

= Sind sparrow =

The Sind sparrow ( *Passer pyrrhonotus* ) is a passerine bird of the sparrow family Passeridae , found around the Indus valley region in South Asia . It is also known as the jungle , Sind jungle , or rufous @-@ backed sparrow . Very similar to the related house sparrow , it is smaller and has distinguishing plumage features . As in the house sparrow , the male has brighter plumage than female and young birds , including black markings and a grey crown . Distinctively , the male has a chestnut stripe running down its head behind the eye , and the female has a darker head than other sparrow species do . Its main vocalisations are soft chirping calls that are extended into longer songs with other sounds interspersed by breeding males . Historically , this species was thought to be very closely related to the house sparrow , but its closest evolutionary affinities may lie elsewhere . Discovered around 1840 , this species went undetected for several decades after its discovery .

Within its Indus valley breeding range in Pakistan and western India , the Sind sparrow is patchily distributed in riverine and wetland habitats with thorny scrub and tall grass . During the non @-@ breeding season , some birds enter drier habitats as they disperse short distances from their breeding habitat , or migrate into western Pakistan and the extreme east of Iran . Since this species is fairly common and expanding its range , it is assessed as least concern on the IUCN Red List . The Sind sparrow is social within small groups while feeding and breeding , and during its winter dispersal . It feeds mostly on seeds and less often on insects , foraging close to the ground . Nests are made in the branches of thorny trees , and are untidy globular masses constructed from grass or other plant matter and lined with softer material . Both sexes are involved in building the nest and caring for the young , and usually raise two clutches of three to five young each breeding season .

= = Description = =

The Sind sparrow is very similar to the house sparrow , and both sexes resemble their counterparts of that species , but it is slightly smaller and males and females each have features that distinguish them as Sind sparrows . The Sind sparrow is 13 cm ( 5 @.@ 1 in ) long , while the common South Asian subspecies of the house sparrow , *Passer domesticus indicus* , is about 15 cm ( 5 @.@ 9 in ) long . Wingspans range from 6 @.@ 2 to 7 @.@ 0 cm ( 2 @.@ 4 to 2 @.@ 8 in ) , tails from 4 @.@ 7 to 5 @.@ 7 cm ( 1 @.@ 9 to 2 @.@ 2 in ) , and tarsi measure 1 @.@ 6 ? 1 @.@ 9 centimetres ( 0 @.@ 63 ? 0 @.@ 75 in ) .

The breeding male has a short and narrow black bib and a broad chestnut eye stripe that does not meet the mantle . The male has a grey crown and nape and a rufous lower back and rump . The female has a darker and greyer crown and cheek than the female house sparrow and the shoulder is darker chestnut . The female Dead Sea sparrow of the subspecies *Passer moabiticus yattii* is also similar to the female Sind sparrow , but has yellow tinges on the underparts and sometimes on parts of the head . The bill is black on the breeding male and pale brown on the non @-@ breeding male and female . With a culmen length of 1 @.@ 1 ? 1 @.@ 3 centimetres ( 0 @.@ 43 ? 0 @.@ 51 in ) , the Sind sparrow is slightly smaller @-@ billed than the house sparrow .

The Sind sparrow 's chirping chup call is softer , less strident , and higher pitched than that of the house sparrow , and is easily distinguished . The song of breeding males includes chirrups interspersed with grating t @-@ r @-@ r @-@ rt notes and short warbles or whistles .

= = Taxonomy = =

The Sind sparrow was first formally described by Edward Blyth , from a specimen collected by Alexander Burnes at Bahawalpur in around 1840 . Blyth 's description was published in an issue of the Journal of the Asiatic Society of Bengal which , although dated 1844 , was published only in 1845 . It was not recorded until 36 years later , despite the efforts of noted ornithologists Allan Octavian Hume in Sindh and William Thomas Blanford in eastern Iran . This was probably because of its general similarity to the house sparrow , though additionally , Blyth 's description of the species incorrectly described its rump feathers as maroon , and a description by Thomas C. Jerdon

contained similar errors . Commenting on his unsuccessful search , Hume wrote that the hundreds of house sparrows he killed in pursuit of the Sind sparrow " ought to form a heavy load " on Blyth 's conscience , and that if the Sind sparrow existed " it would be only decent for it ... to put on an appearance with as little delay as possible " . Hume doubted its distinction , as did other ornithologists . The Sind sparrow was rediscovered by Scrope Berdmore Doig in 1880 , in the Eastern Nara district . Ernst Hartert considered it a subspecies of the house sparrow , *Passer domesticus pyrrhonotus* , in his *Die Vögel der paläarktischen Fauna* , but Doig and Claud Ticehurst both found that the two species bred in the same areas without interbreeding .

The specific epithet of the Sind sparrow , *pyrrhonotus* , comes from the Greek *pyrrhos* ( " flame @-@ coloured " ) , and *-notos* ( " -backed " ) . E. C. Stuart Baker suggested the English name rufous @-@ backed sparrow , but as this name might cause confusion with other species , Ticehurst suggested the name Sind jungle @-@ sparrow , which became the accepted name for the species . This name refers to Sindh , a province now in Pakistan which makes up a large part of the Sind sparrow 's range , and the jungle habitat of the bird ( in the word 's original sense of tangled dry thicket ) . This name is shortened to jungle sparrow or Sind sparrow , of which the first was used in the IOC World Bird List , until Sind sparrow was adopted in 2009 .

The Sind sparrow is a member of the genus *Passer* , which contains the house sparrow and around twenty other species . In a 1936 review of the house sparrow 's relatives , German ornithologist Wilhelm Meise suggested that the Sind sparrow evolved from an isolated population of house sparrows , noting that the Indus valley is a centre of small bird types . British ornithologist J. Denis Summers @-@ Smith considered the Sind sparrow to be part of the " Palaearctic black @-@ binned sparrow " group including the house sparrow , though not one with a particularly close relationship with the house sparrow . Summer @-@ Smith suggested that these species separated 25 @,@ 000 to 15 @,@ 000 years ago , during the last glacial period , when sparrows would have been isolated in ice @-@ free refugia , such as the Indus River Delta , where he thought the Sind sparrow evolved . However , studies of mitochondrial DNA indicate an earlier origin of *Passer* species , with speciation occurring as early as the late Miocene and early Pliocene , about 5 million years ago . Hume and Ticehurst observed a resemblance , and a possible relation , between the Sind sparrow and the Dead Sea sparrow of the Middle East and Balochistan . William Robert Ogilvie @-@ Grant and Henry Ogg Forbes saw a resemblance to the Abd al @-@ Kuri sparrow , endemic to the island of Abd al @-@ Kuri , in their 1899 description of that species , noted upon by Guy M. Kirwan in a 2008 study .

#### = = Distribution and habitat = =

The Sind sparrow has a restricted distribution , primarily occurring within the Indus valley of Pakistan , and the lower parts of the tributaries of the Indus in the Punjab region . Its distribution extends from the Indus Delta north to the Kabul River near Nowshera and the Jhelum near Nurpur Noon , extending east into India as far as the Delhi area . It also breeds locally in parts of Pakistan 's western province of Balochistan , and has been recorded several times in south @-@ eastern Iran . The Sind sparrow is somewhat common in its restricted breeding range , and no threats are known to the survival of the species , so it is assessed as least concern on the IUCN Red List .

During winter , it often makes short distance movements , and some birds move into parts of western Pakistan and an adjoining corner of Iran , and less commonly north @-@ western Gujarat , India . Longer movements may occur , as suggested by a possible sighting in the United Arab Emirates in November 2000 .

It mostly breeds in acacia and tamarisk scrub and tall grass , invariably near rivers or other wetlands . The construction and expansion of irrigation canals has increased its habitat in Sindh , and helped it extend its range into the Yamuna floodplain and parts of Rajasthan , India . It may breed around rice paddies and other fields , or human habitations , provided that there is enough cover and suitable nesting sites . In winter , it moves away from its main riverine habitat , and into drier thickets characterised by *Salvadora* and *Capparis* bushes , but never moves too far from water .

## = = Behaviour = =

The Sind sparrow is gregarious , generally forming small groups of four to six birds while feeding . It tends to breed in loose colonies of a few pairs , and non @-@ breeding birds may gather to roost in acacias or tamarisks near water . During winter , the non @-@ breeding season , it forms larger flocks of as many as 30 birds , and joins flocks with other seed @-@ eating birds , such as house sparrows and red avadavats . The Sind sparrow feeds mainly on the seeds of grasses and other plants such as *Polygonum plebeium* . It may also forage for insects such as caterpillars , especially to feed nestlings . Flocks forage on flats alongside rivers , flying into nearby bushes and continuing to forage when disturbed .

Nesting occurs during a period of several months between April to September , the timing depending on rainfall , during which two clutches are raised by most pairs . Sind sparrows build nests in the upper branches of thorny trees or the ends of thin branches hanging over water . The nest is an untidy dome of grass and other plant matter , such as tamarisk twigs , roots , and reeds , with a diameter of about 9 to 18 cm ( 3 @. @ 5 to 7 @. @ 1 in ) . The nest has an entrance located higher up on the sides , is somewhat flat on top , and is lined with softer plant material and feathers . The birds may sometimes build below the nests of egrets or extend the nest of a baya weaver or pied myna . Both the male and female take part in nest building and incubation . Clutches typically contain three to five eggs . Scrope Doig described the eggs as being markedly smaller than the house sparrow 's , measuring 0 @. @ 7 × 0 @. @ 5 in ( 1 @. @ 3 × 1 @. @ 8 cm ) and similarly greenish or greyish with highly variable blotches , striations , and other markings .