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SEEDS CHARACTERS AFFECTING THE POST-DISPERSAL SEED PREDATION OF DOMINANT DRY FOREST TREE SPECIES

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Soil seed banks in natural dry forests of Sri Lanka are highly heterogeneous and contain very low number of tree seeds. Post–dispersal seed predation is considered as yet another reason for this. This study aims at determining the seed characteristics of dominant dry forest tree species and to examine their post-dispersal seed predators. Seeds from ripen fruits of eight dry forest tree species, *viz. Bauhinia racemosa, Cassia fistula, Chloroxylon swietenia, Drypetes sepiaria, Dimocarpus longan, Manilkara hexandra, Schleichera oleosa* and *Syzygium cumini* were collected from Bundala, Kaudulla, Udawalawa and Girithale National Parks during their fruiting seasons. Fruit type, seed length, width, fresh weight, moisture content and the nutrient composition (starch, fiber, protein and fat content) of these species were determined. Post-dispersal seed-predators of these tree species were observed either directly during the day-time or by tracing signs on partially predated seeds. Seed size and weight and, their protection by hard fruit or seed coats appear to affect predation after fruit/seed dispersal. Starch, fiber, protein and fat contents varied significantly among seeds of the species examined ($p < 0.05$). Generalist insects and rodents were the predators of these seeds and the variation of the seed qualities did not appear to influence in attracting any specialist seed predators. However, the climatic and habitat conditions which vary from region to region may favor one or the other type of generalist to be abundant in a given area and thereby predate upon seeds of a given tree species. In addition, termites appear to destroy seeds gathered in the soil seed banks in dry forests, irrespective of the species or the seed traits. Consequently, the soil seed banks are deprived of tree seeds and natural regeneration of dominant dry forest tree species is greatly hindered. Rodents and insects are ubiquitously present in these fragmented dry forests and this may eventually create a significant impact on reducing the quality and the quantity of the soil seed bank and thereby reduce the natural regeneration of tree species in dry forests of Sri Lanka.

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