

## INTRA GROUP VARIATION IN THE DIETARY PROFILE OF JAPANESE MACAQUES AS REVEALED BY STABLE ISOTOPE ANALYSIS OF HAIR

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*We studied dietary profiles of individual animals in a group of Japanese macaques (*Macaca fuscata*) through analysis of carbon and nitrogen stable isotope ratios in hair. During the growth of hair, individual filaments sequentially archive temporal fluctuations in stable isotope ratios. Stable isotope analysis of animal tissues provides dietary data that are longer term and less biased than those obtained by direct observation of feeding, scat analysis, or stomach content analysis. We collected dorsal body hairs of macaques from 28 individuals belonging to a foraging group consisting of about 50 individuals. We cut the hairs into 5-mm sections from the roots to the tips. We pooled corresponding sections of hairs for each monkey and treated as units of analysis; we measured stable isotope ratios with a mass spectrometer interfaced to an element analyzer. We observed marked seasonal variation in the dietary profiles of individual animals. The dietary profiles also varied among animals. We detected larger variations in male monkey stable isotope ratios than in female signatures. This gender difference may be related to kin-related spacing of individuals in a group during foraging. We need further collections and analyses of data to identify factors determining individual differences in dietary profile.*

Keywords: *Macaca fuscata*, dietary profile, stable isotope analysis, individual differences