SHORT COMMUNICATION

THE DISTRIBUTION OF MONA MONKEYS (*CERCOPITHECUS MONA*, SCHREBER, 1774) IN THE UNIVERSITY OF LAGOS CAMPUS, AKOKA, LAGOS

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ABSTRACT: Mona monkey (*Cercopithecus mona*) is the only non-human primate in the University of Lagos campus that has been in existence on the site before the establishment of the institution in 1962. Infrastructural developments seem to have confined the animal to small, relatively less disturbed forest areas. This study was carried out to investigate the population distribution of mona monkeys at various study sites in the university campus. Population estimates were conducted in five mona ranges through the transect method. The highest populations of 37 and 31 were recorded at the forests behind the Faculty of Arts Block and University of Lagos Guest Houses, respectively. Mean daily occurrence were highest at these sites between 07:00–09:00 and 13:01–14:00 hours. Relatively, high occurrences were observed at the sites behind the Church and Mosque, and the Faculty of Environmental Sciences between 09:01–12:00 h. Mona populations were significantly different (P<0.05) between the study sites. Mona monkey habitat restoration, proper forest management and law enforcement should be employed to conserve the present population of this monkey.

Key words/phrases: *Cercopithecus mona*, Nigeria, Occurrence, Population.

INTRODUCTION

Mona monkey (*Cercopithecus mona*) is found in a wide variety of forest types including near human habitation. They are arboreal and can be found primarily in rainforests at middle and top canopies of trees, mangrove swamp, gallery forest and woodlands, but rarely in farmlands (Oates *et al*., 2008). Their geographical range in Africa covers west and central African countries such as Nigeria, Ghana, Senegal, Congo, Gambia, Benin, Guinea, Ivory Coast, Liberia, Sierra Leone, Togo, Cameroon and Uganda (Estes, 1991; Glenn, 1997; Grzimek, 1990; MacDonald, 1985; Meester, 1968; Nowak, 1999) and Zaire (Mate, 1995; Ihobe, 1997). In Nigeria, they occur in Lekki Conservation Centre, Yankari Game Reserve, Gashaka Gumti, Kainji Lake, and Okomu National Parks.

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Mona monkey is listed by the International Union for the Conservation of Nature as 'Least Concern' (IUCN, 2010). As the species is widespread and relatively common and can adapt to a wide variety of degraded habitats, it is not believed to be declining at any rate (Oates *et al.*, 2008). With the rapid increase in global human population, wild population of non-human primates have started to decline in most of the regions in which they occur. There are three broad categories of major threats to primate populations in the wild, *viz*, habitat destruction, hunting for meat and live capture for export or local trade. The relative impact of each of these varies from species to species and region to region (MacDonald, 1985; Kingdon, 1988; Grzimek, 1990; Burnie, 2009). Although it is frequently difficult to express this in exact quantitative terms, we know with certainty that the situation is becoming or has already become critical for major portion of this important mammalian order. Several species are already on the verge of extinction; others are disappearing at an alarming rate and some though still abundant are decreasing in many parts of the range and only a handful of adapted species appear to hold their own, but these are small rapidly breeding monkeys (MacDonald, 1985).

Modification of habitat is the single most important factor contributing to the decline of primate populations on a global basis. More than 90% of all primate species occur in tropical forests of Asia, Africa and South and Central America (MacDonald, 1985). As these forests are exploited and disappearing, so too are the species depending on them for survival.

The University of Lagos is located in a place inhabited by mona monkeys and other mammals (Asiwaju, 1987). Due to gradual habitat modification (building of infrastructures) on the campus of the University of Lagos over the years, the mona monkeys are gradually being restricted to fewer habitable areas. This study identified the locations inhabited by mona and estimated their number in each location during a six month period of 2009. This work intends to bring to the attention of authorities, the need to conserve and protect mona monkeys.

MATERIALS AND METHODS

Study area

This study was conducted in the University of Lagos campus, Lagos State, Nigeria. It is located at 6° 30' N and 3° 24' E (Fig. 1). Five different sites of approximately 100 m^2 were selected for the study as these were areas that the monkeys were mostly sighted. These areas were University of Lagos (Unilag) Guest Houses (Site A), backside of Faculties of Business

Administration (Site B) and Art (Site C), Church and Mosque (Site D) and backside of Faculty of Environmental Science (Site E).
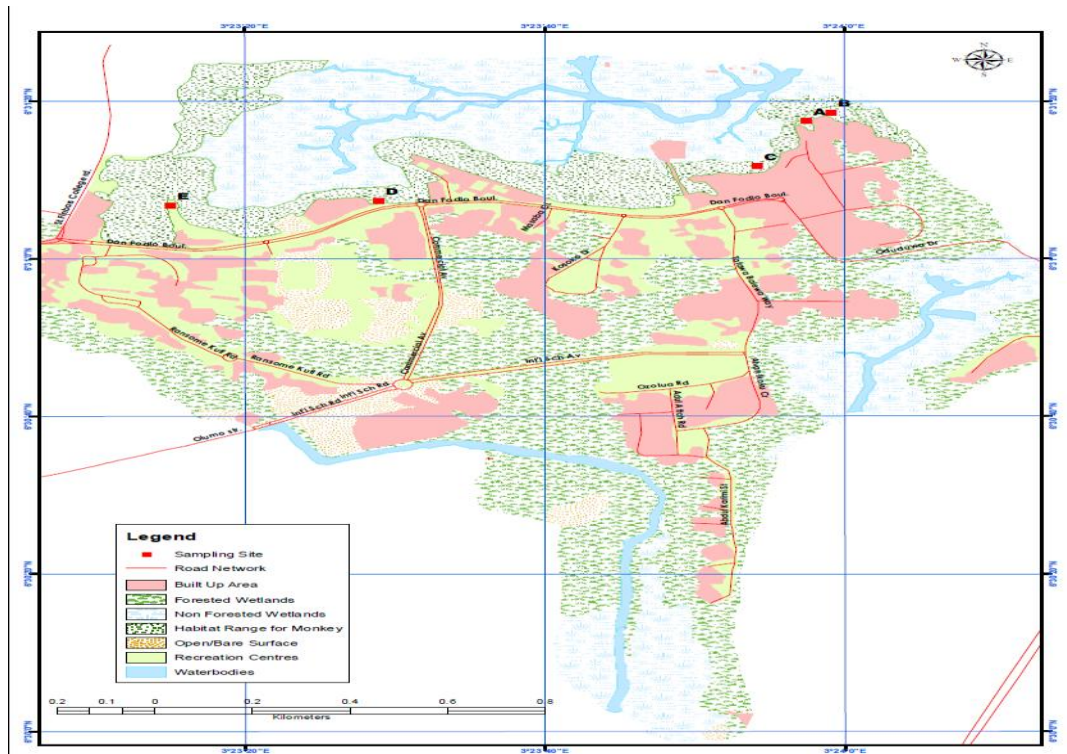

Fig. 1. Map of the study areas in University of Lagos campus and the mona monkey range.

Data collection

A reconnaissance survey of free-ranging mona monkeys was conducted for three weeks on the University of Lagos campus to determine where they forage and to select sites for detailed studies. Selected study sites were visited for observation of the monkeys and data collection, which lasted from December 15, 2008 to June 27, 2009 constituting approximately 28 weeks.

Transect method (Whitesides *et al*., 1988) was used for population surveys in the five sites. Trails accessing these sites were used as transects. Enumeration was on both sides of the trails. Surveying commenced at 07:00 h and ended at 19:00 h. The population of monkeys at the various study sites was tested (using the Chi-square analysis) to ascertain whether there was significant differences or not.

RESULTS

Fig. 2 shows that the mean daily occurrences of mona monkeys were highest at site C, followed by site A between 13:01–14:00 h. In site D, occurrences were highest between 15:011–7:00 h, while in site E the highest occurrence of the monkeys was between 07:30–09:00 h. High occurrences of monkeys at sites A and C were also observed in the early morning hours between 07:00–09:00 h, while relative higher occurrences were seen at sites D and E between 09:01–12:00 h. Plate 1 shows sightings of mona monkeys in the study sites.
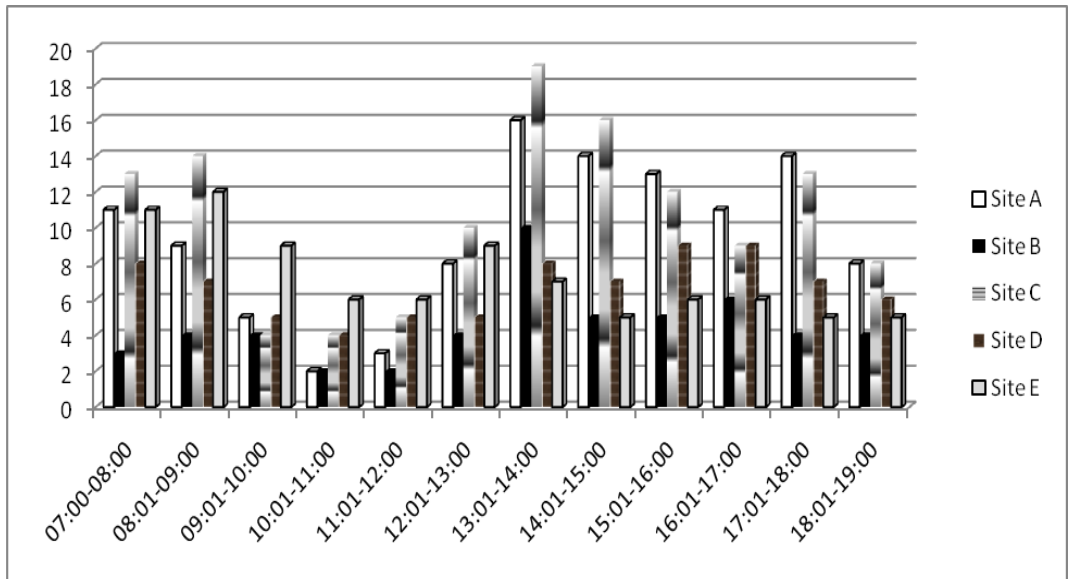

Fig. 2. Mean daily occurrence of mona monkeys in relation to time in sites A, B, C, D and E.

The monthly population estimate of mona monkeys in the five study sites in the University of Lagos is shown in Fig. 3. January had the highest recorded population of 110. This was followed by May, with estimates of 92 individuals. April and June had the next high values of 81 and 77 individuals, respectively. February had the least estimate of 65. The highest mona population of 137 was on site A. This was followed by sites C, E, D and B, with values of 126, 99, 78 and 64 individuals, respectively.
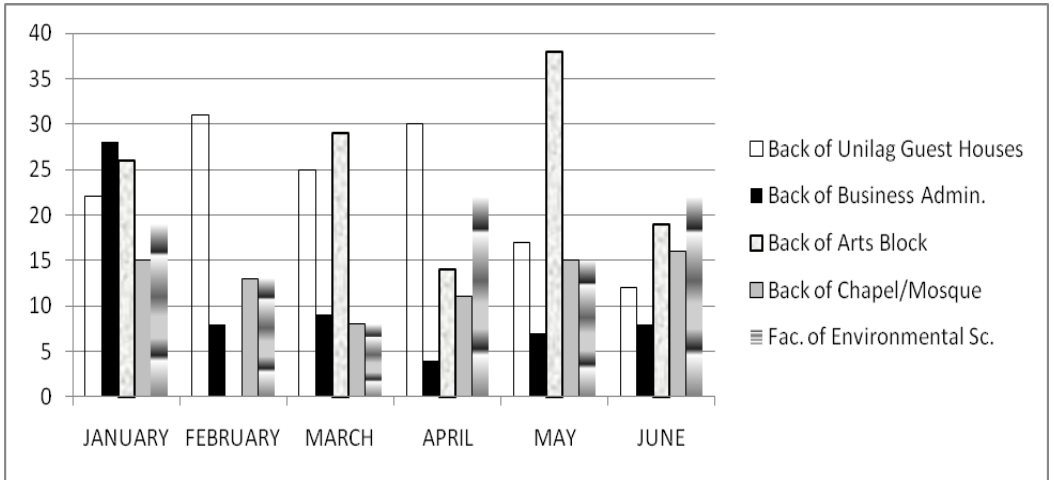
Fig. 3. Monthly population of mona monkeys in five sites in the University of Lagos campus.

Fig. 4 shows the mona population estimates according to study sites and months of study. There was significant difference between the population of mona monkeys at the various study sites (χ^2=37.925, P<0.05).
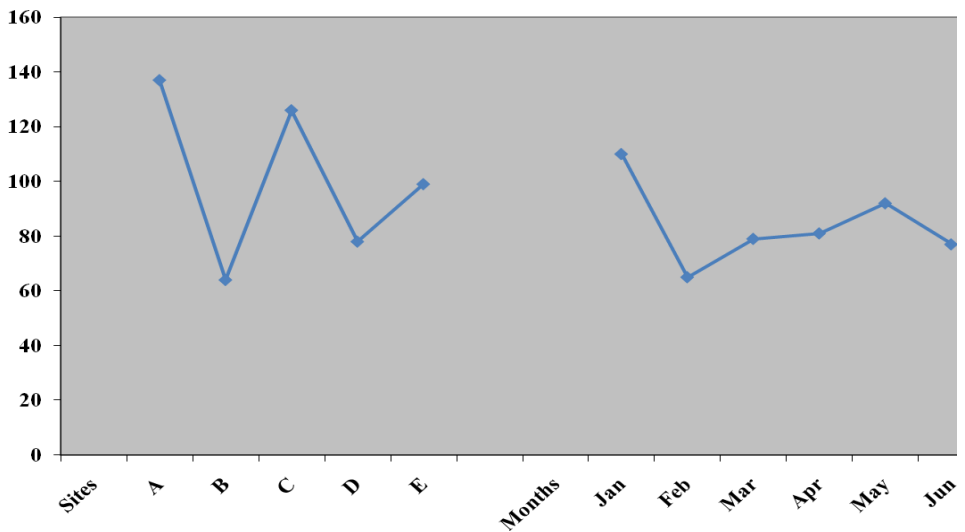

Fig. 4. Estimated population of mona monkeys from five sites in University of Lagos.
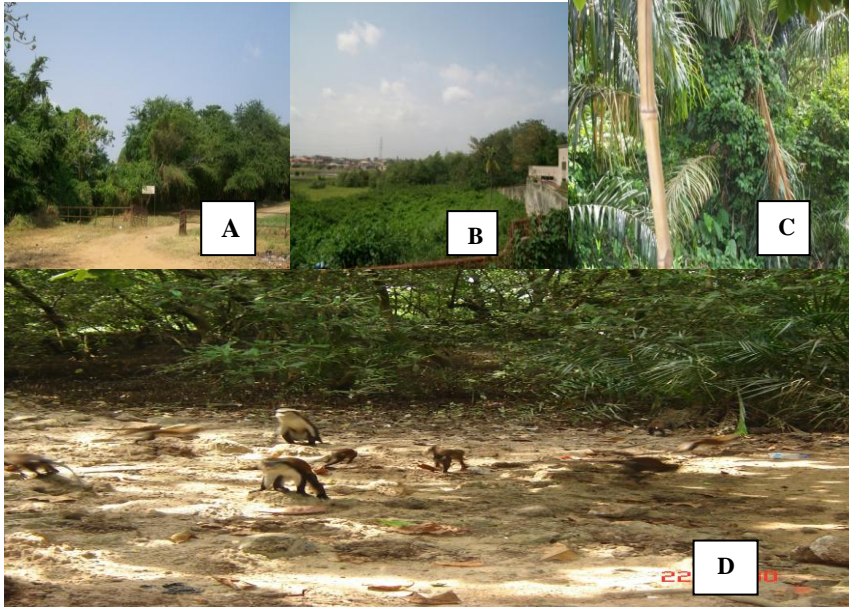
Plate 1. Photographs of study sites where mona monkeys were sighted: A=Back of Unilag Guest Houses; B=Back of Business Administration; C=Fac. of Environmental Science; D=A troop of mona monkeys at Unilag Guest Houses.

DISCUSSION

This study has revealed the population and distribution of mona monkeys in the University of Lagos campus. They were diurnal and mostly active during the early morning and afternoon hours, which conforms to the observation of Glenn (1997). The lowest population was recorded at site B. This site seemed not to support their arboreal life due to the observed low tree cover. It was also observed that this site served as a corridor for the monkeys when they moved from site A to site C or vice versa, where cool shade provided by tree canopies under which the monkeys played and groomed were found. Secondly, students, staff and visitors to the University usually converge to sites A or C to feed these monkeys with food items such as biscuits, peanuts, bread and other snacks. Olaleru and Egonmwan (2012) listed biscuits, bread as some of the foods of mona monkeys in the University of Lagos.

The high occurrences of monkeys at sites A and C during the early morning could imply that they sleep in those places. Monkeys came out early at dawn with the expectation of getting food from humans, having been fed the previous day. They then eventually move to sites D and E during the mid-morning to afternoon. These sites contain wider expanse of vegetation for

foraging on wild food sources such as insects and fruits. These sites have very low or non-human presence; therefore provision of food by humans was not a common sight in these sites.

Monthly fluctuations in mona population could be due to some environmental factors. The dry season could have made vegetative cover dry up, thereby making for easy sighting and enumeration. Subsequently, low numbers could perhaps be due to some unrecorded killings or with the rains and vegetation cover, which contributes to poor sightings.

CONCLUSION AND RECOMMENDATION

University of Lagos turned 50 years in 2012. What used to be primary forest and other vegetation have been cleared and replaced mainly by infrastructures. This has adversely affected the population and distribution of the monkeys on the campus. They are at present restricted to the few pockets of habitable vegetation. With no conservation policy on ground, the few monkeys left are under the threat of hunting pressures and hence the population will decrease soon. Establishment of conservation policies by the University management for proper forest management and biodiversity conservation would help in the conservation of the present population of mona monkeys in the campus.

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