

## Project Update: November 2015

I am returning from the first field season in the Betampona Natural Reserve, Madagascar where I spent the previous 6 months studying how domestic and endemic carnivores interact and how this might facilitate disease transmission across species. My team, composed by Malagasy veterinary students, local guides and I have set up a network of 30 camera trap stations in this 2,228 ha lowland rainforest. This allowed us to capture over 1000 pictures of carnivores from eight species that occur within this ecosystem. The preliminary results of our camera trapping efforts spanning over 2772 trap-nights show that domestic dogs are the most frequently encountered carnivore species in Betampona. In fact, dogs were photographically captured more often than all species of endemic carnivores combined. This confirms that exotic and endemic species interact at least indirectly (overlap in space use) in Betampona and may transmit pathogens to one another. Another exciting result from the camera trapping grid allowed us to confirm the presence of two carnivore species that were not known to occur within this ecosystem: the endemic Falanouc (*Eupleres goudotti*) (Figure 1) and the introduced Indian civet (*Viverricula indica*).

In addition to our camera trapping survey, we collected biological samples from approximately 60 dogs and cats living in neighbouring villages as well as wild carnivores from the reserve to test for the exposure to common carnivore pathogens. The preliminary results suggest that the majority of dogs and cats living in the Betampona ecosystem were exposed to diseases such as canine parvovirus, canine distemper and toxoplasmosis that may affect wild animal populations. The laboratory analyses testing for the exposure of endemic carnivores to the same diseases are underway.



Left: A Falanouc (*Eupleres goudotti*), a species that was not known to occur in the Betampona Natural Reserve and captured on camera traps. Right: Mihaja, a veterinary student from the University of Antananarivo completes a physical examination on an endemic broad striped vontsira (*Galidictis fasciata*) in Betampona