UK Strategy for Red Squirrel Conservation - Action Plan for Northern Ireland

BIODIVERSITY IN NORTHERN IRELAND

Contents

UK STRATEGY FOR RED SQUIRREL CONSERVATION: IMPLEMENTATION IN NORTHERN IRELAND 1999-2004

Introduction

We know, both from ordinary observations and from systematic research, that many wild species of plants and animals are declining in Northern Ireland. Some species, once common, are now under threat or hard to find. Others are critically rare, and a few are now extinct.

Through the Convention on Biological Diversity, the UK Government is committed to play its part in a world-wide drive to arrest and reverse this decline in biodiversity. Its overall approach is set down in the UK Biodiversity Action Plan.

A cross-sectoral partnership, the Northern Ireland Biodiversity Group (NIBG), has now developed a Biodiversity Strategy for Northern Ireland. This Strategy looks at the particular circumstances of Northern Ireland, identifies the main reasons for loss of biodiversity, and puts forward an extensive suite of measures to be undertaken over a 15-year period. One of the recommendations (number 57) requires us to prepare and implement the Northern Ireland components of UK habitat and species action plans. The Northern Ireland Squirrel Forum has developed this plan and Environment and Heritage Service is pleased to be able to publish it on behalf of the Forum.

There are good precedents from elsewhere to show that with determination, co-operation and carefully targeted resourcing, populations of wild species can be stabilised and restored. There is every reason to hope that we can do the same for the red squirrel here in Northern Ireland.

The structure and delivery of Northern Ireland plan is largely based on the model established for the UK action plans. EHS will act as an initial contact for the plan but the Squirrel Forum will be the lead partner.

Comments or feedback on the plan would be welcomed and should be addressed to Environment and Heritage Service, Conservation Science Unit, Commonwealth House, 35 Castle Street, Belfast BT1 1GH. Further information about the Northern Ireland Biodiversity Strategy and developments relating to it such as other species action plans can be found on the EHS website at www.ehsni.gov.uk.

This regional plan thus follows the general guidelines laid out in the JNCC UK Strategy for Red Squirrel Conservation and the Government's Red Squirrel Biodiversity Action Plan and is the process for 'action on the ground'. It is a five year plan, running from 1999 to 2004, at which time the plan should be fully reviewed.

Aim: The aim of this action plan is to ensure the survival of the remaining red squirrel populations in Northern Ireland.

Background

The red squirrel (*Sciurus vulgaris*) was once ubiquitous in the United Kingdom but has declined drastically in numbers and distribution over the last fifty years. It is now restricted to Scotland, Northern Ireland and northern England, with small isolated populations elsewhere. There are estimated to be 160,000 red squirrels in Britain, 30,000 of which are in England.

Reasons for the decline of the red squirrel in the British Isles include loss and fragmentation of habitat and disease. However, the most important factor appears to be competition with the introduced American grey squirrel (*Sciurus carolinensis*). The grey squirrel was introduced to Britain in the late 19th century and Ireland in the early 20th century and has become widespread. It appears better able to exploit deciduous and mixed woodlands, with higher breeding prospects and adult survival compared to red squirrels in these woodlands. Red squirrels usually disappear from broad-leaf and mixed woodlands within fifteen years of the arrival of greys.

Statement of Current Position

Records of red squirrels from the past few hundred years show that numbers have fluctuated markedly with time. These show that numbers fell to very low levels in the United Kingdom around the 18th and 19th centuries, to the point of extinction in some areas. Several re-establishments were carried out in Ireland using English stock between 1815 and 1856. Two of these, at Moneyglass Co Antrim and Ravensdale Park

near Dundalk, are thought to form the basis of the present Northern Ireland population of red squirrels. Translocations within Northern Ireland have since occurred and the species remains widespread.

The current distribution of red and grey squirrels in Northern Ireland is shown on **Map 1**.

Landscape Structure of the Area

Given its comparatively small area, Northern Ireland has amongst the most varied solid geology in the world. All major geological periods over the last 500 million years are represented, with many older rocks also present.

Geological history is a major determinant of today's landscape influencing, amongst other things, topography at both the regional and local scales, soil type and drainage patterns. Through these physical factors geology exerts a significant control on habitat and subsequently, on all biodiversity.

The main geological units present in Northern Ireland include the uplands of the Sperrins and north-east Antrim underlain by ancient metamorphic rocks, the limestones of the Fermanagh lowlands with more resistant sandstones forming the uplands. Antrim is dominated by the striking basalt plateau of Antrim while the Down and Armagh lowlands host much older sandstones and shales. Past volcanic activity has produced the upland blocks of Mourne, Ring of Gullion, Slieve Croob and Slieve Gullion.

Good examples of the relationship between topography and vegetation can be seen where significant remnant woodland exists on the steep slopes of the Antrim basalt plateau and in the glacially deepened valleys in the Sperrins. The geochemical nature of the rock controls woodland type with former area supporting base-rich communities while the latter generally hosts more acid types.

The woodlands of Northern Ireland can be split into three broad categories:

- conifer plantations
- broad-leaved and yew woodlands
- lowland wood pasture and parkland

A fourth category, native pine woodlands, has been extinct here for more than three thousand years, a casualty of both changing climate and Bronze Age farming practices.

The bulk of the woodland cover in Northern Ireland is **conifer plantation**, which currently extends to over 50,000 ha (3.6% of the UK total). In the past, plantations were often established in the uplands (on heaths and blanket bogs), where large tracts of land could be acquired more easily. Some non-native conifers such as Sitka spruce, as well as Norway spruce and lodgepole pine, grow very well in our mild, wet climate and provide the most economic timber crop.

Conifer plantations are scattered across Northern Ireland, but are particularly common in west Fermanagh, west Tyrone, on the northern parts of the Antrim Plateau and in the Sperrins.

Broad-leaved Woods make up the remainder of the woodland cover. This type includes both woodlands that have been planted, often by non-native species such as beech *Fagus sylvatica,* in addition to semi-natural woodlands. **Lowland wood pasture and parkland** is generally not common in the Northern Ireland landscape. This woodland type is found in situations such as demesne plantings and deer parks, the larger, long-established estates such as Crom, Florencecourt and Castlecoole in Co Fermanagh, Belvoir Park Forest and the Lagan Valley Regional Park in Belfast.

MAPS

(Overlay maps 1-5 over the base, map 6 to show distribution and areas in relation to the River Bann and motorway).

Map 1 Current distribution of red squirrels in Northern Ireland.
Map 2 Current distribution of grey squirrels in Northern Ireland
Map 3 Map identifying proposed conservation areas.
Map 4 Map showing state forests.
Map 5 Map showing red squirrel feeders.
Map 6 Outline map showing River Bann and motorways.

PROPOSALS FOR ACTION

The actions listed here are following headings from the JNCC UK Strategy for Red Squirrel Conservation and the Red Squirrel Biodiversity Action Plan.

1. POLICY AND LEGISLATION

AIM: To ensure that red squirrels are considered in all policy decisions.

1.1	Ensure that the needs of red squirrels are taken into account in planning applications and procedures, nature conservation strategies and forestry strategies.	*Target:* *Action:*	*Ongoing* *DARD, EHS, PS, NT, UWT*
1.2	Raise awareness of the law relating to red and grey squirrels and ensure that it is enforced.	*Target:* *Action:*	*Ongoing* *EHS*

2. SITE SAFEGUARD AND MANAGEMENT

This section includes habitat and landscape management

AIM: To establish Red Squirrel Preferred Areas where viable populations can be maintained and protected in the long term through habitat management.

2.1	Identify all large upland conifer forests with resident red squirrel populations.	*Target:* *Action:*	*Identify on Map 3* *FS*
2.2	Prioritise woodlands according to: ◆ Size ◆ Location, isolation ◆ Viability of red squirrel population ◆ Structure of woodland - species composition, age structure ◆ Proximity to grey squirrel population and risk of incursion ◆ On-site threats - disease, roads, disturbance ◆ Ownership and tenure ◆ Long-term future of site, existing management plans and priorities ◆ Special circumstances	*Target:* *Action:*	*Prioritise woodlands in 1999 (completed)* *FS*
2.3	Identify buffer zones of priority woodlands where grey squirrel control should be encouraged.	*Target:* *Action:*	*Identify by 1999 (completed)* *FS*

2.4	Liaise with landowners of Red Squirrel Preferred Areas.	*Target:*	*Get owners agreement for management plans*
		Action:	*DARD*
		Funding:	*DARD, FS(COGS, CMD*
2.5	Produce management plans for priority sites or input into existing plans avoiding conflict with other biodiversity objectives.	*Target:*	*Promote and develop management plans*
		Action:	*DARD*
2.6	Assist with implementation of management plans.	*Target:*	*Management to commence in line with agreed plans starting spring 2000*
		Action:	*DARD*

3. SPECIES MANAGEMENT AND PROTECTION

This section includes grey squirrel control and supplementary feeding

AIM: To alleviate threats to remaining red squirrel populations through targeted grey squirrel control, supplementary feeding of red squirrels and research into disease and mortality.

3.1	Promote and achieve targeted grey squirrel control in the interface area (see maps 1 and 2).		
	◆ Top priority is the buffer zone of the interface area, to prevent further spread of greys.	*Target:*	*Inform landowners and occupiers*
		Action:	*DARD, UTGO, UWT, Councils*
	◆ Potential refuge sites should be identified within the interface area in which long-term habitat management can be carried out for red squirrels. Grey control should be targeted to these sites in addition.	*Target:*	*Contact all major woodland owners in this zone by 2000*
		Action:	*DARD, UTGO, UWT, Councils*
		Target:	*Identify sites*
3.2	Provide advice, grant-aid and training to ensure that mechanisms for grey control are in place in the red area, so that a rapid response can be made to any incursions by greys.	*Target:*	*Ongoing*
		Action:	*DARD, EHS*
3.3	Map grey squirrel control effort to monitor progress and target future work.	*Target:*	*Produce map by 2000 and update annually*
		Action:	*EHS*

3.4	Promote supplementary feeding in the interface area at times of year when natural food resources are limited.	*Target:*	*Ongoing*
		Action:	*All Forum Members*
3.5	Promote best practice in supplementary feeding through production of a guidance note on cleaning and maintenance of hoppers, when to feed, what to feed etc. Monitor supplementary feeding effort in NI through survey.	*Target:*	*Produce guidance note by 2000*
		Action:	*FS*
		Target:	*Surveys 1999 (completed) and 2003*
		Action:	*EHS*
3.6	Assist research into red squirrel diseases and respond to outbreaks	*Target:*	*Ongoing*
		Action:	*All Forum Members*
3.7	Assess occurrence of red squirrel road mortality through one year survey.	*Target:*	*Survey 1999-2000*
		Action:	*CEDaR*
3.8	Campaign for red squirrels road sign.	*Target:*	*Subject to survey result*
3.9	Identify road mortality black spots and prioritise.	*Target:*	*List priority sites by 2001*
		Action:	*Subject to survey result*
3.10	Target road signs and rope bridges to priority sites.	*Target:*	*Subject to survey*

4. SURVEY, MONITOR AND RESEARCH

This section includes information gathering, survey and monitoring and research

AIM: To establish a scientific base of knowledge on squirrel ecology, management and distribution in NI and to encourage public involvement in red squirrel conservation.

4.1	Carry out a strategic distribution survey every four years in NI.	*Target:*	*Surveys 2000, 2004*
		Action:	*EHS,UWT,FS*
		Funding:	*EHS*
4.2	Develop expertise in the captive breeding of local red squirrels for future repopulation of suitable areas.	*Target:*	*Ongoing*
		Action:	*Belfast Zoo*

4.3	Collate sightings reported on RECORDER database. Produce annual distribution maps.	*Target:*	*Ongoing*
		Action:	*CEDaR*

5. EDUCATION AND AWARENESS

AIM: To increase awareness of the need for red squirrel conservation and encourage public involvement in the Project.

5.1	Raise awareness of red squirrel conservation through ongoing public relations campaign.	*Target:*	*Ongoing*
		Action:	*All Forum members*
5.2	Promote Regional Action Plan and ensure that it is used by all relevant organisations.	*Target:*	*Circulate by end 2000*
		Action:	*EHS*
5.3	Raise awareness through annual NPI National Red Squirrel Week.	*Target:*	*Minimum 1 event per year*
		Action:	*All Forum Members*
5.4	Revise regional leaflet to include promotion of Action Plan and Preferred Areas.	*Target:*	*Produce by end 1999*
		Action:	*DARD*
5.5	Promote Red Squirrels literature.	*Target:*	*Ensure provided to all appropriate woodland owners*
		Action:	*All Forum members*
5.6	Promote awareness to schools and distribute Teachers Pack.	*Target:*	*Contact all primary schools by 2004*
		Action:	*EHS*

6. REVIEW

	Action Plan will be reviewed annually by NI Squirrel Forum	*Target:*	*Ongoing*
		Action:	*All NI Forum Members*

ACTION PLAN ABBREVIATIONS

UTGO	Ulster Timber Growers Association
CEDaR	Centre for Environmental Data and Recording
EHS	Environment and Heritage Service (DOE)
NT	National Trust
UWT	Ulster Wildlife Trust
DARD	Department of Agriculture and Regional Development
FS	Forest Service (DARD)
PS	Planning Service (DOE)
WGS	Woodland Grant Scheme
CMD	Countryside Management Division (of DARD)

RED SQUIRREL PREFERRED AREAS

What is a Red Squirrel Preferred Area?

Red Squirrel Preferred Areas are woodlands which are managed to offer a long-term refuge for red squirrels. Each preferred area will comprise of a core area of woodland surrounded by a buffer zone.

The ideal refuges will be large conifer woodlands with negligible beech, oak or chestnut of masting age. Such large-seeded deciduous trees encourage colonisation by grey squirrels. A mixture of age classes and species of conifer will ensure a continuous food supply. In commercial woodlands, at least 20% should be made up of species other than the main crop tree. Berry-bearing shrubs increase diversity and add interest for other wildlife, as well as providing extra food for red squirrels.

The buffer zone is a protection area for the core woodland. It should be either coniferous woodland or non-squirrel habitat, open moor or agricultural land for example. Ideally there should be as few routes of squirrel migration as possible, to reduce the likelihood of incursions by grey squirrels. Grey squirrels are known to move along tree lines and wooded valleys, particularly if they contain oak, hazel, beech or chestnut. Grey squirrel control can be focused in the buffer zone to prevent colonisation of the refuge.

Establishment of refuge sites is dependent on the co-operation of all landowners in both the core woodland and the buffer zone.

Acknowledgements

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Belfast Zoo
DARD Countryside Management
Forest Service
DUCHAS
Environment and Heritage Service
National Trust
NI Environment Link
Trinity College Dublin
Ulster Museum
Ulster Timber Growers' Organisation
Ulster Wildlife Trust
Mr Mervyn Archdale
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Dr Denis Tangney

INVESTOR IN PEOPLE

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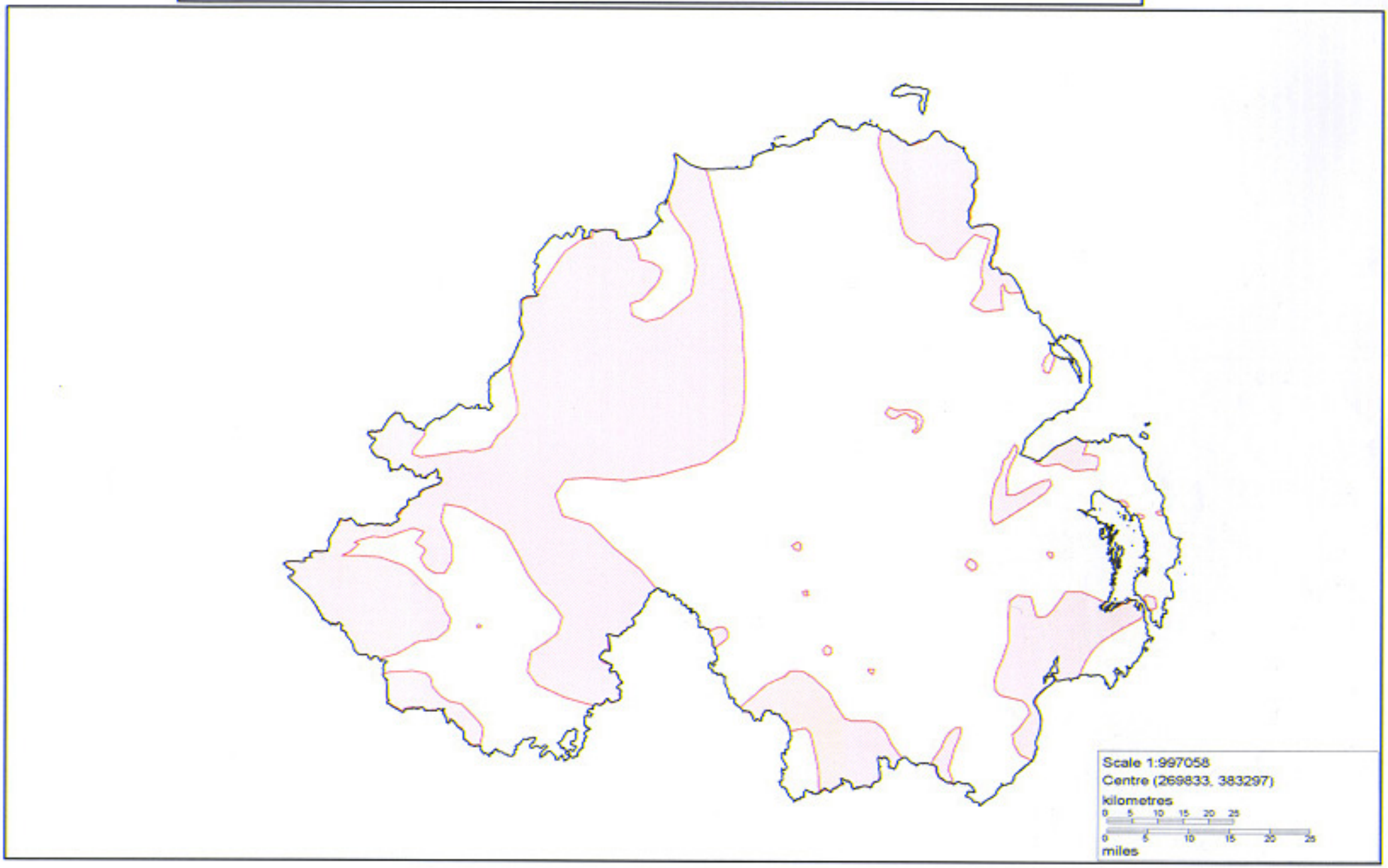
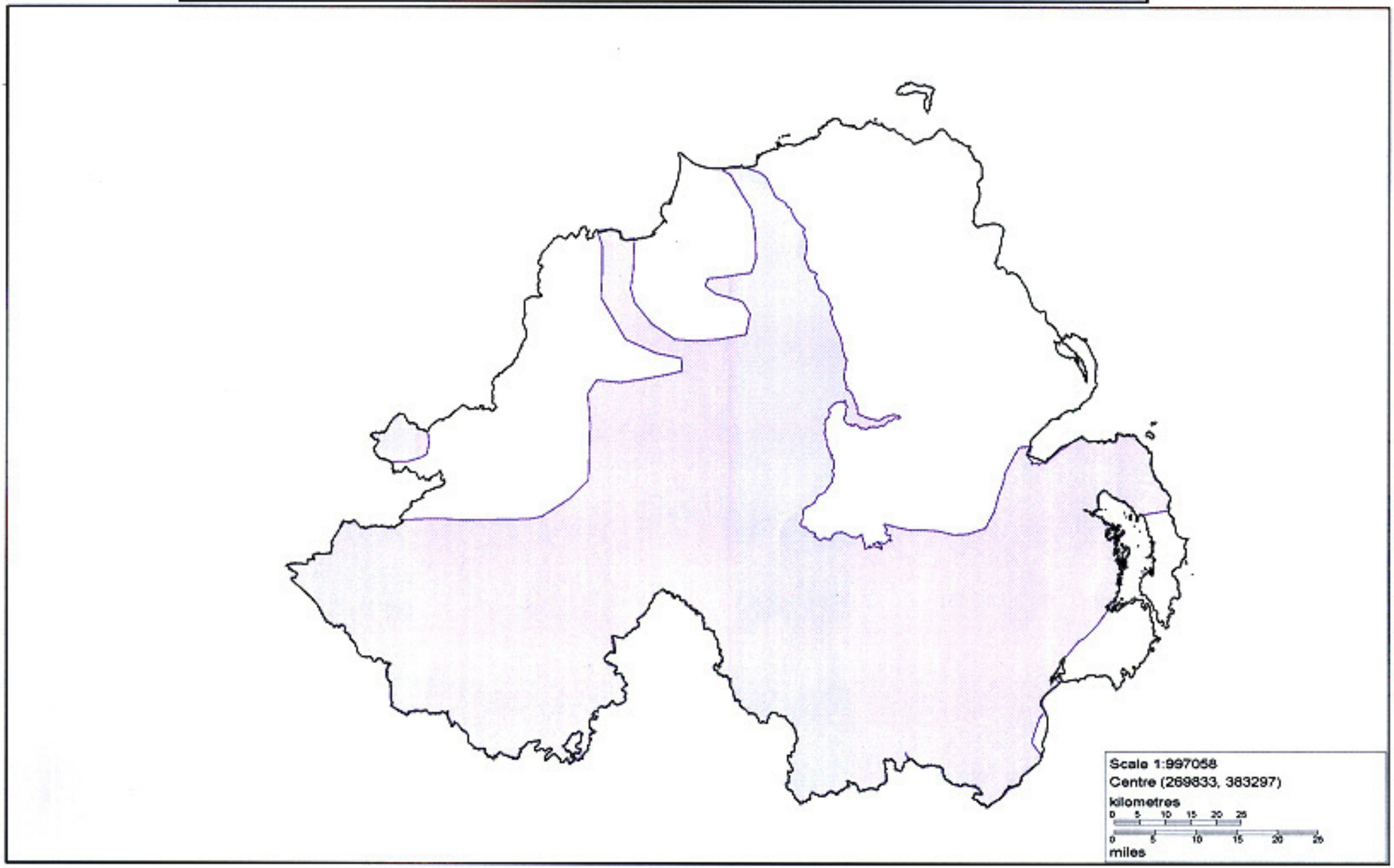
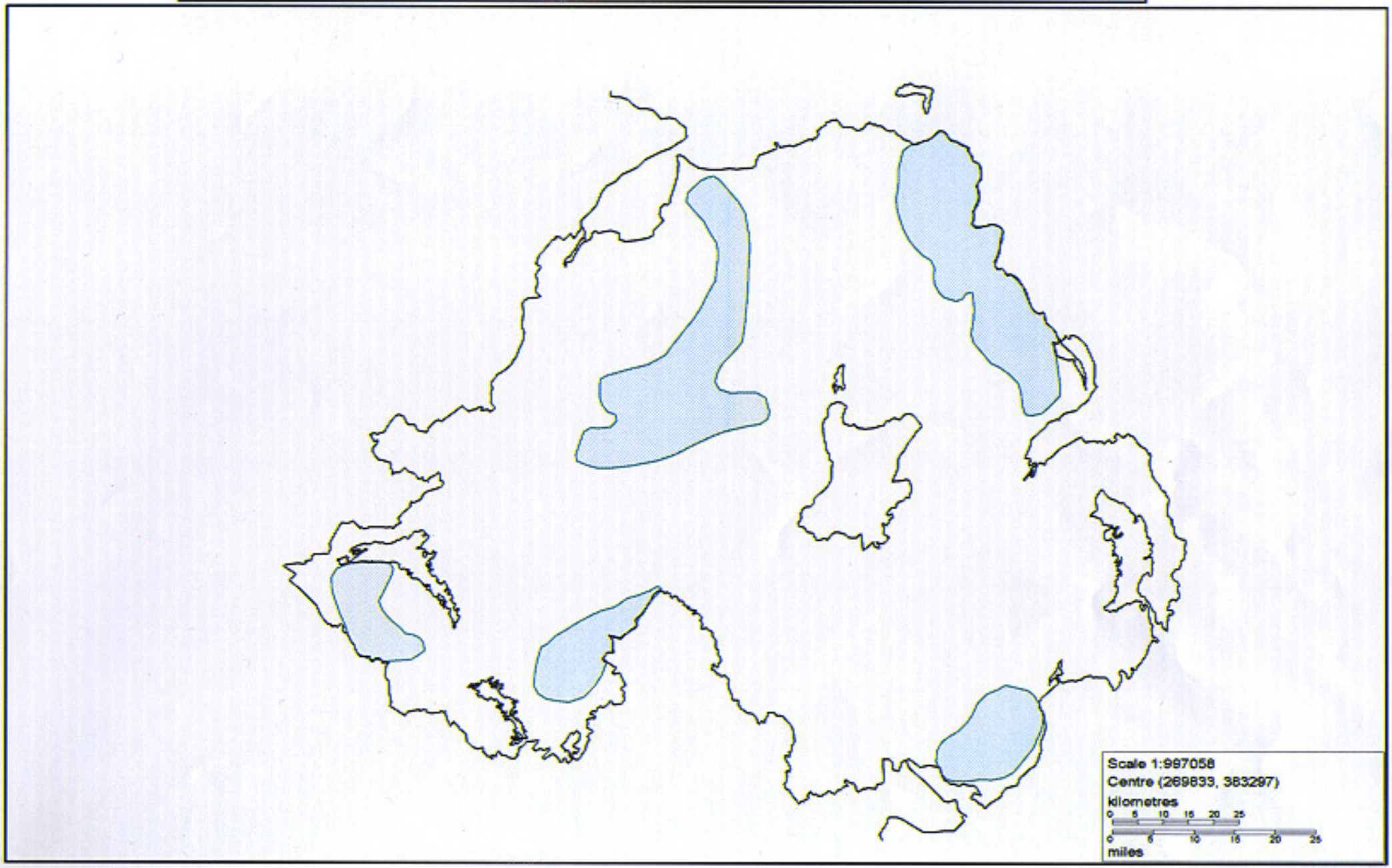
Map 1. Current distribution of red squirrels in N.Ireland



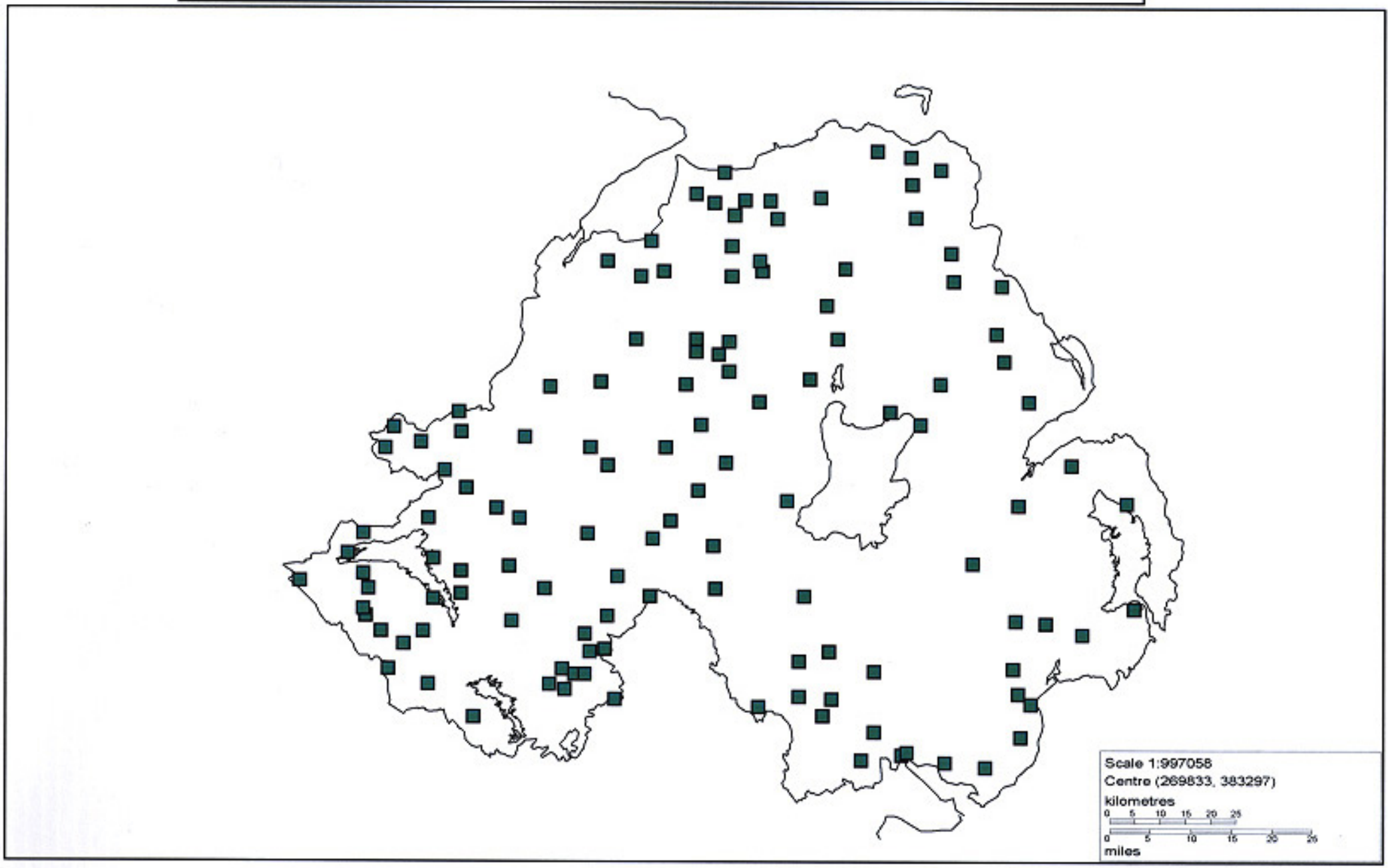
Map 2. Current distribution of grey squirrels in N.Ireland



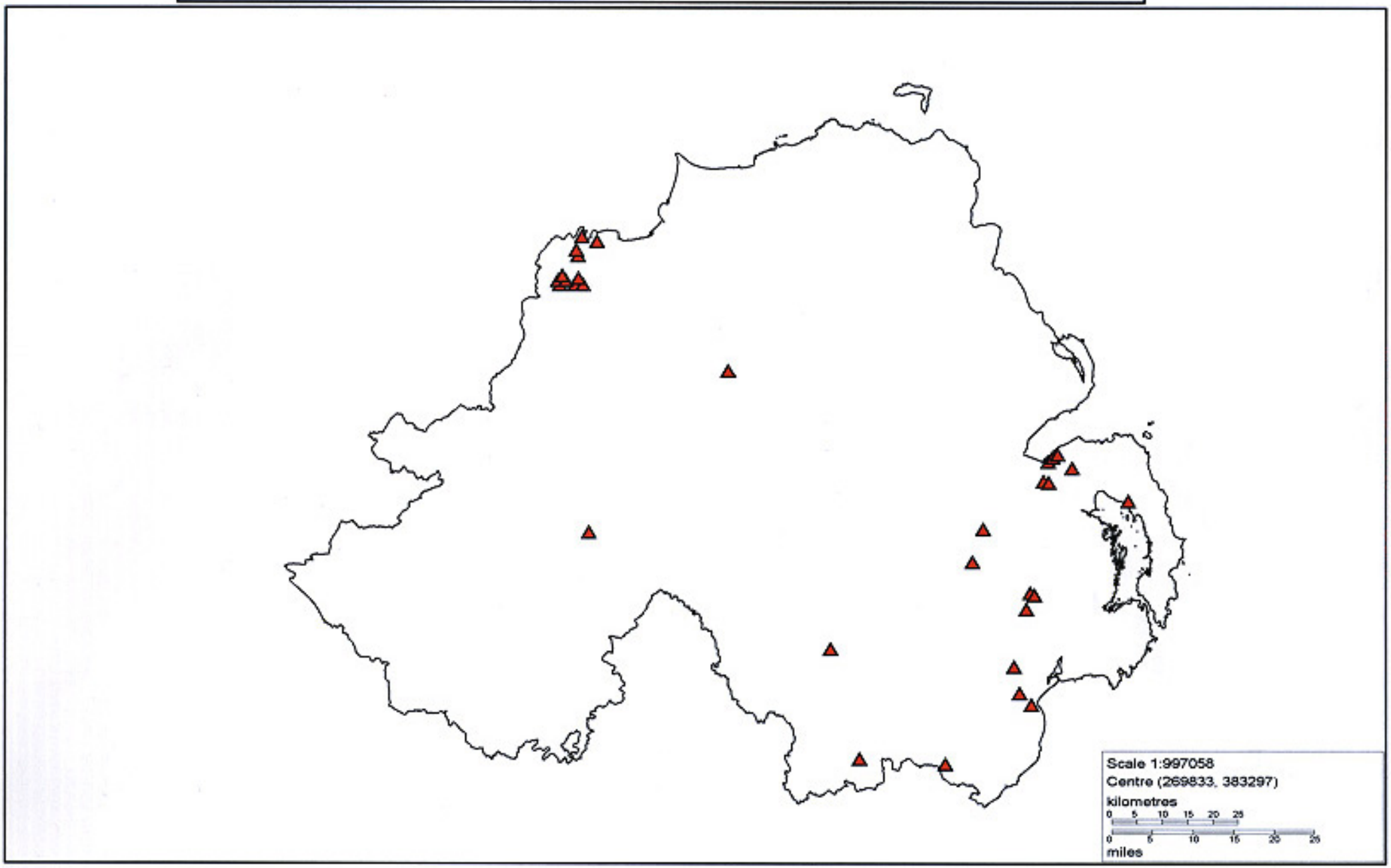
Map 3. Map identifying proposed conservation areas



Map 4. Map showing state forests



Map 5. Map showing red squirrel feeders



Map 6. Outline showing River Bann and the motorways