

**THE STUDY ON THE POPULATION OF LONG-TAILED MACAQUE (*Macaca fascicularis*)  
AND THE STRUCTURE OF VEGETATION CONSTRUCTING THEIR HABITAT  
IN ROWOBENDO RESORT, ALAS PURWO NATIONAL PARK  
BANYUWANGI REGENCY, EAST JAVA**

By: Eko Desi Sularso<sup>1</sup>, Djoko Marsono and Soebeno<sup>2</sup>

**Abstract**

*Macaca fascicularis* is one of the primates inhabiting Alas Purwo National Park. Being taken advantage for tourist attraction, located in an area of intensive tourism, *M.fascicularis* requires special attention especially the one focusing on their population dynamics. There are a number of aspects which are worthy of the study in order to figure out the dynamics of a population that is ever changing i.e. the birth rate, mortality, predation, migration, dispersion, age distribution, sex ratio, and social organization of a species. The aim of this research is to find out the population structure (including age distribution, sex ratio, and density), home range, and the vegetation structure found in three groups of *M.fascicularis* in Rowobendo Resort i.e. Rowobendo Post, Pura Giri Salaka, and Triangulasi. Hopefully this research could provide information for the planners, the managers of Alas Purwo National Park, and the researchers from other institutes attempting to arrange and make use of the animal without causing any damage to the nature conservation in this region.

Concentration Count Method is implemented to find out the population structure of the three groups of *M.fascicularis*. It is counted twice a day during 12 days of observation. Another method implemented is Line Transect Method to estimate the whole range of *M.fascicularis* population living in Rowobendo Resort by using six lines of observation spreading around the area. It is assumed to be able to represent the whole resort in this region. The home range of *M.fascicularis* can be detected by following the daily movement of one or more individuals chosen as the samples from morning to afternoon. Each group is observed in four sequential days in October-November 2002 by using Magellan Blazer Global Positioning System (GPS) to record the data. Point-Centered Quarter Method is used to obtain the data of vegetation structure at the level of pole and tree (more than 10 cm dbh) and Quadrat Method is used to obtain the data of ground cover vegetation structure. The sampling process for vegetation data is done by using random preliminary systematic system.

The finding of the research shows that group of *M.fascicularis* inhabiting Pura Giri Salaka has the highest population consisting of 49 macaques with the density of 2,07 ind/Ha; followed by Triangulasi troop consisting of 38 macaques with density of 1,82 ind/Ha, and the lowest is of Rowobendo Post troop consisting of 30 macaques with the density of 1,08 ind/Ha. The home range of *M.fascicularis* in three areas of observation i.e. Rowobendo Post, Triangulasi, and Pura Giri Salaka are 27,71 Ha, 23,64 Ha, and 20,84 Ha with average length of movement of 1280 m, 1089 m, and 997 m. The largest variety of the vegetation is found in Triangulasi consisting of 48 kinds of species from 40 families, followed by that of Rowobendo Post consisting of 27 kinds from 14 families, and the least is that of Pura Giri Salaka consisting of 23 kinds from 10 families. The vegetation found in Rowobendo Resort is made use as the source of food, playground, place to rest, shelter and cover, as well as for a sleep. The vegetation mostly used for food is of *Ficus sp*, *Tectona grandis*, *Cassia siamea*, *Eugenia javanica*, *Hibiscus tiliaceus*, *Samanea saman*, and *Delonix regia*.

Keywords: population, *M.fascicularis*, vegetation, habitat, home range

<sup>1</sup> The Student of the Conservation of Forest Resources Department, the Faculty of Forestry, UGM

<sup>2</sup> The staffs of lecturer of Forestry Faculty, UGM