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First Record of Algae-Feeding by a Female Chimpanzee at Mahale.

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INTRODUCTION

Chimpanzees in the wild are for the most part hydrophobic (1), although those of Mahale have been reported to collect and eat grasses and herbs growing in fresh water, become partly submerged and wet (2).

During my recent research in the Mahale Mountains, I observed an adolescent female entering a stream and eating algae intensively. This is the first observation of chimpanzees in the Mahale Mountains National Park to feed on the aquatic algae. From the

viewpoint of the dissemination of new information, I believe that it merits detailed documentation.

METHODS

In the course of a one-year study of the reunion behavior of M group chimpanzees from August 1997 to July 1998, focal targets were selected in the morning and followed during the whole day, videotaping all behaviors other than lying, sleeping or sitting. The observation of algae-feeding was accidental since the behavior was performed by an adolescent female, *Sally*, when I did not follow her. *Sally* was confirmed to have immigrated into M group for the first time on January 18, 1997 (Michio Nakamura, pers. comm.). The whole process (September 8 and October 2, below) was recorded with a Sony Model No.DCR-PC7 digital video recorder.

OBSERVATIONS

1. September 8, 1997. Around 13:00, while walking along a stream called Kasihamto, I found *Sally* about to escape from the stream in which green algae grew thick. The stream was 4m wide and formed a pool at the spot. Seeing me, *Sally* fled at once. I concealed myself behind

a tree and waited for her to appear again. In a few minutes, she came back and after carefully monitoring the area *Sally* entered the stream again slowly. While repeatedly picking up algae with one hand and putting it into the mouth, she advanced slowly into deeper water until she was immersed up to the knees. The feeding lasted more than a few minutes and it is likely that she ate a large amount of algae. While she was feeding, no other chimpanzee came close. After she left, several individuals passed by the same place, but all of them only drank water without eating algae.

2. September 25, 1997. Mr. Ramadhani Nyundo of Tanzania National Parks observed the same feeding behavior by *Sally* in the same place.

3. October 2, 1997. Around 14:00, I was waiting for *Sally* to appear at the same site. *Sally* appeared alone and began to feed on algae after carefully looking around. Her arms were immersed into water up to the shoulders. She continued to feed for ca 4 minutes and no other chimpanzees appeared in her proximity. Five minutes after *Sally* left the place, nine-year-old female *Ai* came to



Sally feeding on algae (Photo from video)

the very place where *Sally* was sitting, and appeared to touch the algae with her fingers, but did not collect any. She drank water and then departed.

DISCUSSION

On October 8, it rained heavily as the arrival of the rainy season and the torrents swept away almost all the algae from the pool. Since then algae-feeding has not been observed as of this writing (November 23, 1997).

It is interesting that only *Sally* fed on the algae. She was a new immigrant female to M group and it is likely that she had acquired this feeding habit when she had been in her natal group. According to Toshisada Nishida (pers. comm.) who traveled around widely, the algae were abundant in the upper streams of large rivers such as Kasiha and Lubulungu, and therefore it is possible that *Sally* had migrated from one of the eastern unit groups in the Park.

Many females have immigrated into M group so far (3), but none of them except *Sally* have been observed to exhibit algae-feeding (Nishida, pers. comm.). This suggests that algae-feeding might more likely be *Sally's* idiosyncratic behavior rather than a cultural trait of her natal group, although it is possible that the latter is the case.

Algae is an unusual food source for wild chimpanzees, as is evident from their lack in the food lists of many chimpanzee sites (4, 5, 6). So far, algae-feeding has been reported only from Bossou, Guinea (7) in which chimpanzees scoop up algae with the use of a stick. Here in Mahale, *Sally* has not been seen to use a scooping tool, but entered the stream without hesitation. Of course, a scooping tool is a device to take algae without entering into water. So, the difference in the behavior between Mahale and Bossou might derive from the cleanliness of the water.

Whether or not this new behavior will be disseminated to other members of M group is an interesting topic to study in the next dry season.

ACKNOWLEDGMENTS

I thank Tanzania Commission for Science and

Technology, Serengeti Wildlife Research Institute, and Tanzania National Parks for permission to work at the Mahale Mountains National Park; the staff of the Mahale Mountains National Park and Mahale Mountains Wildlife Research Centre for their logistic support; and T. Nishida and N. Itoh for cooperation during the research. I am indebted to T. Nishida for valuable comments on the preliminary manuscript and R. Nyundo for precious information. The research was supported by a fund under the Monbusho International Scientific Research Program (#07041138 to T. Nishida).

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