

## A6.13a Bittern *Botaurus stellaris* (breeding)

### 1. Status in UK

Biological status		Legal status		Conservation status	
Breeding	✓	Wildlife and Countryside Act 1981	General Protection Schedule 1(1)	Species of European Conservation Concern	<b>SPEC 3</b> Unfavourable conservation status ( <b>vulnerable</b> ) but not concentrated in Europe
Migratory	✓	Wildlife (Northern Ireland) Order 1985	General Protection Schedule 1(1)	(UK) Species of Conservation Importance	<b>Table 2</b>
Wintering	✓	EC Birds Directive 1979	Annex I Migratory	All-Ireland Vertebrate Red Data Book	<b>Extinct</b>

### 2. Population data

	Population sizes (booming males)	Selection thresholds	Totals in species' SPA suite
<b>GB</b>	20	1	18 (90% of GB population)
<b>Ireland</b>			
<b>Biogeographic population</b>	10,044	100	18 (0.2% of biogeographical population)

GB population source: Stone et al. 1997

Biogeographic population source: Hagemeyer & Blair 1997

### 3. Distribution

The global distribution of the Bittern extends from western Europe, across central Asia to Sakhalin and north Japan. An isolated population occurs in southern Africa. Across this extensive area, its breeding range is confined to wetland areas supporting extensive stands of the Common Reed *Phragmites australis*.

Two sub-species are recognised. The nominate race occurs throughout the Palearctic, whilst those breeding in southern Africa below to the race *B. stellaris capensis*. The distribution of Bitterns in eastern and central Asia is largely continuous. In Europe, however, the range is very discontinuous. This is a consequence of the loss of habitat and the isolated nature of suitable remaining wetland areas. Accordingly, although Bitterns occur in most European countries, they are highly localised (Hagemeyer & Blair 1997).

Bitterns are currently one of the rarest breeding birds in the UK, with the entire population (20 booming males) confined to England. Here, the species breeds regularly in reedbeds in the counties of Norfolk, Suffolk and Lancashire. In the past, it bred in other counties within the UK (Holloway 1996). Many of the significant former breeding sites, along with current ones, are currently subject to active habitat management and restoration to enhance their suitability for this species.

#### **4. Population structure and trends**

The Bittern's European population is estimated at 10,000-12,000 pairs (Hagemeijer & Blair 1997).

At one time a locally numerous breeding species in the UK, Bitterns became extinct by the 1880s as wetlands were drained for agricultural purposes and the remaining birds were persecuted by egg and skin collectors and by 'sportsmen'.

Breeding was established again in the UK in 1911 and the population grew to an estimated peak of 78-83 booming males in the mid-1950s (Day & Wilson 1978). The increase was almost certainly a result of legislative protection, the protection of existing reedbeds as nature reserves, and the flooding of coastal areas as war-time defence against invasion, with the coincident growth of extensive stands of reed. As these reedbeds matured, they accumulated reed-litter and dried out, pools and dykes became choked with reed growth and became unsuitable for Bitterns. Numbers have also been adversely affected by changes to food supply, a lowering of water tables due to high levels of ground water abstraction, and local pollution. As a result of these negative factors, numbers have fallen steadily, reaching what was probably their lowest point in 1997 of an estimated 11-12 'booming' males. The population has since increased to 19-22 'booming' males in 1999 (Gilbert *et al.* 1999) with 20 males (Stone *et al.* 1997) accepted by this review for standardised reporting purposes.

The Bittern's decline in the UK has been mirrored in populations elsewhere in Europe (Tucker & Heath 1994) and the species is consequently regarded as being of conservation concern in both European and UK contexts.

#### **5. Protection measures for population in UK**

##### **SPA suite**

In the breeding season, the UK's SPA suite for Bittern supports, on average, 18 booming males. This amounts to about 90% of the British breeding population whilst the suite contains about 0.2% of the international population. Bitterns do not breed in Northern Ireland. This total is contained within five sites (Table 6.13a.1) where Bittern has been listed as a qualifying species.

##### **Other measures**

A number of reedbeds outside the SPA suite have been subject to, or are programmed for, active habitat management in order to make them more attractive to breeding Bitterns. The essential action at these sites is to re-wet the reedbeds (RSPB *et al.* 1994; Tyler 1994). This can be achieved by lowering the bed level by reed litter-removal and/or by raising water levels through sluicing and bunding. New feeding areas can be created by clearing dykes and deepening existing pools (Tyler 1994). Reedbed management within and outwith the SPA suite is expected to provide habitat suitable for 30-40 'booming' Bitterns.

National and international conservation concern for the species is reflected in action plans on both scales for this species (Heredia *et al.* 1996; Biodiversity Steering Group 1995).

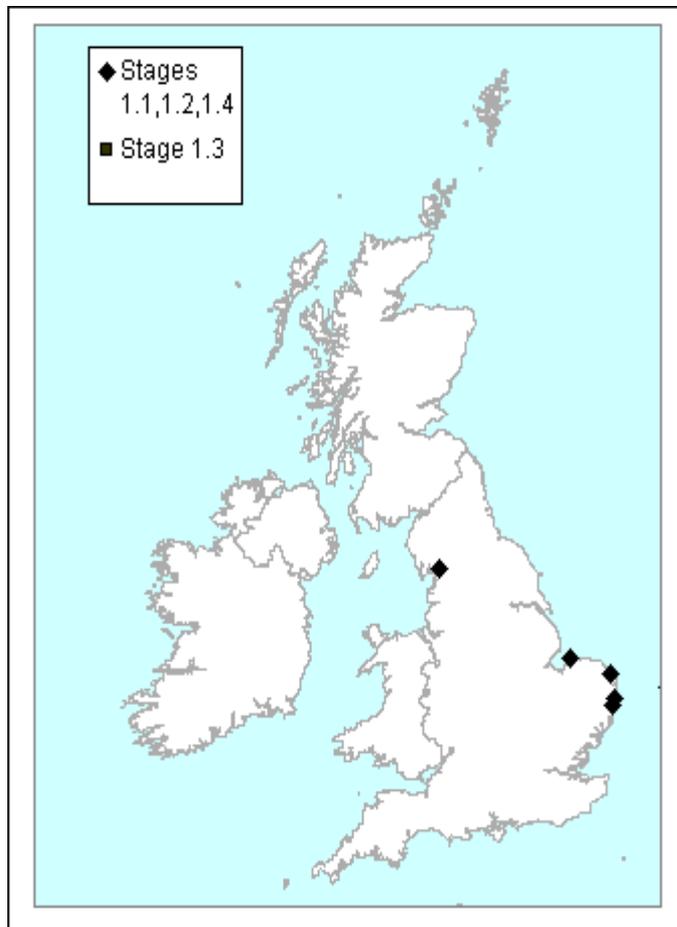
New reedbed creation is in progress in areas of limited existing wildlife interest with the aim of establishing a substantial area for breeding Bitterns in the near future. The UK Bittern Action Plan (Biodiversity Steering Group 1995) seeks to provide sufficient habitat for 100 'booming' males by 2020. Sea-level rise poses a significant threat to Bittern habitat in south-eastern England and a considerable area of new reedbed will need to be created to compensate

for their inevitable loss or degradation. Therefore, the essential requirement is to create a further 1,000 ha of new reedbed in the bird's traditional stronghold in south-eastern England, but safe from the impact of sea-level rise.

## 6. Classification criteria

All sites in the UK that were known to regularly support more than 1% of the national breeding population of Bitterns (booming males) were considered under Stage 1.1, and all were selected after consideration of Stage 2 judgements. The distribution of the four sites encompasses the core of the remaining range of Bitterns in the UK, notably extensive coastal wetlands in East Anglia where current active conservation management is being undertaken for this species.

### Distribution map for breeding Bittern SPA suite



**Table 6.13a.1 – SPA suite**

<b>Site name</b>	<b>Site total (booming males)</b>	<b>% of biogeo- graphical population</b>	<b>% of national population</b>	<b>Selection stage</b>
Benacre to Easton Bavents	1	<0.1	5	1.1
Broadland	3	<0.1	15	1.1
Leighton Moss	4	<0.1	20	1.1
Minsmere - Walberswick	7	0.1	35	1.1
North Norfolk Coast	3	<0.1	15	1.1
<b>TOTALS</b>	<b>18</b>	<b>0.2%</b>	<b>90%</b>	