

LOWLAND TAPIR CONSERVATION INITIATIVE
Atlantic Forest - Pantanal - Cerrado - Amazon

PROGRESS REPORT (2020)



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BACKGROUND INFORMATION

The Lowland Tapir Conservation Initiative (LTCI) is a long-term, nation-wide conservation effort led by Brazilian conservationist Patrícia Medici. The overall goal of the LTCI is to safeguard the survival of lowland tapirs in all four Brazilian biomes where the species is found – Amazon, Atlantic Forest, Cerrado, and Pantanal. Our aims are: 1- To gather and apply high-quality scientific data and results to substantiate the development and implementation of biome-based conservation strategies for tapirs and their habitat in Brazil, and 2- To use tapirs as ambassadors for conservation in Brazil, catalyzing habitat conservation and protection, threat mitigation, environmental education, outreach and awareness, training and capacity-building, and scientific tourism initiatives.

The LTCI was first established in 1996 in the Atlantic Forest, and since then has expanded its efforts to the Pantanal (2008), and Cerrado (2015). We are now preparing to establish our fourth and final tapir conservation effort in Brazil, the Amazon Tapir Program. Concomitantly, we are re-assessing our Atlantic Forest tapir population 10 years after we published our first assessment in 2010. In the Pantanal, we continue to monitor the tapir population at Baia das Pedras – our control population – through telemetry and camera-traps. Finally, the Cerrado Program continues as we apply the results of our threat assessments to the development and implementation of mitigation plans for roadkill, pesticide contamination, and poaching.

In the Amazon, our main objectives will be to assess and mitigate threats affecting tapirs along the southern arc of deforestation in the states of Mato Grosso and Pará. Some of the threats we will be dealing with include current habitat destruction for the expansion of large-scale agriculture (mostly soybean, corn, and cotton) and cattle ranching, forest logging, mining, palm oil and, once again, roadkill and pesticides.



LOWLAND TAPIR CONSERVATION INITIATIVE

Although the LTCI is mostly focused on the conservation of a single species, we are talking about an important key species. Tapirs are widely recognized as *umbrella species* (species with large area requirements, which if given sufficient protected habitat area, will bring many other species under protection). Meeting the needs of an umbrella species provides protection for the other species with which it co-occurs and the wild lands on which they all depend. Furthermore, tapirs are *landscape species* (species that occupy large home ranges often extending beyond protected area boundaries, which require a diversity of ecosystem types and have a significant impact on the structure, productivity, and resilience of ecosystems). The movements of landscape species can functionally link different habitat types within a given landscape. The elimination of a landscape species may undermine these functional links and lead to cascading changes in ecological communities or even the loss of the ecosystem functions critical to the persistence of other species, communities, and the larger landscape itself. Lastly, tapirs play a critical role in shaping the structure and maintaining the functioning of ecosystems, mostly through seed dispersal and browsing, and thus have been recognized as *ecological engineers* or *gardeners of the forest*. Tapir population declines and local extinctions can seriously affect biodiversity.

SPECIES & HABITAT

TARGET SPECIES: Lowland Tapir, South American Tapir, Brazilian Tapir; *Tapirus terrestris* - **IUCN RED LIST:** Vulnerable A2cde+3cde; **BRAZIL RED LIST ASSESSMENT:** AMAZON: Least Concern; ATLANTIC FOREST: Endangered; CERRADO: Endangered; PANTANAL: Near Threatened; **CITES II**

TARGET HABITAT: ATLANTIC FOREST BIOME – tropical forest – Morro do Diabo State Park and surrounding forest fragments, São Paulo State; PANTANAL BIOME – freshwater floodplain – Baía das Pedras Ranch, Mato Grosso do Sul State; CERRADO BIOME – shrub forests and open grasslands – private land, larger landscape (large-scale agriculture and cattle ranching), Mato Grosso do Sul State; AMAZON BIOME – tropical forest – private land, larger landscape (large-scale agriculture and cattle ranching, oil palm, mining, selective logging), Mato Grosso and Pará states.



GOALS & OBJECTIVES

The **OVERALL GOAL** of the LTCI is to safeguard the survival of lowland tapirs in all four Brazilian biomes where the species is found - ATLANTIC FOREST, PANTANAL, CERRADO and AMAZON.

AIM 1 – To gather and apply high-quality scientific data and results to substantiate the development and implementation of biome-based conservation strategies for tapirs and their habitat in Brazil.

OBJECTIVE 1.1. To build and maintain the largest tapir dataset in the world.

OBJECTIVE 1.2. To run Population Viability Analysis (PVA) to determine the conservation status, risk of extinction, and probability of survival of tapir populations in each biome.

OBJECTIVE 1.3. To develop, implement and evaluate threat mitigation strategies in each biome.

OBJECTIVE 1.4. To apply the LTCI data and results to the development of biome-based action plans for the conservation of tapirs and their remaining habitat.

AIM 2 – To use tapirs as ambassadors for conservation in Brazil, catalysing habitat conservation and protection, environmental education, outreach and awareness, training and capacity-building, and scientific tourism initiatives.

OBJECTIVE 2.1. To implement education programs using tapirs as flagship species in each biome.

OBJECTIVE 2.2. To apply effective communication tools to spread the word about the tapir conservation cause.

OBJECTIVE 2.3. To provide hands-on field experience to the general public through scientific tourism.

OBJECTIVE 2.4. To train the conservationists of the future and build capacity for effective conservation.



PROJECT LOCATIONS

LOCATION 1: ATLANTIC FOREST

Morro do Diabo State Park (MDSP, 350 KM²) and surrounding forest fragments (100 KM²) - Municipality of Teodoro Sampaio, Pontal do Paranapanema Region, São Paulo State, Brazil

In historical times, the Atlantic Forest stretched almost continuously for 4,000 km along the eastern Brazilian coast from Rio Grande do Norte State at the easternmost tip of the South American continent to as far as Rio Grande do Sul, the southernmost Brazilian state. The destruction of this biome and its wildlife began in the early 1500's, when the Portuguese first reached Brazil, beginning the European colonization in the eastern part of South America. The original extent of the Atlantic Forest - including forests, mangroves and restingas - has been reduced by approximately 88% (Ribeiro *et al.* 2009). The forest was cleared mainly for timber, firewood, charcoal, agriculture, cattle ranching, and the construction of cities.

Despite legal restrictions on deforestation in Brazil, the Atlantic Forest is still under severe anthropogenic pressure, and suffers from various patterns of habitat fragmentation. It is one of the most threatened biomes in the planet. The Atlantic Forest harbors one of the highest plant and vertebrate diversity on Earth, containing nearly 8% of the world's total species, many of which are endemic to this biome and/or threatened with extinction. The Atlantic Forest is considered a "hotspot" for biodiversity conservation.





LOCATION 2: PANTANAL

Baía das Pedras (private property, cattle ranch, and eco-tourism lodge, 145 KM²), Nhecolândia Sub-Region, Southern Pantanal - Municipality of Aquidauana, Mato Grosso do Sul State, Brazil



The Pantanal is the largest continuous freshwater wetland on the planet, covering ca. 160,000 km² of low elevation floodplains of the upper Rio Paraguay and its tributaries, in the center of South America. The vegetation is influenced by four biomes: Amazon, Cerrado, Chaco, and Atlantic Forest. The region is distinguished for its extraordinary concentration and abundance of wildlife. The Pantanal has been recognized as a "National Heritage" by the Brazilian Constitution of 1988, while several international conventions have recognized the importance of the biome (Ramsar, Convention on Biological Diversity, UN Convention on Climate Change, Convention on Migratory Species, and World Heritage Convention).

Only 2.6% of the Pantanal is under protection. Historically, the Pantanal has not had much attention from the governments of Brazil, Bolivia, and Paraguay, the three countries in which it is located. However, during the past few decades, expanding agricultural frontiers along with economic and political changes have brought the region to the forefront of developmental planning. This is particularly evident in Brazil, which holds approximately 85% of the Pantanal. In the mid-1970s, the Brazilian government started several large programs to develop the Pantanal region aimed at intensifying the utilization of its natural resources and integrating it into the national development plan through the construction of roads and power lines. Since then, nine hydroelectric plants have been built in the Pantanal; the project to establish the Bolivia-Brazil gas pipeline crossing the Pantanal is in progress; and there is considerable pressure to change the course of the Paraguay River in order to facilitate the inexpensive shipment of soybean and minerals to the Atlantic Ocean.

Another threat to the integrity of the Pantanal biome is that the traditional methods of low-intensity cattle ranching are rapidly being replaced by more intensive forms of exploitation. Over the past two centuries, the traditional cattle ranching practices have been the main economic activity in the Pantanal. Because it maintains the structure, function, biodiversity, and beauty of the landscape, it is considered a sustainable method of utilizing the Pantanal's natural resources. Today, cattle-ranching remains as the main economic activity in the region, with approximately 95% of the Pantanal being privately owned and fenced into large ranches averaging some 10,000 hectares. However, increasing economic pressure has led traditional cattle ranchers to increase the number of animals per unit area to increase the efficiency of beef production and the economic return of the ranches. The result has been overgrazing and an increased conversion of natural pastures into "artificial" pastures by introduction of exotic grasses (500,000 ha of deforested land over the past quarter of a century). In 2000, the total area of original vegetation that had been replaced with exotic grasses was estimated at 12,200 km². Consequently, these activities are estimated to have affected 40% of the Brazilian Pantanal.



LOCATION 3: CERRADO

Selected landscape (2,200 KM²) located along the BR-267 highway in between the municipalities of Nova Alvorada do Sul and Nova Andradina, Mato Grosso do Sul State, Brazil. The study area includes natural habitat (15% of the study area including Cerrado fragments, gallery forests, and marshland), pastureland, agriculture, Eucalyptus plantations, and highways, among others.

The Cerrado spreads across 2,031,990 km² of the central Brazilian Plateau. The Cerrado is the most extensive woodland/savannah region in South America and consists largely of savannah, woodland/savannah, and dry forest ecosystems. The second largest of Brazil's major ecoregions, after the Amazon, this conservation hotspot accounts for a full 21% of the country's land area (it also extends marginally into Paraguay and Bolivia). Within the region, there is a mosaic of different vegetation types, including tree and scrub savannah, grassland with scattered trees, and occasional patches of a dry, closed canopy forest called the *Cerradão*. Gallery forests are found throughout the region. The Cerrado receives abundant rainfall (between 1100-1600 mm per year), although this rainfall is concentrated in a 6-7-month period between October and April. The rest of the year is characterized by a pronounced dry season, and many plant species in the Cerrado are well adapted to drought conditions as a result. Much of the vegetation is also adapted to fire, which is an important part of the ecology of the Cerrado. The flora displays several adaptations to fire, including thick bark, leathery leaves, a rapid regeneration capacity and deep root systems. Large mammals such as the lowland tapir, giant anteater, giant armadillo, jaguar, and maned wolf still survive in the Cerrado but are competing with the rapid expansion of Brazil's agricultural frontier, which focuses primarily on sugar cane, mostly for biofuel, soy, and corn. Cattle ranching is another major activity in the region, as it produces 40 million cattle a year.





LOCATION 4: AMAZON

Four sites along the southern arc of deforestation in the states of Mato Grosso and Pará including: 1- logging concessions, 2- oil palm plantations, 3- mining sites, and 4- large-scale agriculture and cattle-ranching properties.

The Amazon is defined as the area covered predominantly by dense moist tropical forest, with relatively small inclusions of several other types of vegetation such as savannas, floodplain forests, grasslands, swamps, bamboos, and palm forests. The biome encompasses 6,7 million km² and is shared by eight countries (Brazil, Bolivia, Peru, Ecuador, Colombia, Venezuela, Guyana, and Suriname), as well as the overseas territory of French Guiana. The Amazon takes up 40% of the land in Brazil. It spreads across the entire states of Pará, Amazonas, Amapá, Acre, Rondônia and Roraima and a section of Maranhão, Tocantins and Mato Grosso. The Amazon houses at least 10% of the world's known biodiversity, including endemic and endangered flora and fauna, and its rivers account for 15-16% of the world's total river discharge into the oceans.



The Amazon has a long history of human settlement, but in recent decades the pace of change has accelerated due to an increase in human population, the introduction of large-scale agriculture and cattle ranching, and integration of the region into the global economy. Vast quantities of commodities produced in the Amazon - cattle beef and leather, timber, soy, oil and gas, and minerals, to name a few - are exported today to China, Europe, the United States, and other countries. This transition from a remote backwater to a cog in the global economy has resulted in large-scale deforestation and forest degradation - more than 1,4 million hectares of Amazon forest have been cleared since the 1970's. An even larger area has been affected by selective logging and forest fires. Logging is the primary driver of forest disturbance and

studies have shown that logged-over forests - even when selectively harvested - have a much higher likelihood of eventual deforestation. Logging roads grant access to farmers and ranchers to previous inaccessible forest areas. Conversion for cattle grazing is the biggest single direct driver of deforestation. In Brazil, more than 60% of cleared land ends up as pasture, most of which has low productivity, supporting less than one head per hectare. Industrial agricultural production, especially soy farms, has also been an important driver of deforestation since the early 1990s. Mining, subsistence agriculture, dams, urban expansion, agricultural fires, and timber plantations also result in significant forest loss in the Amazon.



ACTIVITIES 2020

The year of 2020 started very well, and we were all excited and energized to expand our tapir conservation efforts to the Amazon, to go back to the Atlantic Forest 10 years after our first study in that region was published, and to continue our work in the Pantanal and Cerrado. We hired a new team of biologists and veterinarians and planned a full schedule for 2020, including field expeditions to all our study sites, meetings, workshops, environmental education activities, conferences, lectures, presentations, and so much more. However, the first case of COVID-19 in Brazil was reported on the 14th of March and suddenly, just like for everybody else around the planet, we had to deal with a pandemic.



In February, before the pandemic hit Brazil, we had selected and trained a group of four volunteers to carry out our line-transect sampling in Morro do Diabo State Park, our Atlantic Forest site. The volunteers were able to work for 30 days (March) but in early April the park was closed due to COVID-19. In fact, all protected areas in Brazil were closed. This meant we had to send our volunteers home, which ended up being a logistical nightmare. At that point, it was already unsafe to have them use public transportation such as planes and buses. They were from different parts of São Paulo and Paraná states and we had to hire a private van service that travelled for 36 hours dropping the volunteers off in their houses.

At that point, we had started compiling weekly reports of the numbers COVID-19 cases in the large cities and small towns near our study areas, particularly in the Amazon. The situation in the northern part of Brazil quickly deteriorated, with large numbers of cases and deaths, and health care systems collapsing. We quickly realized we would not be able to start our work in the Amazon any time soon, but we continued to monitor the situation hoping it would take a turn for the best.





In the meantime, the Pantanal continued to be free from COVID-19 and safe. Our Pantanal study site – Baía das Pedras Ranch – is located in the heart of the floodplain, in a very remote, isolated area, where cases of COVID-19 have not been reported. Our first expedition to the Amazon was scheduled for June but given the situation we decided to go to the Pantanal instead. Our annual schedule already included two expeditions to Baía das Pedras in 2020, and we decided that our safest option was to postpone the Amazon and focus on the Pantanal.

In early May, we reviewed our contingency plans and added new measures to try and protect our team, our families, and the wild tapirs we handle from COVID-19. While in Campo Grande – where we are all based – our team members worked from home. Since the beginning of the pandemic, we have remained isolated as much as possible. We communicate through e-mail, Whatsapp, Skype, and Zoom. Given that we were extremely strict about isolation, we were able to keep healthy and felt safe to get together for our field expeditions to the Pantanal.

AIM 1: To gather and apply high-quality scientific data and results to substantiate the development and implementation of biome-based conservation strategies for tapirs and their habitat in Brazil.

OBJECTIVE 1.1. To build and maintain the largest tapir dataset in the world.



From January to December 2020, we carried out six expeditions to our Pantanal study area (January, April, June, August, October, December). The expeditions in Jan, Apr, and Dec were carried out with the purpose of checking our camera-trap grid, replacing rechargeable batteries and memory cards, and processing photos and videos. The expeditions in Jun, Aug, and Oct were focused on captures and GPS-tagging. We were able to carry out ca. 60 days of fieldwork. We had 31 capture/recapture events, including five new individuals. Three of our tapir offspring detected in 2017 received GPS expandable collars as part of our social organization study. Three tapirs equipped with GPS Iridium collars in 2019, continued to be monitored as part of our tapir dispersal study. Data collected from these individuals will be the very first documentation of tapir dispersal!

The LTCI includes a very well-established study of tapir health, maintained in all field sites where it operates. When tapirs are captured for GPS-tagging and microchipping, biological materials are collected for complete health assessments. We have already published several scientific papers presenting part of these results, and many others are in preparation. In addition, we continue to collect skin samples for genetic studies. At the moment, we are processing the dataset generated by the analysis of over 500 samples collected by the LTCI for the past 24 years. These samples were collected from live tapirs (captures, biopsy darting) and tapir roadkill. This is an astonishing sample size for a large, solitary mammal such as the tapir.



LOWLAND TAPIR CONSERVATION INITIATIVE



During the first six months of 2020, LTCI veterinarians went through our entire BIOBANK and reorganized our 24 years of biological samples. Aliquots for different types of samples were re-labelled, properly organized in cryotube storage boxes, and carefully mapped. In addition, we contacted all different partners of the LTCI tapir health studies to plan and prepare for the work in the Amazon. We also contacted and held virtual meetings with several laboratories and research groups around the country for future toxicological analysis of the biological samples we will collect in the Amazon.

We were also able to establish partnerships for studies on tapir reproduction, something that has been on our to-do list for a long time. Our partners on this front will be the Smithsonian Conservation Biology Institute (SCBI) - Smithsonian Institution (USA), and *Universidade Federal Rural do Semi-Arido* (UFERSA) in Rio Grande do Norte (Brazil). We will analyze data on testicle biometry and hormone levels for males, and vaginal cytology and hormone levels for females. Samples and data are already available from the Pantanal and Cerrado biomes. This will be a pioneer, in-depth assessment of tapir reproduction in the wild.

Our camera-trap grid has been continuously maintained in the Pantanal since 2010. For the past 10 years, we have compiled over HALF MILLION tapir photos and videos. In ca. 70% of the events (sets of photos/videos of the same animal in a short period of time), we were able to identify individual tapirs, using characteristics such as permanent scars, ear cuts, length and shape of the tail, vestigial spot patterns, and GPS collar marks. We were able to identify and monitor 150 tapirs at Baía das Pedras through camera trapping. This is an incredible source of data on tapir ecology, behavior, social organization, reproduction, and health, complementing the data gathered through other methods such as telemetry, genetic relatedness, and the analysis of biological samples for health studies.





OBJECTIVE 1.2. To run Population Viability Analysis (PVA) to determine the conservation status, risk of extinction, and probability of survival of tapir populations in each biome.



In March 2019, with support from modelers from the IUCN SSC Conservation Planning Specialist Group (CPSG), we developed and validated VORTEX baseline models for the Atlantic Forest, Pantanal, and Cerrado tapir populations. Late in 2019 and throughout 2020, our camera-traps in the Pantanal recorded several new offspring from our monitored reproductive females and we were able to compile additional life table data. We spent the last six months "feeding" and perfecting the Pantanal model, which will ultimately benefit the modelling for all the other biomes. The modelling of the impact of threats will be carried out in 2021.

OBJECTIVE 1.3. To develop, implement and evaluate threat mitigation strategies in each biome.

Threat assessments and the development of threat mitigation strategies continue. During the first six months of 2020, we updated and organized our tapir roadkill and pesticide contamination datasets and wrote papers for publication. Due to the pandemic, most governmental environmental agencies and attorney general offices have been closed. Nevertheless, staff from these agencies have been working from home and we have managed to keep in contact regarding our mitigation plans.

The transportation agency responsible for maintaining the MS-040 Highway (AGESUL – *Agência Estadual de Gestão de Empreendimentos*) did not implement the mitigation measures we proposed in our mitigation plan back in 2017. Negligently, the Mato Grosso do Sul State environmental agency (IMASUL – *Instituto de Meio Ambiente de Mato Grosso do Sul*) did not investigate the non-compliance with such measures. Under these circumstances, both agencies are currently the target of a PUBLIC CIVIL LAWSUIT filed by our partners at the Attorney General's Office of Mato Grosso do Sul State.

In January 2020, we filed a PUBLIC CIVIL INQUIRY together with the Federal Attorney General's Office requesting investigations regarding wildlife roadkill along BR-267 Highway. This is a federal highway managed by the National Transport Infrastructure Department (DNIT – *Departamento Nacional de Infraestrutura de Transportes*) overviewed by the Brazilian Institute for the Environment and Renewable Natural Resources (IBAMA – *Instituto Brasileiro de Meio Ambiente e Recursos Naturais Renováveis*).

Regarding pesticide contamination, we continue to participate in the Commission to Combat the Impact of Pesticides in Mato Grosso do Sul State. In addition, we are partnering with a recently established project from IBAMA aiming at investigating the effects of pesticides on wild mammals and birds. Since March 2020, all meetings and discussions of these groups have been held virtually. It is important to mention that this work has never been so important in Brazil. Since Jair Bolsonaro took over as president of the country in January 2019, the Brazilian Ministry of Agriculture, Livestock and Supply has approved over 900 new pesticides for use in the country.



OBJECTIVE 1.4. To apply the LTCI data and results to the development of biome-based action plans for the conservation of tapirs and their remaining habitat.

The next assessment of the Brazilian Red List of Threatened Species is scheduled for 2022. Nevertheless, we are constantly working on gathering data and information for red listing and action planning. For example, we have just finalized a 15-year study about the biogeography of lowland tapirs in the Atlantic Forest. This study has generated extremely detailed data which will contribute substantially to the next red list assessment.

The Brazilian Action Plan for Threatened Ungulates – which includes lowland tapirs – was developed, approved, and published in November 2019. The first evaluation of the implementation of actions was carried out through an online meeting held in June 2020. The main stakeholders behind the implementation of the tapir component of this plan are the Chico Mendes Institute for Biodiversity Conservation (ICMbio), IUCN SSC Tapir Specialist Group (TSG), and Lowland Tapir Conservation Initiative (LTCI-IPE). The implementation of the plan is well underway.

AIM 2: To use tapirs as ambassadors for conservation in Brazil, catalyzing habitat conservation and protection, environmental education, outreach and awareness, training, and capacity-building, and scientific tourism initiatives.

OBJECTIVE 2.1. To implement education programs using tapirs as flagship species in each biome.

For the safety of the LTCI staff and everyone involved, all educational activities involving contact with members of local communities in and around the study areas were cancelled. The same occurred with our educational campaigns in partnership with Brazilian zoos.

The IUCN SSC Tapir Specialist Group education curriculum – TAPIR TRACKS – was first published in 2018 in English, and then translated into Portuguese in 2019, and Spanish in 2020. All three versions of the document have been widely distributed to educators and tapir conservationists worldwide (in-situ and ex-situ), particularly in Latin America and Southeast Asia. In Brazil, our goal is to have the curriculum adopted by the Ministry of Education in primary schools throughout the country. In the beginning of 2020, we had scheduled meetings with the main governmental education agencies in the State of Mato Grosso do Sul (covering our Pantanal and Cerrado study areas) but all these meetings were cancelled due to the pandemic.

OBJECTIVE 2.2. To apply effective communication tools to spread the word about the tapir conservation cause.

The LTCI staff has been spending more time in the office than originally planned and, therefore, we have been able to dedicate more time to writing up and publishing our results. Several papers have been submitted for publication and many others are in preparation.

All national and international conferences, meetings, and workshops that LTCI staff members were scheduled to attend in 2020 were cancelled. Some of these events were held online, but most have been postponed to 2021. The 8TH International Tapir Symposium scheduled to be held in November 2020 in Cali, Colombia, was postponed to April 2021 and will go online.



LOWLAND TAPIR CONSERVATION INITIATIVE

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Never in history have we seen the current impacts caused by human beings on nature. As a result, we are experiencing a serious crisis today. Acting now is extremely important to reverse the impacts of climate emergencies and prevent future wildlife extinctions. Conservationists like me must help set the tone and agenda for environmental conservation strategies in the decade ahead.”

PATRICIA MEDICI,
WHITLEY GOLD
AWARD WINNER
2020



Despite the COVID-19 pandemic, we kept our social media audience (over 10,000 fans and followers, including Facebook, Instagram, and YouTube) updated. We posted complete updates from the field (including progress reports, and selections of photos and videos), films, newsflashes, announcements, scientific publications, press publications, podcasts, live transmissions, wildlife research and conservation news and much more.

In 2020, we had an exceptional opportunity to promote tapirs through the press! In May, Patricia Medici, was honored with the Whitley Gold Award, known as the "Green Oscars", which was a major accomplishment for tapir conservation worldwide. The award generated a lot of media attention in Brazil, as well as internationally.

Since August last year, Patricia Medici has been part of a major project called Mulheres na Conservação (Women in Conservation) led by environmental journalist Paulina Chamorro and wildlife photographer João Marcos Rosa. This project is carried out in partnership with Toyota Brazil Foundation and National Geographic Brazil. Five Brazilian conservationists who dedicate their lives to saving threatened species and ecosystems in Brazil have been selected for the first phase of the project. Women in Conservation includes high profile articles on National Geographic Brasil, a web series, podcasts, and continuous media exposure for species conservation.

OBJECTIVE 2.3. To provide hands-on field experience to the general public through scientific tourism.

We had a number of eco-tours, groups of visitors, and volunteers scheduled to participate in our scientific tourism program in the Pantanal in 2020. All these were cancelled due to the pandemic. Here, it is important to mention that most eco-tourism facilities in Brazil have been temporarily (or definitely) closed due to COVID-19. Our study area in the Pantanal – Baía das Pedras – was not able to operate last year.

OBJECTIVE 2.4. To train the conservationists of the future and build capacity for effective conservation.



We had TSG Fellows scheduled to join our Pantanal and/or Amazon field expeditions during the first half of 2020. Their participation was cancelled due to the pandemic. We had six volunteers involved with our fieldwork in the Atlantic Forest. In addition, biology, and veterinary students from local universities in Campo Grande have been helping our team with camera-trap photo and data processing. Two short-term courses were scheduled to be held in the first half of the year, but both had to be cancelled due to COVID-19. At the moment, we are considering running these courses online early in 2021.



EMERGENCY - PANTANAL FIRES

COVID-19 was not the only crisis that the LTCI had to deal with in 2020. A major environmental tragedy hit Brazil with large-scale fires in the Amazon and the Pantanal. The fires in the Pantanal resulted from the junction of natural and socioeconomic factors. The year of 2020 saw the worst drought in over half a century, probably due to a combination of the climatic phenomenon La Niña, with climate change, effects of deforestation in the Amazon and uncontrolled increase of hydroelectric dams in the rivers that feed into the Pantanal. Furthermore, an ongoing government strategy has been weakening our environmental legislations, encouraging landowners to clear their lands illegally. Within this scenario, a combination of natural, accidental, and criminal fires has had an unprecedented devastating impact on the Pantanal. More than 30% of the biome burnt to ashes, destroying the rich local flora, killing millions of animals, and even affecting the means of life of local communities. The consequences are still little known, but unfortunately, they will still be felt for many decades. To deal with it, the LTCI joined efforts with ICAS (Institute for the Conservation of Wild Animals) to define priority actions and outline support strategies, which fell into three different fronts: (1) URGENT RESPONSE, (2) PREVENTION, and (3) IMPACT MEASUREMENT.



1. URGENT RESPONSE – provide support to animal rescue teams and wildlife rehabilitation centers.



At the very beginning of the animal rescue work, we noticed the large number of occurrences with tapirs. Therefore, our first action was the creation of a remote support group for animal rescue and rehabilitation teams. Through WhatsApp, we put members of these teams in contact with our network of tapir specialists including LTCI's past and current veterinarians and biologists, zoo personnel, specialists in animal nutrition, and several researchers. All these different professionals in the network were available to discuss the best protocols for anesthesia, treatment, feeding and maintenance of animals from rescue until complete rehabilitation and release. In addition, we shared all the relevant materials we have available, such as manuals, guidelines, and protocols (veterinary, anesthetic, and laboratory).

In order to obtain the needed financial resources, an international online fundraising campaign was launched in mid-September (through credit card and PayPal). In addition, we have also applied to and obtained emergency resources from several zoo conservation funds and national and international companies and organizations. Combining all contributions, we have raised over U\$275,000.



LOWLAND TAPIR CONSERVATION INITIATIVE



Part of the donations was used to provide veterinary equipment and supplies to animal rescue teams all over the Pantanal, as well as to the wildlife rehabilitation center at the Federal University of Mato Grosso in Cuiaba. These teams of heroes have taken risks and faced the most adverse conditions while rescuing and taking care of many burned animals. Tapirs, giant anteaters, otters, jaguars and many more species were received and treated in the best possible way, limited by the lack of adequate equipment and shortages of medicines and necessary materials.

For two months, one of our vets dedicated full-time to keeping in touch with different teams, keeping lists of their needs, placing orders for the purchase of equipment and supplies from several different companies, making payments, tracking shipments and much more. We drove twice to Cuiaba, bringing truckloads of materials.

As urgent response, we have also allocated resources for the purchase of appropriate firefighting gear (such as fire-resistant boots, pants, shirts, gloves, and balaclavas, as well as helmets, eye protection, water pumps, fire hoses, shovels, chainsaws, air blowers, brush cutters). For this action, we worked in partnership with a non-profit organization called ECOA - Ecology and Action, which conducts several environmental and social projects in the Pantanal region since 1989. Our financial contribution was essential to assist these actions from logistics and transportation to gear purchase.

2. PREVENTION - creation of a coalition of 10 community fire brigades in the Nhecolândia sub region of the Pantanal.

Since fires are recurrent in the Pantanal and climate models forecast severe drought in the following years, we proposed a long-term strategy for the prevention of similar catastrophes in the Nhecolândia region, where the LTCI and ICAS are based. Although the fires did not hit the region in 2020, in 2019 fires had destroyed 10% of our study area and the risk remains very high. Therefore, we have articulated the creation of a coalition of ranches that will be permanently prepared with fire brigades to act against possible fires.

The Baía das Pedras ranch, our study area, together with other nine ranches will form a coalition covering 1,500 km² of the Pantanal biome. Baía das Pedras will be the central HQ of the coalition, keeping key equipment including a 5,000-liter portable water tank as well as water pumps and accessories that can be transported in urgency to neighboring ranches. In addition, each ranch will receive a kit of firefighting equipment (including a fire burner, a portable blower, chainsaw, blade cutter, sickles, and hoes) as well as individual protective equipment for FIVE individuals (fire-resistant boots, protective clothing, gloves, glasses, balaclavas, helmets, water bottles, leg protectors, etc.). We had the guidance of experienced firefighters and ranch owners to choose the equipment, and we have already purchased all the items.





LOWLAND TAPIR CONSERVATION INITIATIVE

In May 2021, following all the procedures against the COVID-19, we will hold an event at the Baía das Pedras ranch to gather the member of all the 10 ranches who are part of the coalition. Experienced firefighters from PrevFogo/IBAMA will attend and train landowners and their employees on how to use, store and upkeep the equipment. A Memorandum of Understanding will be signed with each participating ranch guaranteeing the proper use and care of the material and we will evaluate biannually the success of this initiative through questionnaires.

We will share the results of this experience with local and state stakeholders and policy makers in order to provide an example of potential strategies to prevent and reduce the occurrence of catastrophic fires in the Pantanal, such as this year. This initiative also aims to guarantee the protection of the study area and a buffer zone of the most extensive long-term conservation project of the Lowland Tapir and the first long-term project focused on giant armadillos in the world.

Finally, we will provide funding to PrevFogo/IBAMA to keep 10 experienced firefighters for six months. The federal government maintains small groups of firefighters in different regions of the country only during the dry season (six months). During discussions with the coordinators of PrevFogo in Campo Grande/MS, we were told that their main need would be to keep some of their team for the remaining six months of the year (wet season). That way, they would have that additional time to train farmers, ranchers, local communities etc.

3. IMPACT MEASUREMENT – provide support to research initiatives seeking to evaluate the impact of the fires on wildlife.

In order to evaluate the impact of these catastrophic fires on wildlife at least two large initiatives have been established:

3.1. Researchers from several organizations joined forces with EMBRAPA Pantanal – a governmental research institute that developed a standard method to count carcasses using line-transect sampling. Many researchers have been contributing. Preliminary results of the carcass counts showed that fires were so strong that were able to affect large animals, especially tapirs. However, low-mobility animals such as rodents and reptiles have suffered even more, disrupting the base of the food chain. The general lack of food resources due to the effect of scorched earth that destroyed the plant and animals supplies from the bottom of the food chain is a well-known phenomenon after large-scales fires called 'gray hunger', which normally has long-lasting consequences for wildlife.



3.2. SESC Pantanal, a private reserve in the northern Pantanal, lost 91% of their area. This area maintains one of the largest tapir populations in the Pantanal. With support from partners, they have distributed 160 water/food stations for the animals (they bring water and fresh food every two days), and they are monitoring 12 of these stations with camera-traps. This will be an extremely effective way to monitor and evaluate the conditions of the animals over time after the fires. Therefore, we provided 10 additional camera-traps kits (containing camera traps, rechargeable batteries, and SD cards) to monitor at least 10 more stations for as long as needed.

We were also in touch with several colleagues and organizations, trying to compile as much information as possible about the effects of these fires on tapirs to be able to model this impact on their population and evaluate the consequences.



MAIN PROJECT OUTPUTS

- Over the last 24 years, the LTCI has built the most extensive tapir database in the world, including all Brazilian biomes where the species occurs (Atlantic Forest, Pantanal, Cerrado, and Amazon). This database includes data on tapir biology, ecology, demography, social organisation, reproduction, health, genetics, threat assessments, life table parameters for PVA modelling and much more. Results from the LTCI will be critical for the development of specific, realistic, effective strategies for the conservation of tapirs in Brazil.
- The LTCI is the largest tapir study in the world. Since 1996, the team has captured 170 individual tapirs, including 35 individuals in the Atlantic Forest (1996-2007, captures finalized), 100 in the Pantanal (2008-on-going), and 35 in the Cerrado (2015-2018, captures finalized). One-hundred and one of these individuals (25 in the Atlantic Forest, 53 in the Pantanal, and 23 in the Cerrado) have been radio-collared and monitored for extended periods of time.
- Three tapirs equipped with GPS Iridium collars in the Pantanal in 2019 continue to be monitored in 2020 as part of our tapir dispersal study. Data collected from these individuals will be the very first documentation of tapir dispersal through telemetry!
- The LTCI includes a very well-established study of tapir health. Tapirs captured for GPS-tagging and microchipping are sampled for biological materials for complete health assessments. We have already published scientific papers presenting part of these results, and several other papers are in preparation.
- At the moment, we are processing the dataset generated by the analysis of over 500 skin samples, collected over the past 24 years from live tapirs (captures, biopsy darting) and tapir roadkill. This is an astonishing sample size for a large, solitary mammal such as the tapir. Our main questions include genetic relatedness and social organisation, and population genetics. We will start sampling tapirs in the Amazon in 2021.
- We established partnerships for studies on tapir reproduction. Our partners will be the Smithsonian Conservation Biology Institute (SCBI) - Smithsonian Institution (USA), and Universidade Federal Rural do Semi-Arido (UFERSA) in Rio Grande do Norte (Brazil). This will be a pioneer, in-depth assessment of tapir reproduction in the wild.
- Our camera-trap grid in the Pantanal has been maintained since 2010 and it has generated over HALF a MILLION tapir photos and videos. This is an incredible source of data on tapir ecology, behavior, social organisation, reproduction, and health, complementing the data gathered through other methods such as telemetry, the study of genetic relatedness and the analysis of biological samples for health studies.



LOWLAND TAPIR CONSERVATION INITIATIVE

- We have carried out comprehensive assessments of the most important threats affecting tapirs in the Atlantic Forest, Pantanal, and Cerrado, including habitat loss and fragmentation, large-scale agriculture and cattle-ranching, fire, roadkill, infectious diseases, poaching, and contamination by pesticides, among others.
- Data and results from the LTCI have been applied to regular reviews/updates of the IUCN SSC Red List of Threatened Species (annual) and Brazilian Red List of Threatened Species (every five years).
- The Brazilian Action Plan for Threatened Ungulates – which includes lowland tapirs – was developed, approved, and published in November 2019. The first evaluation of the implementation of actions was carried out through an online meeting held in June 2020. The main stakeholders behind the implementation of the tapir component of this plan are the Chico Mendes Institute for Biodiversity Conservation (ICMBIO), IUCN SSC Tapir Specialist Group (TSG), and Lowland Tapir Conservation Initiative (LTCI-IPE). The implementation of the plan is well underway.
- The transportation agency responsible for maintaining the MS-040 Highway (AGESUL – *Agência Estadual de Gestão de Empreendimentos*) in the Cerrado did not implement the mitigation measures we proposed in our mitigation plan back in 2017. Negligently, the Mato Grosso do Sul State environmental agency (IMASUL – *Instituto de Meio Ambiente de Mato Grosso do Sul*) did not investigate the non-compliance with such measures. Both agencies are currently the target of a PUBLIC CIVIL LAWSUIT filed by our partners at the Attorney General's Office of Mato Grosso do Sul State.
- In January 2020, we filed a PUBLIC CIVIL INQUIRY together with the Federal Attorney General's Office requesting investigations regarding wildlife roadkill along BR-267 Highway. This is a federal highway managed by the National Transport Infrastructure Department (DNIT – *Departamento Nacional de Infraestrutura de Transportes*) overviewed by the Brazilian Institute for the Environment and Renewable Natural Resources (IBAMA – *Instituto Brasileiro de Meio Ambiente e Recursos Naturais Renováveis*).
- We continue to participate in the Commission to Combat the Impact of Pesticides in Mato Grosso do Sul State. In addition, we are partnering with a recently established project from IBAMA aiming at investigating the effects of pesticides on wild mammals and birds.
- The LTCI staff has been spending more time in the office than originally planned and, therefore, we have been able to dedicate more time to writing up and publishing our results. Several papers have been published, submitted for publication and many others are in preparation.



LOWLAND TAPIR CONSERVATION INITIATIVE

- This year we had an exceptional opportunity to promote tapirs through the press! In May, Patricia Medici, was honored with the Whitley Gold Award, which was a major accomplishment for tapir conservation worldwide. The award generated a lot of media attention in Brazil, as well as internationally.
- Since August last year, Patricia Medici has been part of a major project called Mulheres na Conservação (Women in Conservation). This project is carried out in partnership with Toyota Brazil Foundation and National Geographic Brazil. Women in Conservation includes high profile articles on National Geographic Brasil, a web series, podcasts, and continuous media exposure for species conservation.
- Establishment of priority conservation areas in the State of Mato Grosso do Sul, Brazil.
- Guiding of tapir reintroduction and translocation programs in Brazil and internationally.
- Furthermore, LTCI results have been used to substantiate discussions regarding upstream conservation issues such as the effect of climate change on animal populations, and value of ecosystem services.
- The worst fires in the history of the Pantanal hit the wetlands. The LTCI – in partnership with ICAS (*Instituto de Conservação de Animais Silvestres*) – organized a fundraising campaign and obtained support from online campaigns, national and international zoo conservation funds, companies, and private individuals. We have defined priority actions, outlining support strategies, which fell into three different fronts: (1) URGENT RESPONSE, (2) PREVENTION, and (3) IMPACT MEASUREMENT.
- We provided veterinary equipment and supplies to animal rescue teams all over the Pantanal, as well as to the wildlife rehabilitation center at the Federal University of Mato Grosso State. We have also allocated resources for the purchase of appropriate firefighting gear as well as for the logistics of firefighter brigades, in partnership with the NGO ECOA.
- We have articulated the creation of a coalition of 10 ranches that will be permanently prepared to act against future fires. The coalition will cover 1,500 km² of the Nhecolândia sub region of the Pantanal (where our study area – Baía das Pedras – is located).
- We are collaborating with different efforts to measure the impact of the fires on wildlife. In addition, we are compiling as much information as possible about the effects of these fires on tapirs to be able to model this impact on their population and evaluate the consequences.



MONITORING

OBJECTIVE 1.1. To build and maintain the largest tapir dataset in the world.

- R.1.1.1. Tapirs successfully captured, radio-tagged, and monitored.
- R.1.1.2. Field research data gathered, processed, and analyzed (ecology, social organization, reproduction, threats)
- R.1.1.3. Biological samples collected, processed, and analyzed (health, genetics)
- R.1.1.4. Dataset and results applied to feed into PVA modelling and action planning.
- R.1.1.5. Dataset and results applied to feed into other components of the LTCI work including environmental education, communication, scientific tourism, campaigns etc.
- R.1.1.6. Spatial results made available open access in ArcGIS and Movebank.

OBJECTIVE 1.2. To run Population Viability Analysis (PVA) to determine the conservation status, risk of extinction, and probability of survival of tapir populations in each biome.

- R.1.2.1. Life table parameters compiled and applied for PVA.
- R.1.2.2. Robust baseline models developed and tested.
- R.1.2.3. Impact of current threats modelled and evaluated.
- R.1.2.4. Management and conservation scenarios modelled and evaluated.
- R.1.2.5. Current and future risks of population declines or extinction modelled and evaluated.

OBJECTIVE 1.3. To develop, implement and evaluate threat mitigation strategies in each biome.

- R.1.3.1. Mitigation strategies successfully developed and disseminated to all relevant stakeholders.
- R.1.3.2. Relevant stakeholders involved and willing to work together to solve the problems.
- R.1.3.3. Mitigation strategies implemented.
- R.1.3.4. Mitigation strategies evaluated.
- R.1.3.5. Impact of threats on tapirs and their habitat reduced.

OBJECTIVE 1.4. To apply the LTCI data and results to the development of biome-based action plans for the conservation of tapirs and their remaining habitat.

- R.1.4.1. LTCI biome-based action plans successfully developed and disseminated to all relevant stakeholders.
- R.1.4.2. LTCI biome-based action plans under implementation.
- R.1.4.3. LTCI results applied for the development of strategies for the conservation of the biomes where tapirs are found (i.e., establishment of corridors and stepping-stones connecting patches of remaining habitat, creation of protected areas (governmental and private), established partnerships with and involvement of agri-business companies, better design and planning for highways etc.).
- R.1.4.4. Global and national red list assessments for tapirs published and widely disseminated.
- R.1.4.5. TSG Lowland Tapir Action Plan and National Action Plan for Threatened Ungulates reviewed/updated every 3 yrs.
- R.1.4.6. Results shared with other tapir researchers and conservationists and contributing to the conservation of tapirs throughout their geographic distribution (South America, 11 countries).
- R.1.4.7. Results shared with zoos holding tapirs worldwide and contributing to a better management of tapirs in captivity.

OBJECTIVE 2.1. To implement education programs using tapirs as flagship species in each biome.

- R.2.1.1. Children, teenagers, teachers, coordinators, and principals in rural and urban schools reached through LTCI environmental education programs, exposed to information and educational materials; target audience better educated about tapir conservation issues in their region.



- R.2.1.2. Landowners, farm/ranch employees, landless people and small farmers around study areas reached through LTCI environmental education programs, exposed to information and educational materials; target audience better educated about tapir conservation issues in their region.
- R.2.1.3. 50 Brazilian zoos participating in the national education campaign carried out in partnership with the Brazilian Association of Zoos.
- R.2.1.4. School curriculum Tapir Tracks adopted by primary schools throughout Brazil.
- R.2.1.5. Educational materials developed by the LTCI available online for use by other conservationists around the world.

OBJECTIVE 2.2. To apply effective communication tools to spread the word about the tapir conservation cause.

- R.2.2.1. Scientific papers published and widely disseminated.
- R.2.2.2. Undergraduate and post-graduate students and conservation professionals reached through talks, posters, booths, lectures etc. in national and international conferences and universities better educated about tapir conservation issues.
- R.2.2.3. Local stakeholders including governmental agencies, NGOs, universities, local communities, zoological institutions, research institutes etc. constantly informed about and involved with LTCI activities.
- R.2.2.4. Information and materials made available through a strong, well-established web presence, reaching thousands of people throughout the world, with a particular focus in Brazil; English and Portuguese.
- R.2.2.5. TSG members and supporters well informed about LTCI activities and results.
- R.2.2.6. Brazilian and international citizens reached through regular media appearances, educated about the tapir conservation cause and willing to help.
- R.2.2.7. LTCI supporters well informed about LTCI activities and results.
- R.2.2.8. Zoo professionals/visitors/members from around the world receiving regular information about tapirs, educated about the tapir conservation cause and willing to help.
- R.2.2.9. General public in Brazil taking part in special events organized by the LTCI, educated about the tapir conservation cause and willing to help.
- R.2.2.10. Effective use of the TED and National Geographic platforms to spread the word about the tapir conservation cause to a larger audience throughout the world.

OBJECTIVE 2.3. To provide hands-on field experience to the general public through scientific tourism.

- R.2.3.1. LTCI volunteers, groups of visitors and eco-tours exposed to field work and the routine of a field team, educated about the tapir conservation cause, helping spread the word.
- R.2.3.2. Eco-tourism professionals (lodge owners, guides and tourism operators) educated about the tapir cause.
- R.2.3.3. Tourists receiving better information.

OBJECTIVE 2.4. To train the conservationists of the future and build capacity for effective conservation.

- R.2.4.1. TSG members – national and international – trained on tapir research and conservation methods and strategies and establishing their own tapir programs in Brazil or other countries.
- R.2.4.2. At least 3 new tapir research and conservation programs established in Brazil or any other tapir range countries as a result of the LTCI training.
- R.2.4.3. Wildlife veterinarians trained.
- R.2.4.4. Trainees and interns trained on tapir research and conservation methods and strategies.
- R.2.4.5. Short-term course participants trained on several topics of conservation biology and better prepared to make significant contributions to conservation in Brazil and elsewhere.



FINANCIAL & INSTITUTIONAL SUPPORTERS 1996-2020

- AgroPalma Inc., Brazil
- Airmaps Inc., Brazil
- Alexandria Zoological Park, USA
- Alto Estilo Inc., Brazil
- American Association of Zookeepers (AAZK), USA
- Americana Zoo, Brazil
- AquaZoo Leeuwarden and Dierenrijk, Netherlands
- Association Beauval Conservation et Recherche, France
- Association Française des Parcs Zoologiques, France
- Association of Zoos and Aquariums (AZA) Tapir Taxon Advisory Group (TAG)
- Bass Foundation, USA
- Bauru Zoo, Brazil
- BBC Wildlife Fund, UK
- Belo Horizonte Zoo, Brazil
- Bergen County Zoo, USA
- Brevard Zoo Conservation Fund, USA
- Burger's Zoo, Netherlands
- Busch Gardens Conservation Fund, USA
- Camboriú Zoo, Brazil
- Centro de Diagnóstico Marcos Enrietti (CDME), Curitiba, Paraná, Brazil
- Charles Hazlehurst Moura Foundation, USA
- Chattanooga Zoo, USA
- Chester Zoo, North of England Zoological Society, UK
- Chicago Zoological Society, Brookfield Zoo, USA
- Cleveland Metroparks Zoo and Cleveland Zoological Society, USA
- Coins for Change Program, Club Penguin, Disney Studios, Canada
- Columbus Zoo, USA
- Connecticut's Beardsley Zoo, USA
- Conservation, Food and Health Foundation, USA
- Copenhagen Zoo, Denmark
- Curitiba Zoo, Brazil
- Disney Worldwide Conservation Fund, USA
- Dobra Inc., Brazil
- Drayton Manor Park, UK



LOWLAND TAPIR CONSERVATION INITIATIVE

- Dublin Zoo, Ireland
- Dudley Zoo, UK
- Dutch Zoos Conservation Fund (DZCF), Netherlands
- EcoGeo Treinamentos, São Paulo, Brazil
- Elisabeth Giaouque Trust, UK
- Emmen Zoo, Netherlands
- Escola Estadual Delfina Nogueira de Souza, Cerrado, Brazil
- Escola Pantaneira Fazenda Barranco Alto, Pantanal, Brazil
- Escola Pantaneira Fazenda Primavera, Pantanal, Brazil
- European Association of Zoos & Aquaria (EAZA) Tapir Taxon Advisory Group (TAG)
- Fazenda Laranjeira, Cerrado, Brazil
- Fazenda Lucas, Cerrado, Brazil
- Fazenda Santa Sofia, Cerrado, Brazil
- Floresta Nacional de Carajás, Pará, Brazil
- Fondation Le Pal Nature (Association Les Amis de la Lieu), France
- Fondation Segré, Switzerland
- French Zoo Vet Association, France
- Fresno Chaffee Zoo, USA
- Fundação Florestal do Estado de São Paulo, São Paulo, Brazil
- Fundo Nacional do Meio Ambiente (FNMA), Brazil
- Future for Nature Foundation, Netherlands
- Givskud Zoo, Denmark
- Gramado Zoo, Brazil
- Grupo Amaggi – Fazenda Tanguro, Brazil
- Happy Hollow Zoo, USA
- Hogle Zoo, USA
- Hotel Fazenda Baía das Pedras, Pantanal, Brazil
- Houston Zoo, USA
- Idea Wild, USA
- Instituto Biológico de São Paulo, São Paulo, Brazil
- Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis (IBAMA), Brazil
- Instituto Chico Mendes de Conservação da Biodiversidade (ICMBIO), Brazil
- Instituto de Conservação de Animais Silvestres (ICAS), Brazil
- Instituto de Pesquisas Amazônicas (IPAM), Brazil
- Instituto Florestal de São Paulo, São Paulo, Brazil
- Instituto Iamar, Brazil



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- Instituto Pasteur, São Paulo, Brazil
- IUCN Small Grants Program, The Ford Foundation, USA
- IUCN SSC Conservation Planning Specialist Group (CPSG)
- IUCN SSC Tapir Specialist Group (TSG)
- Jacksonville Zoo, USA
- Jimmy's Farm, UK
- João Pessoa Zoo, Brazil
- John Ball Zoo Society, Wildlife Conservation Fund, USA
- Juscelino Martins, Brazil
- Klabin SA, Brazil
- Kolmarden Foundation, Sweden
- Laboratório Humano BIOLAB, Teodoro Sampaio, São Paulo, Brazil
- Laboratório Renato Arruda - Sabin, Campo Grande, Mato Grosso do Sul, Brazil
- Laboratórios de Nutrição Animal & Química ESALQ/USP, Piracicaba, São Paulo, Brazil
- Legendia Parc (SARL Le Sentier des Daims), France
- Lincoln Park Zoo, Scott Neotropical Fund, USA
- Lion Country Safari, USA
- Macboot Inc., Brazil
- Ministério Público do Mato Grosso do Sul, Brazil
- Mogi Mirim Zoo, Brazil
- Mohammed bin Zayed Species Conservation Fund, UAE
- Mulheres na Conservação Network, Brazil
- Nashville Zoo at Grassmere, USA
- National Geographic Society, USA
- Nattu Inc., Brazil
- Nellcor Inc., USA
- Nürnberg Zoo, Germany
- Odense Zoo, Denmark
- Opel Zoo, Germany
- Oregon Zoo Future for Nature Conservation Fund, USA
- Orquidário de Santos, Brazil
- Pano da Terra Inc., Brazil
- Paradise Wildlife Park, UK
- Parc Animalier d'Auvergne, France
- Parc Zoo du Reynou, France
- Parc Zoologique CERZA Lisieux, France



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- Parc Zoologique d'Amnéville, France
- Parque das Aves, Brazil
- Parque Estadual Morro do Diabo, São Paulo, Brazil
- Parrot Wildlife Foundation, France
- Paulínia Zoo, Brazil
- Pescheray Zoo, France
- Planète Sauvage, France
- Podotherapie Ohout, Netherlands
- Pomerode Zoo, Brazil
- Pousada Xaraés, Pantanal, Brazil
- Prefeitura Município Teodoro Sampaio, Brazil
- Prince Bernhard Fund for Nature, Netherlands
- Private Donations
- Quagga Foundation, Netherlands
- Refúgio Biológico Bela Vista, Itaipu Binacional, Brazil
- Réserve Zoologique de Calviac, France
- Riverbanks Zoo, USA
- Roger Williams Park Zoo, USA
- Rolex Institute, Switzerland
- Sacramento Zoo, USA
- Safaripark Beekse Bergen, Netherlands
- Salvador Zoo, Brazil
- San Diego Zoo, USA
- São Carlos Zoo, Brazil
- São Paulo Zoo, Brazil
- Sapucaia do Sul Zoo, Brazil
- Save Animals Facing Extinction, USA
- SeaWorld & Busch Gardens Conservation Fund, USA
- SESC Pantanal, Brazil
- Smithsonian Conservation Biology Institute (SCBI), Smithsonian Institution, USA
- Sociedade Brasileira de Zoológicos e Aquários (AZAB), Brazil
- Sorocaba Zoo, Brazil
- Stichting Wildlife, Netherlands
- Tapir Apps, Germany
- Tapir Preservation Fund (TPF), USA
- Taronga Zoo, Australia



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- TED Fellows Program, USA
- Tetra Pak Ltda., Brazil
- The Big Cat Sanctuary, UK
- The Ledder Family Charitable Trust, USA
- The Norman and Sadie Lee Foundation, USA
- The Walt Disney Company, USA
- Toledo Zoo, Brazil
- Touroparc, France
- Tropical Manaus, Brazil
- Universidade de São Paulo (USP), FMVZ - Departamento Veterinária Preventiva e Saúde Animal (VPS), Brazil
- Universidade de São Paulo (USP), FMVZ - Departamento Patologia e Toxicologia (VPT), Brazil
- Universidade Estadual Paulista (UNESP), Centro de Assistência Toxicológica de Botucatu (CEATOX), Brazil
- Universidade Federal do Amazonas (UFAM), Manaus, Amazonas, Brazil
- Universidade Federal do Mato Grosso (UFMT), Cuiabá, Mato Grosso, Brazil
- Van Tienhoven Foundation, Netherlands
- ViaFauna Inc., Brazil
- Vienna Zoo, Austria
- Virginia Zoo, USA
- Whitley Fund for Nature (WFN), UK
- Wildlife Conservation Network (WCN), USA
- WildTrack, Portugal
- Wilhelma der Zoologisch Botanische Garten, Germany
- Woodland Park Zoo, USA
- World Association of Zoos and Aquariums (WAZA), Switzerland
- WWF INNO Fund, Netherlands
- Zoo Conservation Outreach Group (ZCOG), USA
- Zoo de la Barben, France
- Zoo de la Fleche, France
- Zoo des Sables, France
- Zoo du Bassin d'Arcachon, France
- Zoo Miami, USA
- Zoo New England's Quarters for Conservation, USA
- ZooParc de Beauval, France
- ZooParc Overloon, Netherlands
- Zoological Society of Hertfordshire, UK