Feeding ecology and seed dispersal of pigtail macaques (*Macaca nemestrina*) in Khao Yai National Park, Thailand

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Seed dispersal has a profound influence on structure and diversity in tropical environment. Although all frugivorous primates disperse seeds, the contribution of dispersal by some species in forest regeneration is still discussed. For instance, baboons and macaques are controversially described as seed dispersers or as seed predators. We study the seed dispersal by a troop of pigtail macaques (*Macaca nemestrina leonina*) in the Khao Yai National Park (Thailand) in order to describe the mode of seed dispersal and the seed fate of each fruit species consumed by macaques, including the assessment of potential germination enhancement for dispersed seeds. Pigtail macaques disperse seeds either via feces, by swallowing seeds, or via cheekpouch storage, by spitting out seeds after processing the fruits in the mouth. Preliminary results of our study show that pigtail macaques in the study troop disperse the seeds of at least 15 fruits species. For some species (*Nephelium melliferum, Baccaurea ramiflora*), macaques use the 2 modes of seed dispersal simultaneously. If part of the seeds excreted are intact and viable, as shown by the cut test, some are destroyed during mastication and digestion, and therefore it seems that macaques are to be considered both as seed dispersers and predators. The size of dispersed seeds ranges from the largest defecated seed (*Nephelium melliferum*) of 22mm long and 13mm wide to the smallest (*Dissocheta divaricata*) less than 1mm long and 0.5mm wide. In the future, Tetrazolium test will also be used to assess seed viability, and the germination enhancement for seeds defecated or spat out will be assessed using germination test. Germination rate and germination delay will be compared for defecated, spat and control (seeds from non consumed fruits collected from trees foraged by the macaques) seeds.