414/D

Diurnal activity budget of endemic Dull-blue Flycatcher *Eumyias sordidus* (Passeriformes:Muscicapidae) in Horton Plains National Park, Sri Lanka

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The diurnal time-activity patterns of the Sri Lanka Dull-blue Flycatcher *Eumyias sordidus* were studied during January to December, 2016, in Horton Plains National Park (HPNP). Focal sampling method was used to study the activity of *E. sordidus.* A total of 288 hours were spent to collect data.Three natural habitats were selected for study namely Cloud Forest (CF), Cloud Forest Die-back (CFD) and Grassland (GL). To test the differences in activities in an entire daylight period, each day was divided into different time periods, Early Morning (EM), Morning (M), Midday (MD), Afternoon (AN) and Evening (E).The Climate seasons were characterized as First Inter Monsoon Season (FIMS), South West Monsoon Season (SWMS), Second Inter Monsoon Season (SIMS), North East Monsoon Season (NEMS).One-way ANOVA test was used to check the significant difference among variables. Dull-blue flycatchers spent an average of 33.54% of their day time for scanning, 3.18% feeding, 4.77% locomotion, 20.55% resting, 14.28% vocalizing and 6.18% engaging in preening activities. The time spent on resting (ANOVA, p=0.021), preening (ANOVA, p=0.022), vocalizing (ANOVA, p=0.045) and breeding (ANOVA, p=0.037) varied among climate seasons in 2016. The time spent onscanning (ANOVA, p=0.014), locomotion (ANOVA, p=0.018), resting (ANOVA, p=0.021) preening (ANOVA, p=0.016) and other activities (ANOVA, p=0.011) varied among time periods during the day,but not among habitats (ANOVA, p>0.05). The time spent for vocalizing varied among habitats (ANOVA, p=0.044) and climate seasons (ANOVA, p=0.045) within the year. The feeding patterns did not differ among climate seasons, day time periods and habitats (ANOVA, p>0.05). Locomotion behaviour varied among day time periods (ANOVA, p=0.03) but did not change between seasons and habitats (ANOVA, p>0.05). The resting behaviour differed among climate seasons (ANOVA, p=0.021) and day time periods (ANOVA, p=0.012) but did not differ among habitats (ANOVA, p=0.214). Preening differed among seasons (ANOVA, p=0.022) and day time periods (ANOVA, p=0.021) but did not vary among habitats (ANOVA, p=0.118). Breeding activities were observed during FIMS and SWMS. *E. sordidus*spent an average of 49.9±12.7% (Mean ± Standard Deviation) of their day time for breeding activities during breeding seasons. The current research suggests that several factors, such as food availability, environmental conditions, predation threat and human disturbances may affect the diurnal activity patterns of *E. sordidus* between day time periods, habitats and climate seasons in HPNP. The present study provides insights for the conservation of this endemic bird species, and recommends further studies to clarify the conclusion.

Key Words: Sri Lanka Dull-blue Flycatcher, Endemic, Horton Plains, Diurnal activity budget,Tropical Montane Cloud Forest.

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