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<NOTE>

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

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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*).

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