

= Eurasian bittern =

The Eurasian bittern or great bittern (*Botaurus stellaris*) is a wading bird in the bittern subfamily (*Botaurinae*) of the heron family *Ardeidae* . There are two subspecies , the northern race (*B. s. stellaris*) breeding in parts of Europe and Asia , as well as on the northern coast of Africa , while the southern race (*B. s. capensis*) is endemic to parts of southern Africa . It is a secretive bird , seldom seen in the open as it prefers to skulk in reed beds and thick vegetation near water bodies . Its presence is apparent in the spring , when the booming call of the male during the breeding season can be heard . It feeds on fish , small mammals , fledgling birds , amphibians , crustaceans and insects .

The nest is usually built among reeds at the edge of bodies of water . The female incubates the clutch of eggs and feeds the young chicks , which leave the nest when about two weeks old . She continues to care for them until they are fully fledged some six weeks later .

With its specific habitat requirements and the general reduction in wetlands across its range , the population is thought to be in decline globally . However the decline is slow , and the International Union for Conservation of Nature has assessed its overall conservation status as being of " least concern " . Nevertheless , some local populations are at risk and the population of the southern race has declined more dramatically and is cause for concern . In the United Kingdom it is one of the most threatened of all bird species .

= Taxonomy and etymology =

This species was first described in 1758 as *Ardea stellaris* by the Swedish naturalist Carl Linnaeus in his *Systema Naturae* . In 1819 , the English naturalist James Francis Stephens , coined the genus *Botaurus* for the bitterns to distinguish them from *Ardea* , the great herons . It is placed in the subfamily *Botaurinae* , and its closest relatives are the American bittern (*Botaurus lentiginosus*) , the pinnated bittern (*Botaurus pinnatus*) and the Australasian bittern (*Botaurus poiciloptilus*) . Two races of Eurasian bittern are recognised ; the nominate subspecies *B. s. stellaris* has a palearctic distribution and occurs across a broad swathe of Europe , North Africa and Asia , while the other subspecies , *B. s. capensis* , occurs only in southern Africa . The name *capensis* was used for species found in the Afrotropics for which no exact range was known .

The generic name *Botaurus* was given by the English naturalist James Francis Stephens , and is derived from Medieval Latin *butaurus* , " bittern " , itself constructed from the Middle English name for the bird , *botor* . Pliny gave a fanciful derivation from *Bos* (ox) and *taurus* (bull) , because the bittern 's call resembles the bellowing of a bull . The species name *stellaris* is Latin for " starred " , from *stella* , " star " , and refers to the speckled plumage .

Its folk names , often local , include many variations on the themes of " barrel @-@ maker " , " bog @-@ bull " , " bog hen " , " bog @-@ trotter " , " bog @-@ bumper " , " mire drum [ble] " , " butter bump " , " bitter bum " , " bog blutter " , " bog drum " , " boom bird " , " bottle @-@ bump " , " bull of the bog " , " bull of the mire " , " bumpy cors " , and " heather blutter " . Most of these were onomatopoeic colloquial names for the bird ; the call was described as " bumping " or " booming " . Mire and bog denote the bird 's habitat .

= Description =

Bitterns are thickset herons with bright , pale , buffy @-@ brown plumage covered with dark streaks and bars As its alternate name suggests , this species is the largest of the bitterns , with males being rather larger than females . The Eurasian or great bittern is 69 ? 81 cm (27 ? 32 in) in length , with a 100 ? 130 cm (39 ? 51 in) wingspan and a body mass of 0 @. @ 87 ? 1 @. @ 94 kg (1 @. @ 9 ? 4 @. @ 3 lb) .

The crown and nape are black , with the individual feathers rather long and loosely arranged , tipped with buff narrowly barred with black . The sides of the head and neck are a more uniform tawny @-@ buff , irregularly barred with black . The mantle , scapulars and back are of a similar

colour but are more heavily barred , the individual feathers having black centres and barring . The head has a yellowish @-@ buff superciliary stripe and a brownish @-@ black moustachial stripe . The sides of the neck are a rusty @-@ brown with faint barring . The chin and throat are buff , the central feathers on the throat having longitudinal stripes of rusty @-@ brown . The breast and belly are yellowish @-@ buff , with broad stripes of brown at the side and narrow stripes in the centre . The tail is rusty @-@ buff with black streaks in the centre and black mottling near the edge . The wings are pale rusty @-@ brown irregularly barred , streaked and mottled with black . The plumage has a loose texture , and elongated feathers on the crown , neck and breast can be erected . The powerful bill is greenish @-@ yellow with a darker tip to the upper mandible . The eye has a yellow iris and is surrounded by a ring of greenish or bluish bare skin . The legs and feet are greenish , with some yellow on the tarsal joint and yellow soles to the feet . Juveniles have similar plumage to adults but are somewhat paler with less distinct markings .

= = Distribution and habitat = =

The breeding range of *B. s. stellaris* extends across temperate parts of Europe and Asia from the British Isles , Sweden and Finland eastwards to Sakhalin Island in eastern Siberia and Hokkaido Island in Japan . The bird 's northern extent of occurrence is around 57 ° N in the Ural Mountains and 64 ° N in eastern Siberia . Its southern limit is the Mediterranean Sea , the Black Sea , Iran , Afghanistan , Kazakhstan , Mongolia and Hebei Province in northern China . Small resident populations also breed in Morocco , Algeria and Tunisia . It typically inhabits reed beds (*Phragmites*) and swamps , as well as lakes , lagoons and sluggish rivers fringed by rank vegetation . It sometimes nests by ponds in agricultural areas , and even quite near habitations where suitable habitat exists , but for preference , chooses large reed beds of at least 20 hectares (49 acres) in which to breed .

Some populations are sedentary and stay in the same areas throughout the year . More northerly populations usually migrate to warmer regions but some birds often remain ; birds in northern Europe tend to move south and west to southern Europe , northern and central Africa , and northern Asian birds migrate to parts of the Arabian peninsula , the Indian sub @-@ continent , and the provinces of Heilongjiang , Jilin and Inner Mongolia in eastern China . Outside the breeding season it has less restrictive habitat requirements , and as well as living in reed beds , it visits rice fields , watercress beds , fish farms , gravel pits , sewage works , ditches , flooded areas and marshes .

The subspecies *B. s. capensis* is endemic to southern Africa , where it is found sparingly in marshes near the east coast , the Okavango Delta and the upland foothills of the Drakensberg Mountains . This population is sedentary .

= = Behaviour = =

Usually solitary , the Eurasian bittern forages in reed beds , walking stealthily or remaining still above a body of water where prey may occur . It is a shy bird , and if disturbed , often points its bill directly upwards and freezes in that position , causing its cryptic plumage to blend into the surrounding reeds , an action known as *bitterning* . While in this position , the shield of elongated feathers on throat and breast droop downwards and hide the neck , so that the outline of the head and body is obscured . Sometimes it resorts to applying powder down produced by patches of specialist down feathers at the side of its breast . This white dusty material seems to help it to rid its head and neck of slime after feeding on eels . It then removes the excess powder by scratching vigorously before applying preen oil from the gland at the base of its tail .

The bird has a secretive nature , keeping largely hidden in the reeds and coarse vegetation . Occasionally , especially in hard winter weather , it stands in the open beside the water 's edge , although usually close to cover to facilitate a hasty retreat . In flight , its wings can be seen to be broad and rounded , and its legs trail behind it in typical heron fashion . Its neck is extended when it takes off , but is retracted when it has picked up speed . It seldom flies however , except when feeding young , preferring to move through the vegetation stealthily on foot . Its gait is slow and

deliberate and it can clamber over reeds by gripping several at a time with its toes . It is most active at dawn and dusk , but also sometimes forages by day .

Eurasian bitterns feed on fish , small mammals , amphibians and invertebrates , hunting along the reed margins in shallow water . British records include eels up to 35 cm (14 in) and other fish , mice and voles , small birds and fledglings , frogs , newts , crabs , shrimps , molluscs , spiders and insects . In continental Europe , members of over twenty families of beetle are eaten , as well as dragonflies , bees , grasshoppers and earwigs . Some vegetable matter such as aquatic plants is also consumed .

Males are polygamous , mating with up to five females . The nest is built in the previous year 's standing reeds and consists of an untidy platform some 30 cm (12 in) across . It may be on a tussock surrounded by water or on matted roots close to water and is built by the female using bits of reed , sedges and grass stalks , with a lining of finer fragments . The eggs average 52 by 38 mm (2 @. @ 0 by 1 @. @ 5 in) and are non @-@ glossy , olive @-@ brown , with some darker speckling at the broader end . Four to six eggs are laid in late March and April and incubated by the female for about twenty @-@ six days . After hatching , the chicks spend about two weeks in the nest before leaving to swim amongst the reeds . The female rears them without help from the male , regurgitating food into the nest from her crop , the young seizing her bill and pulling it down . They become fully fledged at about eight weeks .

= = = Voice = = =

The mating call or contact call of the male is a deep , sighing fog @-@ horn or bull @-@ like boom with a quick rise and an only slightly longer fall , easily audible from a distance of 3 mi (4 @. @ 8 km) on a calm night . The call is mainly given between January and April during the mating season . Surveys of Eurasian bitterns are carried out by noting the number of distinct male booms in a given area . Prior to modern science , it was unknown how such a small bird produced a call so low @-@ pitched : common explanations included that the bird made its call into a straw or that it blew directly into the water . It is now known that the sound is produced by expelling air from the oesophagus with the aid of powerful muscles surrounding it .

= = Status = =

The Eurasian bittern has a very wide range and a large total population , estimated to be 110 @, @ 000 to 340 @, @ 000 individuals . The International Union for Conservation of Nature has assessed its overall conservation status as being of " least concern because although the population trend is downward , the rate of decline is insufficient to justify rating it in a more threatened category . The chief threat the bird faces is destruction of reed beds and drainage and disturbance of its wetland habitats . It is one of the species to which the Agreement on the Conservation of African @-@ Eurasian Migratory Waterbirds (AEWA) applies . The southern race has suffered catastrophic decline during the 20th century due to wetland degradation and , unlike the northern race , is of high conservation concern .

In the United Kingdom , the main areas in which the Eurasian bittern breeds have been Lancashire and East Anglia with an estimated 44 breeding pairs in total in 2007 . However , the Lancashire population at Leighton Moss RSPB reserve has declined in recent decades , while bitterns have been attracted to new reed beds in the West Country . In Ireland , it died out as a breeding species in the mid @-@ 19th century , but in 2011 a single bird was spotted in County Wexford and there have been a number of subsequent sightings . In the 21st century , bitterns are regular winter visitors to the London Wetland Centre , enabling city dwellers to view these scarce birds .

= = In literature = =

Thomas Bewick records that the bittern " was formerly held in much estimation at the tables of the great " .

= = = Booming = = =

The Eurasian bittern is proposed as a rational explanation behind the drekavac , a creature of the graveyard and darkness originating in south Slavic mythology . It is mentioned in the short story " Brave Mita and Drekavac from the Pond " by Branko Ćopić .

The 18th @-@ century Scottish poet James Thomson refers to the bittern 's " boom " in his poem " Spring " (written 1728) , published as part of his The Seasons (1735) :

The Bittern knows the time , with bill ingulph

To shake the sounding marsh

The species is mentioned in George Crabbe 's 1810 narrative poem The Borough , to emphasise the ostracised , solitary life of the poem 's villain , Peter Grimes :

And the loud Bittern from the bull @-@ rush home

Gave from the Salt @-@ ditch side the bellowing boom :

The Irish poet Thomas MacDonagh translated the Gaelic poem " The Yellow Bittern " (" An Bonnán Buí " in the Irish) by Cathal Buí Mac Giolla Ghunna . His friend the poet Francis Ledwidge wrote a " Lament for Thomas MacDonagh " with the opening line " He shall not hear the bittern cry " .

In the Sherlock Holmes novel The Hound of the Baskervilles by Sir Arthur Conan Doyle , the villain Stapleton proposes the boom of a bittern as an explanation for the howl attributed to the mystical hound .

Because of its secretive and skulking nature , it was for long unclear exactly how the bittern produced its distinctive booming call . A Mediaeval theory held that the bittern thrust its beak into the boggy ground of the marsh in which it lived , making its vocalization which was amplified and deepened as it reverberated through the water . A reference to this theory appears in 1476 in Chaucer 's The Wife of Bath 's Tale , lines 972 @-@ 73 :

And , as a bitore bombleth in the myre ,

She leyde hir mouth un @-@ to the water doun

The English 17th century physician Sir Thomas Browne disputed this claim , stating in his Pseudodoxia Epidemica , Book III , Ch.27 : " That a Bittor maketh that mugient noise , or as we term it Bumping , by putting its bill into a reed as most believe , or as Bellonius and Aldrovandus conceive , by putting the same in water or mud , and after a while retaining the air by suddenly excluding it again , is not so easily made out . For my own part , though after diligent enquiry , I could never behold them in this motion " . Browne even kept a captive bittern to discover how its " boom " was produced .

= = = Invisibility = = =

The artist Abbott Handerson Thayer argued in his ill @-@ advised 1909 venture into zoology , Concealing @-@ Coloration in the Animal Kingdom , that animals were concealed by a combination of countershading and disruptive coloration , which together " obliterated " their self @-@ shadowing and their shape . On the disruptive effect of bittern plumage , he wrote :

I was watching a standing [American] Bittern at a distance of about ten feet . The light stripes on the bill were repeated and continued by the light stripes on the sides of the head and neck , and together they imitated very closely the look of separate , bright reed @-@ stems ; while the dark stripes pictured reeds in shadow , or the shadowed interstices between the stems .

On the Eurasian bittern 's markings , he wrote :

Reed @-@ like patterns occur also ... on the necks of some of the true herons ... The beautiful European Bittern has kindred markings with a strong admixture of richly brindled grass @-@ pattern ? a pattern at once bold and subtle , whose oblitative effect is the bird 's normal environment must be consummate .

The zoologist Hugh Cott , in his classic 1940 study of camouflage , Adaptive Coloration in Animals , cites William Palmer 's account of seeing a bittern :

he once marked the place in a marsh where one of these birds had alighted : on reaching the spot

he had the ' greatest difficulty in finding it clinging motionless , with bill almost erect , to a stem of wild oats ' .