Botaurus stellaris -- (Linnaeus, 1758)

ANIMALIA -- CHORDATA -- AVES -- PELECANIFORMES -- ARDEIDAE

**Common names:** Eurasian Bittern; Bittern; Butor étoilé; Common Bittern

### European Red List Assessment

<table>
<thead>
<tr>
<th>European Red List Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC -- Least Concern, (IUCN version 3.1)</td>
</tr>
</tbody>
</table>

#### Assessment Information

<table>
<thead>
<tr>
<th>Year published:</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date assessed:</td>
<td>2015-03-31</td>
</tr>
<tr>
<td>Assessor(s):</td>
<td>BirdLife International</td>
</tr>
<tr>
<td>Reviewer(s):</td>
<td>Symes, A.</td>
</tr>
<tr>
<td>Compiler(s):</td>
<td>Ashpole, J., Burfield, I., Ieronymidou, C., Pople, R., Van den Bossche, W., Wheatley, H. &amp; Wright, L.</td>
</tr>
</tbody>
</table>

#### Assessment Rationale

**European regional assessment:** Least Concern (LC)
**EU27 regional assessment:** Least Concern (LC)

In Europe this species has an extremely large range, and hence does not approach the thresholds for Vulnerable under the range size criterion (Extent of Occurrence 10% in ten years or three generations, or with a specified population structure). The population trend appears to be stable, and hence the species does not approach the thresholds for Vulnerable under the population trend criterion (30% decline over ten years or three generations). For these reasons the species is evaluated as Least Concern in Europe.

Within the EU27 this species has a very large range, and hence does not approach the thresholds for Vulnerable under the range size criterion (Extent of Occurrence 10% in ten years or three generations, or with a specified population structure). The population trend appears to be increasing, and hence the species does not approach the thresholds for Vulnerable under the population trend criterion (30% decline over ten years or three generations). For these reasons the species is evaluated as Least Concern in the EU27.

### Occurrence

#### Countries/Territories of Occurrence

**Native:**
Albania; Armenia; Austria; Azerbaijan; Belarus; Belgium; Bosnia and Herzegovina; Bulgaria; Croatia; Cyprus; Czech Republic; Denmark; Estonia; Finland; France; Georgia; Germany; Greece; Hungary; Italy; Latvia; Lithuania; Luxembourg; Macedonia, the former Yugoslav Republic of; Malta; Moldova; Montenegro; Netherlands; Poland; Portugal; Romania; Russian Federation; Serbia; Slovakia; Slovenia; Spain; Sweden; Switzerland; Turkey; Ukraine; United Kingdom

**Vagrant:**
Faroe Islands (to DK); Iceland; Ireland, Rep. of; Liechtenstein; Norway; Canary Is. (to ES)

### Population

The European population is estimated at 37,600-66,400 calling or lekking males, which equates to 75,300-133,000 mature individuals. The population in the EU27 is estimated at 11,000-18,600 calling or lekking males, which equates to 21,900-37,100 mature individuals. For details of national estimates, see Supplementary PDF.

### Trend

In Europe the population size is estimated to be stable. In the EU27 the population size is estimated to be increasing. For details of national estimates, see Supplementary PDF.

### Habitats and Ecology

Populations breeding on the Atlantic coast of Europe and in the Mediterranean are largely sedentary due to the relatively mild winters (Newbery et al. 1996) (although they may make local dispersive movements related to rainfall) (Hancock and Kushlan 1984). Continental populations are mainly migratory however...
Newbery et al. 1996, Kushan and Hancock 2005) with a marked post-breeding dispersal of immatures (Kushan and Hancock 2005). The species breeds from March to June in Eurasia. The species has highly restrictive breeding habitat requirements (Martínez-Vilalta et al. 2015). It shows a strong preference for quiet lowland marshes around lakes and rivers (less than 200 m Asl) (Kushan and Hancock 2005) with extensive dense young reedbeds of Phragmites spp. (e.g. with one to three years worth of new growth (Marion et al. 2000, Puglisi et al. 2005) but still maintaining some old or dead stems) that are flooded but are fairly shallow (Martínez-Vilalta et al. 2015) (less than 30 cm deep) (Newbery et al. 1996), have few fluctuations in water-level (Martínez-Vilalta et al. 2015), have low acidity (Kushan and Hancock 2005) and are surrounded by clear open areas (Martínez-Vilalta et al. 2015) of deeper water, which is maintained into the driest part of the breeding season (Gilbert et al. 2005). Breeding adults are more attracted to unfragmented (Puglisi et al. 2005) reedbeds over 20 ha in area, although smaller sites with networks of reed-fringed waterways or open wetland habitats with a number of small reedbeds (Newbery et al. 1996) (greater than 100 m) (Gilbert et al. 2005) over a wide area may also be used (Newbery et al. 1996). The species frequents a more varied range of habitats outside of breeding season, foraging on rice-fields, watercress beds, gravel pits, fish farms, ditches, sewage farms (Martínez-Vilalta et al. 2015), small ponds and wet grassy areas (Kushan and Hancock 2005) as well as marshes and reedbeds (Martínez-Vilalta et al. 2015). It also forages in running water when still waterbodies freeze during the winter (Hancock and Kushlan 1984). Its diet varies depending on the site and season although it predominantly takes fish (particularly cyprinids and eels) and amphibians as well as adult and larval insects, spiders, crustaceans, molluscs, snakes, lizards, birds, nestlings and small mammals (Martínez-Vilalta et al. 2015). The nest is a pad of reeds and other vegetation (Kushan and Hancock 2005) constructed close to or floating on water (Martínez-Vilalta et al. 2015) amidst dense reedbeds (Kushan and Hancock 2005, Martínez-Vilalta et al. 2015).

<table>
<thead>
<tr>
<th>Habitats &amp; Altitude</th>
<th>Importance</th>
<th>Occurrence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Artificial/Aquatic - Aquaculture Ponds</td>
<td>suitable</td>
<td>non-breeding</td>
</tr>
<tr>
<td>Artificial/Aquatic - Excavations (open)</td>
<td>suitable</td>
<td>non-breeding</td>
</tr>
<tr>
<td>Artificial/Aquatic - Ponds (below ha)</td>
<td>suitable</td>
<td>non-breeding</td>
</tr>
<tr>
<td>Artificial/Aquatic - Wastewater Treatment Areas</td>
<td>suitable</td>
<td>non-breeding</td>
</tr>
<tr>
<td>Artificial/Terrestrial - Arable Land</td>
<td>suitable</td>
<td>breeding</td>
</tr>
<tr>
<td>Wetlands (inland) - Bogs, Marshes, Swamps, Fens, Peatlands</td>
<td>major</td>
<td>breeding</td>
</tr>
<tr>
<td>Wetlands (inland) - Bogs, Marshes, Swamps, Fens, Peatlands</td>
<td>major</td>
<td>non-breeding</td>
</tr>
<tr>
<td>Altitude</td>
<td>max. 1400 m</td>
<td>Occasional altitudinal limits</td>
</tr>
</tbody>
</table>

Threats

The species is threatened mainly by the loss of Phragmites reed marshes (Kushan and Hancock 2005) owing to habitat alteration through drainage (Kushan and Hancock 2005), direct destruction (Martínez-Vilalta et al. 2015), changes in traditional management (e.g. changes to reed harvesting regimes) (Marion et al. 2000), sea level rise and salt water intrusion (Newbery et al. 1996), the effects of wave action from boat traffic at the edge of open water (Marion et al. 2000), and pollution (Marion et al. 2000, Martínez-Vilalta et al. 2015) (either eutrophication which modifies fish populations within reedbeds or pesticides which may reduce the species's survival) (Marion et al. 2000). Disturbance from humans during the nesting period is also a threat (Newbery et al. 1996, Marion et al. 2000, Kushan and Hancock 2005) (e.g. disturbance from reed cutting (Kushan and Hancock 2005), noisy recreation and water-sports (Newbery et al. 1996, Marion et al. 2000, Kushan and Hancock 2005), motor vehicles and hunting (Kushan and Hancock 2005)). The hunting of adults and collecting of eggs and chicks still occurs in some areas (Martínez-Vilalta et al. 2015), and the species may suffer high mortalities in very cold winters (especially in sedentary populations) (Marion et al. 2000).

<table>
<thead>
<tr>
<th>Threats &amp; Impacts</th>
<th>Impact and Stresses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Threat (level 1)</strong></td>
<td><strong>Threat (level 2)</strong></td>
</tr>
<tr>
<td>Agriculture &amp; aquaculture</td>
<td>Agro-industry farming</td>
</tr>
<tr>
<td><strong>Timing</strong></td>
<td><strong>Scope</strong></td>
</tr>
<tr>
<td>Ongoing</td>
<td>Majority (50-90%)</td>
</tr>
</tbody>
</table>

Ecosystem degradation
<table>
<thead>
<tr>
<th>Threat (level 1)</th>
<th>Threat (level 2)</th>
<th>Impact and Stresses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biological resource use</td>
<td>Fishing &amp; harvesting aquatic resources (motivation unknown/unrecorded)</td>
<td><strong>Timing</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ongoing</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Stresses</strong></td>
</tr>
<tr>
<td>Biological resource use</td>
<td>Hunting &amp; trapping terrestrial animals (intentional use - species is the target)</td>
<td><strong>Timing</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ongoing</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Stresses</strong></td>
</tr>
<tr>
<td>Climate change &amp; severe weather</td>
<td>Droughts</td>
<td><strong>Timing</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ongoing</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Stresses</strong></td>
</tr>
<tr>
<td>Climate change &amp; severe weather</td>
<td>Temperature extremes</td>
<td><strong>Timing</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ongoing</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Stresses</strong></td>
</tr>
<tr>
<td>Human intrusions &amp; disturbance</td>
<td>Recreational activities</td>
<td><strong>Timing</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ongoing</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Stresses</strong></td>
</tr>
<tr>
<td>Natural system modifications</td>
<td>Abstraction of surface water (unknown use)</td>
<td><strong>Timing</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ongoing</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Stresses</strong></td>
</tr>
<tr>
<td>Natural system modifications</td>
<td>Fire &amp; fire suppression (trend unknown/unrecorded)</td>
<td><strong>Timing</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ongoing</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Stresses</strong></td>
</tr>
<tr>
<td>Natural system modifications</td>
<td>Other ecosystem modifications</td>
<td><strong>Timing</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ongoing</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Stresses</strong></td>
</tr>
<tr>
<td>Pollution</td>
<td>Domestic &amp; urban waste water (type unknown/unrecorded)</td>
<td><strong>Timing</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ongoing</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Stresses</strong></td>
</tr>
</tbody>
</table>

**Conservation Actions Underway**


**Conservation Actions Proposed**

Breeding adults in Europe may be more attracted to unfragmented (Puglisi et al. 2005) reedbeds over 20 ha in area, although smaller sites with networks of reed-fringed waterways or open wetland habitats with a number of small reedbeds over a wide area may also be used (Newbery et al. 1996). There is evidence that females in Britain preferentially nest in locations surrounded by less scrub but more vegetated open water, with a higher...
proportion of Phragmites spp. than other plant species, and in areas where deeper water is maintained into the
driest part of the breeding season (Gilbert et al. 2005). The European Action Plan for this species
recommends raising water levels, harvesting and burning reeds, cutting invasive scrub, or digging out
reedbeds on a rotational compartmental basis as methods of slowing reedbed succession (Newbery et al.
1996). It also recommends the regular cutting of small areas of reedbed to maintain Phragmites spp.
monocultures (Newbery et al. 1996), to provide a range of multi-age reed stands (Kushan and Hancock 2005)
and to favour the retention of water levels in spring and summer (promoting rapid growth, preventing a build-
up of reed litter and providing foraging sites) (Newbery et al. 1996). Large-scale reed cutting should be
prohibited in the late-winter however (Kushan and Hancock 2005). Wetlands should also be managed to
enhance the carrying capacity of fish and eel populations (thus increasing food resources for bitterns) (Noble
et al. 2004, Self 2005, Gilbert et al. 2007). In Britain it was found that suitable habitats should be provided for
all fish life stages (including spawning, refuge and overwintering), the movement of fish throughout reedbeds
should be promoted (e.g. by changes in hydrological management regimes and sluice design) (Noble et al.
2004) and issues relating to water quality, zooplankton and macrophyte community structures should be
addressed (Self 2005). Measures should include sustainably managing river valleys and reed marshes,
including the reduction of water pollution and fish overexploitation. Disturbance at the breeding sites by
recreation should be minimized.

Bibliography

Martínez-Vilalta, A., Motis, A. and Kirwan, G.M. 2015. Eurasian Bittern (Botaurus stellaris). In: del Hoyo,

stellaris in Britain and the implications for wetland management. Biological Conservation 124: 547-553.

Noble, R.A.A., Harvey, J.P. and Cowx, I.G. 2004. Can management of freshwater fish populations be used to
protect and enhance the conservation status of a rare, fish-eating bird, the bittern, Botaurus stellaris, in the
Puglisi, L., Adamo, M C. and Baldaccini, N.E. 2005. Man-induced habitat changes and sensitive species: a
GIS approach to the Eurasian Bittern (Botaurus stellaris) distribution in a Mediterranean wetland.
University Press, Oxford.
Botaurus stellaris

Range

- Extant (breeding)
- Extant (non breeding)
- Extant (resident)

Citation:
BirdLife International (2015)
European Red List of Birds

Map created 05/12/2015

The boundaries and names shown and the designations used on this map do not imply any official endorsement, acceptance or opinion by IUCN.