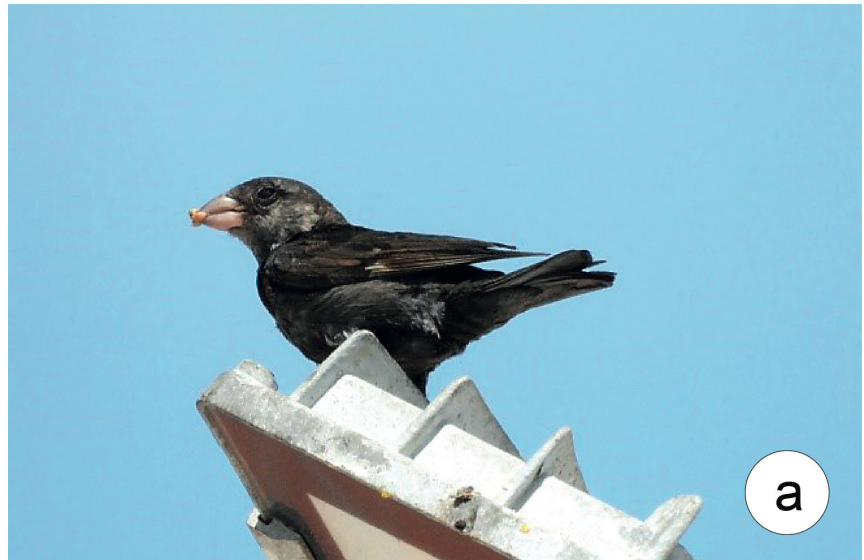


## Observation of colour aberration and feeding of halophytes by House Sparrow in Ramanathapuram District, Tamil Nadu

The House Sparrow, *Passer domesticus* (Linnaeus, 1758) is the most widespread bird species in the world and its geographical range extends over Europe, northern Africa, and parts of Asia including the Indian subcontinent (Ali & Ripley 1987). They are native and resident in Eurasia from British Isles, northern Scandinavia, northern Russia, and northern Siberia, Africa, India and Burma (Cramp 1994). Globally, most intense nest building occurs from February to May and less during rest of the year (Lowther & Cink 2020; Birds of the World 2022). House Sparrows construct nests within buildings, however, modern construction designs around the world lack suitable nesting habitats such as holes or crevices for the construction of nests (Vincent 2005). Sixteen distinct colour mutations were described in House Sparrow by Grouw (2012) and Kumar & Kushwaha (2018). The IUCN Red List has evaluated the conservation status of House Sparrow



Black coloured House Sparrow individual. © M. Pandian.

as 'Least Concern' (BirdLife International 2016).

The study site Mukkaiyur Village (9.129 N, 78.481 E) is located in Ramanathapuram District of southern Tamil

Nadu. Apart from traditional cultivation of paddy, millet, pulses, and cotton, tourism, pilgrimage, fishing, salt pans, and cottage industries involving palm products are the major source of income for

the people in the region. The average annual rainfall is 800 mm. The maximum and minimum annual temperatures of the district are 36°C and 20°C, respectively (<https://Ramanathapuram.nic.in>). The study was conducted during June 2022. A coastal village having a definite population of House Sparrow was identified. Since abundant halophytes occur in the coastal areas, the birds were observed continuously from 0600–1800h daily and recorded their foraging on halophytes. A solitary black coloured House Sparrow individual was also recorded. No live nests, eggs, chicks or adult birds were handled and a minimum distance of c. 15 m was maintained during the observations. Photography was done using a Nikon P1000 digital camera.

### Results and discussion

The study revealed that the individuals of House Sparrows ( $n = 12$ ) consumed succulent leaves of halophytes, such as *Suaeda maritima* (L.) Dumfort. (Amaranthaceae) and *Sesuvium portulacastrum* (L.) L. (Aizoaceae). Succulent parts of *S. portulacastrum* contains 10.2–12.5% protein and high minerals like Ca, Na, Cl, K, and Mg (Lokhande et al. 2012). Similarly, *S. maritima* contains 12.96% protein and other minerals (Yuttana 2015). Since the studied habitat is a coastal area, the individuals of House Sparrows might have consumed the succulent leaves of these two halophytic plants probably to meet their protein and mineral requirements. However, detailed study is required to ascertain the reasons for consuming halophytes.

In Mukkaiyur Village, an abnormal black colored adult House Sparrow individual was observed.

It was freely foraging with other individuals of a flock. No antagonistic behaviours existed between them while foraging, aggregation, and roosting. Albinism and melanism are two most commonly reported form of polymorphism in birds (Mundy 2006). Grouw (2012) has described 16 distinct colour mutations including melanistic colour (black colour) in the House Sparrows based on the specimens found in museum collections and it was due to abnormal deposit of melanin in skin and feathers. Though six most common heritable colour aberrations are found in birds, viz., albinism, leucism, brown, dilution, Ino, and melanism, brown colour is the most common mutation in the House Sparrows (Grouw 2012). Kumar & Kushwaha (2018) have recorded black and reddish individuals of House Sparrow. The recording of a solitary, live black colored House Sparrow in the present study site might have been due to colour mutation as stated by Grouw (2012).

### Conclusion

The study area being a coastal village, has become a potential habitat for House Sparrows. Efforts need to be made to create awareness among the local residents about the need to conserve declining populations of House Sparrows. More nesting sites in the form of cavities in the newly constructed buildings have to be created and artificial nest-boxes have to be installed in residential areas and commercial establishments. Continuous study is required to monitor the colour aberrations and feeding on halophytes by House Sparrows in these coastal villages.

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