



Population Status, Threats and Conservation Measures of Assamese Macaques (*Macaca assamensis*) in Langtang National Park, Nepal

Ganga Ram Regmi & Kamal Kandel,
regmigr1978@yahoo.com

Central Department of Zoology
Tribhuvan University
Kirtipur
Kathmandu
Nepal

Awarded a PSGB Conservation Grant in August 2007

Abstract

A total of 213 Assamese macaques (*Macaca assamensis*) were encountered in 9 groups within the surveyed area surveyed of 113 km² in Langtang National Park. The group density was found to be 0.079 groups/km², with a population density of 1.87 individuals/km² and a mean group size of 23.66 (Range 13-35) individuals. Group size showed a great intraspecific variance among populations of this species in the area. Since larger groups prevailed in group encounters, further research should be attempted to explain whether the high predation pressure or between or within-group competition is responsible for the large group size of Assamese macaques in the area. Age-sex composition of the macaques was 31% adult females, 16% adult males, 18% sub-adults, 16% juveniles and 19% infants in the study area. The adult sex ratio and the recruitment rate were found to be 1:1.92 and 0.61 respectively. The estimated crop damage from 75 households was about Rs. 150,000 per annum with the

average of Rs. 2,000 per household. Presence or absence of macaque damage was significantly related to the distance of the farm from the forest ($\chi^2 = 30.9$, $df = 2$, $P \ll 0.05$). Therefore the crop-raiding incidents were highly clustered near the forest. The costs of crop protection per household ranged between Rs.500-1500 per household per year, which comes to Rs. 37,500 - 112,500 for 75 households. It was found that Assamese macaques spoiled more crops than they actually eat; juveniles and infants in particular brought about damage during play on the ground. The major crops: maize, potato wheat, buck wheat, millet, and others were found to be raided by Assamese macaque in the area. Among these, maize cobs were found to be highly preferred (62%) followed by potato tubers (23%). The most commonly used crop protection strategy was constant vigilance during crop seasons, this was used by 60% of the farmers in the study area. This severe localized crop damage results from the negative attitudes of the local subsistence farmers with respect to food security towards this species and makes it more vulnerable. Besides this most common form of human-macaque conflict, other threats come from expanding human populations and encroachment upon Assamese macaque habitat particularly due to rapid logging for timber to manufacture tourist lodges and hotels and to fulfil the demand of firewood in these harsh areas. Agricultural crop and livestock depredation by wildlife results in disputes between the park authorities and the local people. Potential solutions recommended here emphasize the need for the Park administration to either accept responsibility for the protection of crops and livestock from the park's wildlife or to take measures immediately to minimize them and increase the level of tolerance of the local people for sustainable conservation. Additionally, the sharing of park revenues with local people may also help to lower conflict levels and change the perceptions of locals towards park wildlife. Site-specific conservation measures with development and distribution of outreach materials to local stakeholders should be carried out to foster interest from locals in primate conservation.

