participate in outdoor education. All schools that we were not able to visit received a Red Squirrel Education pack instead which the teachers can deliver.



Figure 4 – Huw Denman and pupils on a red squirrel outdoor lesson in the project area

**Objective 5: To use all data collected to work towards implementing habitat management that is sympathetic to red squirrels and to promote red squirrel key areas.**

With the Welsh ministerial announcement of approval for the ‘Wales Conservation plan for Red Squirrels’ came a clear direction for Forestry Commission Wales to actively undertake positive management for red squirrels across its estate.

As a result of which a bid was requested to the Mid-Wales Red Squirrel Partnership to produce a costed action plan to safeguard the mid-Wales red squirrel population for the next five years.

The produced plan was well received by the Forestry Commission who have now in turn requested that Forest Research use the data gathered by the partnership to undertake an analysis of the habitat potential, both present and future, of the Mid-Wales area for Red squirrels.

The plan is too large to be placed in the Appendix but will be sent accompanying this report.

The Mid-Wales Red Squirrel Partnership (MWRSP) is very grateful for funding given by the People's Trust for Endangered Species (PTES) and the Countryside Council for Wales (CCW) towards this project.

## 4.0 APPENDIX

## Biodiversity Information Search: Mid Wales Red Squirrel Project

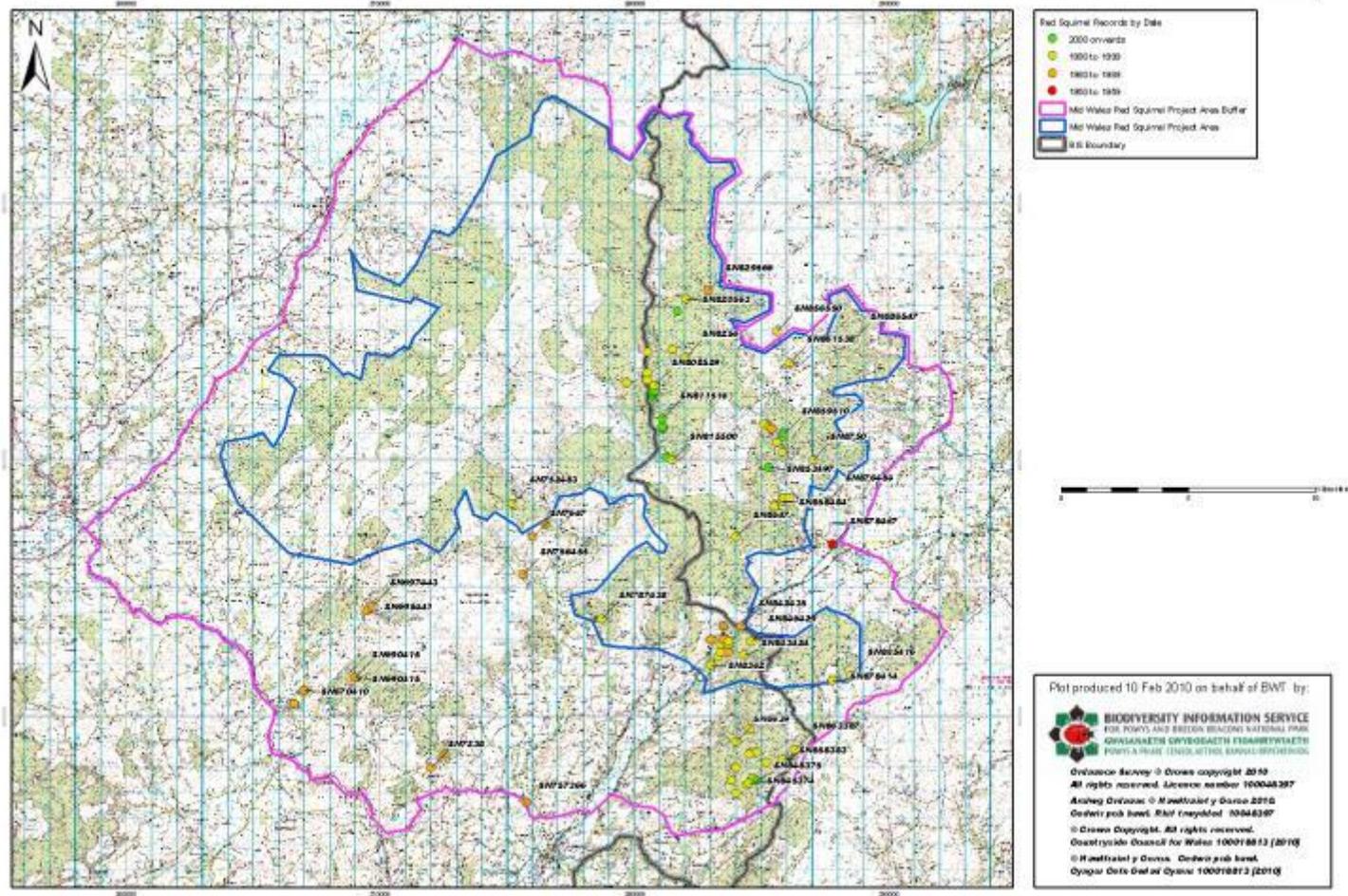


Figure 5 – Map of red squirrel core area, buffer zone and recorded squirrel sighting

