

**Importance of pigtailed macaques (*Macaca nemestrina leonina*) in seed dispersal:
Impact on the ecological balance of the tropical rainforest at Khao Yai National Park,
Thailand**

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Abstract

The tropical rain forest is maintained thanks to a precarious balance placed under the yoke of interactions between the various animal and plant species which compose it. Among them we can find those implying plants and frugivores. Today, no study was still undertaken on the pigtailed macaques (*Macaca nemestrina leonina*) because they are considered seed predator. However, recent studies showed that it could actually be a key-species in the dispersion of many plant species. The study will take place in the Khao Yai National park (2,168 km²), Thailand. We will follow a troop of forty individuals habituated to humans and already well-known. Our goal will be to establish the importance of the pigtailed macaques in the maintenance and the regeneration of the tropical rain forest. Thus we will try to evaluate their capacity of being good seed dispersers. In this purpose we will study: 1) the spatiotemporal distribution, the productivity and the characteristics of the plant species present on the home range of the studied troop, 2) the ranging patterns of the macaques within their home range, 3) their feeding behaviour, notably the fruit selection and the various modes of processing seeds, and finally 4) their impact on the viability and the germination potential of seeds. The study of seed dispersal by these macaques would enable us to step further into the understanding of this environment and, perhaps, to improve the destiny of the pigtailed macaques, species now characterized as “vulnerable”, in recognizing them a paramount role in the conservation of their habitat.