TITLE: PRESENCE OF DERMATOPHYTES IN THE SOIL OF GIANT ARMADILLO (*PRIODONTES MAXIMUS*) BURROWS IN THE PANTANAL OF MATO GROSSO DO SUL

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ABSTRACT:

The giant armadillo (*Priodontes maximus*) is a species considered *VU -Vulnerable by the Red List of Threatened Species World Conservation Union* (IUCN). This animal is of great importance as it is considered an "engineer of the ecosystem", as the burrows that it digs for shelter or feeding purposes are, once they are abandoned, used by many other species. Research conducted in the Pantanal verified that they dig a new burrow almost every two days, therefore providing shelter from predators and refuge against extreme temperatures to over 50 animal species. Soil may be involved in the epidemiological chain of dermatophytosis because it is the reservoir of geophilic species. The aim of this work was to investigate dermatophytes in the surroundings and inside the burrows of giant armadillos in the sub-region of Nhecolândia, Pantanal Mato Grosso do Sul. Sixty soil samples were collected from the inside (20), the entrance (20) and outside (20) of 20 burrows. The fungi were isolated from the soil with the hair baiting technique of Vanbreuseghem, and the plates were incubated at 25°C for up to four weeks. The parasitized hairs were seeded on Mycosel agar at 25°C and the colonies were submitted to microculture technique. Phenotypic macro-and-microscopic identification was performed. Dermatophytes were isolated in 35.0% (7/20) of the burrows and 21.7% (13/60) of the soil samples, distributed as follows: 46.2% (6/13) of the dermatophytes were isolated from the soil inside the burrows (about 1m indoors), 30.7% (4/13) from the burrow entrance and 23.1% (3/13) from the accumulated sand in the outer region of the hole. Only *Microsporum gypseum* (*Nannizzia gypsea*), which is a geophilic species, was isolated. Although this species is geophilic, infections caused by *M. gypseum* have been reported in man, domestic and wild animals, including interspecies transmission. The temperature inside the burrows is more pleasant and with less fluctuation, varying from 24 to 26°C, creating a microclimate that facilitates the growth of the microorganisms. More than 50 species of vertebrates such as anteaters, ocelots, white-lipped peccary, Brazilian agouti, amphibians and even birds were caught sheltering in the burrows of the giant armadillos. Since the transmission of dermatophytosis occurs both via direct and indirect contact, the soil of the burrows represents a risk for the contraction of these diseases and these animals participate in the spread of fungal spores in their environment.

Keywords: dermatophytes, giant armadillo, *Microsporum gypseum*, *Nannizzia gypsea*, *Priodontes maximus*, soil

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