

## Species Action Plan

# House Sparrow

*“The house sparrow, once more cockney than the cockneys, is now a rarity in London”* (Tony Blair, 2000)

*“ I call these my chickens, and I’m obliged to come every day to feed them,’ said a paralytic-looking white-haired old man in the shabbiest clothes, one evening as I stood there; then taking some fragments of stale bread from his pockets, he began feeding the sparrows, and while doing so, he chuckled with delight, and looked round from time to time to see if others were enjoying the spectacle.”* (WH Hudson, 1898)

## 1. Aims

- Raise awareness of the need for biodiversity conservation by focussing attention on the decline in the house sparrow and its importance as a cultural emblem.
- Establish the cause(s) of decline in the population of house sparrows and, if possible, undertake measures to reverse the decline.

## 2. Introduction

Until about ten years ago, the house sparrow (*Passer domesticus*) was one of the commonest birds in London and was one of the most numerous and regular visitors to garden bird tables. The ‘Cockney sparrer’ has always been a firm favourite with Londoners, reflecting its lively social behaviour and relatively tame nature. In Hudson’s day, sparrows had been present by the thousand in the parks of central London. However, on 10 September 2000, a London Natural History Society ‘Bird Walk’ around Hyde Park and Kensington Gardens failed to find a single one.

The house sparrow’s distribution is related to the pattern of human settlement. As a native species it extends from North Africa, throughout Europe and Central Asia and northwards beyond the Arctic Circle. It has also become established in a number of other countries as a result of introduction by man.

House sparrows have traditionally taken bread and scraps from garden bird tables as well as the seeds of grasses and flowers in parks and gardens, brownfield sites or road and railside land. When feeding young, insects such as aphids and caterpillars are a more important part of its diet.

The birds nest mainly in buildings – in roofs, cracks and crevices – or amongst creepers on walls and sometimes in dense shrubbery or trees. Under good conditions, sparrows can raise up to five broods per year, although two or three is more typical.

The house sparrow is generally regarded as sedentary, although some local movements occur. In rural areas, the birds traditionally move off to the cornfields after the end of the breeding season. Seasonal changes in London indicate similar dispersal, probably in search of autumn seed (Baker 1987).

### **3. Current Status**

There is much evidence that this once abundant bird has declined dramatically in recent years – as outlined below. It is now common knowledge that house sparrows have disappeared, or become far less common, in many places where they were formerly abundant. This applies both in the centre of London and many of the suburbs, as well as some of the surrounding towns and indeed a number of cities in other parts of the country such as Bristol and Edinburgh. For many years, the house sparrow received rather little attention from the scientific community. It seemed to be so common that its survival could be taken for granted. Very few observers have maintained records over a long time scale, and these have usually been as part of more general bird monitoring programmes. Some of this data is now proving invaluable in tracing the species' decline.

The issue has attracted media attention and frequent inquiries from the general public. On 1 December 1997 a question was put in the House of Lords "*Whether there has been a reduction in the numbers of sparrows in London; if so, to what is this reduction attributed?*" The Independent (15.5.00) offered a £5,000 reward to anyone who could solve the mystery of the disappearing house sparrow.

#### **3.2.1 Surveys based on London or other cities**

- A series of late autumn bird counts has been carried out in Kensington Gardens, dating back to the 1920s (Nicholson 1995). In 1925, 2,603 birds were recorded, but by 1948 the count had fallen to 885; this first decline has been attributed to the withdrawal of horse-drawn traffic, with its associated grain supply. For the next 20-30 years, the records suggest a continuing although less clear-cut decline, but then a far sharper decline from 544 birds in 1975 to just 81 in 1995, indicating a fall of around 85% at some time between 1975 and 1995. Just 8 birds were recorded in the October 2000 autumn bird count.
- A survey of house sparrows in gardens has been carried out by Helen Baker of the London Natural History Society since 1995, based upon weekly counts. The general trend is for a decrease in flock size, fewer gardens with ten or more fledglings and an increase in the number of gardens where no fledglings or indeed no sparrows at all have been seen. (Baker, publication expected 2004)
- A recent study at Wimbledon Park in south-west London by Dave Dawson, based on 'Standard Walk' methodology, has documented a 95% decline in house sparrows since 1989 (Dawson, unpublished).
- A decline of almost 98% has been observed in suburban Glasgow, from 4.9 birds/ha in 1959 to less than 0.1 per ha in 1997 (Summers-Smith 1999). A recent lack of large foraging flocks on ripening grain fields in late summer has been noted.

### **3.2.2. Evidence from national surveys**

- The BTO Garden Bird Feeding Survey shows that the average number of house sparrows fell by about 50% between 1978 and 1993 in Britain. Though this is a substantial decrease, it is considerably smaller than the decline observed in Kensington Gardens, Wimbledon Park and suburban Glasgow.
- The RSPB Wildlife Explorers Big Garden Birdwatch, which requires children to report on birds in their garden each year in January, shows a 50% decline in house sparrow numbers between 1979, when the survey began, and 2000.
- The National Breeding Birds Survey shows a statistically significant decline of 7% between 1994 and 2002 in Britain. Within London, the BBS decline has been more substantial, with a fall of about 70% between 1994-2002. This is the highest decline for any English Region. When the survey began in 1994 the house sparrow was the most numerous species in the London samples. By 1999 it had been overtaken by feral rock dove, wood pigeon, blackbird, carrion crow and starling. However, the data up to 2000 would seem to indicate that there were still some pockets with high numbers, especially in northeast London.
- By 2002, statistics from the Common Birds Census and Breeding Bird Survey show that over 25 years the decline in the UK population had reached over 60% and the species was placed on the Red List of Species of Conservation Concern.
- House sparrow declines have been recorded from many other countries in Western Europe, including Scandinavia, Netherlands, Belgium, Germany and Austria, although good numbers are still reported by casual observers visiting Paris and some other parts of France.

## **4. Specific Factors Affecting the Species**

A number of factors have been put forward to account for the observed changes in the sparrow population. Some of the factors outlined below could have significant impacts in particular localities and it is possible that they are acting in combination. Research is needed to try to identify the most important factors – only then will it be possible to put in place any effective remedial measures. It is always possible that some as yet unidentified factor is also involved.

### **4.1 Factors relating to food supply**

- **Reduction in insect food supply for the young:** A study in Hamburg has blamed a lack of aphids in early spring for a lack of breeding success in house sparrows in that city. (Mitschke *et al.*, 2000). A decline in the availability of invertebrates (such as aphids) for feeding young is also suggested as a major factor in house sparrow decline by Summers-Smith (1999).
- **Impact of lead-free petrol on aphids:** There is a theory that lead free petrol might contain chemicals which reduce the supply of aphids (Summers-Smith, 2000).

- **Changes in agricultural practice:** These may affect the London house sparrow population especially in late summer/autumn, when birds leave their nesting territories in residential areas and move off in seed-feeding flocks. No doubt some London birds disperse into the surrounding countryside. At this time, changes in agricultural practice such as the switch to autumn sowing of cereals and lack of stubble as autumn and winter feeding habitat may have some impact. Additionally, if the London population has traditionally been augmented from time to time by surplus birds from nearby rural populations, a fall in breeding success in rural populations could reduce the number of immigrants into London.
- **Reduction in seed supply in autumn:** In both central London and the suburbs, there has been a marked reduction in brownfield land in recent decades, as it is developed more quickly.

## **4.2 Predation**

Another theory relates to the recent increase in sparrowhawk and magpie numbers. A single species of predator is normally only likely to act as a major factor in population control of a given prey species if it is a broad-based predator, able to turn to other food supplies as a favoured prey species declines in response to predation pressure. Another significant predator is the domestic cat, and its numbers are of course not limited in the same way by natural population regulation. However, no evidence of a significant increase in the domestic cat population has been forthcoming.

## **4.3 Disease**

Declines on this scale have, in some other species, been attributed to disease. A virus or *Salmonella* infection has been suggested. A form of *Salmonella* has been found on bird tables.

## **4.4 Changes relating to availability of nest sites**

Changes in roof design may be an issue in some areas of older housing undergoing renovation, as modern roof repairs may prevent access to the roof space for birds. However, a decline has also been noted in areas where roof replacement is less widespread.

In addition to re-construction, roofs are often subject to pesticide treatment. Whilst it is recognised that certain pesticides are harmful to bats, no such issue has been recognised for birds.

## **4.5 Pest control**

Although the house sparrow is still recognised as a pest species in some quarters and may be controlled legally (see below), there is not thought to be an appreciable amount of control undertaken in London at present.

# **5. Current Action**

## **5.1 Legal status**

The house sparrow is still classified as a pest species in relation to the Wildlife & Countryside Act (1981, as amended). It was originally listed as a bird that may be controlled at any time of year, but is now covered by legislation that provides for an annually reviewed general licence to control a specified list of pest species, with the land owner's consent (Statutory Instrument no 3010 1992).

## **5.2 Mechanisms targeting the species**

*These current actions are ongoing. They need to be supported and continued in addition to the new action listed under Section 7.*

### **5.2.1 Survey and research**

A number of on-going surveys have been summarised above under section 3.

In the spring and summer of 2000, the RSPB ran a survey on House sparrow nesting behaviour amongst its Wildlife Explorers (youth section), which investigated the relationship between nesting frequency and the age of houses, plus the location of nest sites and use of nest boxes.

London Wildlife Trust's garden survey for 2000/1 includes data on House sparrows.

The DETR commissioned an in depth study to investigate evidence from a wide range of existing datasets. This report has now been published (Crick *et al.*, 2002).

On 20<sup>th</sup> February 2004 the Department of the Environment, Food and Rural Affairs (DEFRA) organised a conference at City Hall *on* to bring all the researchers together. A consensus seems to be emerging that poor survival linked to lack of food is the main factor affecting house sparrows in farming areas. However, the causes in urban areas remain less clear – it may be we are seeing the results of an interaction between a number of the factors noted in section 4 above. RSPB has recently appointed a research officer to undertake detailed scientific studies in London.

### **5.2.2. Suggested public action**

The Department for Environment, Food and Rural Affairs has published a leaflet outlining ways in which the public can try to help the house sparrow.

## **6. Objectives, Actions and Targets**

Most of these actions are specific to this species. However, there are other, broader actions that apply generically to a number of habitats and species. These are located in a separate 'Generic Action' section which should be read in conjunction with this document. There are generic actions for Site Management, Habitat Protection, Species Protection, Ecological Monitoring, Biological Records, Communications and Funding.

*Please note that the partners identified in the tables are those that have been involved in the process of forming the plan. It is not an exclusive list and new partners are both welcomed and needed. The leads identified are responsible for co-ordinating the actions – but are not necessarily implementers.*

**Objective 1 To understand the key factor(s) affecting the population and distribution of house sparrows in London through contributing to fundamental scientific research**

**Target: To have the results of scientifically valid research to explain the decline by 2010**

Action	Target Date	Lead	Other Partners
1.1 Collate existing research information of the status of house sparrows and possible causes of decline, with emphasis on urban areas	Ongoing	GLA	RSPB, LNHS, BTO
1.2 Contribute to the wider debate regarding key issues which should be investigated in research projects	Ongoing	GLA	RSPB, LWT, LNHS, BTO
1.3 Establish links with other relevant research projects and house sparrow surveys in London	Ongoing	GLA	RSPB, LNHS, LAs, BTO
1.4 Support research into house sparrows in London, in liaison with national research projects, including fund raising and contributing local knowledge	2010	GLA	RSPB, LWT, LNHS, LAs
1.5 Review progress and outcome of other research projects on house sparrow decline and draw on the results of this review to revise the proposed actions if necessary	Annually	GLA	RSPB, LNHS, LWT, BTO

**Objective 2 To involve people in London and raise awareness of house sparrows**

**Target: Commission, complete and evaluate survey by the end of 2003**

Action	Target Date	Lead	Other Partners
2.1 Draw up a proposal for survey of house sparrow population and distribution in London involving public participation	Achieved 2001	GLA	LWT, LNHS, LA
2.2 Commission survey to clarify the likely factors affecting house sparrows in	Survey Achieved	RSPB	GLA, LWT, LNHS, LAs

London, evaluate and publicise results	ed 2002, Report publish ed 2003		
2.3 Analyse survey data to clarify the likely factors affecting house sparrows in London	2004	GLA	
2.4 Publish the results of the public survey in an appropriate journal	2005	GLA	RSPB, LWT
2.5 Promote the involvement of the public in constructing a large number of sparrow nest boxes in London through establishing 'sparrow champions' in London boroughs	Ongoing	RSPB	LAs, LBBF
2.6 Maintain the public interest in house sparrow decline through appropriate public activities	2005	LWT	RSPB, RPA, LAs, LNHS, LBP Gardens HAP

## Relevant Action Plans

### London Plans

Private Gardens; Wasteland; Parks, Amenity Grasslands and City Squares; Farmland Audit.

### National Plans

Cereal Field Margins; Ancient and/or Species Rich Hedgerows; Urban Habitat Statement.

## Key References

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## Abbreviations

BTO - British Trust for Ornithology  
GLA - Greater London Authority  
LA - Local Authorities

LWT - London Wildlife Trust  
LNHS - London Natural History Society  
RSPB - Royal Society for the Protection of birds

LBBF - London Boroughs Biodiversity Forum

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