

## 16 **BITTERN SPECIES ACTION PLAN**

### 16.1 **INTRODUCTION**

Bitterns *Botaurus stellaris* are secretive birds which are confined almost entirely to lowland marshes dominated by Common Reed. They feed predominantly on fish (notably eels) but they also take a wide variety of other foods such as amphibians, insects, small birds and mammals. The males advertise their territories by a characteristic deep booming noise which allows the breeding population to be well known.

Up to the 17th century bitterns were widespread throughout England but land drainage and hunting led to a steady decline. By the 1880s they were extinct as a breeding species in this country. They recolonized in the early 1900s. At that time there were estimated to have been around 80 booming males. Since then there has been a steady decline linked to the loss of suitable habitat. There were only 16 booming males in the UK in 1994.

In the winter the resident population is increased by the arrival of birds from the continent. The size of the influx is dependent on the severity of the weather but is never great. The total wintering population is generally less than 100 birds.

Nature conservation organisations have given a high priority to efforts to arrest and then reverse the decline. English Nature, the RSPB and others are putting a great deal of effort into managing existing breeding sites for Bitterns and the creation of new sites. In Hertfordshire, the Lee Valley is particularly important for wintering Bitterns and has the potential to make a significant contribution to their conservation. It regularly supports 3 or 4 Bitterns throughout the winter and it could with appropriate management support breeding Bitterns.

### 16.2 **CURRENT STATUS**

The total European population of Bitterns was estimated to be 2500-2700 pairs in 1976. There was a 30-50% decline after the 1978/79 winter. Bittern numbers appear to be declining in 17 countries, stable or fluctuating in 9, and increasing in only 3. In the UK the Bittern is a declining, localised and rare breeding species. Breeding pairs are confined almost entirely to lowland marshes in Norfolk, Suffolk and Lancashire. In 1994 there were only 15 or 16 booming males. Numbers are boosted in winter by continental immigrants when between 30 and 100 birds are recorded each year.

Records published in the annual *London Bird Report* and *Birds of the Lee Valley* show that until the late 1960s the Bittern was an irregular visitor to the Lee Valley. During the 1970s between 1 and 2 birds wintered in the Lee Valley below Ware, with the same pattern during the 1980s. Exceptions to this were extremely harsh winters such as 1978/79 and 1981/82 when 7 and 6 birds were recorded. Since 1991 the number of

wintering Bitterns has increased with 4 or 5 birds present in recent winters, and 5 to 7 in 1995/96.

In recent years the majority of records have come from Rye Meads/Rye House Marsh and Cheshunt gravel pits - particularly 70 Acres Lake where up to 4 birds have been present at one time. The largest areas of reedbed in the Lee Valley are at Rye Meads and one would expect this to be a favoured area. The birds feed extensively in the reed fringes of the sewage treatment lagoons and in ditches around the lagoons. During the day they roost in the larger reedbeds of the Herts and Middlesex Wildlife Trust nature reserve or the RSPB Rye House Marsh reserve. Occasional records come from other sites in Hertfordshire, most notably from Tring Reservoirs and Stocker's Lake.

## **16.3 CURRENT FACTORS CAUSING LOSS OR DECLINE**

### **16.3.1 Loss of Habitat**

The quantity of reedbed is declining. Surveys indicate only 5000 hectares of reed in the UK and only 53 sites greater than 20 ha. There was a greater than 50% decline in the Norfolk and Suffolk Broads between 1946 and 1977. Increased awareness, conservation and protection in recent years has not stopped the decline. There has been a loss of 5-10% in England over the last decade and further losses are predicted. The main causes have been uncontrolled natural succession leading to drier habitats, conversion to grassland by grazing, and salt water incursion due to the failure of sea defences.

In Hertfordshire the situation is slightly different in that the major loss of reed is historical. In recent years small reedbeds have developed around wet gravel workings but these are now under threat. The total area of reedbed is only about 12 hectares.

### **16.3.2 Declining Reedbed Quality**

The quality of reedbed is also declining. If Bitterns are indicators of reedbed quality, then 19 out of 30 sites which have held Bitterns are no longer of sufficient quality. The principal cause appears to be natural vegetation succession leading to drier and /or more wooded habitat, and a lack of management to control it. Few of the reedbeds in Hertfordshire are in ideal management regimes.

### **16.3.3 Water Quality**

Water quality is also important. Eutrophication (high levels of nutrients) can cause reed die-back and problems of rehabilitation. High nitrate and phosphate cause the breakup and degeneration of floating reed-mats, and lead to anoxic (without oxygen) sediments which do not support food or reed colonisation. Algal blooms can decrease feeding efficiency because of turbidity (cloudiness) and direct fish kills. Pollution which contaminates their food may also contaminate Bitterns.

### **16.3.4 Other Factors**

Other factors which may affect Bitterns include hard weather, excessive water abstraction, persecution and egg collecting.

## **16.4 CURRENT ACTION**

Bitterns and reedbeds are given high priority for action within "Biodiversity: The UK Steering Group Report", which includes costed action plans for both.

English Nature has a Species Recovery Programme for Bitterns. Key actions are to improve the management of existing reedbeds and to encourage the creation of new, large reedbeds.

The RSPB has a species action plan for Bitterns and a habitat action plan for reedbeds.

The Lee Valley Conservation Group have prepared a Bittern Action Plan for the Lee Valley. The principal partners in this plan are the RSPB, the Lee Valley Park Authority, The Wildlife Trust, English Nature, Thames Water Utilities and the Environment Agency. This Bittern Action Plan for Hertfordshire is largely a summary of the Lee Valley plan.



## **16.5 BITTERN ACTION PLAN OBJECTIVES**

To maintain all existing reedbeds by appropriate management.

To complete site management plans/statements for all reedbeds.

To produce at least 2 large reedbeds complexes by creating 10 ha at Cheshunt gravel pits and 10 ha at Rye Meads within 5 years.

To increase the number of small reedbeds by creating a total of at least 5 ha at other sites.

To increase the number of wintering Bitterns to 10 within 10 years.

To increase the number of regular wintering sites to 4 within 10 years.

To attract at least 1 booming male within the next 10 years.

## **16.6 PROPOSED ACTION**

### **16.6.1 Policy and Legislation**

**B1.** Support Special Protection Area status for the Lee Valley.

**Action: LVCG.**

**B2.** Lobby to ensure adequate recognition of the nature conservation value of the valley, and particularly Bitterns and reedbeds, is included within the new Lee Valley Park Plan review.

**Action: LVCG.**

### **16.6.2 Site Safeguard and Management**

**B3.** Continue active management to maintain and enhance reedbeds in existing nature reserves at Rye Meads and Amwell, in a condition suitable for Bitterns.

**Action: HMWT, RSPB (RM), SASAG (Am).**

**B4.** Ensure that appropriate management is applied to all reedbeds over 0.25 ha by 2000, expanding the total area from 12 to 20 ha. There is a need to have drier reedbeds as well as the wet reedbeds preferred by Bitterns. An assessment should be carried out by 2000 for each existing reedbed, the most appropriate condition for each decided, and management planned accordingly.

**Action: HMWT, RSPB, LVRPA.**

**B5.** Create a further 20 ha of reedswamp either on mineral extraction sites or suitable land coming out of agricultural production, by 2007.

**Action: LVCG, HMWT, RSPB, LVRPA, Mineral Operators.**

### **16.6.3 Species Management and Protection**

No action proposed.

#### **16.6.4 Advisory**

**B6.** Distribute the full Lee Valley Bittern Action Plan report during 1997 and updates as appropriate, to all relevant interest groups, landowners and site managers, including statutory bodies, County Councils, District Councils, Parish Councils, LVRPA members and the Lee Valley Anglers Consortium.

**Action:** LVCG.

#### **16.6.5 Future Research and Monitoring**

**B7.** Monitor and collate all records of Bitterns.

**Action:** LVCG, HertsBC, HMWT, RSPB.

**B8.** Carry out research into the feeding ecology and habitat preferences of Bitterns in the Lee Valley, by 2001.

**Action:** UH, RSPB.

**B9.** Assess feasibility of colour-ringing and radio-tagging Bitterns in the Lee Valley, to investigate their movements and use of sites within the valley, by 2000. If feasible implement plan from 2001.

**Action:** RMRG, RSPB.

#### **16.6.6 International**

**B10.** Liaise with appropriate bodies on maintenance of summering habitat, if the origins of Bitterns wintering in the Lee Valley can be ascertained.

**Action:** RSPB.

#### **16.6.7 Communication and Publicity**

**B11.** Use the Lee Valley Conservation Group forum to exchange and disseminate information on Bitterns and reedbeds.

**Action:** LVCG.

**B12.** Issue regular press releases on the progress of Bittern projects.

**Action:** RSPB, HMWT, LVRPA.

**B13.** Maintain the Bittern Watch Point at Cheshunt pits as a joint LVRPA/RSPB project.

**Action:** RSPB, LVRPA.

**B14.** Develop interpretative programmes and media to communicate reedbed and Bittern conservation to the public.

**Action:** RSPB, LVRPA.

**B15.** Develop education courses for schools and colleges on the topic of Bitterns and reedbeds, by 2000.

**Action:** RSPB, LVRPA.

**B16.** Organise a conference in 1998 to promote work on the bird species targeted through the local biodiversity action plan.

**Action: HertsBC.**