

Research Article

Species composition and classification of guilds in birds with respect to food and feeding behavior: Evidences from suburban landscape in Hooghly district, West Bengal

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ABSTRACT

Birds act as indicator of habitat quality as they respond to alterations in habitat structure and represent different trophic groups or guilds. Feeding guild in a bird community is determined by the varieties of food consumed, food procurement methods and foraging substrates exploited by respective bird species. The current study was carried out in Serampore, a suburban town situated on the west bank of river Hooghly in West Bengal. This study provides an insight into the bird-habitat relationship and foraging behaviour of birds based on their community structure. Biweekly sampling was carried out at the sampling site using fixed-radius (25m) point count method for a period of 10 minutes at randomly selected points to note the occurrence of avifauna. Based on the primary and pre-dominant food type, the foraging layers in the suburban habitat were classified as arboreal, terrestrial, and understory. The observations of the present study revealed 48 bird species, which belong to 12 orders and 25 families. The highest bird diversity ($H'_{winter} = 3.18$) was recorded in the post winter months. The local status survey revealed that 18.75% species were rare, 33.3% common and 25% fairly common. The observed species were then categorised into 32 feeding guilds based on their food preferences. 24.53% preferred insects and immature including caterpillars and grubs while 36.48% species were found to be carnivorous. Aquatic-insectivore-carnivore feeding guild was found to hold the maximum species followed by arboreal-terrestrial-insectivore and terrestrial-frugivore-insectivore guild respectively. As per the results, the suburban area under study not only proved to be a preferable and potential bird habitat but also a suitable foraging site for a wide array of bird species. Thus, the present study pertaining to the estimation of bird diversity and further exploration into their respective feeding guilds is expected to provide first-hand information for framing appropriate strategies for bird conservation in the landscape under study and other similar suburban landscapes.

Key words: Suburban, point count, avian diversity, feeding guild

