Lancashire, Manchester & N Merseyside

Red Squirrel Monitoring Report Autumn 2020

Introduction

The autumn monitoring of the North Merseyside and West Lancashire Red Squirrel Stronghold was conducted throughout October 2020 using visual transects. All visual transects were completed within a 3-week period in October. 14 sites throughout the reserve woodlands of Formby, Ainsdale and Altcar were surveyed. A further 12 woodlands within the buffer zone were surveyed covering Little Crosby, Ince Blundell, Southport and Scarisbrick.

Reserve Woodlands – Spring Surveys

14 visual transects were carried out throughout the reserve woodlands, with each transect being walked 3 times. Red squirrels were recorded on all 14 of the visual transects. 1 grey squirrel was recorded on a transect to the south of the Formby reserve woodlands.

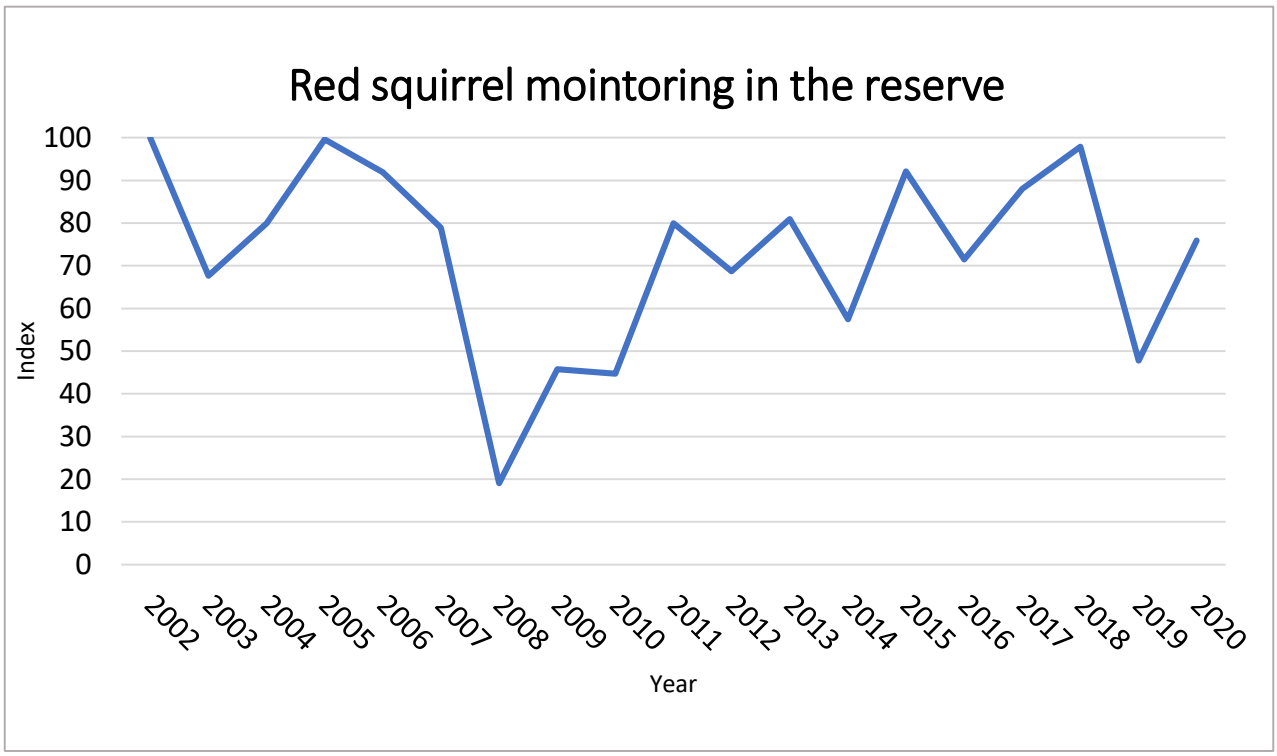

Figure 1. Line graph showing the changes in the autumn red squirrel reserve population between 2002 and 2020.

Figure 1 shows the red squirrel monitoring results in the reserve woodlands from autumn 2002 to autumn 2020. The average number of red squirrels seen across reserve transects in 2002 are taken as 100%. The average number of red squirrels seen in subsequent years are compared to this value. The autumn 2020 monitoring period has seen an increase in red squirrel the population index from 48% in the autumn of 2019 to 76% in the autumn of 2020. These results suggest that the population is recovering from the squirrel pox outbreak in 2019. 51 dead red squirrels were reported in 2020, the majority were reported between June and August when temperatures spiked across the region. Only 7 cases of possible squirrel pox were reported in 2020, none of these cases were reported from within the reserve boundary.

The increase in the red squirrel monitoring can be largely attributed to the increase in red squirrels sighted across Ainsdale. Ainsdale transect No. 6 had the highest number of individuals seen on a single transect this Autumn with 21 individuals sighted. The numbers in the north of Formby remain low, while sightings in the south of Formby are steadily increasing. This may be partly attributed to levels of disturbance. Volunteers reported unusually high numbers of walkers in the early mornings across the Formby woodlands throughout the monitoring period. 1 grey squirrel was sighted on the Shorrocks Hill transect and 2 grey squirrels were later caught through the trap loan scheme in the area.

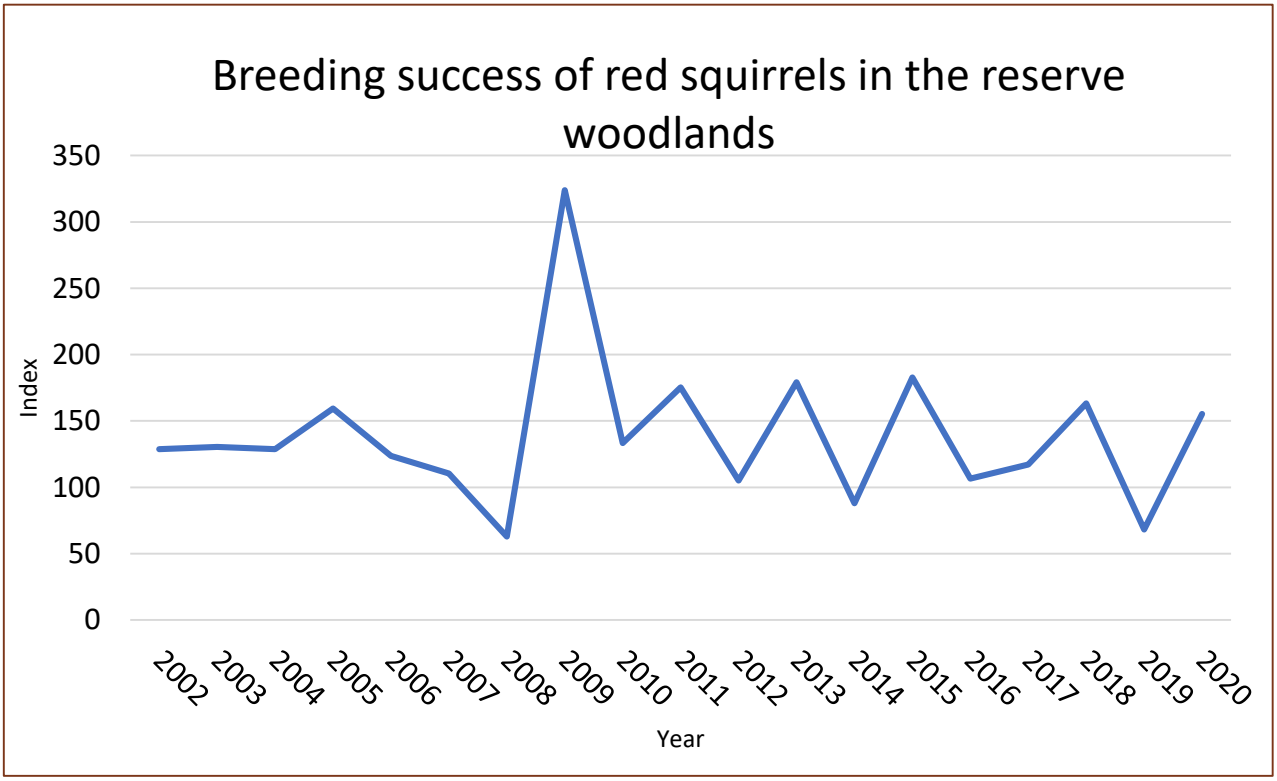

Figure 2: Line graph showing the changes in breeding success in the autumn red squirrel reserve population between 2002 and 2020.

Figure 2 shows the breeding success of red squirrels in the reserve area each year between 2002 and 2020. Breeding success is calculated by comparing autumn results to the previous spring. There has been an increase in breeding success from 68% in autumn 2019 to 155% in autumn 2020. Breeding continues to be relatively stable. The increase this year could be attributed to 2020 being reported

as mast year for acorns and pinecones which could have resulted in increased availability across the reserve.

Buffer Zone & Wider Landscape: Surveys and Analysis

Table 1. The number of sites within the buffer zone with red squirrel, grey squirrel and both species present.

	Red squirrel only	Grey squirrel only	Both species	None
Number of sites	0	9	0	3

11 visual transects were conducted within the remaining woodlands inside the stronghold area and 1 outside of the stronghold. Table 1 shows a summary of the presence of red and grey squirrels throughout these 12 sites.

Within the remaining stronghold, no red squirrels were detected via visual transect at any site during the monitoring period. This is a decrease in red squirrel presence from the spring monitoring period in 2020, when 1 site was found to have red squirrel only presence and a further 2 were found to have both species present. This decrease could be attributed the pause in the grey squirrel control during the national lockdown.

The results for the sites with no squirrel sighting are the same as spring 2020 with Southport crematorium, Orrell Hill Wood and Flea Moss Wood having no squirrel sightings on visual transects during the monitoring period. However, in spring the use of hair tubes confirmed the presence of grey squirrels at Flea Moss Wood despite none being spotted. Hair tubes were not used during the autumn monitoring period due to COVID-19.

Southport crematorium, previously having returned to a red squirrel site had no squirrel presence recorded during the monitoring period. Unfortunately, public sightings only show a grey squirrel presence for autumn monitoring period with no red squirrel sightings reported.

Of the 9 grey squirrels only sites, 8 were within the stronghold (Botanic Gardens, Hesketh Park, Ince Blundell Wood, Moss wood, Jospice, Church Wood, Ben's Gorse Wood and Girl Guides) and 1 within the wider landscape (Mere Sands Wood).

The site with the highest number of grey squirrels was Hesketh Park with 14 seen on a single transect. The Jospice also continues to have a grey squirrel only presence. Unfortunately, we do not have permission to undertake grey squirrel control here and the results are now evident in the monitoring.

Due to an increase in grey squirrel control, the number of grey squirrels sighted on transects at Girl Guides continues to decline. 20 individuals were seen on a single transect in the 2019 autumn monitoring period but only 2 individuals were sighted on a single transect during the 2020 autumn monitoring period. There have also been continued public sightings of red squirrels at Girl Guides.

iNaturalist has allowed additional public sightings data to be included in the report this year, in particular the sightings of red squirrels in Scarisbrick and north Ainsdale. We hope to continue to push the use of iNaturalist to continue to gather data across residential areas.

Public Sightings and Grey Squirrel Control Data

Grey squirrel control is undertaken in the woodlands throughout the stronghold all year round by the Red Squirrel Officer and volunteers. There is also an urban trap loan scheme to tackle grey squirrels in urban areas. This is co-ordinated by the Red Squirrel Office but run by local volunteers. Records of grey squirrel captures and red and grey squirrel sightings are kept up to date to keep track of their distribution and population within the stronghold. This year we have also used sightings of red and grey squirrels withing in the stronghold from iNaturalist. Combining this data with the standardised monitoring results further informs our knowledge of red and grey squirrel distribution. Figures 4 and 5 show the current distribution of red squirrels and grey squirrels respectively in North Merseyside and West Lancashire using the combined data. It is important to note, particularly for the grey squirrel sightings map, that one grey square may only denote 1 grey squirrel sighting.

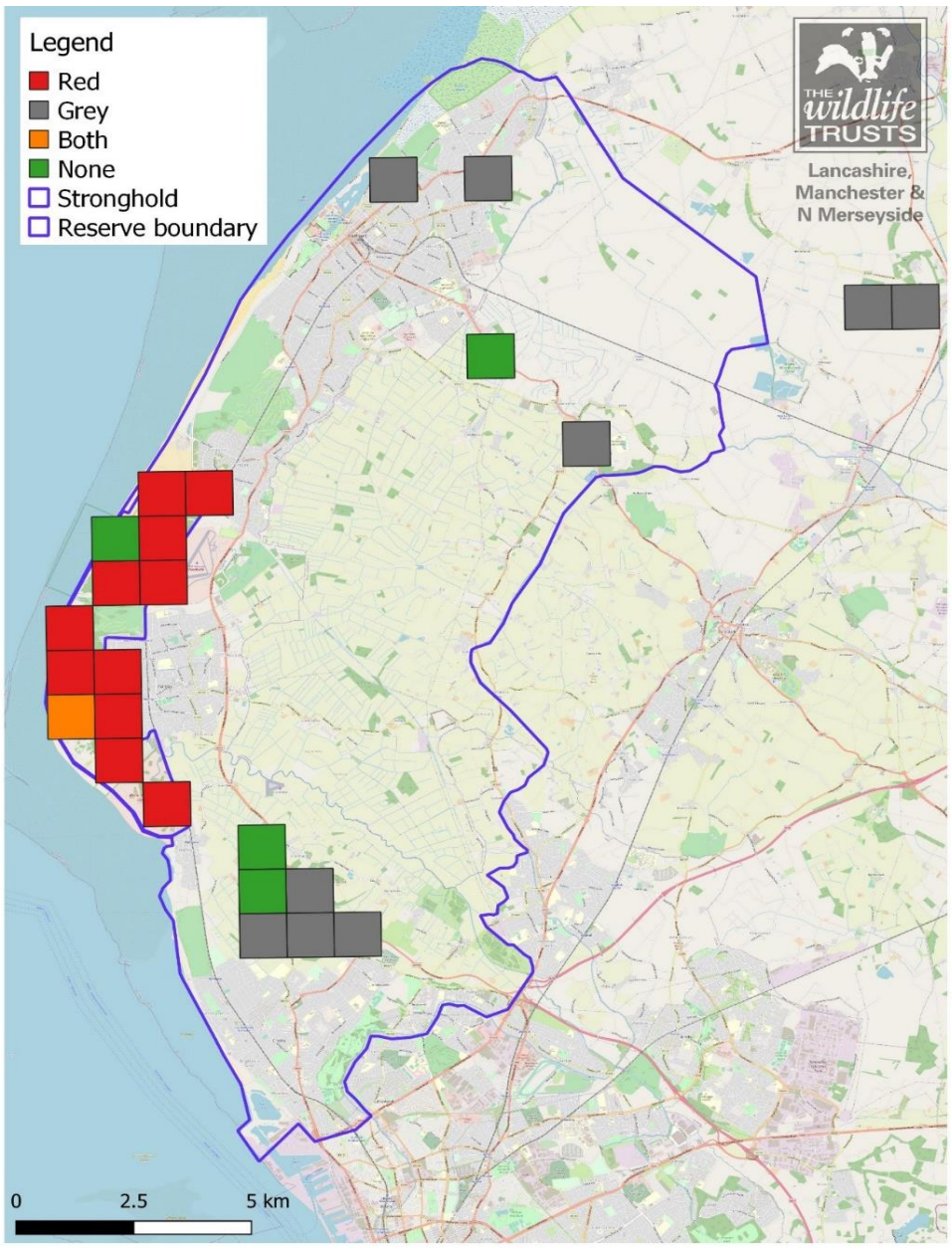

Figure 3. Autumn 2020 standardised monitoring results in the North Merseyside and West Lancashire red squirrel stronghold. Map shows presence of red squirrels (red), grey squirrels (grey), both species (orange) and no squirrels (green) in 1km x 1km squares. Mere Sands Wood transects (outside the stronghold boundary) is also shown

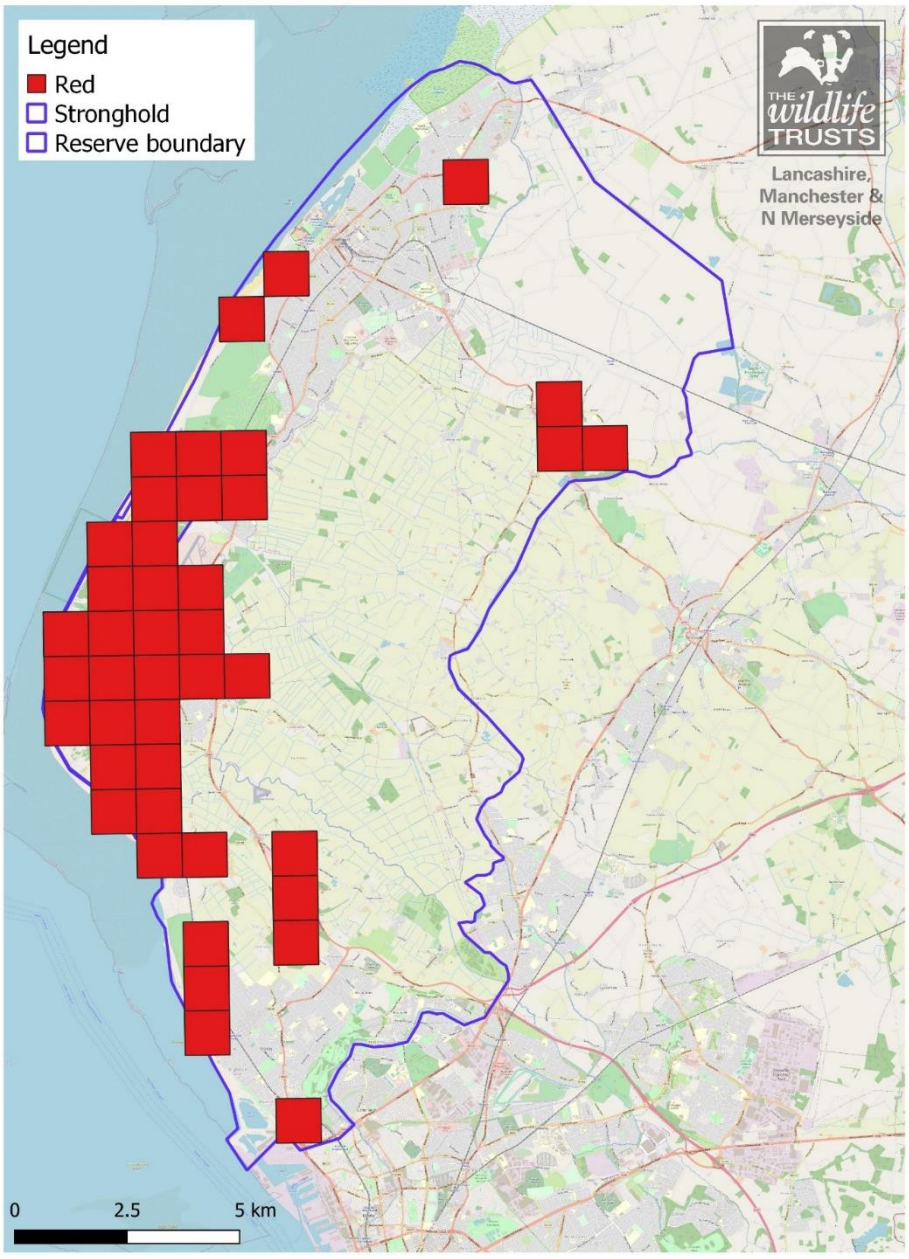

Figure 4. Red squirrel distribution in the North Merseyside and West Lancashire area. Map shows presence of red squirrels in 1km x 1km squares. Results compiled from public sightings, control records, iNaturalist and standardised monitoring throughout 2020.

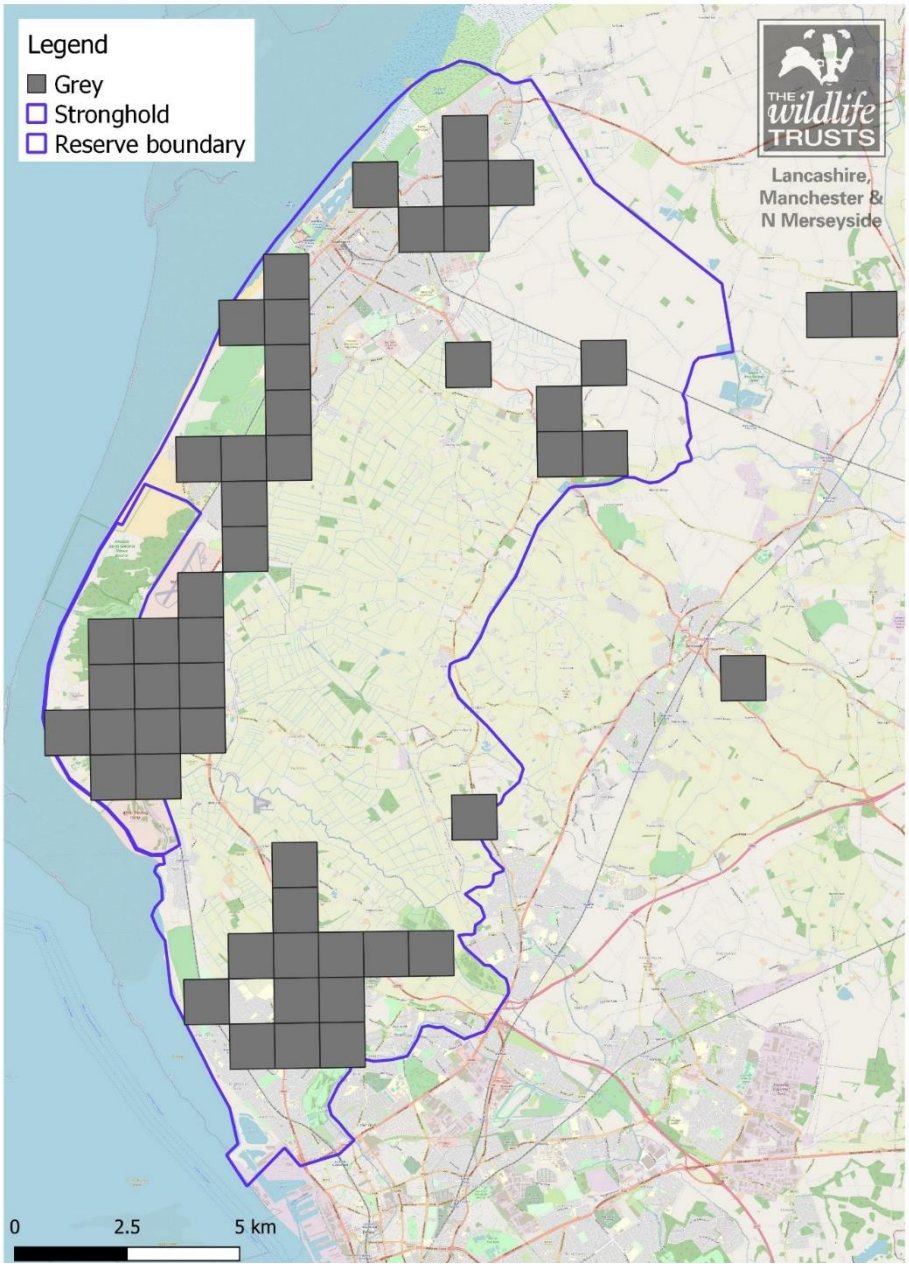

Figure 5. Grey squirrel distribution in the North Merseyside and West Lancashire area. Map shows presence of grey squirrels in 1km x 1km squares. Results compiled from public sightings, control records, iNaturalist and standardised monitoring throughout 2020.

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Acknowledgements

Thank you to all of the staff and volunteers who undertook the surveys and the members of public who have informed us of their squirrel sightings. We also thank the many landowners who continue to grant access to their woodlands.

Tasha Hesketh, Monitoring intern, Jan 2021

References

2020. The Red Squirrel Project. *iNaturalist* [online]. Available from: https://www.inaturalist.org/projects/the-red-squirrel-project?tab=stats [Accessed 31 December 2020].