<NEWS>

Grooming Hand Clasp by Bonobos of Lui Kotal, Democratic Republic of Congo.

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INTRODUCTION

We report the first detailed sightings of the grooming hand clasp (GHC) for the bonobo, *Pan paniscus*, at Lui Kotal, in the Democratic Republic of Congo. This distinctive variant of social grooming was first described for the chimpanzee, *P. troglodytes*, at Mahale National Park, Tanzania[1], but has not been reported in detail before for any other species (but see 2 & 3).

The field site of Lui Kotal is on the south-western edge of the Salonga National Park (02 45.6' S, 20 22.7' E) in Bandundu Province. Research began in 2002[4] and has continued uninterrupted to the present (May, 2006, as of this writing). The study community of apes has been partly habituated without provisioning and does no crop raiding. They live in mixed evergreen rain forest south of the Lokoro River. Of the community of about 30 individuals, 12 have been visually identified and genotyping is underway.

The grooming hand clasp was the first social custom (in contrast to subsistence activities) to be recognised in wild chimpanzees and has been seen in five populations of *P. troglodytes* across Africa from Ivory Coast to

Uganda[5,6]. Two individuals, usually adults, sit facing one another in symmetric configuration while grooming socially; they simultaneously extend one arm vertically overhead and clasp one another's hand or wrist in a mirror-image, 'A-frame' posture. The other hand grooms the revealed armpit or torso of the grooming partner, and this mutual grooming may alternate between hands and be interspersed with normal grooming. Variation exists both between groups and populations in the fine details of the motor patterns, e.g. palm-to-palm versus wrist-to-wrist clasping[7,8].

The only previously published reports of GHC in bonobos are from Wamba, where GHC is said to be commonly observed, although no details have been published[2]. At Lomoko, Hohmann and Fruth[3] described what might be called proto-GHC, in which one individual lifts the hand of the other overhead during grooming. They distinguished between this and GHC on grounds of lack of simultaneous grooming, unilateral initiation, and lack of ritualisation.

OBSERVATIONS

On 24 March, 2006, MB, BF and WM un-nested a party of bonobos at 05.45 hr. Its composition was of at least 2 adult males, 3 adult females, 1 adolescent female, 1 juvenile female, and 2 ventral infants. At 07.32 hr, after eating nearby *Gambeya lacourtiana* and *Mammea africana* fruits, the party travelled and foraged on the ground, giving us intermittent visual contacts. Shortly after 8.00, they stopped in an open clearing created by a treefall, a thick patch of terrestrial herbaceous vegetation, mostly *Haumania* spp. There, after eating pith, they settled down to rest and groom for almost the next two hours. The first grooming was seen at 08.13 and the last behavioural datum was at 10.03; then they left, unseen. Observation was unobstructed from about 20 m distance, but the thick vegetation obscured their lower bodies as they sat in it, except when they stood up to shift positions. Notes were taken independently by the three observers, and then compared later.

At 08.35, one individual slowly and deliberately raised its arm vertically overhead, and about 2 sec later its grooming partner did the same, and they clasped hands.

At 08.44, an adult female and adolescent female did the second GHC, which lasted for >60 sec. Both right arms were fully extended and vertical, but the participants where visible only from the shoulders upward. The GHC was both preceded and followed by at least 5 min of normal social grooming. The shorter arm of the adolescent grasped the wrist of the longer-armed adult, at the base of her palm; the adult's wrist was fully flexed, hanging limp.

At 09.23, the same individuals did the third GHC, repeating the form of the second, but using their left hands. This bout of GHC lasted about 52 sec. and was visible from only the elbow upwards. It was notable that the clasping adolescent supported the combined weight of both arms.

At 09.28, two individuals did an incipient GHC, in which both arms were extended fully, but were then retracted without making contact. They continued normal social grooming.

At 09.40, another GHC occurred in which only the two hands were seen raised overhead, as the participants had shifted downslope. Again the clasp showed wrist support, and it lasted <30 sec.

DISCUSSION

It is not clear from previous reports from Wamba whether or not the GHC there was idiosyncratic, habitual or customary; more details are needed. At Lui Kotal, GHC is habitual or even customary (Fruth and Hohmann, unpublished data). (Here, we use 'habitual' and 'customary' in the sense of 9.) This ethnographic note is only a starting point, and further detailed data are needed before ethnological comparisons can be made (cf. 6). It remains to be seen for GHC if cross-populational variation exists in bonobos (cf. 3), as it does in chimpanzees[5,6]. Hohmann and Fruth[3] described other cross-site differences in bonobo behaviour, in both social and subsistence domains. Based on our preliminary report, the form and function of GHC in bonobo and chimpanzee seem to

be similar, suggesting a pan-*Pan* behavioural pattern.

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