

BIDDING ADIEU

THE VANISHING WORLD OF THE HOUSE SPARROW

A Field Guide for School Students



The Indian House Sparrow (*Passer domesticus indicus*) is the first bird an average Indian encounters. A familiar friend from early childhood, consciously or unconsciously, one hears a lot about this bird.

The Sparrow is a human habitat companion. Wherever there are settlements this small chirping bird thrives. It represents the organic eco-health of a habitat.

Of late, due to its vanishing numbers the bird has lost prominence. This is a matter of great concern. Let's not allow this bird, a part of our heritage, to become extinct like the Dodo which died and became extinct while some humans silently watched others killing the bird for its tasty meat! Ultimately the Dodo is gone and a tree of the same area, the 'Mauritian Calvaria' is also vanishing at human hands. This is because the calvaria would only sprout seeds after having been eaten and digested by the dodo bird. The dodo digested the hard outer covering of the seed and regurgitated the soft inner seed, which it then spat out. This soft seed would fall to the ground and sprout, thus, regeneration of the calvaria continued but now the dodo is no more and there is no other creature to facilitate regeneration. This is what we call an inter-related eco-effect! No natural regeneration is taking place.

Let this NOT happen to our sweet chirping bird, the Indian House Sparrow. You never know how many other species will follow them.

By

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SPARROW

SPARROW SPARROW

SPARROW...



Introduction



The House Sparrow is widely spread in the world, barring areas with very adverse climatic conditions. It is a small bird, typically 6-7 inches long, weighing 24-25 grams. The male has a black beak, which is small but thick, with brighter black, brown and white markings. Females and younger ones are pale coloured and grey.

The bird is native to Europe, Asia and the Mediterranean region but has also spread to the North and South American continents and parts of Africa. The house Sparrow is indeed a widely distributed bird and out of its 26 members of the 'Genus Passer', the Indian House Sparrow is the least migrant. It is a monogamous bird with around 12 sub species.

House sparrows mostly feed on grain and love to live in the open countryside. You will often see it feeding on tiny insects to its young. It is a very adaptable bird and one of the most urbanized ones, nesting in crevices and small, narrow holes in human homes or trees.

The Indian House Sparrow (*Passer domesticus indicus*) is a member of the old world Sparrow

family, Passeridae. It is considered by many to be a relative of the weaver finch family as it does bear resemblance to the weaver bird although it is a bit larger. The House Sparrow is often confused with the Tree Sparrow which is again slender and smaller. Moreover, the House Sparrow has a chestnut and not a grey crown, two distinct wing bars and a black patch on each cheek. Geographical variations have led to evolution of different sub-species of the House Sparrow and changes in size colour and other external feature, albeit not much. Cheeks of the house Sparrow are grey in the west while it is much lighter and whiter in the east. The colour of the chestnut area also shows distinct variation in shades. Birds of the western hemisphere are larger than those in the tropical South Asian region.

SPECIES CLASSIFICATIONS

KINGDOM: ANIMALIA

PHYLUM: CHORDATA

CLASS: AVES

ORDER: PASSERIFORMES

FAMILY: PASSERIDAE

GENUS: PASSER

SPECIES: PASSER DOMESTICUS INDICUS

Local names of the Indian House Sparrow

- Goraiya : Uttar Pradesh, Bihar, and Madhya Pradesh. Also in Uttarakhand and Chhattisgarh
- Ghara chatia : Orissa
- Chimani : Maharashtra
- Chirya : In Urdu language
- Kuruvi : Tamil Nadu and Kerala
- Pichhuka : Andhra Pradesh
- Charai pakhi : West Bengal
- Chiri : Punjab
- Chaer : Jammu and Kashmir
- Gubbachachi : Karnataka
- Chakli : Gujarat



The varied world of House sparrow



Taxonomy

House Sparrow's genus *Passer* comprises 26 species according to the Handbook of the Birds of the World. Majority of the *Passer* species are dull-colored birds with petite rectangular tails and thick conical beaks, between 11 and 18 centimeters long. Mitochondrial DNA suggest that speciation in the genus occurred during the Pleistocene and earlier, while other evidence suggests speciation occurred 25,000 to 15,000 years ago.

Within *Passer*, the House Sparrow is part of the "Palearctic black-bibbed sparrows" cluster and a close relative of the Mediterranean "willow sparrows".

The nomenclature of the House Sparrow and its Mediterranean families is highly complicated. The common type of "willow Sparrow" is the Spanish Sparrow, which resembles the House Sparrow in many respects. It frequently prefers wetter habitats than the House Sparrow, and it is often colonial and nomadic. In most of the Mediterranean, one or both species occur, with some degree of hybridization. In North Africa, the two species hybridize extensively, forming highly variable mixed populations with a full range of characters from pure House Sparrows to pure Spanish Sparrows.



Subspecies

Twelve subspecies of the House Sparrow has been given in the Handbook of the Birds of the World. These subspecies are divided into two groups, the Palearcticdomesticus group, and the Oriental indicus group. Several Middle Eastern subspecies, including *Passer domesticusbiblicus*, are sometimes considered a third, intermediate group. The subspecies *P. d. indicus* was described as a species, and was considered to be a separate sub species by many ornithologists during the 19th century.

Migratory birds of the subspecies *P. d. bactrianus* in the indicus group were recorded overlapping with *P. d. domesticus* birds without hybridising in the 1970s, so the Soviet scientists Edward I. Gavrilov and M. N. Korelov proposed the separation of the indicus group as a separate species. However, indicus-group and domesticus-group birds intergrade in a large part of Iran.

In North America, House Sparrow populations are more differentiated than those in Europe. This variation follows predictable patterns, with birds at higher latitudes being larger and those in arid areas being paler.

Domesticus Group

- *P. d. domesticus*, the nominate subspecies, is found in most of Europe, across northern Asia to Sakhalin and Kamchatka. It is the most widely introduced subspecies.
- *P. d. balearoibericus* is found in the Balearic Islands, southern France, the Balkans, and Anatolia.
- *P. d. tingitanus* is found in the Maghreb from Ajdabiya in Libya to BéniAbbès in Algeria, and to Morocco's Atlantic coast. It hybridises extensively with the Spanish Sparrow, especially in the eastern part of its range.

- *P. d. niloticus*, is found along the Nile north of WadiHalfa, Sudan. It integrates with *bibilicus* in the Sinai, and with *rufidorsalis* in a narrow zone around WadiHalfa. It has been recorded in Somaliland.
- *P. d. persicus* is found in the western and central Iran south of the Alborz mountains, intergrading with *indicus* in eastern Iran, and Afghanistan.
- *P. d. biblicus* is found in the Middle East from Cyprus and southeastern Turkey to the Sinai in the west and from Azerbaijan to Kuwait in the east.

Indicus Group

- *P. d. hyrcanus* is found along the southern coast of the Caspian Sea from Gorgan to southeastern Azerbaijan. It integrates with *persicus* in the Alborz mountains, and with *bibilicus* to the west. It is the subspecies with the smallest range.
- *P. d. bactrianus* is found in southern Kazakhstan to the Tian Shan and northern Iran and Afghanistan. It intergrades with *persicus* in Baluchistan and with *indicus* across central Afghanistan. Unlike most other House Sparrow subspecies, it is almost entirely migratory, wintering in the plains of the northern Indian subcontinent. It is found in open country rather than in settlements, which are occupied by the Eurasian Tree Sparrow in its range. *P. d. parkini* described from Srinagar, Kashmir, is found in the western Himalayas from the Pamir Mountains to southeastern Nepal. It is migratory, like *bactrianus*.
- *P. d. indicus* is found in the Indian subcontinent south of the Himalayas, in Sri Lanka, western Southeast Asia, eastern Iran, and southwestern Arabia as far as southern Israel.
- *P. d. hufufae* is found in northeastern Arabia.
- *P. d. rufidorsalis* is found in the Nile valley from WadiHalfa south to Renk in northern South Sudan and in eastern Sudan, northern Ethiopia to the Red Sea coast in Eritrea.



Distribution

The House Sparrow is an urbanized bird which is found in almost all parts of India. Its population declines in the Northeast as you move from west to east. Although it is found in most parts of Assam, its population is very minimal beyond that and is replaced by the Eurasian Tree Sparrow. The Indian House Sparrow has been seen upto 1200 meters in the East Himalayas and it is found at around similar heights in the Western Himalayas .

The indicus sub species to which our House Sparrow belongs hardly migrates though now for some reason or other, it has spread in the North and South African continents as well.



reproduction

The Sparrow is very flexible in making the nests and does it with tinges of arrogance. They can nest in houses and artificial crevices, holes in the walls, buildings and rocks, in the verandah ceiling fan's inverted cups, cliffs cracks, inlets, and even in the gaps between the window A/C !!! The Sparrow nest is a very untidy, ugly looking bowl type nest but they make the inside very smooth and fluffy by filling it abundantly with very soft feathers.

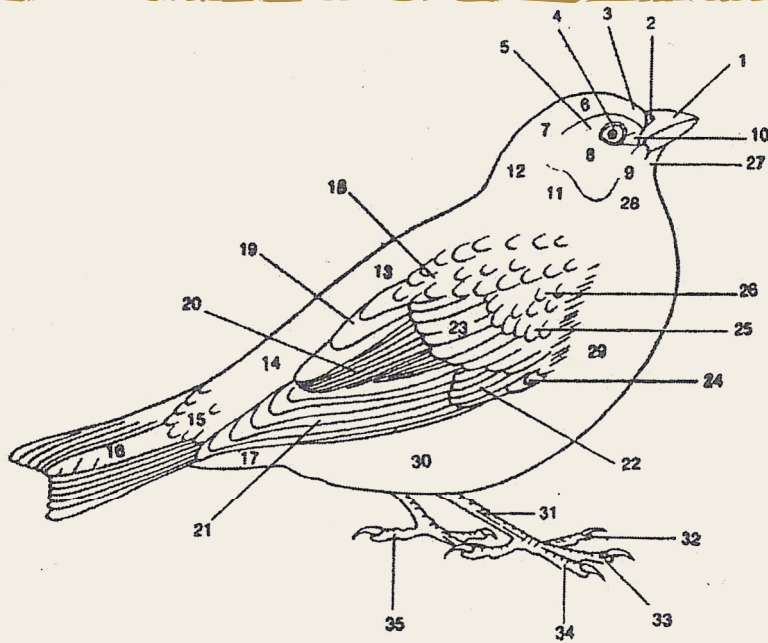
The House Sparrow is known to use the abandoned nests and nesting sites provided they are sure of its safety. Sometime they build nests near another Sparrow's nest and this leads to many good fights among them, The eggs are white, bluish-white, or greenish-white, spotted with brown or greyish and with lined markings which are very variable in designs, The sizes of the eggs are up to 2 inches and are incubated by the female. Male feeds the female during the incubation period. The Sparrow has the shortest incubation period of all the birds, 10 -12 days, and a female can lay upto 4-7 eggs each summer.



Parasites and Disease

The House Sparrow is host to a huge number of parasites and diseases, and the effect of most is unknown. Ornithologist Ted R. Anderson listed thousands, noting that his list was incomplete. The commonly recorded bacterial pathogens of the House Sparrow are often those common in humans, and include Salmonella and Escherichia coli. Salmonella is common in the House Sparrow, and a comprehensive study of House Sparrow disease found it in 13% of sparrows tested. Salmonella epidemics in the spring and winter can kill large numbers of sparrows. The House Sparrow hosts avian pox and avian malaria, which it has spread to the native forest birds of Hawaii. Many of the diseases hosted by the House Sparrow are also present in humans and domestic animals, for which the House Sparrow acts as a reservoir host. Arboviruses such as the West Nile virus, which most commonly infects insects and mammals, survives winters in temperate areas by going dormant in birds such as the House Sparrow. There are a few records of disease exterminating House Sparrow populations, especially from Scottish islands, but this seems to be rare.

Topography of a Sparrow



1. Culmen
2. Nostril
3. Forehead
4. Iris
5. Supercilium
6. Crown
7. Nape
8. Ear-coverts
9. Malar region (malar stripe, moustache)
10. Lores
11. Side of neck
12. Hindneck
13. Back
14. Rump
15. Upper tail-coverts
16. Tail (rectrices)
17. Under tail coverts
18. Scapulars
19. Tertiaries
20. Secondaries
21. Primaries (remiges)
22. Primary coverts
23. Greater coverts
24. Bastard wing (alula)
25. Median coverts
26. Lesser coverts
27. Chin
28. Throat
29. Breast
30. Belly (abdomen)
31. Tarsus
32. Inner toe
33. Middle toe
34. Outer toe
35. Hind toe (hallux)

- The House Sparrow is a small, slender and chirping bird. It prefers to hop. Its average size is 14.5-16 cm and it has a wing span of 19-24 cms.
- There is a sexual dimorphism in the sparrows. The male Sparrow has orangish – dark brown crown, black throat and upper breast, brownish mantle and chestnut nape. The bill in summer is blue black and legs are brown. In winter, its plumage is dulled by pale edgings, the bill turns yellowish-brown with streaked grayish-white underparts. The female has no black colouring.
- The young House Sparrow is a bit darkish brown and the white is replaced by buff while the beak is dull yellow.

Interestingly, the House Sparrow's incessant chirping has interesting variations and this leads to the belief that they are good communicators. The normal chirruping, the mating call, the acceptance and consent call, the joyful chirping and group noise are all different. The feeding call and warnings are also different.

Aggressive males give a trilled version of their call, transcribed as "chur-chur-r-r-it-it-it-it". This call is also used by females in the breeding season, to establish dominance over males while displacing them to feed young or incubate eggs. House Sparrows give a nasal alarm call, the basic sound of which is transcribed as quer, and a shrill chree call in great distress. Another vocalisation is the "appeasement call", a soft quee given to inhibit aggression, usually given between birds of a mated pair. These vocalisations are not unique to the House Sparrow, but are shared, with small variations, by all sparrows.



VOICE

The Disturbing decline

The common House Sparrow is declining all over the world for NO concrete reason and nobody knows why this is happening. The house sparrows are indicators of the environmental health and if they are dying then it means that all is not well. The Sparrow is vanishing from many big cities and growing urban areas. It is still surviving in peri urban and rural areas which clearly indicates that urbanization has a direct bearing on the decline in the Sparrow population. Not only in India, the severe decline in the population of sparrows is seen in Europe, especially in the Netherlands, United Kingdom, France and the Czech Republic. A sharper decline has been noticed in Germany, Italy, Finland and Belgium.

The decline in the numbers of the House Sparrow is alarming. According to various studies its population has declined so much that if this trend is not arrested, soon the House Sparrow would be extinct! It is moving towards oblivion at a rapid pace.

Why is this happening?

We miss the daily chirping of this little bird which was so common that we were habituated to see near our houses. Why is there this sudden disappearance?

Our feathered friends at one time were invariably in our verandahs, frequently on our balcony and occasionally in our living rooms, well inside our homes!

What is making them disappear?

Many reasons are in vogue but nothing can be said with conviction. There could also be a combination of many reasons that are together responsible for the vanishing Sparrow.

The foremost reason seems to be the decline of the Sparrow's habitat. As we have seen, this bird lives on soft bodied insects and feeds its young on them. It was a common sight to see the House Sparrow catching insects in the night and flying towards its nest to feed its babies. It was never afraid of human presence nor did humans tend to kill it for food.

With the excessive use of insecticides, the soft bodied insect is hardly seen now. The decline in its food source has led to a decline in the numbers of the House Sparrow, especially in big cities.

The second obvious reason is the problem of nesting. The House Sparrow makes its nest in the crevices or in the skylight cornices of the houses and other such spaces in urban areas. It also used to make its nest in the space between the terracotta tiles of semi urban roofing, but with the advent of modern house construction, these crevices and square holes in the roof are now covered with wire meshing or jalis. As skylight ventilators have been discarded there are no more terracotta roof tiles and with that no nest crevices, no more nests, and hence, NO MORE SPARROWS.

House Sparrow is basically a seed eating bird. These quasi domesticated birds were highly dependent on the left over grains thrown to them after the ladies had finished cleaning grain for the family. Now this practice has changed with the change in lifestyle in the Indian urban scenario. With availability of ready ground wheat flour, the seed cleaning and spillover seeds that provided food to the Sparrow has declined in the cities but although it remains in the peri urban and rural areas, the House Sparrow population is on the decline even there.

Unleaded petrol : safer for humans, killer for House Sparrow?

According to Dr. Meeta Sinha Akhilesh, one of for the most surprising facts responsible for the sharp decline in population of House Sparrow is the use of unleaded petrol in vehicles. The combustion of this petrol leads to the formation of menthyl nitrite, which is highly toxic for soft bodied insects. This leads to decline in the insect population and since younger birds are fed on them, the numbers of young birds, are obviously also declining.

Still the sparrows are not out of our lives : Save them in time!

The population size of this species is very large and is nowhere near the threshold for 'vulnerable species' as per IUCN'S population size decline criteria and red data list.

So the Sparrow has entered the RED DATA LIST but still in the 'least concerned category'. Nevertheless it is in the RED DATA BOOK and that is really sad so **let's take some concrete action to save this species.**





What Schools and Students Can Do

Schools should avoid using pesticides in their gardens and fields. For control of insects and pests they should resort to bio pesticides & bio insecticides. A clear cut guideline should be made by the school so that the food chain is not disturbed for the House Sparrow. This act would make available the soft bodied insect for younger chicks

- ✦ Make the students aware of the scenario and ask them to do some actual project on the house sparrows.
- ✦ Try to ascertain the reason for decline
- ✦ Form a wildlife society in the school so make a guideline of Dos and Don'ts.
- ✦ Organic farming could be helpful in saving the Sparrow as it would enhance sparrows food availability.
- ✦ Form a group of Sparrow watchers and find out their availability in various parts of the city and town. Study their habitat .
- ✦ Make bird nests and hang them at appropriate places. The bird nest should be of the crevice type and not the box type ones as in the latter pigeons, etc. enter forcibly and prevent sparrows from nesting.
- ✦ The placement of crevice type nest is important. It should be within or near the building and at a sufficient height so that common predators like cats, etc. cannot reach them.
- ✦ Lastly, all schools must celebrate the World Sparrow Day on 20th March and follow the latest on the sparrow.

HOUSE SPARROW NEST BOX : THE GUIDELINES

- The boxes should be made preferably of wood and unpainted.
- Make the aeration holes properly in the boxes but not at the top roof as it would lead the dew , raindrops etc entering and thereby wetting the nest in the process.
- Don't make the surface very smooth by chiseling and painting it. Let it be in its natural form.
- Sparrow would prefer the nests which are within or near to your home and away from predators and other disturbances.
- The Sparrow prefers crevices and small hole type of the nest where sufficient aeration and natural light is there and from where the young chicks can peep out one the eggs are hatched. Once the nest boxes are they are placed correctly, they can provide a wonderful opportunity to witness first hand the experience of the life of a bird..
- Nest boxes should only be placed where they cannot be gained access to by predators especially cats. Cats keep a vigilant watch on the nests and attack when the chicks are grown up and their calls become audible. So the boxes are to be kept where you can diligently view them but at the same time predators should not be able reach them.
- Ensure adequate source of food and water around and in your garden.
- Birds become very sensitive during the breeding season and one should avoid disturbing them by constantly clicking pictures or looking everytime at them. Many a times this causes birds to abandon the nest.
- After the breeding is over, the nests are generally used as a night shelter by the birds as it provides the desired safety and warmth to them.



HOUSE SPARROW : AMAZING FACTS

- The most widespread commonly seen wild bird in the world is probably the House Sparrow (*Passer domesticus*) which has been transported all over the world by European settlers and can now be found on 2/3 of the land masses of the world including New Zealand, Australia, N. America, India and of course Europe.
- House Sparrows reportedly lived and bred in the Frickley Colliery Yorkshire, England coal mine shaft 640 m (2100 ft.) below ground level, where two, and later three birds were fed by the miners and lived for 3 years. (In November 1977, a pair nested in the mine and raised 3 young which did not survive).
- Originally native to Eurasia and North Africa, House Sparrows have successfully followed man to all of the world's continents except Antarctica.
- House Sparrows rarely occur very far from humans and our structures.
- To move around on the ground, House Sparrows usually hop instead of walk. Walking is rarely observed and then only by older individuals.
- The House Sparrow can swim when it needs to for survival. They have even been observed swimming underwater when threatened.
- While the longevity record for a House Sparrow is over 13 years old, the survival rate for the young of each year is less than 25%. Over 40% of all adult House Sparrows die each year.
- Only 200 years ago, there were no house sparrows on the entire continent of North America. Today, it is estimated that there are over 150 million.
- Birds have a primitive, largely reptilian type kidney which, although able to secrete some salt, is quite poor at it. The ability to process salt varies between species, but most can produce uric acid with a maximum salt concentration of about 300 mmol/litre. Amongst our garden birds, house sparrows and pigeons are some of the most salt tolerant species. The capability to secrete salt seems to be linked to habitat, particularly marine environment and drought conditions. This is nicely illustrated by the savannah Sparrow. The subspecies that inhabits saltmarsh is capable of secreting 2-3 times as much salt than other subspecies that live in salt-free habitats.
- Sparrows love to bathe in shallow waters to clean themselves.

SOURCE : www.housesparrowdecline