AVIFAUNAL DIVERSITY OF UDAWATTA KELE: AN URBAN FOREST RESERVE IN THE KANDY DISTRICT

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Sri Lanka is a bird paradise. Up to date, 453 bird species had recorded from Sri Lanka. Among them 237 species are breeding residents and 216 species are migrants. Out of 237 resident species, 27 species are endemic to the country [4]. Kandy is the capital of the central hill country of Sri Lanka. There are six bird distribution zones in Sri Lanka. Udawatta Kele belongs to the mid country wet zone. Udawatta Kele forest reserve is an artificial forest located at the very heart of the city of Kandy in Sri Lanka. In 1856, this areas was named as a nature reserve and in 1938 as a sanctuary. Extent of this forest is about 102.8 ha. Jack and Mahogani plantation was begun and maintained from 1940 by the Forest Department of Sri Lanka and currently the forest is protected under the Forest Department. Since the surroundings of the Udawatta Kele are highly urbanized, the wildlife of the area is blessed from this forest islet. It provides many habitats for animals, especially birds. Since it is an easy destination, many studies have been carried out based in Udawatta Kele. However, only a few scientific studies on the avifauna in Udawatta Kele have been carried out to date. According to Ellepola [1], twenty three bird species recorded in Udawatta Kele, including five endemic species.

The objective of this study was to study the avifaunal diversity of Udawatta Kele forest reserve. The study was conducted in Udawatta Kele forest reserve, Kandy, Sri Lanka. Line transects were used to collect data. Transects were established along the permanent walking trails, covering most of the area of the forest. Opportunistic point counts were also taken for data collection. Birds were observed using a pair of Nikon monarch ® binocular. Also birds were identified by their calls and songs. Identifications were confirmed by using Harrison [2]. The survey was carried out for one year, from January to December 2014, through both migratory and non migratory period. Data were collected from early morning to noon when birds were more active. Feeding habits of birds were also observed during the survey. According to the food habit birds were categorized into groups. Furthermore, the habitat preferences of each bird were identified. Thus, birds were also separated into groups based on their habitat preference.

A total of 51 bird species belonging to 28 families were recorded during the study. Of the 51 species, 47 species were breeding residents, four species and one sub species were migrants (Figure 3). The study encountered four endemic bird species and two proposed endemic species (Figures 1 and 2). Fifty per cent of the recorded families (n = 14) had only one species, nine families (32.14%) had three species, two families (7.14%) with three species, two (7.14%) with four species and one family (3.57%) had five bird species. Of the 51 bird species, two species were near threatened, i.e. Sri Lanka Emerald-collared Parakeet (*Psittacula calthropae*) and Black Eagle (*Ictinaetus malayensis*), and one species was nationally threatened (Black-throated Munia (*Lonchura kelaarti*) according to IUCN [3].

Most of the recorded species were canopy and sub canopy dwellers. Of 51 species 32 species were canopy and sub canopy dwellers (canopy=14, sub canopy=10, canopy and sub canopy=8). The remaining 19 bird species were more commonly recorded closer to the ground. Most of the species were secondary forest associated species. Few species preferred grassland and water body habitats. During the study six main bird feeding guilds were recorded, i.e., frugivores, nectivores, seed eaters, insectivores, carnivores, and omnivores. Most of the birds were insectivores (n=19), followed by omnivores (n=11).

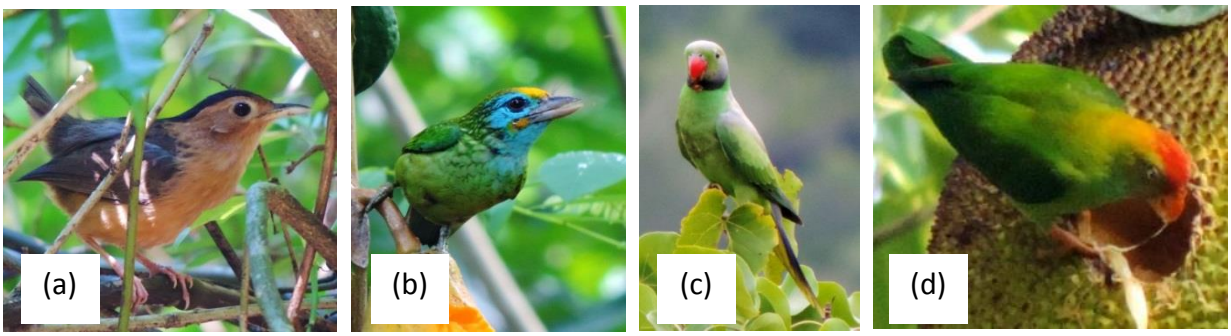

Figure 1: Endemic bird species in Udawatta Kele. (a) Pellorneum fuscocapillus (b) Megalaima flavifrons (c) Psittacula calthropae (d) Loriculus beryllinus

Most of the birds utilize this landscape as their roosting and nesting areas. Also some migratory birds had chosen this area as their destination for spending their winter in breeding lands. Number of endemic bird species is low in the area. And the recorded endemic species are common species. Low habitat heterogeneity and lack of specific habitats and high degree of urbanization of the surroundings have may probably reduaced the number of endemic species.

Most of the forest covered with a constant canopy. This canopy cover decreases the amount of sunlight reach to the ground layer. Therefore, most of the forest areas lack an understory and ground layer vegetation. A healthy understory can be observed in areas where in minimal canopy cover. Most of the forest ground was covered with fallen leaves. This ground structure enables the ground dwelling birds for camouflage.

Most of the recorded bird species were insectivores and found in canopy and near to canopy. This layers rich in insects, flies and plant bugs; which were their main food source. Also some insectivores recorded at ground. Fallen leaves and branches were ideal places for colonize insects and other invertebrates. Hence, ground was good feeding place for insectivore birds.

Habitat heterogeneity of the forest is low, but it provides some distinct habitats. Secondary forest, grassland, water bodies are some of these habitats. This habitat variation enables to increase the species richness of the area. Since most of the forest area covered with a thick canopy, locating birds was much difficult. Also the visibility decreased by the low light conditions inside the forest. But most bird species are noisy and make calls and songs. These bird calls helps to identify bird species even the individual is not visible.

Figure 2: Proposed endemic species in Udawatta Kele. (a) Megalaima rubricapillus (b) Chrysocolaptes lucidus

Figure 3: Migratory species in Udawatta Kele. (a) Pitta brachyura (b) Muscicapa muttui (c) Dendronanthus indicus (d) Phylloscopus magnirostris

References

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