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**<NOTE>**  
**Poke-type Social Scratching  
Persists at Mahale**

*Michio Nakamura*

*Wildlife Research Center, Kyoto University, Japan  
(E-mail: nakamura@wrc.kyoto-u.ac.jp)*

**INTRODUCTION**

Social scratch is a grooming pattern observed consistently in Mahale, whereby one individual scratches the body of another individual<sup>1</sup>. A different type of social scratch is customarily observed at Ngogo<sup>2</sup>. Mahale chimpanzees employ stroke-type scratching, whereas Ngogo chimpanzees employ poke-type scratching<sup>2</sup> (Figure 1). Although Shimada<sup>3</sup> reported that three Gombe chimpanzees performed social scratch, there are no reports of this behavior from other study sites.

Although the dominant type of social scratching at

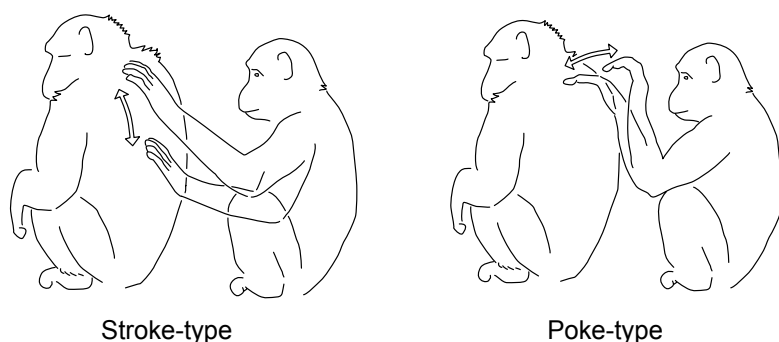


Figure 1. Two types of social scratch: stroke-type and poke-type.

Mahale is the stroke-type, one adult female *Ako* showed the poke-type scratch<sup>2,4</sup>. According to Nishida *et al.*<sup>4</sup>, *Ako* was first seen to show this pattern in 1999, used both types equally (8 pokes vs 7 strokes) between 2002 and 2003, and ceased to show the poke-type in 2004. Nishida *et al.*<sup>4</sup> also stated that there was no evidence of social transmission in the different types of social scratch, because *Ako*'s daughter *Acadia* never showed the poke-type.

However, I observed several cases of poke-type social scratching by *Ako* and *Acadia* after 2004, as reported here.

## OBSERVATIONS

Between November 2005 and July 2010, I made 9 short visits to Mahale (each visit consists of about one to two months), during which I saw 22 cases of social scratch by *Ako* (Figure 2). Twelve of them were the poke-type and 10 were the stroke-type (Table 1). Although the data-set is small, it seems *Ako* has not changed her social scratching types over the years. On September 24, 2008, she showed 4 cases of poke-type and 4 cases of stroke-type intermittently within 10 min, directed to the same adult female *Abi*. Thus, *Ako* mixed both types even in the same grooming session.

I saw her show the poke-type during my last visit, in 2010.

In the same study period from 2005, I observed 9 cases of social scratch by *Ako*'s daughter *Acadia*. *Acadia* was the first offspring born to *Ako* in 1998; thus, she was

in transition from juvenility to adolescence during my study period. She showed the poke-type twice and the stroke-type 7 times (Table 1). Although *Acadia*'s poke-type was first seen only in 2006 (in the same day), it is difficult to say whether or not she changed her type because she showed the stroke-type before and after 2006. *Acadia* was last seen by observers in September 2009, and because she had started to show adolescent estrous swelling and was in good health, it was assumed that she emigrated to another group.

*Ako* also has a son, *Agano*, born in 2004, but he was not seen to perform social scratching during the study period.



Figure 2. *Ako* (left) just after performing the poke-type scratch. *Ako*'s son, *Agano*, sits in front.

## DISCUSSION

Contrary to the report by Nishida *et al.*<sup>4</sup>, *Ako* did not cease the poke-type social scratch in 2004 but instead she continues to use both types equally. It is puzzling why she did not show any poke-type scratching in 2004, but it might be an observational bias, as she has kept showing this pattern every year, except for 2007. So, the poke-type scratch still survived in Mahale's M group.

It is notable that *Ako*'s daughter *Acadia* showed, although only twice, the same poke-type scratch. As so few individuals showed the poke-type scratch at Mahale<sup>4</sup>, I suspect that *Acadia* somehow copied this pattern from her mother, the most frequent performer of the pattern, rather than surmise that *Acadia* invented this pattern by herself. Unfortunately, we cannot do a follow-up study of whether or not *Acadia* continues to use the poke-type, as she has emigrated.

As of 2010, I have not observed *Agano*, *Ako*'s son, performing social scratching. This is partly due to his young age and partly due to short observation periods, so he is not yet observed to groom others often. He should start soon to groom others, and perhaps he will show more social scratching when he enters adolescence. It will be interesting to see whether or not he will employ the poke-type in the near future, as he had many chances to

Table 1. Two types of social scratch by *Ako* and *Acadia* at Mahale.

| Year                  | <i>Ako</i> |        | <i>Acadia</i> |        | Source     |
|-----------------------|------------|--------|---------------|--------|------------|
|                       | poke       | stroke | poke          | stroke |            |
| 2002–2003             | 8          | 7      | –             | –      | Ref 4      |
| 2004                  | 0          | 10     | –             | –      | Ref 4      |
| 2005                  | 1          | 0      | 0             | 2      | This study |
| 2006                  | 1          | 0      | 2             | 1      | This study |
| 2007                  | 0          | 0      | 0             | 0      | This study |
| 2008                  | 8          | 9      | 0             | 4      | This study |
| 2009                  | 1          | 1      | –             | –      | This study |
| 2010                  | 1          | 0      | –             | –      | This study |
| Subtotal of 2005–2010 | 12         | 10     | 2             | 7      |            |

Opportunities for observing *Ako* and *Acadia* differ year-by-year (e.g., they were seldom seen in 2007 during my visit), so it makes no sense to compare the frequencies across years. *Acadia* emigrated to a different group by the 2009 study period.

watch his mother doing the pattern and he also sometimes received the poke-type scratch from *Ako*.

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