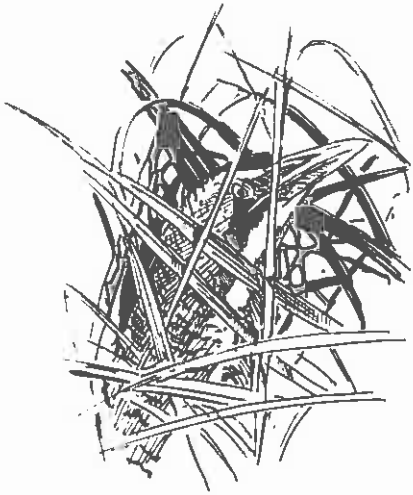


Bittern

Botaurus stellaris



Status

Red listed: BD, HD, BR, SPEC 3 (V)
Schedule 1 of WCA 1981
Annex I of EC Wild Birds Directive

National monitoring

Annual breeding surveys of known sites (RSPB).
Rare Breeding Birds Panel.

Population and distribution

The bittern is extremely rare in Britain, and by 1886 had ceased to breed due to persecution. Recolonisation took place in Norfolk in the early 1900s, followed by a slow increase and spread up to the mid-1950s. After this there began a decline that still continues (*Red Data Birds*). This is mainly due to loss of habitat and gradual unsuitability of existing habitat. Less than 20 males have been recorded booming in recent years (RSPB 1998) and the RSPB is monitoring all recently occupied sites. Winter sightings are scattered throughout the UK, with higher numbers in south-east England. Between 50 and 150 birds winter in the UK (*Winter Atlas*), with higher numbers during more severe winters.

Ecology

Bitterns usually occur in large reedbeds (>20 ha). Some males start booming in February, but the main period is mid-March to mid-June, though this varies between sites. The booming vocalisation of the male is very variable in the frequency with which it is given and the distance over which it can be heard. Eggs are laid from late March to May. Chicks leave the nest and disperse into the reeds at about 12 days old, fledging between June and August. In winter, bitterns will be found in a slightly wider range of habitats, ranging from wet ditches with cover, to the more usual large stands of wet reedbed.

Breeding season survey – population

Information required

- maximum number of booming males heard at any one time on a single visit
- summary map showing location of all booming males heard over three visits.

Number and timing of visits

At least three visits: first week of April, end of April or beginning of May, and mid-May. If any booming is heard, several further visits a few days apart will be necessary to confirm that the bird remains present for at least a week.

Time of day

Preferably in the two hours before dawn, otherwise in the two hours after dusk.

Weather constraints

Calm conditions are best.

Sites/areas to visit

Reedbeds where booming has been reported or where wintering birds have been recorded in recent years.

Equipment

- Schedule 1 licence
- 1:10,000 map of the area to be visited
- A4 photocopied map of the survey area for use in the field
- compass
- clipboard.



Safety reminders

Ensure someone knows where you are working and what time you expect to return. If entry into the reedbed is unavoidable, try to work in pairs and use a map that shows safe and unsafe areas. Do not enter reedbeds in the dark, and if you are in one in the evening make sure you get out before it becomes dark.

Disturbance

Avoid trampling damage – newly created paths can invite predators. Be aware of the presence of other rare breeding birds such as bearded tits and marsh harriers which you may affect by disturbance.

Methods

If you hear a booming male at a site that is not already being covered by the RSPB, contact the Conservation Science Department at The Lodge (address in the *Introduction*). They will be able to obtain good-quality sound recordings of the booms for analysis to identify individuals and give a more accurate population estimate (Gilbert et al 1994).



It is important to confirm the presence of a booming male at a site for more than one week. On hearing one it will therefore be necessary to make several further visits, a few days apart. If more than one booming male is suspected within a site, listen at a position from which they can be heard together or co-ordinate a team of people to listen for, time and map booming males. Listen for unusual booming or characteristic booming patterns as this can help to distinguish between individuals. Assume that the number of males present at each site is equal to the maximum number of birds heard booming at any one time on a single visit, unless you have evidence to the contrary (eg very distinctive booming patterns). The more accurately the booming periods are known at each site the easier it is to produce a national population figure for the species.

Map the location of any booming males. This can be done by triangulation. Pick three vantage points around the bird and mark them on the field map. Take a bearing to the booming male from each. Mark the bearings on the map with a pen and ruler – the bittern is where all

three lines intersect. Do this on at least three occasions, at least three days apart. Record any sightings on the same map.

Breeding season survey – breeding success

The best way to obtain an indication of breeding success is by observing feeding flights and juveniles later in the season. Juveniles have brighter, sandier plumage and bright yellow legs. Report any sightings of summering birds away from breeding sites as above.

Winter survey

Record any sightings of bitterns between August and February.

References

- Gilbert, G, McGregor, P K and Tyler, G (1994) Vocal individuality as a census tool: practical considerations illustrated by a study of two rare species. *J. Field Ornithology* 65: 335–348.
- RSPB (1998) *The Bittern Monitoring Report 1998*. RSPB unpubl (confidential).