ABSTRACT

The present investigation was carried out to study the floral and avifaunal composition of the three major different habitats, the moist deciduous forest, evergreen forest and teak plantation of the Parambikulam Wildlife Sanctuary and to assess the habitat use of the avifauna. The sanctuary was found rich in avifauna with 261 species of birds belonging to 59 Families of 17 Orders. Among the three habitats in this sanctuary, moist deciduous forest showed high plant species richness. The diversity and density of tree species was highest in the evergreen forest followed by moist deciduous forest and teak plantation. The diversity of shrub species was higher in moist deciduous forest. The foliage diversity was higher in wet season than in dry season.

A differential distribution of birds related to seasons and habitats was observed. The species richness and abundance were higher during the wet season, but the species composition (guild structure) in the three habitats differed significantly. The resource utilization patterns of birds in two habitats (moist deciduous forest and evergreen forest) varied based on the availability of resources.

Bird species that face seasonal irregularity in the availability of food resources may shift to feeding on other resources or it may move to another area where the original food resource is available. The increased bird abundance in the moist deciduous forest could be attributed to the increase in the number of endemic species and winter migrants. Rainfall is found to be the major factor influencing the abundance of birds in the Sanctuary.

The foraging pattern was found to have nine foraging methods (Sallying, Pouncing, Foliage gleaning, Wood gleaning, Wood probing, Ground carnivores, Nectar exploiting, Fruit exploiting, and Seed exploiting), four foraging substrates (forest floor, shrub, tree and air) and specific foraging heights. The floral and avifaunal structure in the three different habitats with respect to various seasons and food availability indicate the diversity status.

Key words: Parambikulam Wildlife Sanctuary, Moist deciduous forests, Evergreen forest, Teak plantation, Flora, Avifauna, Diversity, Community structure, Foraging pattern.