

## **S7: Biodiversity patterns of herbivore scarab chafers (Coleoptera: Scarabaeidae) in Sri Lanka**

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Very little is known about factors determining assemblage structure of tropical herbivore scarab chafers (Coleoptera: Scarabaeidae). In this study we examine diversity patterns of scarab chafers at a local scale to infer patterns of species turnover among different sites and habitats. We applied a sampling scheme of six UV-light traps that were placed in different habitat types at each locality to explore the quantitative species composition in sites as well as different forest types, including lowland, sub-montane and montane forests in both dry and wet seasons. Four expeditions were undertaken in 2019 and in 2020 to twelve localities in lowland wet/dry evergreen forests, sub-montane wet evergreen forests and montane forests of Sri Lanka. Results of the first two expeditions revealed a high endemism of the target taxa in the study sites. Continued sampling efforts during two further expeditions demonstrated that we recorded almost the complete species assemblage within a particular site, as the species accumulation curve saturated for several sampling events in the fourth expedition. We examined 4689 scarab chafer individuals and identified 43 Sericini morpho-species and 68 other scarab morpho-species. This included so far 10 new species of Sericini. Our results presume large species turnover among traps set in different habitats in the same locality. However, traps of different localities generally showed more similar faunal composition, than traps of the same locality. Species abundance varied significantly across dry and wet seasons in each locality. This might indicate that habitat determines the assemblage composition more than the locality, which we would like to investigate in more detail: our results shown here are based on morpho-species assignments and will be underpinned in the frame of the project by molecular data.