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The Influence of Congolese Refugees on Chimpanzees in the Lilanshimba Area, Tanzania

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INTRODUCTION

Tanzania has received a large number of refugees from neighboring countries and contributed support to them. However, the establishment and maintenance of refugee camps has a serious impact on the natural environment and the local community. While the refugee camps for Burundians and Rwandans are located in the northwestern area which chimpanzees (*Pan troglodytes*) do not inhabit, two of the three camps for Congolese, Lugufu 1 and Lugufu 2, were built in a chimpanzee habitat. In 1997, 30,000 people came from the Democratic Republic of Congo, and 90,000 Congolese refugees currently live in the two camps. This report shows the influence of the Congolese refugees on the chimpanzee habitat based on the comparison between the home range and population density in 1995 and those in 2006.

STUDY AREA AND PERIOD

The Lilanshimba area is a habitat for one to two unit group(s) of chimpanzees (Fig. 1). This population is separated from the southern population by the Malagarasi River, and from the northern population of Gombe National Park by an 80km gap. In 1995–1996, Kano *et al.*[1] estimated that the population density was 0.10-0.14 individuals/km^2 and that 32–45 chimpanzees inhabited the 316km^2 area (05°05'–14'S, 29°58'–30°20'E). Chimpanzees were densely distributed only in the 175km^2 central section, in which the density was 0.15–0.23 individuals/km^2. The majority of the Lilanshimba area is a miombo woodland dominated by *Brachystegia* and *Julbernardia*. The year is divided into the dry season from May to October and the rainy season from November to April.

Ogawa and Sakamaki stayed in Lilanshimba from August 13 to 19 and from August 23 to September 1, 2006, and conducted a bed-census survey in the east, west, and central sections of the Lilanshimba area.

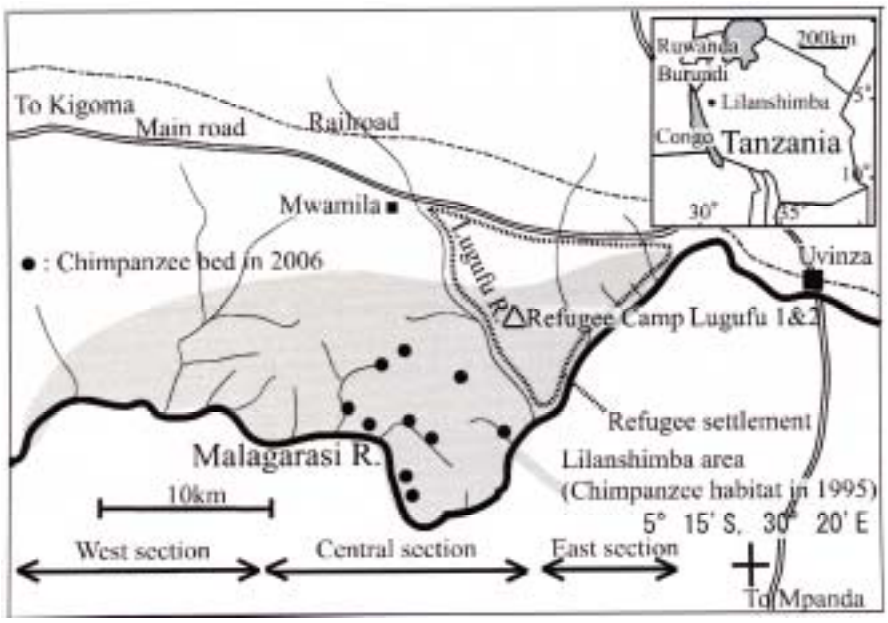

Fig.1. The Lilanshimba area in western Tanzania

RESULTS

On August 14, Ogawa encountered one chimpanzee party including two adults and one infant in the central section of Lilanshimba. However, chimpanzees no longer in- habited the northeast of the Lugufu River due to the refugee camps having been built in the east section (5°08'S, 30°12'E). The chimpanzees lost at least one quarter of their home range. The Congolese refugees were provided with minimum

food, but they crossed the Lugufu River, went out of the refugee settlement, and cut down trees for cultivation, housing, firewood, and charcoal. Unlike the logging by the Tanzanians, the Congolese refugees have cut down all trees in numerous areas both in and out of the settlement. They moved through the central and west sections of Lilanshimba to the Malagarasi River and Lake Tanganyika for fishing and hunting. Lions (*Panthera leo*), elephants (*Loxodonta Africana*), and zebras (*Equus burchellii*) inhabited Lilanshimba before 1997, but there was no evidence of these mammals in 2006. According to local people, the populations of these mammals in Lilanshimba disappeared after the refugee camps were built.

In the central section, we recorded 35 chimpanzee beds within 35m, and 11 beds within 10m from our 85.3km walking routes. A direct comparison between 73 beds in 20m×189.7km area in 1995[1] and 11 beds in 20m×85.3km area in 2006 indicates that the population density in the central section became one third (chi square=12.6, df=1, $p<0.01$). However, the population density in the central section in 1995[1] might have been overestimated. This is because Kano *et al.*[1] assumed that chimpanzee beds disappear in 113.6 days like in Gabon, but chimpanzee beds made in the miombo woodland area in Tanzania remain much longer. Therefore, if we assume that beds disappear in 260 days as recorded in the Ugalla area, Tanzania[2], the density in 2006 can be estimated to be 0.02 individuals/km^2 {0.0225 individuals/km^2 = 35beds/(0.07km× 85.3km×260 days), 0.0248 individuals/km^2 = 11 beds / (0.02km×85.3km×260 days)}. This means that only 4 chimpanzees over 3–4-year-old were present in 175km^2 of the central section. In the west section, we found neither any beds nor any other trace of chimpanzees in 2006 and Kano *et al.*[1] found only 2 beds in 1995. The chimpanzees may rarely or temporarily visit the west section. Our survey suggests that the number of chimpanzees in the whole Lilanshimba area should be no more than several individuals.

DISCUSSION

Even before 1997, the home range of chimpanzees in Lilanshimba had been steadily decreasing as a result of increasing habitat destruction by commercial logging and cultivation. After 1997, however, the destruction by the Congolese refugees became a more serious threat to the survival of chimpanzees in this area. Unlike most Tanzanians, there are no restrictions barring the Congolese from eating the meat of chimpanzees. Our local assistant in Mwamila village heard that Congolese refugees actually hunted chimpanzees in 2002. Chimpanzees in Lilanshimba are isolated from other populations, and are in imminent danger of extinction due to the habitat destruction and direct hunting by the Congolese refugees.

There is another refugee settlement for Burundians in the Mishamo area, western Tanzania (office: 5°43'S, 30°46'E), which is located outside of a chimpanzee habitat. However, some of Burundian refugees leave the settlement, temporarily or permanently live in the chimpanzee habitat, the Ntakata and Kakungu area (05°45'–06°15'S, 30°00'–15'E), and hunt many wild mammals there[2]. Although more than 30 years have passed since they came to this refugee settlement, it is uncertain when or whether they will ever go back to their home country. UNHCR and the Tanzanian government should carefully choose the location of refugee camps and maintain the refugee settlements to protect the natural environment for the sake of not only the refugees but also Tanzanians in the local community and wild animals in that area.

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