

## Diet analysis of sympatric colobine monkeys from Bako National Park, Sarawak, Borneo

### ABSTRACT

Habitat quality and abundant of food resources are among the key factors influencing the continued existence of primates in the wild. Although much has been studied on primate habitats and their diets, little is known about the nutritional value of the colobines' foods. This study aimed to assess the dietary nutrient compositions of two sympatric colobine monkeys, *Trachypithecus cristatus* and *Nasalis larvatus*, in Bako National Park using proximate analysis of faecal, leaf and fruit samples of eight dominant tree species in Bako NP. Five nutrient parameters, namely crude protein, crude fat, crude fibre, ash, phosphorus, and energy content, were chosen to assess the nutritional demands of the monkeys in the wild. The faecal samples showed significantly higher percentage of crude fibre (27.58%) in *N. larvatus* compared to *T. cristatus*. In contrast, crude fat (8.52%), ash content (1.79%) and phosphorus (5.76 mg/g) were found to be significantly higher in the faecal samples of *T. cristatus* than in *N. larvatus*. The nutrient composition of leaves samples from the tree species consumed by *N. larvatus* and *T. cristatus* showed a significantly higher percentage of crude protein (14.56%) in *Barringtonia asiatica* (sea poison tree) and higher ash (13.70%) in *Morinda citrifolia* (Indian mulberry). Meanwhile, nutrient composition in fruit samples showed highest percentage of crude fibre (32.58%) and crude fat (12.35%) in *Calophyllum inophyllum* (Alexandrian laurel), whereas higher phosphorus (5.76%) and energy (24.26 KJ) were recorded in *Ceriops tagal* (Yellow mangrove). The higher crude fiber detected in *N. larvatus*' faecal samples compared to *T. cristatus* may indicates that *N. larvatus* experiences lower digestibility as they are incapable of completely digesting the tough leaves or fruits. This study provides useful information for the conservation and management of these primate species especially on their dietary requirements in captivity or in a new habitat.