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ANTEATERS & HIGHWAYS PROJECT: FIRST RESULTS

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The Brazilian Cerrado is a stronghold for populations of giant anteaters (*Myrmecophaga tridactyla*). Today this biome is being heavily fragmented by an ever-increasing road network. Giant anteaters are one of the most frequently road-killed species. The main goal of the Anteaters & Highways Project is to understand and quantify the impacts of roads – roadkill and movement barriers – and their consequences for giant anteater’s densities, population structure and health in the state of Mato Grosso do Sul (MS). Hence, to define strategies to prevent potential giant anteater local population extinctions. The Project is organized in 7 activities and is developed by 6 staff, 2 associate researchers, 6 PhD students, 9 MSc students and 36 collaborators.¹ A total of 1,158 km of highways were surveyed fortnightly for 3 years (feb/2017-jan/2020), totaling 84,673 km of survey effort. Records were also obtained from regular road users, road workers, news and extra routes. In total, we recorded 12,400 roadkill, including 762 giant anteaters. Using this data, we published an article about spatial patterns of road mortality of medium-large mammals.² We captured 53 giant anteaters that were monitored by GPS-radio-collars during ca. 1 year. A total of 5 animals were killed by vehicles. Preliminary results show that giant anteaters regularly cross low traffic highways, which are included in their home range. There is a high rate of crossings, but low mortality probability per crossing. On high traffic highways, animals avoid the highway and the crossing rate is very low, but there is a higher probability of vehicle collision per crossing.³ Interviews were conducted with 229 truck drivers in MS to collect information about the human dimensions of wildlife-truck collisions. Data analysis showed that even drivers who care for animals intended to hit them if they appear on the road, due to safety concerns. The rationale in decision-making is mostly driven by risk perception of safety towards hitting than avoiding the animal in the road-environment. This is critical to recognize in the design of conservation messages and interventions focused on influencing driver’s behavior.⁴ We sampled 120 landscapes with camera-traps, randomly distributed within 10 km of two roads (low/high traffic), with a total effort of c. 10,529 days of sampling.



Overall, giant anteaters were present in more than 70% of the landscapes, near and far from both roads. We found a positive relationship between the distance from the road and the relative abundance of giant anteaters.⁵ We collected samples from 1,594 animals, and performed 119 necropsies, of which 62 of giant anteaters. Several studies are being conducted by our partners.⁶ According to the results of our population model based on data collected by the project, road-kill decreases population growth rate of giant anteaters living near highways by half.⁷ Using systematic monitoring and persistence carcass data, we estimate that 12,494 collisions occurred with animals > 1kg, of which 5,830 were with animals likely to cause material damage with monetary cost to vehicles. Through interviews, we calculated the cost of vehicle damages and concluded that investments in fencing hotspots of mortality on surveyed roads are likely to pay off on average in 11 years. Our next steps will focus on the human, political, and institutional dimensions of wildlife-vehicle collisions in order to reduce significantly the number of animals killed, as well as human injuries and vehicle damage.

Palavras-chave: Medidas de mitigação, Atropelamento de fauna, Animais selvagens, Conservação de animais silvestres.

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