
<NOTE>

**A Survey of the Nimba
Mountains, West Africa from
Three Routes: Confirmed New
Habitat and Ant-Catching Wand
Use of Chimpanzees.**

*Makoto K. Shimada
(Primate Research Institute,
Kyoto University)*

A research team from the Primate Research
Institute, Kyoto University (KUPRI) has been

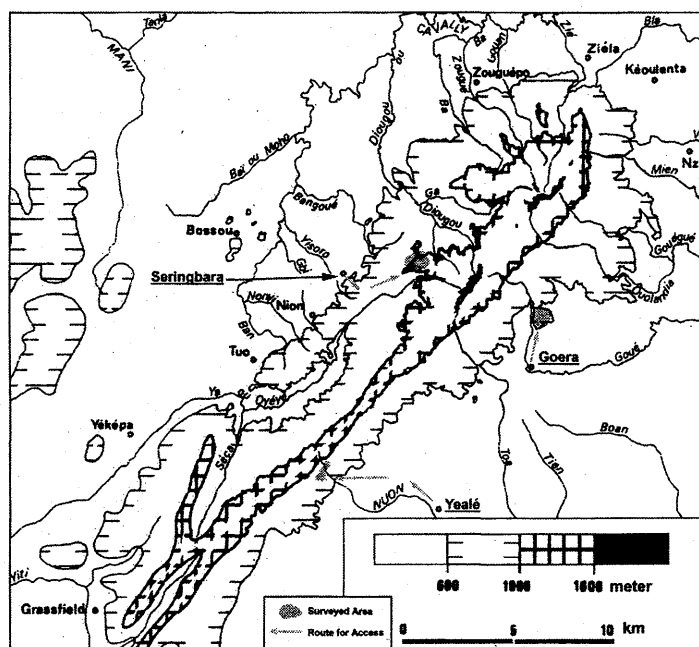


Fig. 1. Map of study sites. Map in (7) is retouched. Seringbara Site; 07°38'10" - 15"N, 08°25'20" - 40"W, Goera Site; 07°37'00" - 38'10"N, 08°22'30" - 23'10"W, and Yealé Site; 07° 33' 30"N, 08° 27' 45"W - 07° 33' 07"N, 08° 28' 05"W.

studying the chimpanzees at Bossou, Guinea, since 1976. The demographic records of Bossou indicate a small but stable group size (about 20), no immigration of females, and the possibility of emigration by both sexes during adolescence (1). In the framework of an extensive survey of neighboring populations (2), I conducted a pilot study in the Nimba Mountain area from three routes. Nimba is the closest known habitat of other chimpanzee groups, and is located southeast of Bossou. The forests of Nimba and Bossou are separated by 4 km of savanna vegetation, and there is a plan to plant trees to connect them: the 'Green Passage Plan' (3). UNESCO designated 220 km² of the Nimba Mountains regions as a "Strict Nature Reserve". A research team of KUPRI has been studying chimpanzees in Nimba at two sites: Yealé (4) and Goera (5). Both these sites are located, relative to Bossou, on the other side of the Nimba Mountains.

I entered the forest of the Nimba Mountains on foot from two villages: Seringbara and Yealé and one temporary residential site, Goera, for Forest Department employees (Fig. 1). While searching for traces of chimpanzees, I estimated the age of chimpanzee sleeping beds by the condition of leaves on branches used for building them.

The research at the Seringbara Site

was carried out during two different periods, designated Period I (6 February 1999) and Period II (between 8 - 9 October 1999). In Period I, interviews of Seringbara villagers and a preliminary study around the village was conducted with S. Hayakawa (KUPRI). In Period II, I confirmed the presence of chimpanzees three times from their vocalizations.

Table 1. Number, height, and age of bed at the three sites: Observed in October, 1999.

Seringbara Site						
Height	0m	1-10m	11-15m	15m<	?	Total
Age of bed						
<1 week	0	5	0	0	0	5
1 week - 1 month	0	0	0	0	0	0
1 month <	0	0	1	0	0	1
Total (Seringbara)	0	5	1	0	0	6
Goera Site						
Height	0m	1-10m	11-15m	15m<	?	Total
<1 week	0	0	0	0	0	0
1 week - 1 month	0	0	0	1	0	1
1 month <	0	0	3	4	0	7
Total (Goera)	0	0	3	5	0	8
Yealé Site						
Height	0m	1-10m	11-15m	15m<	?	Total
<1 week	0	5	7	3	1	16
1 week - 1 month	0	18	4	4	0	26
1 month <	1	19	2	12	0	34
Reused ¹⁾	0	0	1	1	0	2
Total (Yealé)	1	42	14	20	1	78

1) Old bed is remade with fresh leaves.

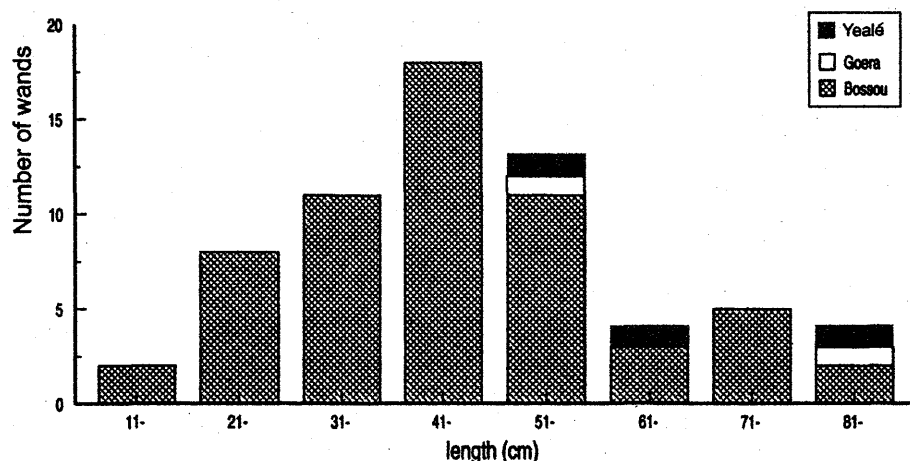


Fig. 2. Comparison of the size of three newly found ant-catching wands used by chimpanzees at Yealé with previous records from Bossou and Goera. Data of wands used by chimpanzees at Bossou and Goera is referred from (4).

I also found five new and one old bed (Table 1) and other traces of chimpanzees, i.e., trails and broken branches. Sugiyama conducted interviews to collect information about chimpanzees at Seringbara at least four times since 1976, during which he also carried out two field survey of the area (personal communication, 6). These interviews and field surveys suggested that chimpanzees sometimes used the area around the village of Seringbara. Therefore, it was believed that the presence of chimpanzees around the village of Seringbara in the Nimba Mountains was temporary, although further evidence had not been sought until this survey.

The research at the Goera Site was also carried out during two different periods, designated Period I (between 27 February - 2 March 1999) and Period II (between 10 - 13 October 1999). In Period I, I found several old beds but no fresh traces of chimpanzees. The newest trace was a more than one-month-old bed, which suggested that chimpanzees had not used this site at least for one month. In Period II, I found four feeding remains, including a fresh one from the previous day, a broken branch, footprints, and eight beds (Table 1). The contrasting condition between the two surveys of the Goera Site suggests that this site is not used continuously by this chimpanzee group. Furthermore, the small number of beds does not reflect the large quantity of feeding remains

found during the Period II. A snare for small mammals and other signs left by poachers were also found. According to local people, because Goera is not a village but a temporary residential site, poachers can enter the forest without being seen more easily than from other routes. The chimpanzee group at this site may be wary of poachers, and tend to avoid using the site for sleeping,

limiting their use of this area only for feeding. The influences of ecological factors, such as weather and seasonal change, and hunting pressure from poachers on habitat use are still unknown.

The research at the Yealé Site was carried out between the 15th - 18th of October, 1999. I found 78 beds (Table 1), heard a chimpanzee vocalization from about 100-m away, and found fresh traces of chimpanzee ant catching with wands. According to the guide from Yealé, since 1993, this was the first finding of the use of wands by chimpanzees to feed on ants in the Yealé area, although Sugiyama found such evidence at Goera earlier in 1991(5).

Fig. 2 compares ant-catching wand length from materials obtained at Bossou, Goera, and Yealé. The data from Bossou and Goera came from Sugiyama (5). Although the length of wands found at Yealé are within the size range of those found in Bossou, they were longer than the average found at Bossou.

New findings during the present investigation are evidences of chimpanzees using at the Seringbara Site, on the western side of the Nimba Mountain, and evidence of ant-catching behavior using wands at the Yealé Site. Further extensive research should be conducted at Nimba to further our understanding of the situation.

I thank Professor Y. Sugiyama, Professor T. Matsuzawa, Mr. H. Takemoto, Ms. S. Hayakawa, Dr. G. Yamakoshi, Dr. M. Myowa-Yamakoshi and other colleagues for their help and guidance; Mr. G. Goumi, Mr. J. Koman, and other guides for their assistance; Professor M. A. Huffman and Ms. T. Humle for their commenting on this manuscript; and the DNRST, Guinea, the Direction de la Recherche, and Direction de la Protection de la Nature, Ivory Coast for permissions; the Monbusho International Scientific Program (Prof. Y. Sugiyama 10041168), Grand-in-Aid for COE Research (Prof. O. Takenaka 10CE2005), and the Nissan Science Foundation for financial support.

- (7) UNESCO. 1998. *Le mont Nimba: Réserve de biosphère et site du patrimoine mondial (Guinée et Côte d'Ivoire)*. UNESCO Publishing, Paris.

REFERENCES

- (1) Sugiyama, Y. 1999. Socioecological factors of male Chimpanzee migration at Bossou, Guinea. *Primates* 40: 61-68.
- (2) Matsuzawa, T., Takemoto, H., Hayakawa, S., Shimada, M. 1999. Diecke Forest in Guinea. *Pan African News* 6: 10 - 11.
- (3) Hirata, S., Morimura, N., Matsuzawa, T. 1998. Green passage plan (tree-planting project) and environmental education using documentary videos at Bossou: a progress report. *Pan African News* 5: 18-20.
- (4) Matsuzawa, T., Yamakoshi, G. 1996. Comparison of chimpanzee material culture between Bossou and Nimba, West Africa. In: *Reaching into thought: The mind of the great apes*, Russon, A.E., Bard, K.A., & Parker, S.T. (eds.). Cambridge University Press, Cambridge. pp. 211-232.
- (5) Sugiyama, Y. 1995. Tool-use for catching ants by chimpanzees at Bossou and Monts Nimba, West Africa. *Primates* 36: 193-205.
- (6) Sugiyama, Y. 1991. Habitat isolation and population structure of wild chimpanzees in and around Bossou, West Africa. In: *Wildlife conservation: Present trends and perspectives for the 21st century*, Maruyama, N. et al. (eds.). Japan wildlife research center, Tokyo. pp.32-35.