

In 2010, scientists published the first comprehensive, peer-reviewed synthesis of biodiversity data for Yasuní National Park in the scientific journal PLOS ONE¹. That study concluded that Yasuní has a) outstanding global conservation significance due to its extraordinary biodiversity and b) potential to sustain this biodiversity in the long term if not degraded by human activities such as oil development [and accompanying roads](#).

Here, we review the key findings from the 2010 study regarding species richness and present new information obtained in the 3.5 years since its publication.

Key notes: For all text below, local scale refers to areas $\leq 100 \text{ km}^2$ and landscape scale refers to areas $\leq 10,000 \text{ km}^2$. Additional information regarding threatened and endemic species is not included in this document, but can be found in the PLOS ONE study.

- Yasuní National Park occupies a unique biogeographic position where species richness of four key taxonomic groups – amphibians, birds, mammals, and vascular plants – all reach diversity maxima together (*i.e.*, quadruple richness center, see Figure 1). For amphibians, birds, mammals, and trees, these are not just continental, but global, maxima of species richness at local scales. This relatively small quadruple richness center encompasses just 0.16% of South America and less than 0.5% of the Amazon Basin.
- The 150 amphibian species documented for Yasuní National Park in 2010 was a world record among comparably sized landscapes. Since publication, the number of species has risen to 153, including two newly described species.
- Adding the 121 documented reptile species, the total herpetofauna of Yasuní National Park —274 species of amphibians and reptiles—is the most diverse assemblage ever documented on a landscape scale.
- Yasuní National Park now contains at least 597 documented bird species, representing one-third of the Amazon's total native species. The park is part of a north-south stretch of forest in the western Amazon that appears to be the richest known globally at the local scale.
- Yasuní National Park is likely one of the [very](#) few places in the world with over 200 coexisting mammal species. In 2010, 169 species were documented. Since then, 7 additional species of bats have been recorded bringing the total number of documented mammals up to 176.
- Ten primate species (in fact, 10 genera) are confirmed to coexist near Tiputini Biodiversity Station within Yasuní National Park, a remarkable diversity at the local scale.

¹ Bass MS, Finer M, Jenkins CN, Kreft H, Cisneros-Heredia DF, et al. (2010) Global Conservation Significance of Ecuador's Yasuní National Park. PLoS ONE 5(1): e8767. <http://www.plosone.org/article/info:doi/10.1371/journal.pone.0008767>

- Yasuní National Park has one of the highest local bat richness for any site in the world, with over 100 coexisting species expected at Tiputini Biodiversity Station.
- A single hectare of forest in Yasuní National Park is projected to contain at least 100,000 insect species, approximately the same number of insect species as is found throughout all of North America. This represents the highest estimated biodiversity per unit area in the world for any taxonomic group. Since 2010 nearly two dozen new species of insects have been described from Yasuní National Park.
- Yasuní National Park is among the richest areas globally for vascular plants at the landscape scale. Over 2,730 vascular plant species are currently documented, including over 2,110 trees and shrubs. Over 3,200 species are expected in the park based upon current collections.
- Yasuni National Park holds a number of global records for woody plant (trees, shrubs, and lianas) species richness at the local scale. For example, it has the highest average number of tree and shrub species per hectare than anywhere else in the world.
- Yasuni National Park is part of a stretch of forest that contains the world's richest 1 hectare tree plots in the world.
- A typical hectare of terra firme forest in Yasuni National Park contains at least 655 trees species, more than are native to [all of](#) the continental United States and Canada combined, and over 900 plant species overall.
- Center for Tropical Forest Science (CTFS) 50 hectare plot update: In 2010, the plot in Yasuni National Park had over 1,100 species-level taxa of trees and shrubs in the first 25 hectares. With the census completion of an additional 25 hectares, a conservative estimate of the current number of documented species is ~1,150. Over 30 new species of trees, including two new genera, have been described from the plot. Four of the new species and both new genera have been described since 2010.

In 2010, the authors of the PLOS ONE study generated a number of science-based policy recommendations, including: “Permit no new oil exploration or development projects in Yasuní, particularly in the remote and relatively intact Block 31 and ITT Block.”

Here, the below-signed scientists [to](#) reaffirm that recommendation.