

USING PHOTOVOLTAIC AUTONOMOUS MONITORING GPS COLLARS TO STUDY HOME RANGE OF BRADYPUS VARIEGATUS IN THE LARGEST URBAN FOREST IN THE WORLD

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RESUMO

In general, technological advances are quickly incorporated into species monitoring studies. To define conservation strategies appropriate to each population, it is important to investigate the size and pattern of use of the home range in loco. Several peculiarities present in the biology of sloth species limit the use of equipment and techniques available to most groups of medium mammals, from fall traps, and camera trap to the current use of drones. Among the resources available to minimize the costs of field activities and to allow remote data to be obtained, radio necklaces proved to be useful for analysis of home range, allowing to obtain information on movement with high precision. However, the short battery life has always been a limiting factor. In our study, to gather information on the use of the home range by *Bradypus variegatus* in a 12,500 ha Atlantic Forest remnant under strong anthropic pressure in the city of Rio de Janeiro, we ordered monitoring modules with GPS technology and data transmission system via GSM / SMS / E-mail, to obtain continuous data, with innovative photovoltaic technology allowing the battery to be autonomous. All of these resources developed in the same module considered the biology and the environment in which the species occurs in the municipality of Rio de Janeiro. The study area - the Massif of Pedra Branca - is adjacent to human communities with low levels of social development, which exert strong anthropic pressure, in the form of hunting, introduction of exotic and domestic species, deforestation and pollution. In addition to the threat to fauna, the safety of researchers is also a considerable factor in the territory in question, since several locations in the region are adjacent to communities dominated by drug trafficking and militia. Catches will be concentrated on the eastern slope of the Massif da Pedra Branca, where the Fiocruz Mata Atlântica Biological Station is located. Based on the occurrence records provided by the modules, we will make maps of the home range. The module allows the programming of travel records at weekly intervals, programming both the use of GSM data and the use of battery. In comparison with the modules, microchips are being implanted in the captured sloths, and received beads attached to the fur for later individual identification. Using the most conservative technique of marking and recapture. In the next few months, we hope to obtain data downloaded remotely that will allow safe and comfortable access to the movement information of these animals, for the preparation of maps of the home range using the techniques of minimum convex polygon (MPC) and Kernel.

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