

Project Update: June 2008

Conservation and landscape genetics of Lowland tapir (*Tapirus terrestris*) in a periodically flooded Amazonian forest.

I am currently in Manaus, in the heart of the Brazilian Amazon. My field site is in the Jaú National Park, which until recently was the largest protected area in Brazil, with just over 2.2 million hectares covering the whole of the Jaú River Basin. I arrived during the peak of the flood, so most of the area was either under water or the soil was quiet wet.

I stayed at a research station about 2 hours by speed boat (15hp engine) away from the mouth of the Jaú River, which pours into the Negro River (which later joins the Solimões River around the Manaus area to form the Amazon River). The research station is a little brick house just off the Seringalzinho Community (Seringalzinho is the diminutive for Seringal, which is a stand of Seringueiras, the tree tapped for rubber). Indeed, there were quite a few of the rubber trees around. The community is small; it has about 5 families (although there is an average 6 children/family). They all live off the land with small orchards to cultivate manioc (a tuber), from which they make the manioc flour, the staple food. They fish and they hunt. I ate some pretty good fresh fish, and they also offered me agouti, collared peccary, and... Tapir... I tried the first two, but didn't feel I should create incentives for tapir hunting, so I didn't eat tapir (in spite of all the delicious noises people were making around me).

I put up my hammock in the research station, covered it with a mosquito net to avoid bats falling in my hammock. The water is so acidic that mosquitoes are not too much of a concern. My research companion (Adriane) had been woken up twice by bats falling in her hammock before she decided in the middle of the night to put her mosquito net up. So, I wasn't prepared to let that happen to me.

My routine was to wake up around 4:30-5am, fix some breakfast, pack the backpack with food and water, dress up in pants, a long-sleeve shirt, tall rubber boots, and a bandana. My field assistant, Tripa (which literally means Tripe... I decided it was best not to ask why), would come by in his little canoe propelled by a small 5hp engine with a long shaft and small propeller at the end (much like the ones you see in Southeast Asia), and we would go out exploring for tapir poop (or, as they call it, tapir fertilizer). The community folk kept telling me that you can't really find tapir poop on trails, and you have to walk the jungle. They poop a lot in areas that are particularly wet. So, off I went with Tripa, literally trusting my life to him, as we would park his leaky canoe (he would periodically be removing water from it as we travelled around the deep, caiman and piranha infested, waters) on the margin and start walking randomly searching for tapir signs, and following them as far as we could. I would be, needless to say, lost pretty quickly. During our first day, after about 5 hours of walking up and down ravines, dodging tree roots and vines (which insist on getting caught on your boots and tripping you over, only to land on a bed of thorns), falling into creeks and puddles (water logged boots are quite comfortable, I found out), and generally getting drenched in sweat and rain, I asked: Are you lost? He looked at me, in his comfortable shorts and t-shirt (he only wore boots because the Foundation whom I am working with requires it of him, otherwise he would be barefoot), and without panting or sweating, replied in a deadpan manner, No! As if that was the most absurd question he has ever heard. At which point, he looked around, and took a course straight back to the canoe.

I would usually make it back to the base station around 2pm. Starving and tired. We would make lunch, and then I would go out to tour the community and talk to different members about my project and about tapirs. I spoke to some hunters. One of them is supposed to be the tapir hunter in the area. He

tells me he has too many mouths to feed, so peccaries and agoutis just don't cut it (he has about 20 kids). He tells me tapirs are easy to find, their poop as well. The hunters in the area have perfected a whistling technique, which imitates the tapir's call (it sounds like a high pitched shrill). They use the whistle to find and lure tapirs to the margin of river and brooks, where they can be easily shot. Or, they use it to follow the tapir into the forest. Of course, they prefer that the tapir comes to them; it makes it a lot easier to transport the meat afterwards if they are already close to their canoes. But, the tapir that was hunted while I was there, it seems, was found an hour and a half away from the canoe. Not easy to carry 200 pounds of meat in the jungle. They also told me that it is easier to find tapirs in the dry season, as they come closer to the river. This made me think, I could maybe use the technique to lure tapirs to the margin and use a biopsy dart to sample them. But, there would have to be a lot of talk with the locals so that they don't go back to kill the animal. Fortunately, Tripa has a small family, and agoutis and peccaries are sufficient.

I was also told that during the wet season they move to the "centre of the earth" according to them. So, at least in the mind of the locals, the tapirs are doing exactly what I am here to test for, which was very encouraging for me. :) At the end of the day, it may not be that way, but at least we get to "bust" a myth then, which is interesting in itself.

Finally, I was also told that there two "qualities" of tapirs. The locals refer to different species as different "qualities." This is something that is being actively pursued by a group of researchers here in Brazil. The locals tell me that the main differences are colour (one is "red," I put red in quotes because red for them doesn't seem to be the same as red for us, and a black one), and differences in size (the "red" is larger than the red one). A more controversial difference, which was not confirmed by multiple people, is that the "red" one is less abundant than the black one. I also asked if the two "qualities" mate with each other. Some said yes, others said no. So, the verdict about the existence of two species in the Amazon is still up in the air (I am sceptical though). As to the colouring issue. At some point, Adriane had the idea of showing the colour plates found in the Louise Emmons' Field Guide to Neotropical Mammals to a few of the locals. They pointed out the lowland tapir (which is clearly gray) as the "red" one, and the Baird's tapir (Central-American species, which is reddish/brown in colouring) as the one that most closely resembles the black one. Anyway, I am hoping to get some pictures in the next trip to see with my own eyes. Gonçalo, my friend here in Manaus, also suggested I take a sheet of paper with me with tapirs with different colours and other species printed on it to show to the community members, individually. Depending on their answers, we can gauge how trustworthy their answers are, and in comparing among people, we maybe start to get a clearer picture as to the differences between these two "qualities."

After the powwows, I would go back to the station, and Adriane and I would talk for an hour or two about different aspects of the Jaú, logistics, etc. I was usually in my hammock by 830pm, and completely beat!

Anyway, the bottom-line of this trip is: it seems I have found a reliable field assistant, who should be able to do some sampling in my absence; I found fresh poop (and also figured out that most that I will find will be fresh, because the rain won't allow it to survive very long); found many tracks and other signs of tapir walking around (always good to know your animal is around); didn't get to see a live tapir, but saw a dead one. Not nearly the same thing, not by a long shot. However, more evidence that they are around, and can be spotted.

The return to "civilization" was somewhat of a shock. Here I was, isolated from everything and

everyone. No electricity, no email, no large amounts of people running about like crazy. Just jungle, silence, and peace. As you return, getting to the port, which is filthy and stinky, loud (horrible) music and full of people running around like mad and trying to sell all sorts of stuff, including their services come rushing to greet you. It is a real assault on all senses.

In any case, I am alive and well. I have recently given a seminar about the project to the Federal University of Amazonas' (UFAM) Biodiversity Graduate Program. It was well received, and people were very interested in the work. I have another seminar planned for the National Institute for Amazonian Research (INPA). But, that will be after my second field trip, which will start in a few days.