

■ SOUTH AMERICA

French Guiana Status of Lowland Tapirs (*Tapirus terrestris*) in French Guiana: A Preliminary Assessment

By Benoit de Thoisy & I. Vogel

French Guiana is the smallest country of the Guiana shield. It belongs to and is administered by France. The Guiana shield is considered to be one of the largest remaining blocks of rainforest and approximately 90% of an area of French Guiana is still covered by moist, upland forest. However, the country is now facing a dramatic increase in human activity. As part of a large-scale study aiming to assess the status of primates in the northern part of the country, some preliminary data have been collected on the status of lowland tapirs (*Tapirus terrestris*) in French Guiana.

The main threat to the tapir in French Guiana is from hunting. The species is not legally protected and was classified in 1995 as one of 12 game species. Therefore it can be harvested and sold without any limits on numbers taken. In the southern part of the country, subsistence hunting occurs, but the main hunting pressure comes from illegal gold miners who are widespread on most of rivers and tributaries. In the north, logging activities result in clearings for hundreds of kilometres of tracks. Despite a very selective timber harvest, such easy access for hunters into large forested areas has dramatic consequences for large species. At the national level forested habitats are not fragmented, but no more than 3% of the country is under protection. Four of the 5 existing nature reserves have forested habitats, but the tapir is present in only 3 of them. The National Park project, which has been planned for 15 years, is now frozen possibly due to lobbying from the gold mining industry.

We assume that the tapir is still present in large areas of French Guiana but believe nevertheless, the direct harvest must be urgently restricted. Although it may not resolve the entire problem, the species must be legally protected. The tapir is regarded as the main game species by most local people, and as a result, the French government may be reluctant to pass legislation to restrict tapir hunting. In the northern belt, probably the more efficient way to reduce the hunting threat would be an improved optimisation and planning of logging activities. This may prevent laying

waste to suitable habitats, reduce access to pristine forest, optimise refuges, source areas, and corridors (de Thoisy *et al.*, 2001). The closure of tracks after logging would also allow population recovery in logged forests. In the south of the country, management and auto regulation by communities should be attempted, but external and uncontrolled pressure from gold miners may cause conflict. There may not be an optimistic outcome to these issues and thus for the conservation of the tapir and other game species and aquatic wildlife (otters, fish, carnivorous birds) unless the French government assumes its responsibilities in terms of conserving biodiversity within its territories.

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Benoit de Thoisy & I. Vogel

Association Kwata - Study & Conservation of French Guiana Wildlife
BP 672, F-97335 Cayenne Cedex, French Guiana
E-mail: thoisy@kwata.org

Colombia

Conflict Between Mountain Tapirs (*Tapirus bairdii*) and Farmers in the Colombian Central Andes

By Jaime A. Suárez & Diego J. Lizcano

In the last century the "Antioqueña" colonisation process transformed the Colombian Andean forest to cropland. This was predominantly in the form of coffee plantations, as coffee was the top Colombian export product in the 20th century. Simultaneously, cities like Ibagué, Armenia, Pereira and Manizales were founded on an economy based on coffee and thus dependent on the exploitation of natural resources. In the middle of the 20th century Pereira, the capital of Risaralda State, was the oldest coffee producer in Colombia. Due to the highest human population in the country, habitat fragmentation and loss increased. River levels diminished and demands for wild meat increased. For this reason the Ministry of Agriculture bought almost all the farms on the Otún river basin. These lands were

given to the municipality of Pereira and administered by Pereira's aqueduct company (Murillo and Baena, 1999). At the start of the 70's these lands and the surrounding areas in Quindio, Tolima and Caldas states were declared to be the "Los Nevados" (snow peaks) National Park with a total area of 38,000 ha. This area was increased to 58,000 ha in 1973. Nowadays this park has a population of 20 families who were living in the Risaralda area before the creation of the park. These families work in the area, growing potatoes and cattle ranching in the Paramo region.

"Los Nevados" National Park constitutes the northern limit of mountain tapir distribution in the central Andes of Colombia (Lizcano *et al.*, 2002). The altitude within the park varies from 2600 m in Risaralda to 5550 m at the peak of Mt. Tolima. Other mountain peaks are the Ruiz volcano, Santa Isabel and the Cisne. Two ecosystems predominate in the region. These are montane forest and the Paramo, which is the region above the tree line from 3700 m to the snowline at 4700 m. The vegetation in the Paramo is dominated by grassland with a few small trees which includes plants of the Espeletia genus (Smith and Young, 1987). At high altitude the forest canopy is 10-15 m and is dominated by *Weinmannia mariquitae*, *Frazieria* sp., *Rapanea ferruginea*, *Sauria scabra* and *Oreopanax* sp. At the lower altitude, vegetation is much higher (30-35m) and is dominated by *Brunellia goudotti*, *Miconia* sp., *Weinmannia* spp., *Nectandra* sp., and *Ocotea* sp. (Cleef *et al.*, 1983).



Forest cleared to grow potatoes.

Photo by Jaime A. Suárez



Potato plant eaten by tapir. Photo by Jaime A. Suárez

The forest is a mosaic of mature and secondary forests of different ages that originate from when farms were abandoned in the middle of the 20th century.

The "campesinos" or small farmers living inside the park owned their lands for many years before the creation of the park, when the "antioqueña" colonization process brought landless people to the region. However, because they actually live inside a national park they live under certain restrictions. For example, timber is restricted as building material, they have no access to bank loans to invest in crops, and hunting in the area is forbidden and penalized by the Ministry of Environment. In addition, they do not have electricity, water or sewage facilities and they are also obliged to pay an annual tax for their lands. The families living in this area use wood as fuel for cooking. An average family is composed of 6 people and consumes 20 kg of wood per day. This amount is the equivalent of one hectare of cleared forest per year (Verweij, 1995). The families in the park have cultivated potatoes for a long time, mainly because they do not have the knowledge to grow other crops. Each landowner owns an average of 60 cows. They use potatoes as their main food and cash crop and they supplement their diets with milk, cheese and other products acquired in the markets of Pereira. Pereira is an 8-hour journey by mule and another 2 hours by bus.

Conflicts between people and tapirs originates when the campesinos need to clear more forest in order to plant more potatoes. The tapirs, which frequent the cleared forest, eat the sprouting potato plants. As a result the campesinos lose their crops and consequently view the tapir as a problem. In 2002 two tapirs were killed for this reason.

Each time the tapir eats a crop of potatoes, the campesinos lose the money invested in the crop, their time spent planting and the money used to buy fertilizers and fungicides. For example, Mr. Rivera invested US\$60.00 in sowing potatoes last year, plus \$60.00 in fertilizer, plus \$15.00 in fungicides plus three months of work. But the tapir ate the crop. When a "campesino" wants to harvest 7 sacks of potatoes he has to invest \$65.00 in fertilizer, \$18.00 in fungicides and three months of work. When they harvest the potatoes they expect to collect 60 sacks each of which have a price of \$15.00 per sack. However, they also have to pay \$8.00 per sack for transportation (mule and bus) to Pereira. Their final profit is just \$337.00. Usually the price is \$15.00 per sack but sometimes the price is lower depending on the quality of potato and the abundance of potatoes at the market. Therefore the profit for the "campesino" is often less. Why doesn't the campesino cultivate other crops? They only have traditional knowledge for growing potatoes. They are unfamiliar with other products and they are cautious about experimenting with new crops that could fetch better prices. Additionally, the Colombian government does not have a policy of improving crop-raising techniques or teaching farmers about growing new crops such as quinoa (*Chenopodium* sp.) (Downer, 1997) or montane pineapple (*Banannas sativus*), Ulluco, Habas, which might have better success.

The campesinos have tried to resolve the problem of tapirs eating potato plants by putting scarecrows made of plastic materials in the fields, keeping dogs tethered in the fields and using smoke and sulphur vapours to drive out tapirs, without any positive results to date. They recognize that one of the best solutions would be to build new fences around the crops, but they do not have the money to buy barbed wire. Furthermore there are severe restrictions in the park regarding the use of wood to build fences within its boundaries. Another solution would be to build stone fences around the fields. This solution would require a lot of work but is very cheap and would not require the use of wood. Another possible solution to the problem is paying compensation for loss of crops to tapirs. We think it is important to involve the environmental and conservation organizations like CARDER, Pereira's Aqueduct Company and the Ministry of Environment Parks Office in the resolution of this problem because conflict solution requires strong partnerships, shared goals for both wildlife and human communities and shared responsibility. Each solution must be worked out on a case-by-case basis, to fit a unique set of ecological, cultural and economic circumstances. There is no universal panacea, but similar principles do apply to most problems.

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Jaime Andrés Suarez Mejía

Researcher, Environmental Sciences, Universidad Tecnológica de Pereira
AA 97, Pereira Risaralda, Carrera 4 bis #24-33, Pereira, Risaralda, COLOMBIA
E-mail: suarmatta@yahoo.com

Diego Lizcano

Ph.D. Graduate Student, Kent University
A. A. 53804, Bogota 0107, DC, COLOMBIA
E-mail: dl36@ukc.ac.uk