

DIETARY SELECTIVITY BY WHITE-FACED CAPUCHINS: HOW IMPORTANT ARE COLOURFUL FRUITS?

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Polymorphic trichromacy characterizes many species of Neotropical monkeys. Finding food in the forest has been hypothesized to select for trichromatic individuals and to maintain colour vision polymorphism. Specifically, trichromacy is predicted to be advantageous for detecting conspicuously-coloured food items (red, orange or yellow fruit, flowers or leaves) amidst greenish foliage within individual trees, or for locating resources over long distances. However, the importance of conspicuously-coloured foods in the diet of many primates has not been extensively evaluated. To this end, we investigated the dietary composition and preference of white-faced capuchin monkeys for the plant species in Santa Rosa National Park, Costa Rica. We recorded the foraging behaviours of 4 monkey groups for a total of 21 months between January 2007 and August 2009. Additionally, we conducted forest transects to determine food abundance. We found that 59% of all foraging records were for conspicuously-coloured fruit and flowers. Cryptically-coloured (green/brown) items made up 20% of records, and the remaining 21% were for food items of other colours (purple/black/white). Furthermore, of the 38 tree species that were over-selected relative to their abundance (i.e. preferred), we found that 63% produced conspicuous food items, 16% cryptic food items and 21% food items of other colours. These results support the idea that colourful fruits and flowers are important in the diet of polymorphic trichromatic capuchins and provide an important foundation for investigations into the effects of vision phenotype on the foraging success of primates.

Keywords: *Cebus*, trichromacy, dichromacy, frugivory