

032

**VOCAL EMISSION AT FISSION-FUSION EVENTS OF SPIDER MONKEYS IN COMPARISON WITH JAPANESE MACAQUES.**

Y. Shimooka<sup>1</sup>, H. Sugiura<sup>2</sup>, A. Link<sup>3</sup>, A. DiFiore<sup>3</sup>

<sup>1</sup>*Teikyo University of Science and Technology, Uenohara, Yamanashi, Japan*, <sup>2</sup>*Kyoto University, Kyoto, Kyoto, Japan*, <sup>3</sup>*New York University, New York, NY, U.S.A.*

*Presenter's Email: yshimooka@gmail.com*

While most nonhuman primates live in socially-cohesive groups, some species exhibit very flexible patterns of association, also referred to a fission-fusion dynamics. Such differences among taxa in social cohesiveness can directly influence construction of social relationships. In this study, we compare the context of vocal emission at fission and fusion events in two species that differ in group cohesiveness. We conducted research on one group of wild Japanese monkeys on Kinkazan Island and one group of wild spider monkeys at Tiputini Biodiversity Station, Ecuador. These two groups have similar home range size and group size. Two or three observers conducted focal observations simultaneously on different group members, collecting a continuous record of activity and vocal behavior. At the same time, the animal locations were recorded automatically using a data-logging GPS. From these continuous location records, we calculated the distance between two individuals to identify the moment of fission and fusion events, and we then compared the frequency of short-range vocalization before and after fission-fusion events. We found that Japanese macaques emit coo calls frequently following fission events, whereas spider monkeys emit whinny vocalizations frequently before fusion events. Both coos and whinnies are exchanged among individuals affiliatively, but they likely have different functional roles. We discuss the differences in sociality (such as sense of distance and tolerance of other individuals) in relation to the spatial distribution of animals within the group.

Keywords: Fission-fusion, Vocalization, Japanese macaque, Spider monkey