

用事例がみられる。たとえば、ブータン西部にあるタクツァン僧院は標高約 3,120 m にあるチベット仏教信仰の聖地であり、僧院までのルートは観光客やブータン人の巡礼路として活用されている [吉田・浅川 2016]。また、2022 年に整備された Trans Bhutan Trail は、西ブータンのハから東ブータンのタシガンまでの 403 km をつなぐ道であるが、このトレイルも 1960 年代にブータンの東西をつなぐ高速道路が建設されるまで巡礼路として利用されていた [Trans Bhutan Trail]。

古道の現代的活用の取り組みでは、豊かな自然とともにその土地の歴史や文化が刻まれた古道をいかに持続的に整備・活用するかが模索されている。ブータンの開発目標である国民総幸福 (GNH) の向上も、持続的な経済発展・文化の保全・自然環境の保護・良い統治を 4 本柱としている。日々の喧騒から

離れその土地の自然・歴史・文化が刻まれた古道を歩くことは、私たちに今ここにいることの価値や素朴な幸せをそっと教えてくれる気がする。Shingtala Kezang エコトレイルをはじめブータンにおける古道の現代的活用の今後に着目していきたい。

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Hunter-animal Relationships Changed by Modern Hunting Technology

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“We have caught a lot of animals today!”
A hunter in the village, shotgun in hand,
triumphantly holds up the day’s catch. Large

numbers of duiker (a type of ungulate) and
primate carcasses were randomly piled up on
the ground. This was a scene I saw every time

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I accompanied the villagers on their hunting activities.

The Influx of Modern Hunting Technology and the Bushmeat Crisis in the Central African Rainforests

Bushmeat is the meat of wild animals used as meat. The local people widely use bushmeat as a major source of protein and cash income in rainforest regions around the world [Fa *et al.* 2022], as well as traditional medicines and other uses [Lee *et al.* 2020].

Traditional hunter-gatherers in the Central African rainforests, the setting of this paper, have hunted forest animals using tools made from natural materials, such as tree vines, spears, and crossbows. Anthropologists, who laid the foundations for the early days of African hunter-gatherer research, have vividly depicted hunting activities by hunter-gatherers using traditional hunting tools.

However, in recent years, modern hunting technology, such as firearms and LED lights from outside society, has changed this hunting pattern. With the advent of firearms, hunters can now easily hunt wild animals. The use of LED lights also enable hunters to conduct hunting activities at night actively.

With the advent of modern hunting equipment, coupled with a rapid increase in demand for bushmeat due to urban population growth, there is concern that hunting activity in the Central African rainforests has far

exceeded sustainable levels in recent years.

This situation, where wildlife is threatened with dramatic population declines or local extinctions due to hunting activities exceeding sustainable levels, is called the ‘bushmeat crisis’ [Ichikawa *et al.* 2017]. As mentioned earlier, bushmeat is an essential source of protein and cash income for people living in tropical rainforest areas in their daily lives. The bushmeat crisis is, therefore, a social challenge that could threaten both wildlife conservation and the livelihood security of local people at once.

Life in a Hunting Camp

My research site, Gribé village, is adjacent to Boumba-Bek National Park in Southeastern Cameroon, where the hunter-gatherer Baka and the agriculturalist Konabembe live in the same villages. The two ethnic groups have a hierarchical relationship to a certain extent but are also interdependent, bartering for forest products and agricultural produce.

It is not only Baka who hunt wild animals in the forest but also Konabembe, who sometimes stays in forest camps for a few weeks to hunt wild animals in the forest. Bushmeat wildlife is a valuable source of cash income for them, primarily when they cannot harvest cash crops such as cacaos and bush mangos.

Photo 1 shows one of the hunting camps scattered throughout the forest; during their

stay at the hunting camp, they cook and took naps in huts made from a combination of sturdy wood and leaves cut from the forest. The smoky area is where they smoke the games they catch during their extended stay in the hunting camp. Raw wild animal meat goes maggoty if left for three days. For this reason, they place their dismembered games on an improvised smoker made from tree branches and smoke them (Photo 2).

The hunting activity I accompanied this time was a joint Baka and Konabembe. Once they arrived at the camp and were ready for their extended stay, they set out on a hunting and gathering activity with different roles. Some went to patrol pre-set traps, while others fished nearby. Finally, some stayed behind in the hunting camp to watch for food.

When the hunters returned from hunting, they prepared dinner. Bushmeat from the duiker caught that day was smoked and sold, as mentioned above, so we only ate the entrails of the duiker. The offal of the wild

animal was too bitter for my stomach to accept, as I was used to eating the offal of poultry raised for food in Japan.

After dinner, they sat around the fire and chatted while smoking handmade cigarettes made from plucked tobacco leaves and drinking a pack of whiskey in one hand. Even though they can speak French, Cameroon's official language, Baka and Konabembe speak each other in the local language. As a newcomer to learning the local language, I could not grasp the exact content of their conversations. However, they seemed to be having much fun. Sometimes the names of villagers, Japanese researchers, or Cameroonian researchers were mentioned in the conversation. Was it gossip related to that person, or was it a complaint about that person?

I could see why an anthropologist once described their life in the forest as a 'forest holiday.' It is not difficult to imagine how enjoyable it is for us Japanese to spend time



Photo 1. Hunting Camp in the Forest



Photo 2. Instant Bushmeat Smoker

with our close friends, sake in hand, chatting and gossiping in a place where we can be completely unobserved.

Accompany the Hunting Expeditions Targeting Primates

Although it is late to introduce it, I am studying the conservation of wild primates. My research aims to determine the effects of hunting activities by local people on the ecology and population density of wild primates and to use this information to propose new practical conservation policies for wild primates. In this section, I would like to describe the activities of hunting primates.

The forests around the village of Gribé are home to a total of 13 primates, including great ape species such as gorillas (*Gorilla gorilla*) and chimpanzees (*Pan troglodytes*), eight species of medium-sized primates of the family, and three nocturnal primate species [Hongo *et al.* 2020]. The great ape is strictly forbidden to hunt by the law set Ministry of Forestry and Wildlife (MINFOF, Cameroon). Moreover, the three nocturnal primates are challenging to spot, so villagers do not actively track these primates. Therefore, eight species of medium-sized primates of the family are the main targets of hunting.

Hunting arboreal primates living in high forest canopies with traditional hunting tools is challenging. However, the influx of modern firearms from outside societies changed the

situation, allowing locals to hunt arboreal primates easily; the arrival of firearms formed a new hunter-prey relationship between humans and primates.

During the daytime, it is challenging to target primates in trees due to daylight interference. Therefore, hunters generally hunt primates at dawn and dusk when the sunlight is weak. It is easy to look for arboreal primates when walking through the forest. Once under a group of primates, it is up to the hunter to show his skills. Even for those who hunt wild game daily, targeting primates high up in the trees is challenging. Some hunters are skilled and are sure to hunt primates once they have tracked them down, while others cannot even after tracking primates 5–6 times. Baka, whom I accompanied, was a skilled hunter and shot down an adult male *Guereza colobus* (*Colobus guereza*) with a single blow (Photo 3). The downed colobus still had enough energy to run on the ground,

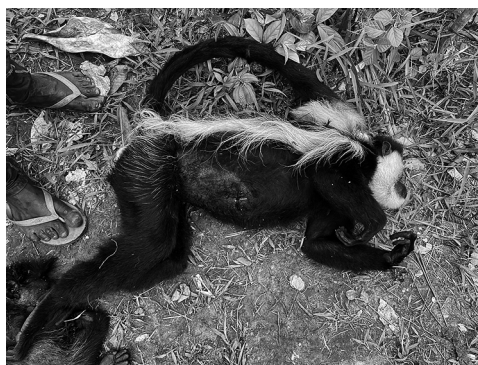


Photo 3. Hunted *Guereza Colobus*

so the Baka hunter finished it by striking his prey on the head with the back of his machete.

Hunting Activities at Night

When night fell, hunters started preparing to go out hunting at night. The forest is dark at night. The forest is covered by a thick canopy overhead, so even at night with a full moon, the forest does not allow light to penetrate. In the night forest, it is challenging to spot primates sleeping in the trees, even for villagers familiar with the behaviour and ecology of forest animals. Therefore, the main target animals for hunting change in the night forest. At night, they hunt duikers.

Some animals, including duikers, have unique organs in their eyes that reflect light. Nocturnal animals use this unique structure in the eye to amplify weak light, enabling them to maintain good vision at night.

When a hunter walks around the forest with an LED light, the eyes of the duiker glow in response to the light. The duiker, perhaps because it has woken up from sleep, does not try to run away for a while when the light shines on it but instead stops where it is. The hunter then aims with his gun and strikes with a ‘Bang.’ This way, even in the dark forest at night, the hunter can find and hunt duikers more easily than during the day.

Hunters may also actively call their prey: they sometimes turn off their LED lights and emit a “Meow, meow” in the dark,



Photo 4. Infant of Blue Duiker

which, according to the hunter, mimics a duiker’s cry. Other duikers and duiker predators are attracted to the call. For example, a Konabembe I accompanied on a hunting trip once caught a blue duiker (*Cephalophus monticola*) cub alive and made it cry. The hunter’s call sounded similar to its cry (Photo 4).

Hunter-animal Relationships Changed by Modern Hunting Technology

The scene described at the beginning of this article was when the hunters returned from their night hunting activities. Piles of carcasses of captured prey were piled up in front of me.

In the previous studies on hunting activities using modern hunting technology such as

firearms and LED lights, the wild animals hunted are often only given as numbers. There is probably no doubt that hunting at night with firearms and LED lights is unsustainable. However, describing the bushmeat crisis in terms of numbers alone probably miss something important and more about the impact of the bushmeat crisis on the region.

During my research, I accompanied villagers hunting with firearms several times. Still, I did not find the game of life between hunter and hunted that anthropologists have depicted in the past. Rather than a struggle for life, I felt it was more like a one-sided slaughter of wild animals. Bullets fired at duikers, especially during nighttime hunting activities, were rarely missed. It is no exaggeration to say that hunters killed every duiker they encountered in the nighttime hunting activities I accompanied.

The negative impact of modern hunting technology, such as firearms and LED lights, not only on wildlife but also on the traditional culture of local people may be more

significant than we imagine. Therefore, it is always essential for those who conduct research using fieldwork methods to record the changes that hunting activities using modern hunting technology has brought to the region in writing rather than just describing the number of animals caught.

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