

SQUIRRELSURVEY

Irish Squirrel Survey 2007

PROJECT TEAM

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COMPLETION DATE

September 2007

OBJECTIVES

- To update the records regarding the geographical distributions of red and grey squirrels in Ireland.
- To relate distribution patterns and changes to the presence of pine martens.
- To develop a survey methodology and data collation system that will facilitate the subsequent addition of new records without the need for entirely new large-scale surveys in the future.
- To generate up-to-date maps of these geographical distributions.
- To identify recent changes in the respective distributions via comparison with previous surveys.



left: Native red squirrel (*Sciurus vulgaris*).

Photo: © Niall Benvie (www.imagesfromtheedge.com)

right: Alien grey squirrel (*Sciurus carolinensis*).

- To promote red squirrel conservation and educate people on the threat posed by the grey through directly involving the general public with the survey.

PROGRESS

Records regarding the distribution of red squirrels and grey squirrels in Ireland were updated via a survey based on a widely circulated questionnaire during the period January – May 2007. Five thousand hard copies of a carefully designed survey form were widely distributed in both the Republic of Ireland and Northern Ireland, supported by a survey website (<http://www.irishsquirrels.com>). Overall 1,502 replies were received; this was considered to be a highly satisfactory return, in both number and geographic coverage of the 32 counties.

The questionnaire also enabled those making returns to comment on pine marten sightings, to investigate any potential impacts this predator may be having on the two squirrel species.

The data were collated using Recorder 6 software, a biological database management tool; this will allow data to be supplemented in the future and/or exported for use with other databases such as forestry GIS applications.

The degree of interest shown by the media and the general public was highly encouraging, and it is felt that the issues surrounding the conservation of the red squirrel and the threat posed by the grey were well communicated.

The updated 10 km distribution maps for the three species generated by the survey are shown in Figure 1.

When compared to the results of previous surveys, the red squirrel may still be considered to be widespread and is still common in many areas of the country, particularly west of the River Shannon and in areas of extensive commercial coniferous forestry. Some spread by red squirrels was also noted in a few regions, though in many other areas its habitat is now shared with the grey



Figure 1: Updated 10 km distribution maps for (A) red squirrel, (B) grey squirrel, (C) pine marten.

squirrel. Unfortunately, it may now be considered extinct in Meath, and has become particularly rare in Westmeath, Kilkenny, Carlow and Louth. Red squirrels in areas where greys are already established are under particular threat, while other populations just beyond the current grey squirrel distribution (such as Cork, Limerick, Kerry and north east Antrim, where significant areas of mature broadleaf woodland exist) may also be considered at risk.

Grey squirrels have expanded their range dramatically in the past decade, and are now present in 26 counties. Most apparent is its spread in the counties along the east coast. It is likely that they will continue to spread in many areas of the country in the coming years; they have breached the river Shannon in a few locations and so may begin to extend their range west of the Shannon. However, given the unsuitable habitat that the region presents, the extent to which this will occur and the rate at which it will happen is unclear. Many young broadleaf plantations in the east and south of the country may now be considered to be at high risk from grey squirrel bark-stripping damage.

Pine martens have been recorded in many areas of the country, and appear to be spreading (presumably due to legislative protection and an increase in tree planting). The survey found some evidence of the persistence of red squirrels where pine martens are found, and in some cases the progressive decline of greys in such areas. However, it is difficult to say that this corresponds to the habitat preferences of the

species concerned or if there is a direct relationship between the distribution of pine martens and the two squirrel species. More research in this field needs to be carried out.

OUTPUTS

- Carey, M., Hamilton, G., Poole, A. and Lawton, C. 2007. *The Irish squirrel survey 2007*. COFORD, Dublin.
- Popular articles were featured in the Irish Independent, Irish Times, Irish Examiner, Farming Independent, Farmer's Journal, BBC News Online, Irish Daily Mail, Meath Chronicle, Farmer's Monthly, Irish Timber and Forestry, Irish Mountain Log, The Local Planet and Science Spin, together with publicity in the journals and/or newsletters of CRANN, the Irish Wildlife Trust and Birdwatch Ireland. Publicity in the audio-visual media was also facilitated through interviews on RTÉ Radio 1 (Today with Pat Kenny and Morning Ireland), East Coast FM, Shannonside and Northern Sound, as well as appearances on Ear To The Ground and Eco Eye on RTE1.
- Stand and presentation at Dublin Zoo's Native Species Weekend, April 2007.
- Results were used in the drafting of All-Ireland Red Squirrel Species Action Plan.
- Poole, A. 2007. An investigation of translocation as a technique to conserve the red squirrel (*Sciurus vulgaris*) in Ireland. PhD Thesis, NUI Galway.
- www.irishsquirrelsurvey.com