

Environment & Heritage Service

NORTHERN IRELAND SPECIES ACTION PLAN TREE SPARROW

April 2008

Northern Ireland Species Action Plan
Tree Sparrow *Passer montanus*
April 2008

1. Current Status

- 1.1 The tree sparrow is a small buff, brown bird of around 13-14cm. The sexes are similar. It has a chestnut brown head, brown and black streaked back and buff breast and flanks. It has a very characteristic black cheek-spot on its pure white face. It closely resembles a male house sparrow, a close relative but the tree sparrow is slightly smaller and neater and lacks the grey crown, and has a smaller black bib which does not extend onto to the breast. It has a stout seed-eating bill.
- 1.2 Arable and mixed farmland areas hold a large proportion of the population. They are also common close by waterbodies and along waterways. In Northern Ireland, they occur around Lough Neagh, Lough Beg and Portmore Lough (Perry and Day, 1997). They also occur throughout the mixed farmland of Co. Down (Gibbons *et al.*, 1993) and in other localised areas in Northern Ireland such as around Lough Foyle (Northern Ireland Birdwatchers Association, 2004).
- 1.3 Tree sparrows nest in holes, often in ruins or occupied buildings or even old sand martin burrows. They will also use old trees and cliffs (Field and Anderson, 2004) and use a wide range of surrounding habitat for feeding. They will readily use nestboxes and are small enough to fit into holes used by great tits and blue tits. The nest is an untidy mass of grasses and vegetation formed into a flattened dome. The breeding season extends from April to August and usually two or three broods are fledged. Each clutch consists of between 2 and 7 eggs and the chicks will be fed a wide range of invertebrates while they are in the nest (Cummins *et al.*, 2000; Anderson *et al.*, 2002).
- 1.4 In winter, tree sparrows flock together and form mixed flocks with house sparrows and other seed-eating birds such as yellowhammers and chaffinches. They spend a lot of time on farmland, close to cereal stubble fields where they feed on grain and weed seeds (Perkins and Anderson, 2002). Set-aside, wild-bird cover and other seed-rich crops and grasses attract large flocks in the winter months and sometimes grain in feeding troughs intended for livestock is utilised.
- 1.5 The European population of tree sparrows is large and consists of in excess of 26 million breeding pairs. It is also widespread, with a range covering most countries in Europe (Birdlife, 2004). The species is also widespread throughout Asia where it occurs in abundance (Cramp, 1994).
- 1.6 The UK population is currently estimated at 38,000 breeding pairs (Baker *et al.*, 2006). No national tree sparrow surveys have been carried out, but partial surveys have been carried out (Perry and Day, 1998; Stanbury and Watson, 2001). The Northern Ireland population is likely to number around 5,000

breeding pairs. This is based on Ireland's 9,000 territories estimated in the Breeding Bird Atlas (Gibbons *et al.*, 1993) and where around half of that distribution appeared to be situated in Northern Ireland.

- 1.7 The tree sparrow has undergone a dramatic decline in population in the UK in recent decades (declining by 95% between 1970 and 1999) (Gregory *et al.*, 2002). Its British range also decreased by 19.6% between the two Atlas periods 1968-72 and 1988-91 (Gibbons *et al.*, 1993). Current BBS trends are unknown in Northern Ireland as not enough tree sparrows are detected to produce a reliable trend. The history of the species in Ireland has been one of decline and recovery (Hutchison, 1989) and it was even extinct for a short time in the 1950s before recovering quickly (Gibbons *et al.*, 1993). The species is often known for its irruptive movements, which can lead to new colonies being formed on a local or wider scale. This irruptive behaviour is thought to have led to the recolonization of Ireland in the 1950s (Gibbons *et al.*, 1993).
- 1.8 The tree sparrow is specially protected in Northern Ireland under the Wildlife (Northern Ireland) Order 1985. It is listed as a Species of European Conservation Concern (SPEC 3) – a species of unfavourable conservation status in Europe although its global population is not concentrated in Europe. This is due to its declines across much of north-western Europe. It is also listed in Annex III of the Berne Convention but does not appear in the European Birds Directive.
- 1.9 The tree sparrow is listed as a priority species under the UK Biodiversity Action Plan. It is red listed in the UK Birds of Conservation Concern (Gregory *et al.*, 2002) due to its population decline but green-listed in the Birds of Conservation Concern in Ireland (Newton *et al.*, 1999) as the population was considered to be stable across Ireland as a whole. On revision of this Irish list, it is likely to be promoted to amber due to its recently revised SPEC 3 status. It is also a Northern Ireland Priority Species under the Northern Ireland Biodiversity Strategy.

2. Current Factors Affecting the Population

- 2.1 Change in agricultural practices – the switch from mixed farming in Northern Ireland to specialisation in grass means fewer cereal stubble fields are left over the winter to provide seed food. In addition, in some areas, the trend in switching from spring to autumn cultivation of arable ground has further reduced the area of stubble available over the winter. More efficient harvesting methods and intensification of existing arable also mean that there is less spilt grain, and fewer weeds to provide seeds and associated invertebrates. The intensification of grassland has also meant the loss of species-rich grasslands, with intensive pasture and silage providing little in the way of seeds and invertebrates.
- 2.2 Reseeded grassland – traditional, extensively managed meadows, rich in grasses and broadleaved herb species are being reseeded with fast growing, high yielding grass varieties such as rye grass *Lolium perenne*. Increased

fertiliser inputs promote dense, rapid growth of uniform swards, low in structural and species diversity. Such swards are consequently heavily grazed or harvested for silage throughout the year. This creates a low diversity, highly disturbed environment that contains few invertebrates. The grasses are rarely allowed to set-seed and so the seed resource never becomes available to the sparrows.

- 2.3 Drainage – invertebrate-rich wet areas, ponds and open ditches have been filled in and drained. Cropped wet areas and seasonally used wet grazing areas have been drained, improved and put into crop or livestock production. These areas previously provided habitat for large bodied invertebrates, a favourite food supply of the tree sparrow.
- 2.4 Pesticides - herbicide and insecticide use directly reduces the number of weed plants and invertebrates. Herbicides also indirectly reduce invertebrates by removing the host plants on which they feed. Tree sparrows are left with reduced summer invertebrate food and winter seed food.
- 2.5 Non-cropped areas - which are rich in invertebrate life such as rough grass banks, uncultivated corners and uncropped field margins have all been removed along with their valuable food source in order to increase the farmed area.
- 2.6 Hedgerow removal - well-managed hedges provide excellent roosting and nesting habitat. The loss of hedges through removal or the lack of hedgerow management reduces feeding opportunities for tree sparrows as they prefer to forage close to cover that offers security from predators.
- 2.7 Limited nest sites - a lack of traditional nesting sites such as holes in mature trees and buildings, and the loss of ruins and inappropriate management of old buildings could be limiting nesting opportunities for tree sparrows. The species readily utilises new nesting boxes situated in suitable habitat. Such circumstances would suggest few other nesting sites are available in the vicinity.

3. Current Action

- 3.1 The Department of Agriculture and Rural Development, DARD, through its Countryside Management Branch (CMB), has developed a series of agri-environment schemes including the Environmentally Sensitive Area (ESA) scheme, and the Countryside Management Scheme (CMS). Their objective is to protect and enhance existing habitats and species on the farm, and to create habitats by encouraging more sensitive management practices. Both these schemes have similar management provisions, are voluntary and apply to the whole farm. These schemes provide a mechanism for delivering some of the targets listed in action plans for many species and habitats, targeting areas of as little as 0.1 ha of semi-natural habitat in order to maintain or improve their present conservation value. Both contain a range of prescriptions which have the potential to maintain a range of semi-natural habitats that would benefit tree sparrow. The original ESA prescriptions have now been replaced by the

new CMS prescriptions. Around 230,000 ha of farmland is currently in agri-environment schemes in Northern Ireland, approaching a quarter of the total agricultural land in the Province.

- 3.2** Agri-environmental prescriptions through Countryside Management Scheme (CMS) and the Environmentally Sensitive Area (ESA) schemes have several options to directly benefit tree sparrow, including species-rich grassland (especially when taken for hay), un-grazed grass margins, field boundary restoration (especially hedgerows), restoration of traditional buildings and arable options - winter stubble (especially after a conservation cereal), conservation cereal, wild bird cover, and undersown cereals. These options can provide nesting habitat, summer insect and winter seed food.
- 3.3** A new agri-environment scheme, called the NICMS (Northern Ireland Countryside Management Scheme), will be launched in late Spring/early summer 2008. The NICMS is an integral part of the Northern Ireland Rural Development Programme 2007 – 2013 (NIRDP). This programme is part-financed by the European Agricultural Fund for Rural Development (EAFRD) with co-funding provided by the Department of Agriculture and Rural Development (DARD). The NICMS will play an important role in delivery of Axis 2 of the NIRDP - Improving the environment and the countryside through land management.
- 3.4** The NICMS aims to make a major contribution to the conservation action required for many Northern Ireland priority habitats and species. The habitat management plans in NICMS specify how farmers and land managers can best contribute to the conservation of these priority habitats and species
- 3.5** DARD operates an Organic Farming Scheme which encourages organic farming and is likely to benefit a range of farmland birds including tree sparrow.
- 3.6** DARD run a scheme for those in CMS/ESA schemes called “Vision E - plan”. This offers grants for capital works including hedge restoration, restoration of traditional buildings and nest boxes.
- 3.7** DARD and RSPB jointly employ two Agri-Environment Officers, whose main role is to contribute to the effective delivery of agri-environment prescriptions for biodiversity priorities, including tree sparrow.
- 3.8** RSPB Northern Ireland recently employed a Priority Bird Species Officer, whose main role was to contribute to the effective delivery of the conservation of priority species which includes tree sparrow. This was undertaken through close working with local biodiversity officers and the implementation of conservation actions, carried out at a local scale through a Local Biodiversity Action Plan (LBAP).
- 3.9** Local biodiversity officers across Northern Ireland are writing and implementing a LBAP within their respective regions. Those council areas in which the tree sparrow is a prominent bird may select it as a flagship species

and carry out some additional awareness raising, publicity or practical conservation work for the species.

- 3.10** The Lough Neagh Tree Sparrow Project began in September 2006 and will run for at least two years. The project is managed by the Lough Neagh Partnership and has involvement from all seven councils that surround Lough Neagh. It is funded through the Lough Neagh Partnership and landfill tax credit schemes. The Lough Neagh Wetlands hold a large proportion of the Northern Ireland population and provide the essential requirements of insect and seed food for tree sparrows. The project aims to raise awareness of tree sparrows and their requirements in the farmland surrounding Lough Neagh, and in the long-term, target specific conservation action to improve the habitat for tree sparrows and increase their numbers and range. The project involves the provision of nest boxes and supplementary food along river courses and in the wider countryside and the utilisation of a number of local volunteers.
- 3.11** The planting of wildflower meadows, which may be of assistance to farmland birds, is encouraged and facilitated by a number of local organisations.
- 3.12** The ‘Voluntary Initiative’, a partnership between farming and conservation organisations, aims to promote the safe and limited use of pesticides on farmland.

4. Action plan targets

- 4.1** By 2010, maintain the Northern Ireland tree sparrow population
- 4.2** By 2015, increase the Northern Ireland tree sparrow population by a further 5%.
- 4.3** By 2010, maintain the range of the Northern Ireland tree sparrow.
- 4.4** By 2015, increase the range of the Northern Ireland tree sparrow by a further 5%.

5. Proposed Actions with Lead Agencies

5.1 Policy and Legislation

- 5.1.1** Monitor the effects of decoupling, the shift from production based subsidies to area-based payments, particularly on mixed farming systems, for changes which may have implications for tree sparrow and other farmland birds.
(ACTION: DARD)
- 5.1.2** By 2009, target positive management through agri-environment schemes, the LBAP process and grant aid for biodiversity to secure favourable management for tree sparrows.
(ACTION: EHS, DARD, District councils)

5.1.3 Ensure implementation of Good Agriculture and Environmental Condition (GAEC), to preserve the suitability of breeding and wintering habitats such as hedges, species-rich grassland etc. for tree sparrows.
(ACTION: DARD)

5.1.4 By 2009, ensure that important tree sparrow habitats and their conservation management requirements are recognised and included in statutory and non-statutory plans e.g. Development Plans, Local Biodiversity Action Plans (LBAPs) and appropriate management strategies.
(ACTION: Planning Service, EHS, DARD, District Councils)

5.1.5 By 2009, review *Planning Policy Statement 2 (PPS2) – Planning and Nature Conservation*, to include policies relating to priority habitat and species.
(ACTION: Planning Service, EHS)

5.1.6 By 2009, review current agri-environment research, for good examples of conservation and recommendations that could benefit farmland birds including the tree sparrow. Advocate for the inclusion of any recommended agri-environment options in the next revision of the Countryside Management Scheme.
(ACTION: EHS, DARD)

5.2 Site safeguard and management

5.2.1 By 2009, establish agreements with landowners for the positive management of areas important for breeding and wintering tree sparrows and the suite of lowland farmland birds within ASSIs through the MOSS scheme.
(ACTION: EHS)

5.2.2 By 2009, where appropriate, enhance management of relevant Nature Reserves/National Nature Reserves for breeding tree sparrows.
(ACTION: EHS, District Councils)

5.2.3 By 2010, increase the area of arable land in Northern Ireland through agri-environment schemes and a cereal national envelope to benefit tree sparrows and other farmland birds and increase the ratio of spring: autumn cultivation of cereals to allow more stubble to be left over winter.
(ACTION: DARD)

5.3 Species management and protection

No actions

5.4 Advisory

5.4.1 By 2009, ensure that information on tree sparrow in Northern Ireland is available to all those who could play a role in their conservation and recovery.
(ACTION: EHS, DARD, District councils)

- 5.4.2** By 2009, through LBAPs and agri-environment schemes promote positive management on suitable sites to bring habitat into optimum condition for tree sparrows.

(ACTION: EHS, DARD)

5.5 International

- 5.5.1** Further develop links with the Republic of Ireland to promote the exchange of information and experience in research, management techniques, education and conservation strategies in general and in particular, relating to tree sparrow.

(ACTION: EHS)

5.6 Future Research and monitoring

- 5.6.1** By 2009, undertake a Northern Ireland-wide breeding survey of lowland farmland birds, to include the tree sparrow to establish the population size and range of tree sparrows.

(ACTION: EHS)

- 5.6.2** By 2009, if the tree sparrow population appears to be declining across Northern Ireland as shown in surveys, then undertake research to investigate factors limiting to its population.

(ACTION: EHS)

- 5.6.3** By 2009, monitor the effectiveness of agri-environment schemes, in maintaining and enhancing habitats and populations across Northern Ireland for lowland farmland birds, including the tree sparrow.

(ACTION: EHS, DARD)

- 5.6.4** Continue to support BBS and encourage its growth and expansion in Northern Ireland so at some point in the future, tree sparrows may be surveyed in enough squares to allow them to be adequately monitored for ongoing trends, along with other key species.

(ACTION: EHS)

5.7 Communications and publicity

- 5.7.1** Continue to provide high quality advisory materials to landowners and seek opportunities to promote and publicise mechanisms for delivering positive management.

(ACTION: EHS, DARD)

5.8 Links with other action plans

- 5.8.1** It is likely that the implementation of this plan will also benefit the Northern Ireland populations of the following UK and/or Northern Ireland priority species:-

- House Sparrow *Passer domesticus*
- Linnet *Carduelis cannabina*
- Yellowhammer *Emberiza citrinella*

6 References

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List of Useful Acronyms

ASSI	Area of Special Scientific Interest
BAP	Biodiversity Action Plan
CEDaR	Centre for Environmental Data and Recording
CMD	Countryside Management Division
CMS	Countryside Management Scheme
DARD	Department of Agricultural and Rural Development
DCAL	Department of Culture, Arts and Leisure
DETI	Department of Enterprise, Trade and Industry
DOE	Department of the Environment
DRD	Department for Rural Development
EHS	Environment and Heritage Service
ESA	Environmentally Sensitive Area
ESCRs	Earth Science Conservation Review Site
HAP	Habitat Action Plan
JNCC	Joint Nature Conservation Committee
NMNI	National Museums of Northern Ireland
NESA	New Environmentally Sensitive Area
NIBG	Northern Ireland Biodiversity Action Group
NICMS	Northern Ireland Countryside Management Scheme
NICS	Northern Ireland Countryside Survey
NNR	National Nature Reserves
PPS	Planning Policy Statement
RA	Rivers Agency
RSPB	Royal Society for the Protection of Birds
SAC	Special Area of Conservation
SLNCI	Sites of Local Nature Conservation Importance
SoCC	Species of Conservation Concern
SPA	Special Protection Area
WFD	Water Framework Directive
WWT	Wildfowl and Wetlands Trust



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