
Study on Home Range Size and Pattern among Diurnal Non-Human Primates in Mihintale Archaeological Site

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The size and pattern of the home range depend on basically food availability, density of the group, free ranging species and geographical reasons. A home range is the area in which an animal lives and moves on a periodic basis and it is related to the concept of an animal's territory which is the area that is actively defended. When consider about Sri Lankan primates; Sri Lanka has five primate species. Three species belongs to catarrhines, the toque monkey (*Macaca sinica*), the purple -faced langur (*Trachypithecus vetulus*), the grey langur (*Semnopithecus entellus*) and two or more species of the slender loris (*Loris* spp.). This study was conducted in Mihinthale archeological site. This study was focused on home range of the toque monkey (*Macaca sinica*), the purple -faced leaf langur (*Trachypithecus vetulus*), and the grey langur (*Semnopithecus entellus*). Preliminary observations were started from January 2015 to May of 2015. Intensive data collection started from May 2015 to September of 2016. Behavioral observations were conducted for 136 days. Three groups were selected to represent all three species by randomly for this long term study. Home range data was collected by observations of daily path range. To determine actual home range of three species GPS points and hard copies of maps of the site were used. GIA maps were created to measure the area which were used by each species. The result of this study that home range size of each species; the purple faced –leaf langur's home rang is the largest among the three species. All macaque groups have very small free ranging area when consider with the other two species. Macaques mainly depend on human supplied food and hardly depend on food from the forest, hence recording the smallest home range among the three primate species. The conclusion of study are that purple - faced leaf langur's home rang is the largest home rage than gray langur and toque macaque. Gray langur's home rang is larger than toque macaque and smaller than purple faced leaf langur. Toque macaque has smallest home range. The identified two main factors for this variation are the availability of food and the density of groups in the given area.

Keywords: food availability; group size; langur; macacque