

RSNE Annual Monitoring Programme

Layman's Report 2018

Northumberland Wildlife Trust



The Annual Monitoring Programme

Red Squirrels Northern England (RSNE), a Northumberland Wildlife Trust conservation partnership, established the annual monitoring programme in 2012. Approximately 300 sites are surveyed each year during spring, in a three month period from March 1st to May 31st.

The study area is located across seven counties in northern England, where wild living red squirrels are still present. In brief, within each 2x2 km square, or 'tetrad', one survey is conducted during a 15 day period using one of the following survey methods: baited trail camera, baited visual transect or observed feeder. Monitoring takes place in woodlands and gardens with the same sites surveyed each year using the same methods.

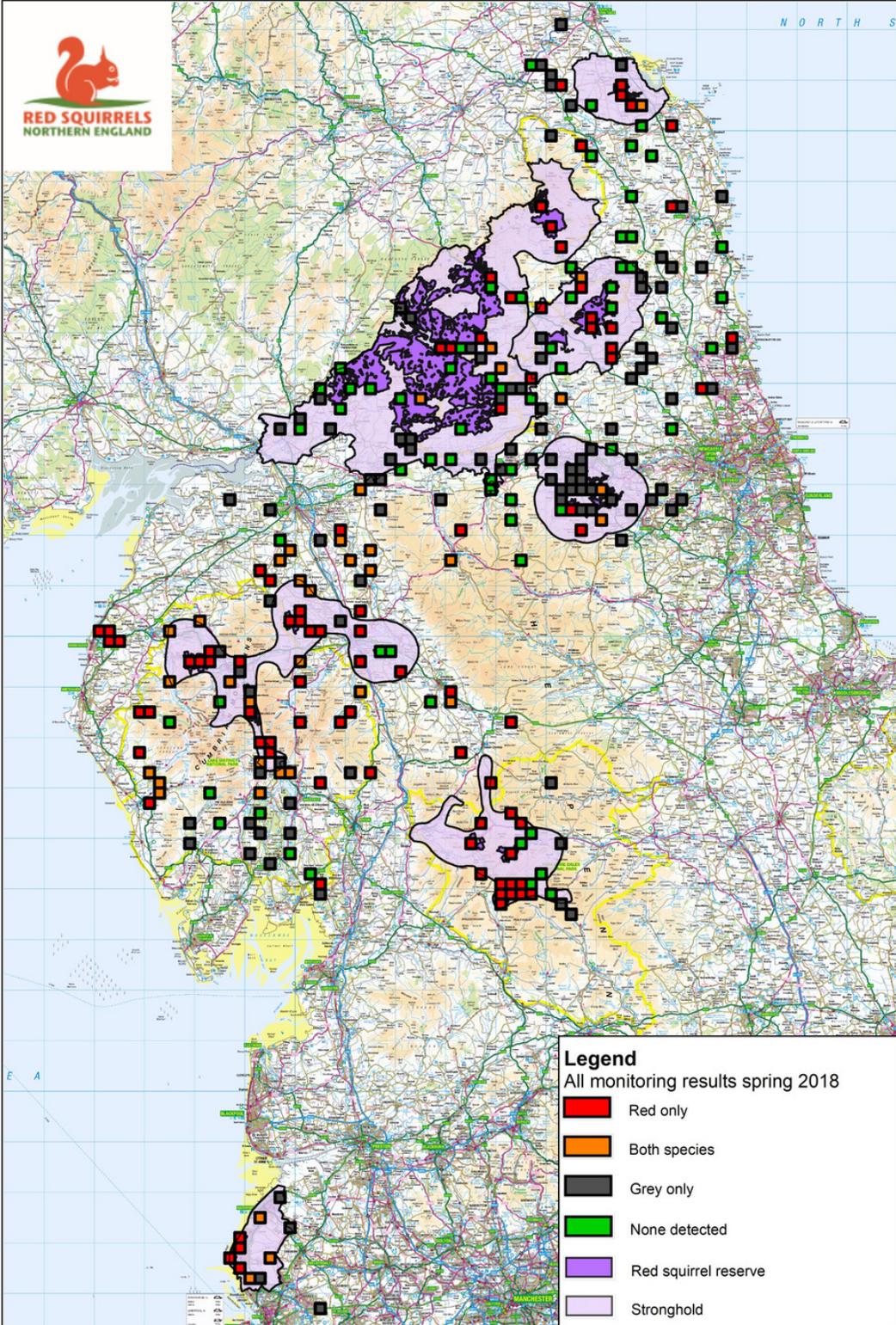
The aim of the annual monitoring programme is to build a long-term dataset that will evidence changes that may occur to red and grey squirrel range over time. By conducting surveys in the same three month period and the same locations each year, there is more confidence in the results detecting changes to red and grey squirrel distribution over time.

The annual surveys provide a snapshot of red and grey squirrels in time across the study area; however they do not provide a complete picture of squirrel distribution. Additional records of squirrels, reported between March and May, are used to produce further distribution maps. These can be found in the full report, available on the RSNE website.

Involving 160 people, over 80% of which are volunteers, the programme is one of the largest existing citizen science projects in mammal conservation within the UK.

Photo: Bonnie Sapsford



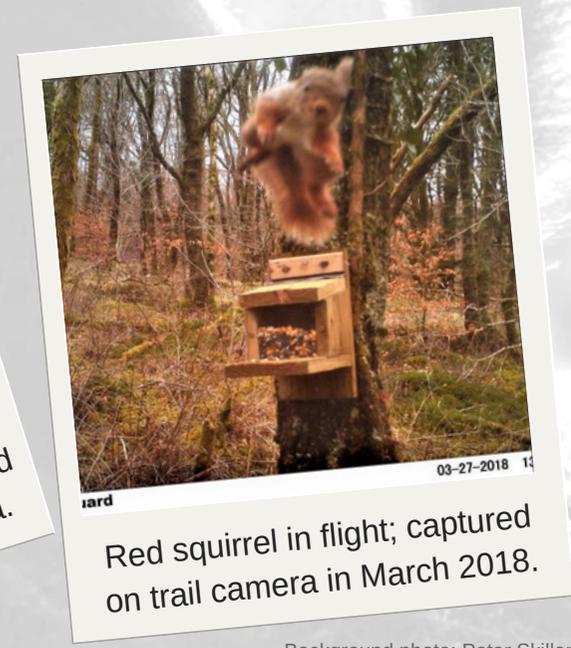
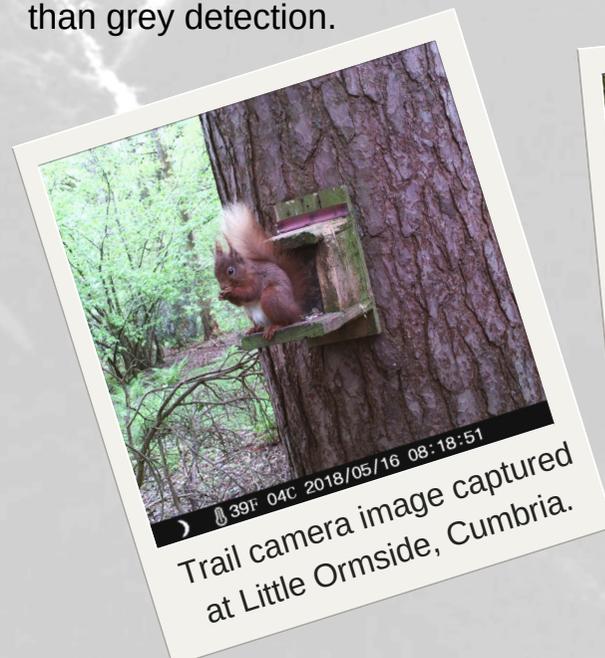


Annual Monitoring Results 2018

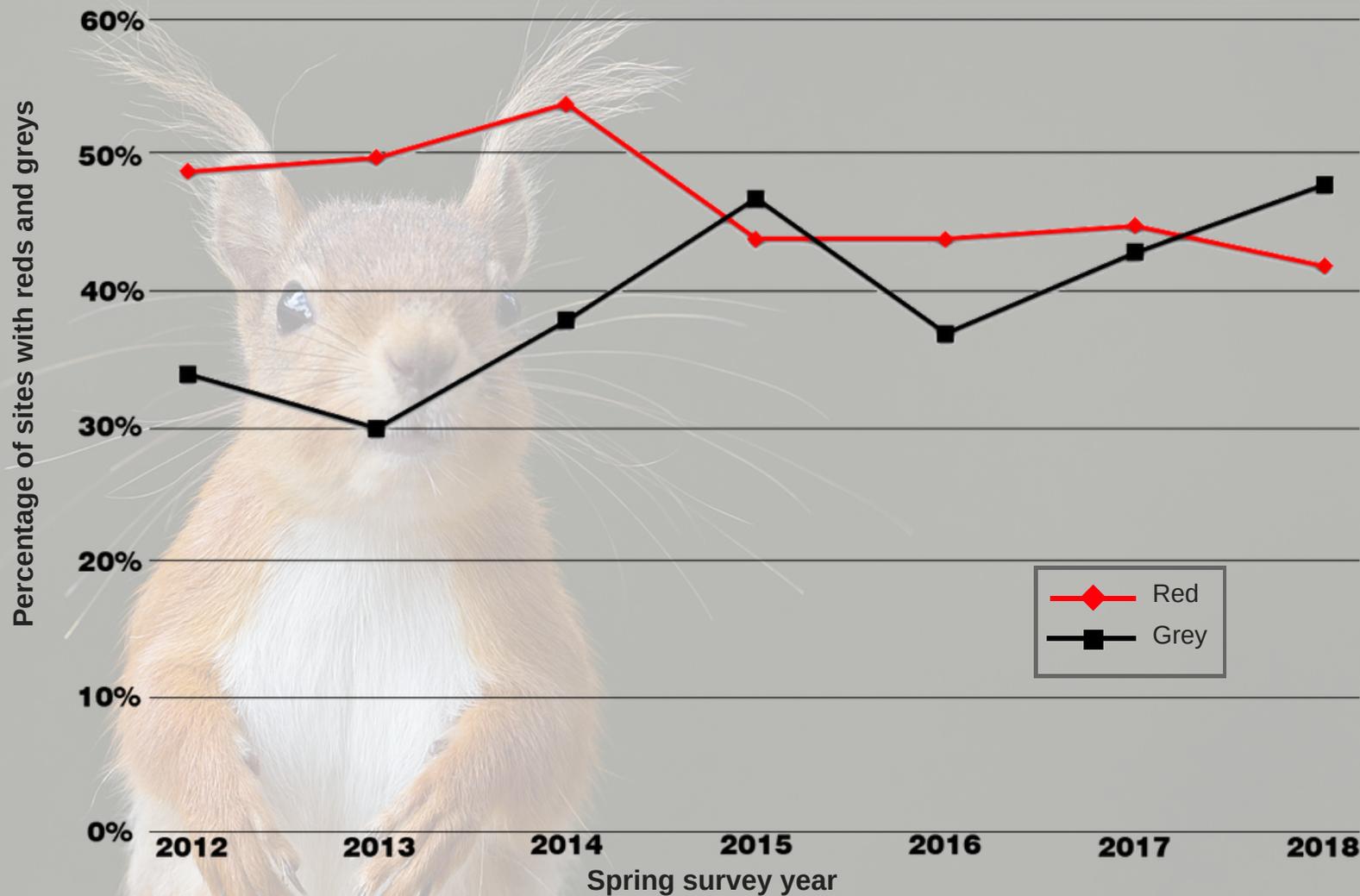
290 sites were monitored with overall results demonstrating that red squirrels are still widely distributed across northern England. Reds were detected in 42.4% of total sites surveyed and greys detected in 47.9%; a 3% decrease in red detection and a 5% increase in grey detection in comparison to monitoring results in 2017.

Results were also analysed per county and per national park. In Cumbria, reds and greys were both widely detected (57.1% and 47.8% respectively). Within the Lake District National Park area of Cumbria, results were similar with high detection of both reds and greys. Red detection in Northumberland overall was low (26.8%) in comparison to grey detection (50%). However, detection of reds was higher than greys within Northumberland National Park. This was also the case within the Yorkshire Dales National park.

Within red squirrel strongholds, reds were detected in the majority of sites in both the Yorkshire Dales (71.4%) and the North Lakes (74.2%) strongholds. Within all reserves, red detection was higher than grey detection.



Annual Monitoring Results Over Time



This graph demonstrates the overall results since the monitoring programme began in 2012. The red line shows the percentage of sites in which red squirrels were detected each year, and the black line shows the percentage of sites in which grey squirrels were detected. An overall comparison of results from 2012 to 2018 demonstrates the fluctuations in range of both species of squirrel across the study area.

Between 2015 and 2017 red squirrels were detected in a similar number of sites. This number decreased slightly, by 3%, in 2018. The number of sites in which grey squirrels were detected decreased in 2016, but has increased in both 2017 and in 2018.

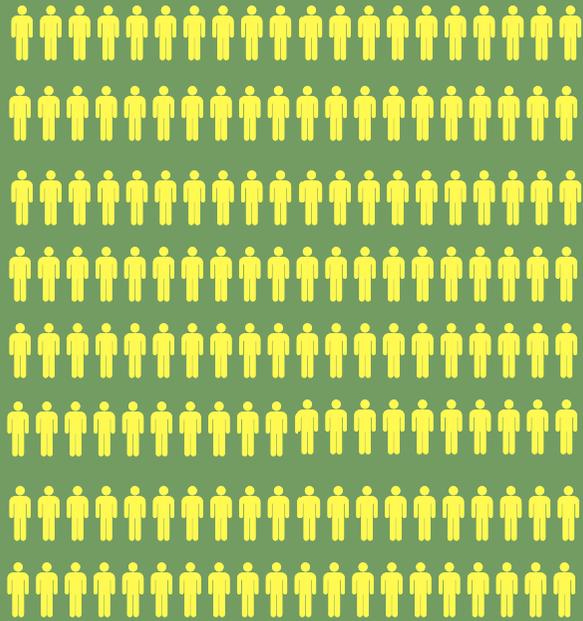
Factors that may influence fluctuation include:

- **Environmental variation** (including natural food supply and weather)
- **Human conservation intervention** (suppression of grey squirrel numbers)

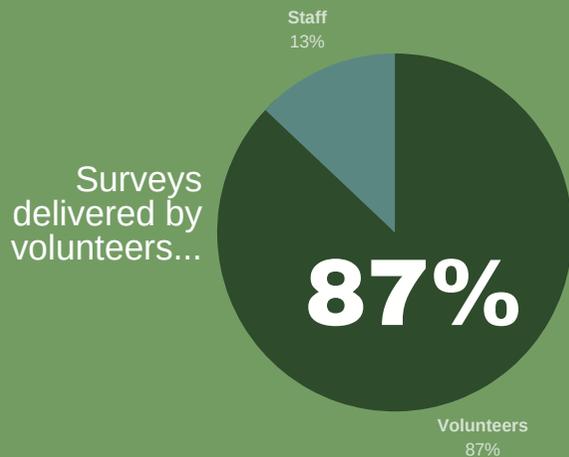
The increase in grey squirrel detection in 2014 and 2015 followed reports of a mild winter and an abundance of natural food sources. Although these factors cannot be directly linked to monitoring results, they may provide some context to the increase in grey squirrel detection in 2015. Populations of squirrels, like all wild animals, fluctuate from year to year. The key outcome for the monitoring programme is that red squirrel detection overall remains stable.

2018 Annual Monitoring in Numbers

People



160 people involved



2000 woodlands & gardens surveyed since 2012

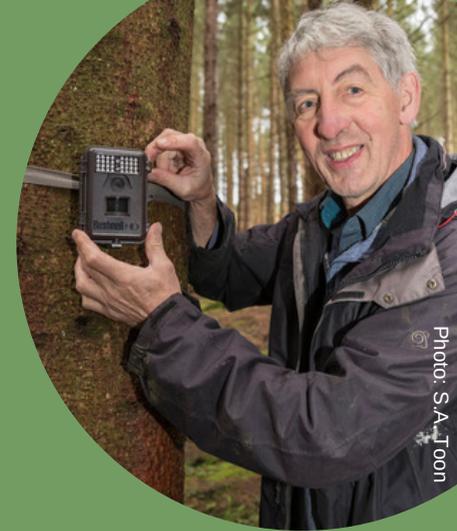
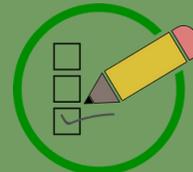


Photo: S.A. Toon

Logistics



7 counties



290 surveys



3 months

Methods



232 Trail camera surveys



38 Visual transect surveys



20 Observed feeder surveys

Results



47.9%



42.4%

of all sites

Key Messages from the 2018 Programme

In 2018, the programme has continued to document widespread distribution of red squirrels across areas of northern England. This is welcome news for the hundreds of people involved in the conservation effort to protect this iconic British mammal.

The successful delivery of the programme highlights the collective commitment of more than 160 people, the vast majority of which are volunteers. 290 surveys in three months is a significant achievement. This level of volunteer involvement is essential to the delivery and sustainability of the programme.

The slight decrease (3%) in the number of sites where red squirrels were detected and an increase in the number of sites with greys is a pattern that has been observed in previous years. Fluctuations are common in wild animal populations over time and are often linked to environmental factors.

A potential concern is if grey squirrel detection continues to increase in further annual monitoring. Grey squirrels represent the most significant threat to red squirrels through competition for resources and the spread of a lethal disease; squirrelpox virus. It is crucial that action continues to be taken to protect red squirrels.

Red squirrel conservation is relentless and long-term. The collective achievement and successes in recent years are demonstrated through this programme. One of the greatest challenges ahead is ensuring efforts to safeguard red squirrels continue at current levels.



Photo: Steve Wrigthson



Full report available at: www.rsne.org.uk/squirrel-monitoring-programme

