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## Patterns of diversity and turnover of pleurostict Sericini chafers (Coleoptera: Scarabaeidae) of Sri Lanka: A preliminary investigation of samples from Knuckles conservation forest

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The comparison of species richness and composition at different spatial and temporal scales is important in biodiversity analysis. These parameters are mandatory for a comprehensive understanding of the evolutionary background of species diversification and niche separation within a specific community. However, such studies have rarely been done in tropical, species rich, very old, and isolated islands like Sri Lanka. Here, we examined the spatiotemporal variation of assemblages of Sericini in the Knuckles forest range. We determined how composition, species richness, and abundance vary with different habitats and different seasons across the forest. We conducted two field surveys in Pitawala Patana (Knuckles-North) and Deanston (Knuckles-South) in February and October 2019. Six UV light traps were placed in different habitat types at each location for three consecutive days. Species accumulation curves indicated saturation for the series of trapping events. Species were sorted to morphospecies based on the complex shape of the aedeagus. Preliminary statistical analyses were done using principal component analyses and plots were performed using PAST Version 3.25. Specimens were selected for DNA sequencing of the barcoding gene region (*Cox1*), for each presumptive morphospecies per site. A total of 365 Sericini specimens were captured, comprising 18 species, of which five were new to science. Four species (*Maladera lindulana*, *M. cervicornis*, *Serica lurida*, *Selaserica nitida*) were co-occurring in both seasons, while three species (*Periserica* sp., *M. weligamana*, *Sel. athukoralai*) disappeared and 11 species (10 *Maladera* species, 1 *Selaserica* species) emerged after the Southwest Monsoon season. The number of specimens per trap varied significantly with the season. The results suggest high spatiotemporal variation of Sericini assemblages across the investigated forest range. Moreover, a preliminary analysis of DNA barcode data suggests that the geography of the forest mountain range might play an important role as a physical barrier, potentially promoting speciation processes.

**Keywords:** *Sericini*, *Scarabaeidae*, *pleurostict*