

## **Project Update: December 2010**

In order to fulfil our objectives about an updated mapping and estimation of the population density of ebony leaf monkeys within the limits of the West Bali National Park (WBNP), we have conducted two types of repeated line-transects, namely “walking transects” and “driving transects”. Walking transects consisted of walking at a constant speed of 2 km/h along a series of transects located in different areas within Prapat Agung Peninsula (eight different transects, each measuring 4 km and being walked 10 times, i.e. a total of 80 transects), whereas driving transects consisted of driving a motorbike at a constant speed of 15 km/h along the main road across WBNP, between Cekik and Teluk Terima (91 transects in total, each measuring 12 km). For every transect, we have counted the number of sightings of ebony leaf monkey groups, and collected the GPS coordinates of each sighting. We have collected 116 sightings of leaf monkey groups during walking transects, and 13 during driving transects. These data, collected during the wet season (February – July 2010), are now being mapped and further analyzed with the *Distance 5.0* software to estimate the leaf monkey population density (number of groups per km<sup>2</sup>) within WBNP. After discussion with local park rangers about methodological issues and our reports of illegal logging in the study site, they decided to conduct a complementary survey of leaf monkeys during the dry season (August – October 2010). We are planning to compare and compile our final results in the preparation of at least one scientific article about the current status and conservation of this primate species.

Regarding our objectives about the socio-ecology and population genetics of the species, we systematically followed a group of ebony leaf monkeys living in a fragmented and disturbed area, i.e. a small patch of plantation forest, measuring approximately 700 m long and 250 m wide, and surrounded by agricultural fields, savannah habitat, roads, villages, and a few forest fragments that may function as dispersal corridors. During 94 observation hours, we used GPS logging to measure the size and differential use of the group’s home range, as well as its daily movement distance. We collected instantaneous group scans (every 10 minutes) to assess this group's daily activity budget. We also conducted repeated line-transects within and around the study area to evaluate the density of neighbouring groups of ebony leaf monkeys. These data, along with further information about local food availability, are now being analysed to determine whether or not such a home range comprised of fragmented and disturbed forest patches is sustainable for one group of ebony leaf monkeys. Our findings will be submitted for publication in conservation journals. Finally, we collected a series of faeces samples from the resident group as a source of DNA for an analysis of population genetic structure. This analysis will be conducted by our research collaborators at the Primate Research Centre of Udayana University.