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About the possible Return of Baird's Tapir to El Salvador

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Abstract

As it is well known, the Baird's tapir (*Tapirus bairdii*) has been declared extinct in El Salvador since 1982 by the UICN. However, two reports in 2002 and 2004 suggested the presence of the species in some Salvadorian protected areas. In both cases field biologists reported footprints of a tapir but there are no verifiable evidences to support the reports (such as photographs, plaster moulds, videos, etc). Due to the increasing interest of some Salvadorian zoologists to update and produce confident wildlife inventories, and as a result of the mentioned reports, a research team attempted to verify the possible presence of *T. bairdii* in the country. The first efforts were carried out in two protected areas, El Imposible and Barra de Santiago – Sector Santa Rita, where the footprints were reported in 2002 and 2004, respectively. Although this first attempt to obtain definitive evidences to establish the presence of this species in El Salvador did not confirm the mentioned reports, there is a good possibility that some individuals of T. bairdii from Guatemala are exploring Salvadorian land due to the good quality of habitat observed particularly in the El Imposible National Park. Notably, some local inhabitants in the surveyed areas attest to never have seen a tapir.

Background and Justification

The main threat faced by Baird's tapir is habitat destruction; different records show that the species survives principally in zones where human access is difficult and, as a consequence, there is abundant high-quality tapir habitat (Matola et al., 1997).

Particularly in El Salvador, it is assumed that the high rate of deforestation was the main problem for this species resulting in its extinction formally declared by IUCN in 1982 (Thornback & Jenkins, 1982); however there is a lack of scientific evidence to explain this extinction process. Also, civil war in the country (1980-1992) may have affected tapir populations but there are not explanations about how and where it could contribute to the extinction.

Thus, accepting that *T. bairdii* is absent in El Salvador, some thoughts have been given to evaluate potential habitat in natural protected areas within the country. Matola et al. (1997) consider the National Parks El Imposible and Montecristo as sites with potential habitat for Baird's tapir; particularly the last one (which is adjacent to forest in Honduras and Guatemala) has been mentioned as the protected area with more possibilities to house a remaining population. The same authors have expressed that if the species is not yet extinct, the prospects for its conservation are difficult and, due to the lack of information about the country, they suggest new surveys are needed. On the other hand, Owen (2003) has suggested that tapir is probably restricted to El Imposible; based on the skull of a specimen which was found in the park in 1987, he considers that the species has been present in this National Park at least since the mid-80s.

A after almost twenty years without reports about *T. bairdii* in El Salvador, a casual finding of footprints in 2002 resurrected the interest for the species among the zoologists in the country. Although there were no verifiable evidences, Owen (2003) accepted the authenticity of the finding and he has speculated about the origin of this tapir, considering two possibilities: (1) the tracks were made by an unknown specimen of the original population of the Salvadorian tapirs (assuming that the Baird's tapir was not extinct in the country); or, (2) tapirs from Guatemala have re-colonized El Imposible.

Consequently, the main objectives of the survey carried out by our research team were, first, to start a systematic search to determine if Baird's tapir is really back to El Salvador; second, to contribute to the efforts of the Specialist Tapir Group of IUCN to update information about the species in the Central American region; and third, to encourage the new generations of Salvadorian biologists to become involved in the study and conservation of wildlife and vulnerable ecosystems in this country.

The Recent Reports

In 2002 the Dutch herpetologist Twan Leenders was collaborating in El Salvador with the local NGO SalvaNATURA to produce a zoological inventory for the National Park El Imposible. At the end of one trip, Leenders mentioned that he found tracks of an adult tapir near the site named "Piedra Sellada" (an interesting archaeological place at the East of the National Park, see Figure 1), and also he said that in one of the prints the smaller fourth toe was evident. He measured the diameter of the track at its widest point (between the toe tips), and it was of 185 mm; unfortunately, he could not take at least a picture to provide evidences of his finding (Oliver Komar, pers. comm., 2002).

After two years, in 2004, during a botanical survey in the Protected Natural Area Barra de Santiago Sector Santa Rita, the Salvadorian botanist Raul Villacorta reported tracks of tapir and apparently his information had a relative impact (Ministerio de Medio Ambiente de El Salvador, pers. comm., 2006). Again, this new record was not backed with verifiable evidence.

Areas Surveyed: The National Park El Imposible and the Natural Protected Area Barra de Santiago Sector Santa Rita

These protected areas are relatively close to each other (Figure 1) but they keep different types of ecosystems and habitats. El Imposible has an extension of about 4,318 hectares and it is characterized by mid-elevation tropical montane forest; in its highest elevations there are portions of remnant cloud forest. The park presents an altitudinal range between 500 and 1,425 m.a.s.l. It is considered as one of the last tropical forest in El Salvador. There are eight main rivers crossing the zone and a large amount of brooks. The National Park was created in 1989 and currently has an interesting international prestige (Samayoa-Valiente et al., 2007).

The Natural Protected Area Barra de Santiago is made up of four Sectors: Barra de Santiago, El Chino, Cara Sucia y Santa Rita. Tapir evidence was found in the fourth Sector. It is classified by the IUCN as Category 6, its extension is approximately of 2,689 hectares and present an altitudinal range between 0 and 20 m.a.s.l. Mangrove is the predominant vegetation. This area is not formally protected (Herrera, 1997).

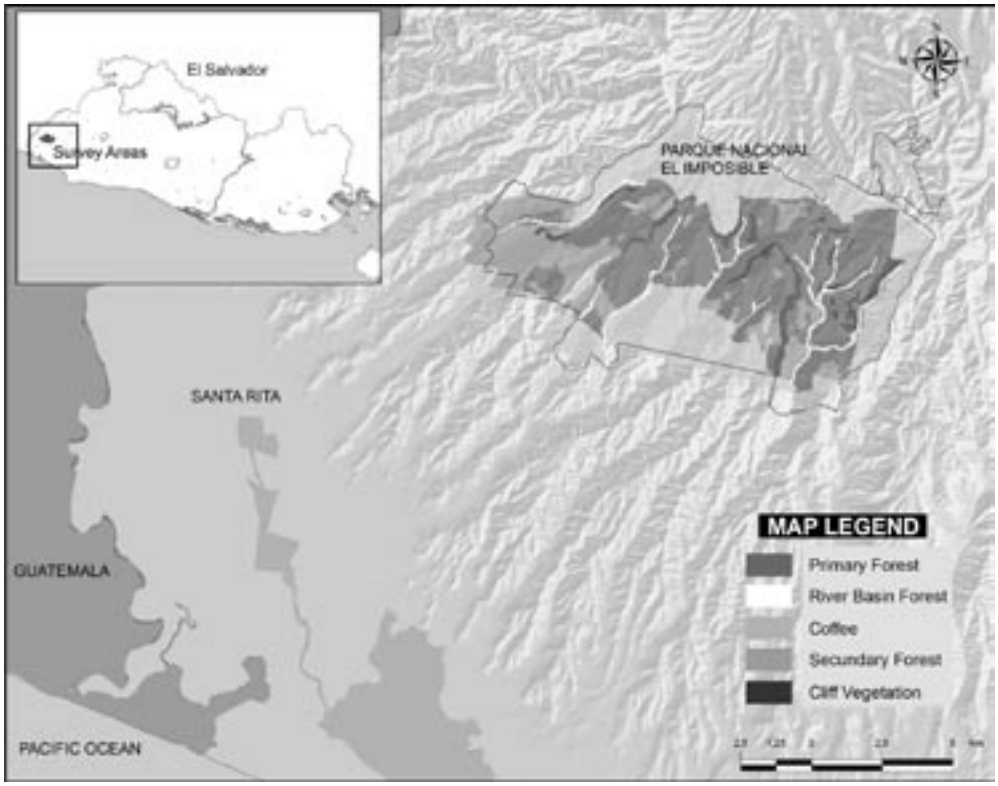

Figure 1. Areas Surveyed: The National Park El Imposible and the Natural Protected Area Barra de Santiago Sector Santa Rita.

Survey Locations, Methods and Results

The first intensive survey took place in November 2006 and it was two weeks long; mainly looking for tapir evidences in El Imposible but also as a way to attract attention to the species in the country. The fieldwork in this National Park was divided in two stages. The first was carried out in the Sector San Benito and the second in the Sector La Fincona. In Barra de Santiago, Sector Santa Rita the fieldwork was brief due to weather conditions.

The most recent report of tapir footprints in the park is located in El Imposible, Sector San Benito; consequently a considerable research effort was focused in this region mainly looking for tracks along the Guayapa River. For methodological purposes this river was considered as a big transect (just inside the park boundaries) where the transect length was the same as the river's, and the width was about 40 meters (20 m by each side of the river). Subsequently, following the same methodology, the Venado River was sampled; this river is located in the same area as Piedra Sellada. A base camp was set at a high point at the south of Guayapa River, and from this site numerous streams which are linked to the Guayapa were covered. The last survey in this sector was carried out in the Ixcanal River. It is relevant to mention that in the original research plan the Mashtapula River would be surveyed, however the particular and unexpected weather conditions made unsafe the routes inside the park. El Imposible Sector La Fincona.was covered in two days focusing the efforts only in the Mixtepe River.

Staff of the Salvadorian Ministry of Environment and Natural Resources (MARN) suggested to the research team to visit the Barra de Santiago Sector Santa Rita because they knew about a report of tapir tracks made in 2004. This place is relatively near to El Imposible. The visit was brief (just one morning) due to our tight schedule and because the previous day's rainfall flooded this site; hence, it was impossible to look for tracks. Nevertheless, for us it was important to know the habitat conditions in this place considering that the most recent report of Baird's tapir in the country has been done in this protected area.

None of the surveyed places showed evidence of tapir presence. Moreover, some inhabitants of the zone cannot remember when it was the last time that a tapir was sought. Only one park guard in the Sector La Fincona remembers the single occasion that he saw a Baird's tapir individual, and it was when he was a child, more than 25 years ago. We also surveyed brooks trying to find tapir droppings and also looked for feeding evidence, without success.

Final Comments

In different sites of the National Park El Imposible the habitat conditions are favourable for Baird's tapir; nevertheless, the hard soil in the park made finding tracks challenging and thus our methodology may be inconclusive to ascertain the presence of the species. In the wet season, when soils may be moist and soft enough to be imprinted upon, the rain may easily erase the footprints. Although in diverse places we found white tailed deer (*Odocoileus virginiana*), racoon (*Procyon lotor*) and great curasaw (*Crax rubra*)

footprints, the density of these species in the park made it easy to find them each morning.

Notably, none of the consulted park guards have seen this species. They are a very capable staff and their knowledge about local wildlife is thorough. As stated above, the 40 years old park guard Mr Vidal Campos is the only one among those questioned who vaguely remembers the occasion when in his childhood he saw a tapir in El Imposible.

Despite our results, at the moment it is difficult to confirm whether the tapir is present in El Imposible, although in our opinion if the species is currently there, it must be as result of immigration of tapirs from Guatemala. This possibility poses the opportunity to start a cooperative effort between research teams and academic institutions of El Salvador and Guatemala, Medici et al. (2006) have mentioned that information about biological and ecological monitoring for Baird's tapir is a priority specifically in subjects like current distribution, habitat use and availability, and movement patterns. El Salvador has been a big question mark in terms of tapir distribution, and the recent reports set a challenge. It is important to say that several scientific publications about Central American biodiversity find in El Salvador the same big question, and it is sometimes interpreted as absence of some species. However, the real problem is that El Salvador has been a poorly studied country for a long time. Based on literature review (746 references), Herrera (2002) concludes that in the past 15 years the vertebrates are the most studied group in El Salvador (40% of the published materials), and with the end of the civil war there was a great interest for research about ecological and biological diversity issues, although the studies are very focused in some protected areas and the results of such studies are not always published.

Finally, although it was not possible to establish the presence of Baird's tapir in the studied area through this survey, further attempts must be considered using other complementary methods (like camera traps) and also through systematically covering the whole National Park. We realize that the burden of proof will always be there: finding no tapirs or tapir evidence always leaves the open possibility that they may still be out there, whereas to prove their presence it only takes one verifiable record. But because the habitats we observed are conducive to hosting a tapir population, and because the possibility and means exist for immigrants from Guatemala to enter these areas in El Salvador, we think the chances are high that the previous reports are correct and contend that further effort must be made to verify them. By the same token, we urge cooperative work with Guatemalan scientists and authorities to determine if a corridor exists between forests in both countries. If such corridor can be confirmed, it should be considered a conservation priority, especially within the scope of the unique international conservation tool of Central American countries, namely the Corredor Biologico Mesoamericano.

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