

Critically Endangered Vieira's titi monkey at risk in Brazil's Arc of Deforestation

By Rodrigo Costa-Araújo, 22nd September 2022

Primates are one of the most threatened group of vertebrates, vital to ecosystem health and important flagship species. Brazil is home to around 20% of all primate species. Of these, 52 species occur in the southern portion of Amazonia and northern Cerrado, including unique transitional ecosystems. This area is widely known as the Arc of Deforestation, where approximately half of global deforestation has occurred in the past 3 decades. Here the forests have been transformed into pastures for cattle and plantations of genetically modified soya bean and corn.

In our article, we use the Vieira's titi monkey *Plecturocebus vieirai* as a case study to assess the scale of threats to primates in the Arc of Deforestation. Our goal was to identify potential solutions for primate conservation that could contribute to the protection of Indigenous peoples in this region, and help mitigate climate change and the biodiversity crisis.



The Vieira's titi monkey *Plecturocebus vieirai*. Photo: Franciely Reis
Our [study](#) is only the second on *Plecturocebus vieirai*. As with other primates that were recently

discovered in the Arc of Deforestation, such as *Mico munduruku*, *Mico schneideri*, and *Plecturocebus grovesi*, little is known about Vieira's titi monkey. Before our research, this titi monkey was known from only three localities and four museum specimens, and categorized as Data Deficient on the IUCN Red List.

Based on more than 90 new locality records and the first population estimates for *P. vieirai* gathered through extensive fieldwork, we found that this species should be categorized as Critically Endangered according to the IUCN Red List criteria. Unsurprisingly, this is primarily a result of the conversion of forest into agricultural and urban landscapes. Climate change will also have a negative impact on the resilience of these forest habitats, affecting the populations of *P. vieirai* even within protected areas and Indigenous lands.



Figure 1. Cattle ranching, degraded vegetation and the smoke of fires in Amazonia, the habitat of the Vieira's titi monkey in the Arc of Deforestation, southern Pará State, Brazil. Photo: Rodrigo Costa-Araújo

A shift in the way natural areas are perceived and exploited is urgently needed by the current and future land owners of Amazonia. Beyond the creation of protected areas and demarcation of Indigenous lands, which are vital but rely on political goodwill, we argue that primate watching could be a sustainable and viable option for generating income for all types of land holders in the Arc of Deforestation.

This land-use, ideally coupled with enforcement of environmental laws, would reduce the pace of large-scale agricultural and cattle ranching expansion. It would contribute to the protection of local people and biodiversity, and to the mitigation of climate change in this global deforestation frontier.



Figure 2. Large scale plantation of genetically modified soya bean (left) and corn (right) replacing unique ecosystems in the area of transition between the Amazonia and Cerrado biomes in the range of the Vieira's titi monkey in the Arc of Deforestation, Mato Grosso State, Brazil. Photos: Rodrigo Costa-Araújo

Primate watching could provide economic sustainability for protected areas currently lacking management capacity, improve autonomy of Indigenous communities, and be the main source of income in private areas. Whilst serving as reservoirs of biodiversity and as sinks for carbon dioxide, the areas protected for, or supplemented by, primate watching could be a valuable source of income for public, private and Indigenous land holders.

The large-scale production of beef, soya and corn in Amazonia is unsustainable, and the unique cultural and cosmological knowledge that still survives is being lost along with the Indigenous communities. If Amazonia loses the ability to sink carbon there will be global consequences. People, Vieira's titi monkey and biodiversity more widely can coexist, but new ideas are urgently required. Primate watching could be part of this.

Video: A new born Vieira's titi monkey learns to grasp on the back of his father. An intimate and rare moment captured by Luciano Silva in the Arc of Deforestation, Sinop, Mato Grosso, Brazil. Credit: Luciano Ferreira da Silva

The article [Primate conservation in the Arc of Deforestation: a case study of Vieira's titi monkey *Plecturocebus vieirai*](#) is available in *Oryx—The International Journal of Conservation*.



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