

Pan Africa News

The Newsletter of the Committee for the Care and Conservation of Chimpanzees, and the Mahale Wildlife Conservation Society



ISSN 1884-751X (print), 1884-7528 (online) mahale.main.jp/PAN/

JUNE 2017

VOL. 24, NO. 1

P. A. N. EDITORIAL STAFF

Chief Editor:

Kazuhiko Hosaka, *Kamakura Women's University, Japan*

Deputy Chief Editor:

Michio Nakamura, *Kyoto University, Japan*

Associate Editors:

Christophe Boesch, *Max-Planck Institute, Germany*

Jane Goodall, *Jane Goodall Institute, USA*

Tetsuro Matsuzawa, *Kyoto University, Japan*

William C. McGrew, *University of Cambridge, UK*

John C. Mitani, *University of Michigan, USA*

Vernon Reynolds, *Budongo Forest Project, UK*

Yukimaru Sugiyama, *Kyoto University, Japan*

Richard W. Wrangham, *Harvard University, USA*

Takeshi Furuichi, *Kyoto University, Japan*

Editorial Secretaries:

Noriko Itoh, *Kyoto University, Japan*

Koichiro Zamma, *Nagano College of Nursing, Japan*

Eiji Inoue, *Toho University, Japan*

Takuya Matsumoto, *Research Institute for Humanity and Nature, Japan*

Instructions for Authors:

Pan Africa News publishes articles, notes, reviews, forums, news, essays, book reviews, letters to editor, and classified ads (restricted to non-profit organizations) on any aspect of conservation and research regarding chimpanzees (*Pan troglodytes*) and bilias (*Pan paniscus*). Contributors are requested to write in English and the papers except forums, reviews and essays should usually be 1,500 words or less. Articles, notes and reviews will be peer-reviewed by at least one appropriate expert on request of the *PAN* editorial staff.

PAN is published twice a year in June and December. Deadline for manuscripts is two months before publication (*i.e.*, the ends of April and October). Submit your manuscripts via e-mail to pan.editor@gmail.com.

- **Manuscripts:** Format as DOC or RTF files
- **Photos and figures:** Format as JPEG or GIF files. Do NOT paste on Word files or create as PDF files. Figures could be sent as excel files also.
- **Audiovisual data:** Authors could include audiovisual data to enhance their papers, although they will be included in the online version only. Sound or video files should be sent only after communicating with the editor to obtain more detailed instructions.
- Send these **separately** by e-mail attachments.

See also <http://mahale.main.jp/PAN/instruction.html>

Deadline of the next issue is October 2017!

Contents

<OBITUARY>

Mr. Toshimichi Nemoto: Secretary-General of MWCS in Tanzania

Kazuhiko Hosaka 1

<NOTE>

Grooming Hand Clasp by Chimpanzees (*Pan troglodytes schweinfurthii*) in the Issa Valley, Western Tanzania

Alex K. Piel, Adrienne Chitayat, & Fiona A. Stewart 2

<NOTE>

Two Cases of Chimpanzees Interacting with Dead Animals without Food Consumption at Bulindi, Hoima District, Uganda

Marie Cibot, Tom Sabiiti, & Matthew R. McLennan 6

<OBITUARY>

Mr. Toshimichi Nemoto: Secretary-General of MWCS in Tanzania

Kazuhiko Hosaka

*Co-chairperson, Mahale Wildlife Conservation Society
c/o Kamakura Women's University, Japan
(E-mail: hosaka@kamakura-u.ac.jp)*

Mr. Toshimichi Nemoto passed away suddenly from heart disease at a hospital in Dar es Salaam, Tanzania, on the 24th of February 2017 at the age of 63. He had been the secretary-general of Mahale Wildlife Conservation Society (MWCS) since it was founded as an NGO authorized by the Tanzanian government on the 12th of August 1994. His contribution to the establishment and management of MWCS was so great that, without his efforts, the society could not achieve most of its community-based conservation activities involving construction of a primary school and a dispensary in Katumbi, a neighboring village to the north of Mahale Mountains National Park. His last appearance as an MWCS member was at the 50th



Figure 1. Mr. Nemoto laughs with Tongwe friends from Mahale (Photo: H. Sakuragi).

anniversary event of Mahale Mountains Chimpanzee Research Project held in Kigoma on the 26th of November 2015 (Figure 1).

Mr. Nemoto's major was history. After graduating from the Division of History, Faculty of Letters, Kyoto University, he spent 6 years teaching at a high school in Ichikawa, Japan. Then, he moved to Tanzania in 1984 to study African history at the University of Dar es Salaam. His determination originated in his involvement in a Japan-based anti-apartheid movement and his first journey to East Africa as an undergraduate student in 1975 (Nemoto 2011). He made friends with primatologists from Japan including the late Professor Toshisada Nishida. I met Mr. Nemoto for the first time in August 1991 when he taught at Dar es Salaam Japanese Class. Since then, there have been many cases in which I had to solicit his advice to escape from various difficulties I faced while travelling in Tanzania. The Mahale Team's reliance on him grew after he visited Mahale for the first time in 1992 and two years later accepted Prof. Nishida's request that he act as the MWCS secretary-general. In 1999, he founded Japan Tanzania Tours Ltd. (JATA Tours) and started to assist researchers not only as a friend but also as a professional tour agent.

On the 3rd of June 2017, more than 300 people gathered to remember him in Tokyo. There I had a chance to know how extensive and deep a friendship he had cherished, and what kind of man he was. Not only researchers of various disciplines but also diplomats, businesspersons, young students interested in Tanzanian people and culture, etc. regretted his too early passing. His wife, Asami, in her final speech as a representative of the surviving family, revealed that Mr. Nemoto had been determined to retire from his tourist company in November 2018 and concentrate on compiling his lifework about African history. On behalf of MWCS, I would like to express our sin-

cere appreciation for his sharing of our passion for long-term research and conservation of Mahale chimpanzees. We vow to continue our endeavors and pass them on to the next generation.

REFERENCES

Nemoto T 2011. *Living in Tanzania: Records of the Nation and the People from the Inner Side*. Showa-do, Kyoto (in Japanese).

<NOTE>

Grooming Hand Clasp by Chimpanzees (*Pan troglodytes schweinfurthii*) in the Issa Valley, Western Tanzania

Alex K. Piel^{1,2}, Adrienne Chitayat¹, & Fiona A. Stewart^{1,2}

¹ Ugalla Primate Project, Box 108, Uvinza, Kigoma, Tanzania
² School of Natural Sciences and Psychology, Liverpool John Moores University, Liverpool, UK
 (E-mail: F.A.Stewart@ljmu.ac.uk)

INTRODUCTION

Despite over 300 years of combined study of wild chimpanzees, reports of social customs continue to emerge (e.g., social scratch, Nakamura *et al.* 2000), especially given an increased use of remote monitoring of behaviour of unhabituated communities, revealing behaviour like stone throwing that have never before been described (Kühl *et al.* 2016). However, it was the grooming hand clasp (GHC) that was first described as a social custom (McGrew & Tutin 1978), reported in chimpanzees

from the Mahale Mountains National Park (MMNP) in Tanzania nearly a half century ago. The GHC results when two chimpanzees sitting and facing each other clasp their hands above their heads, arms at least partly extended and typically groom each other's underarms. Subsequent reports have described variants of the behaviour (described also as "high arm grooming"—Wrangham *et al.* 2016) and its presence in other wild (Webster *et al.* 2009; McLennan 2012) and captive communities (de Waal & Seres 1997; Leeuwen *et al.* 2012) (see Table 1). Whiten *et al.* (2001) suggest that the behaviour may have originated from branch-clasp grooming (see more in McGrew, 2004) and have been subsequently lost in those chimpanzees where the behaviour has not been observed. One population where this may have occurred lives in Gombe National Park (GNP), about 200 km north of Mahale (Figure 1), where GHC has not been observed in six decades of close observation.

Given the behavioural variability known to exist between even adjacent chimpanzee communities (Leeuwen *et al.* 2012; Luncz *et al.* 2012), the presence of GHC in Mahale, but its absence at Gombe is not surprising, but it does leave us wondering about social transmission of behaviour across western Tanzania. New records describing the GHC, especially in chimpanzees that live between the two parks, would further our understanding about the distribution of cultural traits in a fragmented landscape of

chimpanzee presence. Here we report on the first observations of GHC in Issa Valley chimpanzees.

METHODS

The Issa Valley lies about 85 km east of MMNP and about 135 km southeast of GNP (Figure 1). The home range of the Issa community is over 85 km², and is comprised of a mosaic vegetation dominated by miombo woodland, interspersed with thin strips of gallery forest, seasonally inundated swamps, and rocky outcrops. As of April 2017, the Issa community was only partly habituated, with 14 chimpanzees individually recognisable to researchers. Initial genotyping results suggested a minimum community size of 67 (Rudicell *et al.* 2011).

OBSERVATIONS

On 10 March 2017, researchers heard pant hoots early in the morning and followed the origins of the calling to a miombo woodland, not far from the research station. AP counted three individuals sitting in a *Pterocarpus tinctorius* tree: two were feeding on flowers and one adult female was resting. From further down the mountain pant hoots could be heard. AC then joined AP and together we followed the three individuals into a *Brachystegia bussei* tree, where another four individuals were resting arboreally, thereby comprising a total of seven individuals: two adult males, two sub-adult males, two adult females (one

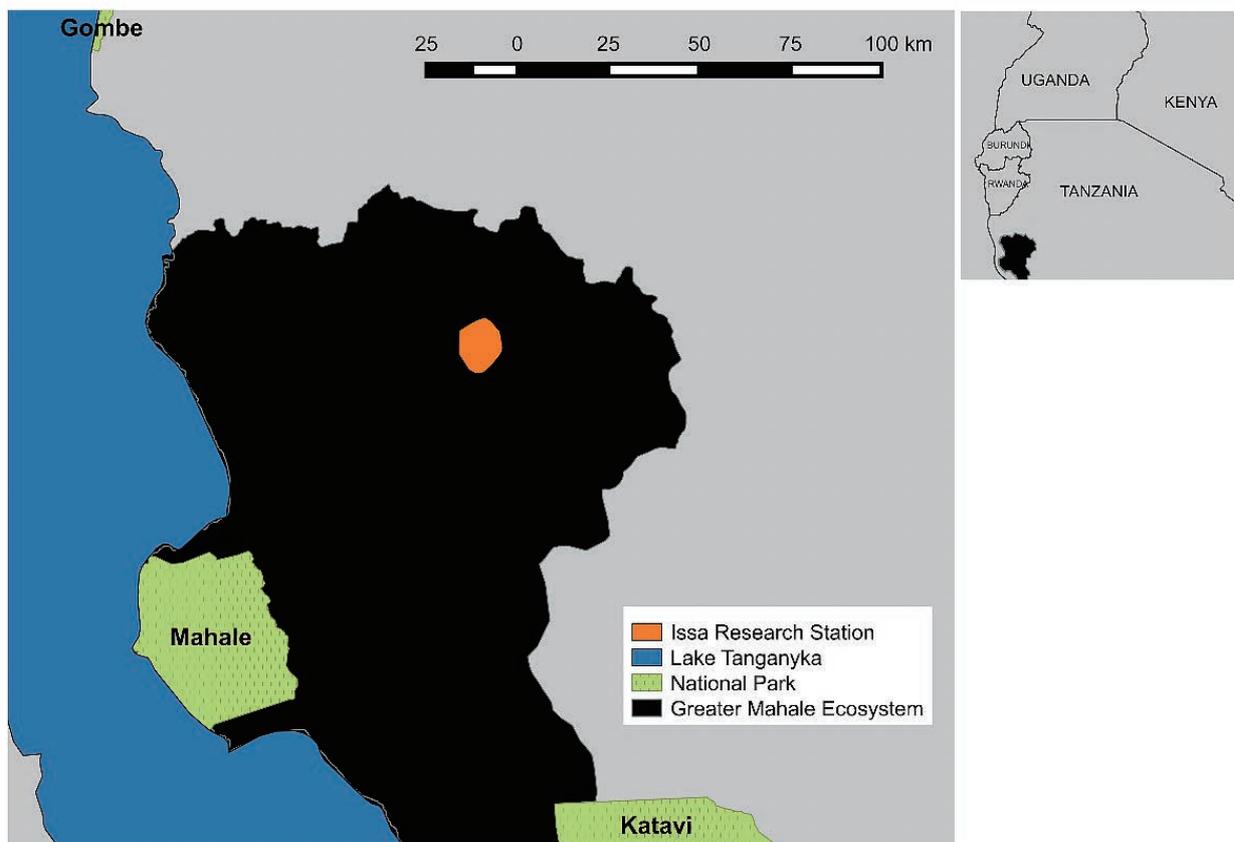


Figure 1. Map of western Tanzania, including the Issa Valley Research Station, Mahale Mountains and Gombe National Parks.

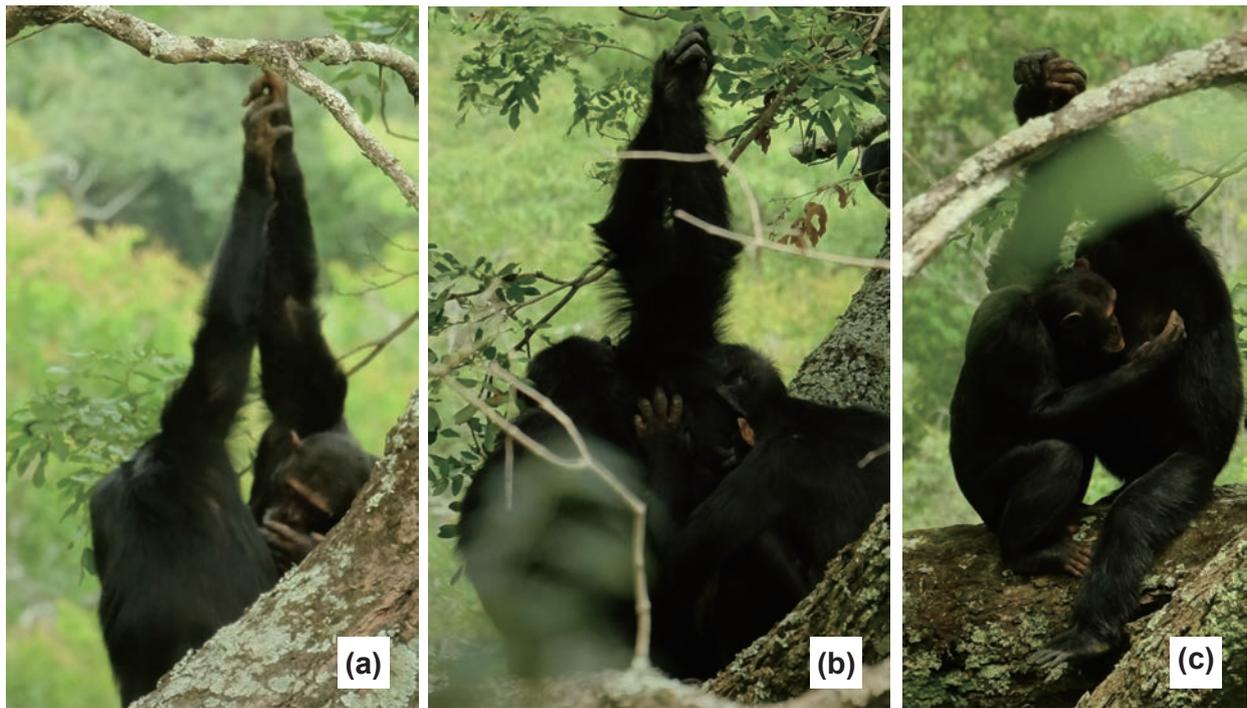


Figure 2. Issa chimpanzees engaged in three types of grooming hand clasp. (a) wrist to palm, (b) palm to palm, and (c) wrist to wrist

with a sexual swelling), and one infant.

With the party comfortable with our presence, we slowly approached to within 20 m, from where we saw two males already engaged in a mutual grooming bout with arms extended and hands touching above them. Over the course of the subsequent 3-hr encounter, we observed the male dyad perform three different hand-clasp configurations (Figure 2a–c), as have been described in previous reports (Leeuwen *et al.* 2012). We did not time each configuration, but with a third individual present and occasionally entering the grooming bout, none of the configurations lasted more than a few minutes, with the entire grooming bout lasting about 20 min.

DISCUSSION

We describe here the first observations of a well-known chimpanzee social custom—the GHC—in a partially habituated community living in the Issa valley, Tanzania. These observations add to our understanding of the patterns of behavioural variation exhibited across the species. As Issa is nearly equidistant between the only two national parks with chimpanzees in Tanzania (GNP and MMNP), insight into the cultural behavioural repertoire at Issa raises the possibility of connectivity to these protected areas. Given the mosaic landscape and variable human population density across the region, it is currently unclear whether there exists chimpanzee population connectivity throughout the ecosystem; integrating socially-transmitted behaviours may help us achieve this.

GHC has now been observed at Mahale (Nakamura 2002) and Issa, less than 100 km to its east; it remains absent in Gombe. This continuity in social custom between the two more southern communities is consistent with current habitat connectivity, as there are both northern

and southern corridors around a large human settlement situated between them (see more in Piel & Stewart, 2014). Our results also support genetic data that show greater similarity between Gombe and Uganda chimpanzees, than Gombe and Mahale (Langergraber *et al.* 2011), and overall, a genetic dissimilarity of Gombe chimpanzees compared to other Tanzanian populations (Inoue *et al.* 2011; Bonnin *et al.* 2015). However, the similarity in SIVcpz viral phylogeny that exists between Gombe and Issa, but not in the southern areas around Mahale (Rudicell *et al.* 2011), suggests either current or recent population connectivity between Issa and Gombe to the north (Piel *et al.* 2013). Accordingly, we would expect these two groups to share cultural behaviours; that they do not, and instead it is Issa and Mahale that share this social custom, supports connectivity between these southern communities. The incongruity between what the viral, genetic and cultural data tell us suggests that we simply do not have the complete picture of chimpanzee distribution and movement across the landscape.

The variation in GHC presence in western Tanzania parallels what McLennan (2012) described for Uganda, with Bulindi, but not Sonso chimpanzees (25 km north) exhibiting the behaviour. He suggested that the absence of GHC in Sonso as well as Gombe and Bossou (see Table 1) reflects the GHC being a “dynamic social custom that... emerges and disappears in local populations repeatedly over time.” Whiten *et al.* (2001) have described “diffusion” as the most parsimonious explanation for the absence of any trait, whereby the trait is exhibited less and less over time, followed by its loss in the community of origin. They suggest that if a replacement alternative exists (at Gombe, for example, branch-clasp grooming), there may be no need to preserve the GHC at Gombe.

Table 1. Study sites and communities where grooming hand clasp has been reported for wild chimpanzees (modified from Webster *et al.* 2009). + indicates the behaviour has been observed; – represents the absence of the behaviour to date.

Sub-species	Country	Community	Hand clasp	Reference
<i>P.t. verus</i>	Guinea	Bossou	–	(Nakamura 2002)
	Senegal	Fongoli	+	(WC McGrew pers. comm. cited in Webster <i>et al.</i> 2009)
	Ivory Coast	Taï (N)	+	(Nakamura 2002)
		Taï (S)	+	(WC McGrew pers. comm. cited in Webster <i>et al.</i> 2009)
<i>P.t. troglodytes</i>	Gabon	Lopé	+	(Nakamura 2002)
	Republic of Congo	Goualougo	+	(WC McGrew pers. comm. cited in Webster <i>et al.</i> 2009)
<i>P.t. schweinfurthii</i>	Tanzania	Mahale (M)	+	(McGrew & Tutin 1978; Nakamura 2002)
		Mahale (K)	+	(McGrew & Tutin 1978; Nakamura 2002)
		Gombe	–	(McGrew & Tutin 1978; Nakamura 2002)
		Issa	+	Current study
	Uganda	Budongo	–	(Nakamura 2002)
		Bulindi	+	(McLennan 2012)
		Kalinzu	+	(Nakamura 2002)
		Kanyanchu	+	(Nakamura 2002)
		Kanyawara	+	(Wrangham <i>et al.</i> 2016)
		Ngogo	+	(Nakamura 2002)
	Semliki	+	(Webster <i>et al.</i> 2009)	

As we continue to learn about the Issa chimpanzee behavioural repertoire, we learn not only about overall chimpanzee behavioural variation, but also more specifically obtain critical data to better understand western Tanzanian chimpanzee population connectivity.

ACKNOWLEDGEMENTS

The Tanzania Wildlife Research Institute (TAWIRI) and Commission for Science and Technology (COSTECH) provided permission for us to conduct research in Tanzania, and to the UCSD/Salk Center for Academic Research and Training in Anthropogeny (CARTA) for support to the Ugalla Primate Project. We thank WC McGrew for very helpful comments on an earlier version of this manuscript.

REFERENCES

- Bonnin N, Piel AK, Ramirez M *et al.* 2015. Gene flow and genetic diversity of Tanzania's Greater Mahale Ecosystem chimpanzees. *Folia Primatol* **86**:249 (abstract). <https://doi.org/10.1159/000435825>
- Inoue E, Tashiro Y, Ogawa H *et al.* 2011. Gene flow and genetic diversity of chimpanzees in Tanzanian habitats. *Primate Conserv* **26**:1–8.
- Kühl HS, Kalan AK, Arandjelovic M *et al.* 2016. Chimpanzee accumulative stone throwing. *Sci Rep* **6**:1–8.

- <https://doi.org/10.1038/srep22219>
- Langergraber KE, Boesch C, Inoue E *et al.* 2011. Genetic and “cultural” similarity in wild chimpanzees. *Proc Biol Sci* **278**:408–416. <https://doi.org/10.1098/rspb.2010.1112>
- Leeuwen EJC Van, Cronin KA, Haun DBM, Mundry R, Bodamer MD 2012. Neighbouring chimpanzee communities show different preferences in social grooming behaviour. *Proc R Soc B* **rspb20121543**. <https://doi.org/10.1098/rspb.2012.1543>
- Luncz LV, Mundry R, Boesch C 2012. Evidence for cultural differences between neighboring chimpanzee communities. *Curr Biol* **22**:922–926. <https://doi.org/10.1016/j.cub.2012.03.031>
- McGrew WC 2004. *The Cultured Chimpanzee*. Cambridge University Press, Cambridge.
- McGrew WC, Tutin CEG 1978. Evidence for a social custom in wild chimpanzees. *Man* **13**:234–251. <https://doi.org/10.2307/2800247>
- McLennan MR 2012. Preliminary observations of hand-clasp grooming by chimpanzees at Bulindi, Uganda. *Pan Afr News* **18**:18–20.
- Nakamura M 2002. Grooming hand-clasp in Mahale M group chimpanzees: implications for culture in social behaviours. In: *Behavioural Diversity in Chimpanzees and Bonobos*. Boesch C, Hohmann G, Marchant LF (eds), Cambridge University Press, Cambridge, pp.71–83.

- Nakamura M, McGrew WC, Marchant LF, Nishida T 2000. Social scratch: Another custom in wild chimpanzees? *Primates* **41**:237–248.
<https://doi.org/10.1007/BF02557594>
- Piel AK, Stewart FA 2014. Census and conservation status of chimpanzees (*Pan troglodytes schweinfurthii*) across the Greater Mahale Ecosystem. Report submitted to the The Nature Conservancy, USA.
- Piel AK, Stewart FA, Pintea L *et al.* 2013. The Malagarasi River does not form an absolute barrier to chimpanzee movement in Western Tanzania. *PLoS One* **8**:e58965.
<https://doi.org/10.1371/journal.pone.0058965>
- Rudicell RS, Piel AK, Stewart F *et al.* 2011. High prevalence of simian immunodeficiency virus infection in a community of savanna chimpanzees. *J Virol* **85**:9918–9928.
<https://doi.org/10.1128/JVI.05475-11>
- de Waal FBM, Seres M 1997. Propagation of handclasp grooming among captive chimpanzees. *Am J Primatol* **43**:339–346.
[https://doi.org/10.1002/\(SICI\)1098-2345\(1997\)43:4<339::AID-AJP5>3.0.CO;2-Y](https://doi.org/10.1002/(SICI)1098-2345(1997)43:4<339::AID-AJP5>3.0.CO;2-Y)
- Webster TH, Phineas R, Hunt KD 2009. Grooming hand-clasp by chimpanzees of the Mugiri community, Toro-Semliki Wildlife Reserve, Uganda. *Pan Afr News* **16**:5–7.
- Whiten A, Goodall J, McGrew WC *et al.* 2001. Charting cultural variation in chimpanzees. *Behaviour* **138**:1481–1516.
<https://doi.org/10.1163/156853901317367717>
- Wrangham RW, Koops K, Machanda ZP *et al.* 2016. Distribution of a chimpanzee social custom is explained by matrilineal relationship rather than conformity. *Curr Biol* **26**:3033–3037.
<https://doi.org/10.1016/j.cub.2016.09.005>

<NOTE>

Two Cases of Chimpanzees Interacting with Dead Animals without Food Consumption at Bulindi, Hoima District, Uganda

Marie Cibot^{1,2}, Tom Sabiiti², & Matthew R. McLennan^{1,2}

¹ Department of Social Sciences, Faculty of Humanities and Social Sciences, Oxford Brookes University, Oxford, UK.

² Bulindi Chimpanzees and Community Project, Hoima, Uganda.
(E-mail: marie.cibotchemin@gmail.com)

INTRODUCTION

Wild chimpanzees regularly catch and eat mammals and, more rarely, birds throughout sites in Africa (e.g., Goodall 1986; Boesch & Boesch 1989; Kuroda *et al.* 1996; Hosaka *et al.* 2001; Newton-Fisher *et al.* 2002; Watts & Mitani 2002; Pruetz & Bertolani 2007; Fujimoto & Shimada 2008; Nakamura & Itoh 2008; Ramirez-Amaya *et al.* 2015). While there are reports of chimpanzees capturing and interacting physically with other animals without eating them, often involving adolescent or immature chimpanzees, such interactions appear to be rare in the wild (e.g., Hirata *et al.* 2001; Carvalho *et al.* 2010; Hockings *et al.* 2012).

At Bulindi, Uganda, chimpanzees have never been observed hunting for meat, despite the presence of suitable prey species (e.g., *Colobus guereza*) and near-continuous monitoring of the chimpanzees since 2012. Here,

we describe two observations of juvenile and adolescent chimpanzees (*Pan troglodytes schweinfurthii*) interacting with dead animals at Bulindi, which were not followed by consumption. We compare these observations to previous reports of physical, non-predatory interactions between wild chimpanzees and sympatric animals at other sites.

STUDY SITE

Bulindi (1°29'N, 31°28'E) is situated midway between the Budongo and Bugoma Central Forest Reserves, in Hoima District, midwestern Uganda. Chimpanzees at Bulindi were first studied in 2006–2008 (McLennan & Hill 2010) and subsequently from 2012 to the present. Their home range comprises degraded riverine forest fragments amid villages, farmland and roads (for details of the study site see McLennan & Asiimwe 2016; McLennan & Ganzhorn 2017). The observations described here were recorded *ad libitum* by Tom Sabiiti (T.S.), a long-term field assistant at Bulindi, during July–August 2016. During this time, the community comprised 21 members: 2 adult males, 6 adult females, 1 adolescent male, 1 adolescent female, and 11 juveniles and infants. The chimpanzees are wary of villagers but are habituated to the authors.

BEHAVIOURAL OBSERVATIONS

Interaction with a helmeted guineafowl (Numida meleagris)

On the 4th July 2016, at 08:30 h, T.S. located a party of 18 chimpanzees. Adolescent male MO (c. 11 years old) was sitting on a branch in a *Pseudospondias microcarpa* tree, inspecting the feathers of a guineafowl, which was already dead; the corpse appeared fresh. A juvenile male (JK; c. 8 years old) was sitting c. 3 m away, looking carefully at MO's actions. Similarly, MO often looked at JK. MO inspected the bird (including touching and smelling it), holding it up by one leg and making the body turn. He showed no aggressive behaviour towards it (e.g. swinging it or displaying with it). He held the bird for 35 min. Throughout this time, JK remained close by. Then, MO dropped the corpse to the ground (from c. 5 m height). JK immediately climbed down to retrieve the dead bird, and climbed up again with it. JK began to inspect the bird, touching the feathers and eyes of the bird. For 45 min, JK kept hold of the bird before dropping it to the ground. Shortly afterwards, he made a day nest and rested. During the episode no other chimpanzees in the party, including other youngsters, showed any apparent interest in the bird or in the behaviour of MO and JK, and none went to collect the corpse after JK dropped it. Neither MO nor JK were observed to eat any part of the bird. The body appeared intact throughout observations with no blood or injury visible.

Interaction with a western tree hyrax (*Dendrohyrax dorsalis*)

On the 17th August 2016, at 08:09 h, T.S. located a party of 16 chimpanzees in *Pseudospondias microcarpa* trees. JK was seated on a branch holding a dead tree hyrax. Although tree hyraxes are mostly nocturnal, T.S. had



Figure 1. A western tree hyrax in riverine forest at Bulindi (Photo: M. McLennan).

observed a tree hyrax in this particular *Pseudospondias* tree on multiple occasions during the preceding 3 months (Figure 1).

The dead hyrax was not adult-sized, but it was not an infant either. It appeared freshly dead. JK was inspecting the body carefully, holding it by one foot to better look at it while turning the body. He directed ‘grooming’ behaviour towards the dead animal by touching and inspecting its hair; he appeared to ‘blow’ on the hair too. Another juvenile male (AR; c. 7 years old) was sitting 1–2 m from JK, looking closely at the dead body. At one point, AR tried to grab the hyrax but JK moved to another branch c. 10 m from AR. The rest of the chimpanzees showed no interest in what JK and AR were doing.

After 30–35 min, all the chimpanzees descended and travelled c. 500 m towards a large *Ficus thonningii* tree. JK travelled carrying the dead hyrax. When T.S. caught up with the chimpanzees near the *F. thonningii*, some had climbed up, while others were underneath in dense vegetation. JK was in the tree still holding the hyrax. He continued to behave in the same manner with the dead animal. After 7 min, the chimpanzees again climbed down, but JK and AR stayed in the tree. JK moved around the tree while holding the corpse by one leg. AR followed him at a distance of c. 5–7 m. After 9 min, AR descended quickly. Then, JK dropped the hyrax to the ground (from c. 10 m height) and climbed down quickly, following AR. The party headed towards an area of dense swamp forest where T.S. could not follow. T.S. saw the exact place where the body landed; however, when he went to check shortly after the chimpanzees left, it was not there; thus, it appears that JK or another chimpanzee picked up the dead hyrax again and travelled with it.

As in the previous observation, T.S. did not observe JK eating any part of the dead hyrax. The animal appeared intact throughout observations with no blood or injury visible.

DISCUSSION

These are the first observed interactions between chimpanzees and wild birds and hyrax at Bulindi.

Chimpanzees at some sites have been described scavenging already-dead animal carcasses (e.g., Muller *et al.* 1995; Watts 2008; Hosaka 2015) or capturing prey trapped in human snares (Brand *et al.* 2014). However, these behaviours are rare and since the carcasses described in this paper appeared very fresh, we consider it most likely that they were captured alive, i.e., that MO (or another chimpanzee) came across the guinea fowl in the bush and grabbed it, and that JK (or another chimpanzee) had grabbed the hyrax, perhaps directly from its tree hole. More recently, on 26th June 2017, AR was observed rapidly pursuing a squirrel (probably *Xerus erythropus*) in a cluster of trees. The squirrel leapt from a tree to escape, and AR descended quickly after it. While it is unknown if he caught the squirrel, this observation suggests that young chimpanzees at Bulindi may be motivated to catch small, live animals. In the present cases, however, it is unclear how the guinea fowl and hyrax died since no injuries were apparent on either.

Our observations are similar to descriptions of chimpanzees from Bossou (Hirata *et al.* 2001; Carvalho *et al.* 2010; Hockings *et al.* 2012), Taï (Boesch & Boesch 1989), Gombe (Goodall 1986), Mahale (Zamma 2002), and also bonobos (*Pan paniscus*) from Lilungu (Sabater Pi *et al.* 1993), interacting physically with certain animals without consuming them. In these reports, both immature and adult chimpanzees and bonobos were observed inspecting and grooming captured animals (including western tree hyraxes at Bossou; Hirata *et al.* 2001) and handling them like “toys”. It appears that chimpanzees and bonobos may respond to a captured potential prey item similarly, irrespective of age or sex, though such playful or curious behaviour seems to be most frequently exhibited by younger individuals. However, these “hunts” or captures appear to be opportunistic and solitary, occurring when an animal was encountered inadvertently. In most cases, the interactions lead to the death of the animal, which was eventually discarded without consumption.

Other species of guinea fowl and hyrax have previously been reported as prey for chimpanzees (Nishida & Uehara 1983; Goodall 1986; Watts & Mitani 2002;

Nakamura & Itoh 2008). Our observations suggest that chimpanzees at Bulindi do not perceive these animals as potential food. This is consistent with a very low frequency of meat-eating at this site. While the chimpanzees eat invertebrates occasionally (McLennan 2014), the only evidence for vertebrate consumption has been the remains of an unidentified small rodent in one faecal sample and several inferred cases of domestic chicken (*Gallus gallus*) predation, all during 2007 (McLennan 2010). No further evidence of hunting and meat-eating has been found despite extensive faecal sampling and near-continuous observations of the chimpanzees since 2012, including numerous observations of non-predatory interactions between the chimpanzees and black and white colobus monkeys (*Colobus guereza*).

ACKNOWLEDGMENTS

Permission to study the chimpanzees in Bulindi was granted by the Uganda National Council for Science and Technology, the President's Office, and the Uganda Wildlife Authority. We thank Moses Ssemahunge for assistance in the field. We are grateful to the editor for helpful comments on the manuscript.

REFERENCES

- Boesch C, Boesch H 1989. Hunting behavior of wild chimpanzees in the Taï National Park. *Am J Phys Anthropol* **78**: 547–573.
<https://doi.org/10.1002/ajpa.1330780410>
- Brand C, Eguma R, Zuberbühler K, Hobaiter C 2014. First report of prey capture from human laid snare-traps by wild chimpanzees. *Primates* **55**:437–440.
<https://doi.org/10.1007/s10329-014-0419-1>
- Carvalho S, Yamanashi Y, Yamakoshi G, Matsuzawa T 2010. Bird in the hand: Bossou chimpanzees (*Pan troglodytes*) capture West African wood-owls (*Ciccaba woodfordi*) but not to eat. *Pan Afr News* **17**:6–9.
- Fujimoto M, Shimada M 2008. Newly observed predation of wild birds by M-group chimpanzees (*Pan troglodytes schweinfurthii*) at Mahale, Tanzania. *Pan Afr News* **15**:23–26.
- Goodall J 1986. *The Chimpanzees of Gombe: Patterns of Behavior*. Harvard University Press, Cambridge MA.
- Hirata S, Yamakoshi G, Fujita S, Ohashi G, Matsuzawa T 2001. Capturing and toying with hyraxes (*Dendrohyrax dorsalis*) by wild chimpanzees (*Pan troglodytes*) at Bossou, Guinea. *Am J Primatol* **53**:93–97.
[https://doi.org/10.1002/1098-2345\(200102\)53:2%3C93::AID-AJP5%3E3.0.CO;2-X](https://doi.org/10.1002/1098-2345(200102)53:2%3C93::AID-AJP5%3E3.0.CO;2-X)
- Hockings KJ, Humle T, Carvalho S, Matsuzawa T 2012. Chimpanzee interactions with nonhuman species in an anthropogenic habitat. *Behaviour* **149**:299–324.
<https://doi.org/10.1163/156853912X636735>
- Hosaka K, Nishida T, Hamai M, Matsumoto-Oda A, Uehara S 2001. Predation of mammals by the chimpanzees of the Mahale Mountains, Tanzania. In: *All Apes Great and Small, Vol. 1: African Apes*. Galdikas BMF, Erickson Briggs N, Sheeran LK, Shapiro GL, Goodall J (eds), Kluwer Academic, New York, pp. 107–130.
https://doi.org/10.1007/0-306-47461-1_11
- Hosaka K 2015. Hunting and food sharing. In: *Mahale Chimpanzees: 50 Years of Research*. Nakamura M, Hosaka K, Itoh N, Zamma K (eds). Cambridge University Press, Cambridge, pp. 195–212.
- Kuroda S, Suzuki S, Nishihara T 1996. Preliminary report on predatory behavior and meat sharing in Tschego chimpanzees (*Pan troglodytes troglodytes*) in the Ndoki Forest, Northern Congo. *Primates* **37**: 253–259.
<https://doi.org/10.1007/BF02381857>
- McLennan MR 2010. *Chimpanzee Ecology and Interactions with People in an Unprotected Human-Dominated Landscape at Bulindi, Western Uganda*. PhD dissertation. Oxford Brookes University, UK.
- McLennan MR 2014. Chimpanzee insectivory in the northern half of Uganda's Rift Valley: do Bulindi chimpanzees conform to a regional pattern? *Primates* **55**:173–178.
<https://doi.org/10.1007/s10329-014-0408-4>
- McLennan MR, Asiimwe C 2016. Cars kill chimpanzees: case report of a wild chimpanzee killed on a road at Bulindi, Uganda. *Primates* **57**:377–388.
<https://doi.org/10.1007/s10329-016-0528-0>
- McLennan MR, Hill CM 2010. Chimpanzee responses to researchers in a disturbed forest–farm mosaic at Bulindi, western Uganda. *Am J Primatol* **72**:907–918.
<https://doi.org/10.1002/ajp.20839>
- McLennan MR, Ganzhorn JU 2017. Nutritional characteristics of wild and cultivated foods for chimpanzees (*Pan troglodytes*) in agricultural landscapes. *Int J Primatol* **38**: 122–150.
<https://doi.org/10.1007/s10764-016-9940-y>
- Muller MN, Mpongo E, Stanford CB, Boehm C 1995. A note on scavenging by wild chimpanzees. *Folia Primatol* **65**: 43–47.
<https://doi.org/10.1159/000156868>
- Nakamura M, Itoh N 2008. Hunting with tools by Mahale chimpanzees. *Pan Afr News* **15**:3–6.
- Newton-Fisher NE, Notman H, Reynolds V 2002. Hunting of mammalian prey by Budongo forest chimpanzees. *Folia Primatol* **73**:281–283.
<https://doi.org/10.1159/000067454>
- Nishida T, Uehara S 1983. Natural diet of chimpanzees (*Pan troglodytes schweinfurthii*): long-term record from the Mahale Mountains, Tanzania. *Afr Study Monogr* **3**: 109–130.
- Pruetz JD, Bertolani P 2007. Savanna chimpanzees, *Pan troglodytes verus*, hunt with tools. *Curr Biol* **17**:412–417.
<https://doi.org/10.1016/j.cub.2006.12.042>
- Ramirez-Amaya S, McLester E, Stewart FA, Piel AK 2015. Savanna chimpanzees (*Pan troglodytes schweinfurthii*) consume and share blue duiker (*Philantomba monticola*) meat in the Issa Valley, Ugalla, western Tanzania. *Pan Afr News* **22**:17–21.
- Sabater Pi J, Bermejo M, Illera G, Veà JJ 1993. Behavior of bonobos (*Pan paniscus*) following their capture of monkeys in Zaire. *Int J Primatol* **14**:797–804.
<https://doi.org/10.1007/BF02192191>
- Watts DP 2008. Scavenging by chimpanzees at Ngogo and the relevance of chimpanzee scavenging to early hominin behavioural ecology. *J Hum Evol* **54**:125–133.
<https://doi.org/10.1016/j.jhevol.2007.07.008>
- Watts DP, Mitani JC 2002. Hunting behavior of chimpanzees at Ngogo, Kibale National Park, Uganda. *Int J Primatol* **23**: 1–28.
<https://doi.org/10.1023/A:1013270606320>
- Zamma K 2002. A chimpanzee trifling with a squirrel: pleasure derived from teasing? *Pan Afr News* **9**:9–11.

Pan Africa News, Vol. 24, No.1

Published in June, 2017

Address: c/o Human Evolution Studies,

Dept. of Zoology, Faculty of Science,

Kyoto Univ., Kyoto, 606-8502, JAPAN

TEL: (+81)75-753-4108

FAX: (+81)75-753-4115

E-mail: pan.editor@gmail.com

URL: <http://mahale.main.jp/PAN/>

ISSN: 1884-751X (Print), 1884-7528 (Online)