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## **Reviewed Article:**

### ***The Discovery of Chimpanzees in the Lwazi River Area, Tanzania: a New Southern Distribution Limit***

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#### **Introduction**

Chimpanzees (*Pan troglodytes*) are found in habitats ranging from the tropical rain forest to more arid areas such as the savanna woodland and grassland forest mosaic <sup>1, 2</sup>. In Tanzania, only chimpanzees of Mahale and Gombe have been continuously studied and well protected <sup>3, 4</sup>, although chimpanzees can be found along the shore of Lake Tanganyika <sup>5, 6</sup>. Comparison of chimpanzee ecology across habitats can reveal the sources and function of variability in chimpanzee behavior and social structure <sup>7</sup>. A better understanding of chimpanzee adaptation to arid conditions can shed light onto early hominid behavioral ecology <sup>8</sup>. In addition, study of habitats and distribution of chimpanzees is important to understand the historical changes of chimpanzee distribution. This paper reports a hitherto-unknown habitat of chimpanzees in the savanna woodland of the 'Lwazi' River area, Rukwa region, western Tanzania.

#### **Study area**

In September 1995, Mukeni found 3 new and 1 old nests of chimpanzees close to the Lwazi R. (= Loasi R.). Based on his information, Ogawa and Kanamori conducted a short survey in the same area from September 4th to 8th, 1996. We stayed on the bank of the Lwazi R. (S08° 12', E31° 08') and walked 25km along it collecting data on chimpanzees.

The majority of this area is deciduous woodland dominated by *Brachystegia* and *Julbernardia* (Miombo in local name). Narrow evergreen forests occur along the Lwazi R. and its branch streams. Relatively dense forests are formed in valleys where rivers cross an escarpment at elevations from 1500 to 1200m. Around this area, bush fires occur and trees of *Pterocarpus angolensis* (Mninga) and *Brachystegia* sp. (Mtundu) are cut down for commercial use.

## Results

### 1: Nests

A total of 16 chimpanzee nests were found. All nests were old (nest leaves were withered) and found in the riverine or gallery forests along the Lwazi R. and its branch streams. Nest height ranged between 16 and 30m (average: 21). Trees used to build nests were *Trichilia dregeana*, *Pseudospondia microcarpa*, and *Dichapetalum stuhlmannii* with an average DBH of 37.0cm (range: between 29.7 and 47.6) and about 30m in height. No nests were found along the Mwimbi R., the southern neighboring river of Lwazi.

### 2: Diet based on fecal contents

Two old feces of chimpanzees were found which included the seeds of *Trilepisium madagascariensis*, *Bequaertiodendron magalis-montanum*, *Grewia mollis* (or *Keetia guienzii*), *Ficus* sp, and other unidentified species. Many feces of baboons (*Papio cynocephalus*) were also found.

### 3: Direct observation by local people

People in Kinika village close to The Lwazi R. told us that they sometimes saw chimpanzees. In October 1995, one villager saw 2 individuals and another villager saw 2 and 7, respectively. The composition of these parties were not clear, because the chimpanzees fled quickly.

## Discussion

The chimpanzee population in Lwazi area discussed here is currently the southernmost population among all wild chimpanzees whose existence has been confirmed by thus far researchers<sup>1,2,5,6</sup>. The flat woodland between the Lwazi R. and the Mwimbi R. might be the current southern boundary of chimpanzee distribution. Along the bank of the Lwazi R., there are *Parinari curatellifolia*, *Uapaca kirkiana*, *Vitex doniana*, *Strychnos* sps., and *Aframmomum* sps., fruits of which are eaten by chimpanzees in other areas. However, no fresh nests were found and Kinika villagers did not see chimpanzees in 1996.

This indicates that the home range of Lwazi chimpanzees includes areas to the north of the bank of the Lwazi R., because the range size of savanna-living chimpanzees is much wider than that of forest-living chimpanzees<sup>5,7,9</sup>.

Utilization of habitat and adaptive strategies for live in the savanna woodland might be different between chimpanzees in the Lwazi area and those in the Ugalla area (Tongwe forest reserve), Tanzania. Nests of the Lwazi area were recorded only in riverine or gallery forests. Not even a deteriorating nest made in the preceding rainy season could be found in the woodland. On the contrary, most nests in the Ugalla area were recorded to occur in small patchy forests dominated by *Monopetalanthus richadsiae* (Kabamba-jike) during the dry season, and many in the woodland and gallery forests dominated by *Cynometra* sp. or *Julbernardia unijugata* (Kabamba-dume) during the rainy season (Idani & Ogawa, in prep.).

In the Lwazi area, environmental change caused by deforestation is a menace to chimpanzee survival, especially because of the severe nature of the savanna woodland. Food supply is poor, predation pressure is high<sup>8</sup>, and Lwazi chimpanzees may be isolated from other chimpanzee populations. Proper government planning is indispensable for the conservation of chimpanzees and other wild animals in the Lwazi area. Further research is needed to understand the historical change of chimpanzee distribution and chimpanzee adaptation to arid habitats.

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