

= Russet sparrow =

The russet sparrow ( *Passer rutilans* ), also called the cinnamon or cinnamon tree sparrow , is a passerine bird of the sparrow family *Passeridae* . A chunky little seed @-@ eating bird with a thick bill , it has a body length of 14 to 15 cm ( 5 @.@ 5 ? 5 @.@ 9 in ) . Its plumage is mainly warm rufous above and grey below . It exhibits sexual dimorphism , with the plumage of both sexes patterned similarly to that of the corresponding sex of house sparrow . Its vocalisations are sweet and musical chirps , which when strung together form a song .

Three subspecies are recognised , differing chiefly in the yellowness of their underparts . The subspecies *rutilans* and *intensior* breed in parts of eastern Asia , where they are usually found in light woodland , and the subspecies *cinnamomeus* breeds in the Himalayas , where it is usually associated with terrace cultivation . The russet sparrow is the typical sparrow of human habitations in towns where the house and Eurasian tree sparrows are absent . In the southern part of its range , the russet sparrow prefers higher altitudes , but in the north it breeds by the sea . The russet sparrow is known well enough in the Himalayas to have a distinct name in some languages , and is depicted in Japanese art .

This sparrow feeds mainly on the seeds of herbs and grains , but it also eats berries and insects , particularly during the breeding season . This diet makes it a minor pest in agricultural areas , but also a predator of insect pests . While breeding , it is not social , as its nests are dispersed . It forms flocks when not breeding , although it associates with other bird species infrequently . In some parts of its range , the russet sparrow migrates , at least to lower altitudes . Its nest is located in a tree cavity , or a hole in a cliff or building . The male chooses the nest site before finding a mate and uses the nest for courtship display . The typical clutch contains five or six whitish eggs . Both sexes incubate and feed the young .

= = Description = =

The russet sparrow is a small chunky bird , with plumage warm rufous in overall colour . It is a medium @-@ sized sparrow at 14 to 15 cm ( 5 @.@ 5 ? 5 @.@ 9 in ) and 18 to 22 @.@ 5 grams ( 0 @.@ 63 ? 0 @.@ 79 oz ) . It has a thick bill suited to eating seeds , which is black on the breeding male , horn @-@ coloured on the non @-@ breeding male , and yellowish with a dark tip on the female . Wingspans for males range between 6 @.@ 8 to 8 @.@ 2 cm ( 2 @.@ 7 ? 3 @.@ 2 in ) and those for females from 6 @.@ 7 to 7 @.@ 7 cm ( 2 @.@ 6 ? 3 @.@ 0 in ) . Tail , bill , and tarsus lengths are 4 @.@ 3 to 5 @.@ 1 cm ( 1 @.@ 7 ? 2 @.@ 0 in ) , 1 @.@ 1 to 1 @.@ 3 cm ( 0 @.@ 43 ? 0 @.@ 51 in ) , and 1 @.@ 6 to 1 @.@ 8 cm ( 0 @.@ 63 ? 0 @.@ 71 in ) , respectively .

Measurements for the russet sparrow vary geographically , between the three subspecies , and also within the Himalayan subspecies *cinnamomeus* . The subspecies *cinnamomeus* is generally larger than the others , and within this form there is a tendency for birds at higher altitudes to be larger , and a clinal variation in size with the smallest birds in the west of the range and the largest in the east .

The iris is chestnut in colour . The legs of both sexes are pale brown to pinkish @-@ brown . The flight of all sparrows is swift , and that of the russet sparrow is described as swifter and more direct than that of the Eurasian tree sparrow .

= = = Plumage = = =

The sexes differ , or are dimorphic , in their plumage , and have a similar pattern to that in the corresponding sex of house sparrow . There is some variation between the three subspecies , especially in the colouration of the underparts . Birds of the subspecies *rutilans* are off @-@ white on their cheeks and the sides of their necks , and have pale grey underparts . Birds of the subspecies *intensior* have a pale yellow wash on their underparts and cheeks , as well as darker upperparts , while those of the subspecies *cinnamomeus* have a heavy yellow tinge to their

underparts .

Moult is poorly recorded , the only records coming from Sakhalin and Himachal Pradesh . In Sakhalin , moult occurs in August and September , between the breeding season and migration . In Himachal Pradesh , aviculturist G. A. Perreau observed captive and wild birds and reported that they were yellow from December to spring and whitish during the remainder of the year , a pattern which may be atypical .

The breeding male is bright russet or cinnamon red on its upperparts from its crown to its rump , with a black streaking on its mantle . It has a small black bib and black around its eye , separated from the russet of its crown by a very thin white supercilium , a stripe running from the bill to the rear of the head . The side of its neck and cheek are off @-@ white , and its underparts are pale grey or washed with yellow , varying geographically . Shoulders and greater coverts are chestnut , and its median coverts are black at the base with white at the tips . The rest of the wing is light brown with black tinges . Its tail is blackish brown , edged with ashy brown . The non @-@ breeding male differs little from the breeding male , being paler with more orange upperparts . The only species with which the male is easily confused is the Eurasian tree sparrow , which differs in its black cheek spot and brown back .

The female has mostly pale brown upperparts , and pale grey underparts , so it resembles the female house sparrow . It differs from the house sparrow in its slightly darker , russet @-@ tinged plumage . It has a conspicuous cream supercilium from above its eye nearly around its head , and a bold dark brown stripe through its eye . It has mostly greyish brown wings and a back streaked with black and buff . The juvenile is similar to the female , though more pale and sandy . As the male reaches its first winter , it resembles the adult , differing in less bold chestnut and a dusky bib .

= = = Voice = = =

The russet sparrow 's vocalisations are described by most sources as " the sweetest and most musical " of any sparrow . Its basic call is a cheep or chilp , similar to that of other sparrows . This call is monosyllabic , unlike the house sparrow 's chirrup call , and is softer than that of the other sparrows . This call is given as a flight call , or by displaying males . Recorded variations include a chweep given by males at the nest and a trilled cheep . Sometimes the male strings calls together and sings them in a strident tone , to create a sort of short song , transcribed as cheep chirrup cheewep or chreet @-@ chreet @-@ chreet . The song is interspersed with sibilant chu @-@ swik notes similar to those of the white wagtail . A thin swee swee vocalisation not unlike that of an Indian robin has been reported , but the context of this call is unrecorded . During territorial disputes , males give a rapid chit @-@ chit @-@ chit call .

= = Taxonomy = =

The russet sparrow was first scientifically described , as *Fringilla rutilans* , by the Dutch zoologist Coenraad Jacob Temminck in 1835 , from a specimen collected in Japan . Its specific name comes from the Latin *rutilus* , " of a glowing or auburn red " . It has usually been placed in the genus *Passer* , and within this genus it is seen as a part of the " Palearctic black @-@ binned sparrow " group , which includes the Eurasian tree sparrow as well as the house sparrow . It has generally been seen as a close relation of the house sparrow , and Richard Meinertzhagen even considered it to be the same species as the Somali sparrow , one of the house sparrow 's closest relatives .

However , studies of mitochondrial DNA indicate that the russet sparrow is an early offshoot or basal species among the Palearctic black @-@ binned sparrows . While mitochondrial DNA suggest speciation in *Passer* occurred during the Miocene and Pliocene , British ornithologist J. Denis Summers @-@ Smith considers the russet sparrow to have separated from the other Palearctic black @-@ binned sparrows about 25 @,@ 000 to 15 @,@ 000 years ago , during the last glacial period . During this time , sparrows would have only been found in isolated ice @-@ free refugia , such as the lower Yangtze valley , which Summers @-@ Smith considers the most likely centre of evolution for the russet sparrow .

Thirteen subspecies have been described , but only three are widely recognised , these differing largely in the colour of their underparts . The nominate subspecies *Passer rutilans rutilans* breeds in Japan , Korea , Taiwan , and southeastern and central China . The subspecies *intensior* , described in 1922 by Walter Rothschild from Yunnan , breeds in southwest China and parts of India , Burma , Laos , and Vietnam . In a large part of Sichuan *intensior* intergrades with the nominate subspecies , and a number of subspecies names have been proposed for the intergrades . The subspecies *cinnamomeus* , described in 1836 by John Gould from the northwestern Himalayas , breeds from northern Arunachal Pradesh to Nuristan in Afghanistan .

#### = = Distribution and habitat = =

The russet sparrow is found in parts of eastern Asia and in the Himalayas . It is not known whether its distribution is continuous between these two areas , since the political sensitivity of the Brahmaputra River 's valley near the China @-@ India border makes the area less accessible to ornithologists . In the Himalayas the russet sparrow breeds from the far northeast of India through southeastern Tibet , Bhutan , Sikkim , Nepal , Uttarakhand , and Himachal Pradesh to Kashmir and Nuristan in Afghanistan . Here , the russet sparrow makes short movements to lower altitudes between November and April in many areas .

In eastern Asia , the russet sparrow is found in Sakhalin , the Kuril Islands , a small part of mainland Russia , Japan , southern Korea , and part of northern China , where it is mostly migratory . It is distributed through southern China and Taiwan , and the mountainous parts of Burma , southern Northeast India , Laos , and Vietnam , where it is mostly resident . The russet sparrow also occurs as a winter visitor in southern Japan , the further south of China , and northern Thailand . In eastern Asia , the autumn migration occurs between August and November .

The russet sparrow appears to be abundant in most habitats across most of its very large range , and in the some areas it is among the most common birds . In Southeast Asia , its range has contracted at lower elevations due to global warming , but it has also moved higher at high elevations and it remains common . Although its global population has not been quantified , it is assessed for the IUCN Red List as least concern for global extinction .

Breeding takes place in mountains and uplands across most of the range . This preference for high altitudes is influenced by latitude : in the farthest south of its range it never breeds below 2 @,@ 500 metres ( 8 @,@ 200 ft ) above mean sea level , but in the northernmost part of its range it often breeds by the sea . In eastern Asia , the russet sparrow prefers light woodland , but it is sometimes found in towns and agricultural areas . In Sakhalin , it breeds mostly in riparian forest . In Hokkaid? , the russet sparrow finds a greater food supply for its young in more remote forests , and has greater reproductive success .

In the Himalayas , it is strongly associated with terrace cultivation , and it probably only spread to the Himalayas when these agricultural practices arrived 3000 to 4000 years ago . In towns where it occurs alongside the house or tree sparrow , it is found in gardens and less built up areas . In those hill stations in India where both the house and the russet sparrow occur , the house sparrow breeds around more @-@ built up areas and bazaars , whereas the russet sparrow is " rather more up market at the larger houses with gardens and open spaces " . In towns where it is the only sparrow , it is not dependent on trees , breeding around houses and eating scraps in streets . In the winter , migratory birds occur in open cultivated land and riverine grasslands , but are never far from shrubs or trees .

#### = = Behaviour = =

In many aspects of its behaviour , the russet sparrow is similar to the house and Eurasian tree sparrows . Like them , it feeds on the ground , but spends most of its time perching on branches . Unlike those species , it prefers open , exposed branches for perching . The russet sparrow is described as shy and wary by some observers , but J. Denis Summers @-@ Smith found it approachable in Indian hill stations . Flocking russet sparrows feed close to the ground , moving

forward as birds from the rear of a flock move to the front , in what is called " roller feeding " .

Outside its breeding season , the russet sparrow is gregarious and forms flocks to find food , though it infrequently associates with other birds . Wintering flocks tend to keep away from human habitation . The russet sparrow is also social at night during the winter , and it forms large communal roosts in trees and bushes . In the breeding season , the female roosts in the nests and the male nests in foliage nearby .

The adult russet sparrow is mostly a seed @-@ eater , eating the seeds of herbs and weeds as well as rice , barley , and other grains . Berries , such as those of the kingore ( certain *Berberis* spp . ) , are also eaten when available . Nestlings are fed mostly on insects , especially caterpillars and larval beetles obtained on trees and flying insects caught by aerial pursuit . During the breeding season adults also consume insects .

Mortality rates in the russet sparrow have not been studied , but it is known that many young birds die from *Isospora* infections , to which the bird has little resistance . Other recorded parasites of the russet sparrow include *Protocalliphora* blowflies , and *Menacanthus* chewing lice .

= = = Breeding = = =

The russet sparrow 's breeding season is short , lasting about three months . The Himalayan subspecies *cinnamomeus* has been recorded breeding from April to August , the nominate subspecies breeds from May to July , and the subspecies *intensor* is believed to breed in March . During its breeding season , the russet sparrow is not gregarious , and its nests are dispersed uniformly rather than clustered . Its nests are most frequently built in tree cavities , often disused woodpecker nests . The russet sparrow has been recorded breeding alongside the Eurasian tree sparrow and white wagtail in black kite nests , taking advantage of the territorial defence of the kites to avoid nest predation . Other nest locations include the eaves of thatched roofs , stone walls and embankments , and electric junction boxes . In Bhutan , it nests in holes in the outer walls of monasteries , often alongside the Eurasian tree sparrow . In Sakhalin , it will sometimes build free @-@ standing nests in bushes . The russet sparrow also uses the disused nests of the red @-@ rumped swallow , and a pair of russet sparrows has been recorded attempting to oust a pair of black @-@ crested tits from their nest .

The male chooses the nest site , and uses it for his courtship display , spending much time calling nearby . When a female comes near a male at his nest the male begins to display by raising his head , drooping his wings , pushing his chest forward , and lowering his tail . He then bows up and down in front of the female , who will lunge and then fly away if unreceptive . Both sexes take part in building the nest , which consists of a loose , untidy bunch of dry grass which fills the nesting cavity , lined with fur and feathers for warmth .

Eggs are elongated ovals , with a fine texture and a slight gloss . They are whitish in overall colour with a grey tinge and brown spots , streaks , or blotches . The average size of the egg is 19 @. @ 2 × 14 @. @ 2 millimetres ( 0 @. @ 75 × 0 @. @ 55 in ) . Eggs are similar to those of the Eurasian tree sparrow , differing in a duller colour and more narrow shape , though they cannot be separated from those of the other sparrows with certainty . Two clutches of four or sometimes five or six eggs are laid in a year . In Hokkaid? , clutches are laid between early May and early July , with two peaks in laying around mid May and late June . Both sexes incubate and feed the young , with the male often being more active in feeding the nestlings . In Hokkaid? , nestlings hatch weighing about 2 to 5 grams ( 0 @. @ 071 to 0 @. @ 176 oz ) , and fledge fourteen or fifteen days after hatching , weighing 15 to 55 grams ( 0 @. @ 53 to 1 @. @ 94 oz ) . The common cuckoo has been recorded in old literature as a brood parasite of the russet sparrow .

= = Relationships with humans = =

In parts of the range , the russet sparrow inhabits towns , and in most of its range , it occurs near cultivation , and is a minor pest of agriculture . Though it damages crops , it also feeds its nestlings largely on insect pests . In China , the russet sparrow has been recorded as a captive bird , kept

with the Eurasian tree sparrow . In Japan it was eaten in the 1870s and sold in the Yokohama game market . The russet sparrow is known well enough in the Himalayas that in most languages it has a different vernacular name from the Eurasian tree sparrow . Examples of these vernacular names include *lal gouriya* in Hindi and *kang* ཀང་ཆེ་གོ་མ་ in Tibetan . The Japanese artist Hokusai portrayed the russet sparrow , and due to this , it has appeared on postage stamps featuring Japanese art in Japan , The Gambia , and Guyana .