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DUNG BEETLES AS INDICATOR OF LAND USE CHANGE ON BRAZILIAN SAVANNA: TAXONOMIC AND FUNCTIONAL RESPONSES

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The Brazilian savanna is the biggest, most biologically rich and possibly the most threatened tropical savanna on the planet. Nevertheless, only 7% of this biome is preserved in protected areas. To assist the conservation of this threatened tropical savanna, we evaluated taxonomic and functional responses of dung beetles related to land use change. We collect dung beetles in 10 fragments of Brazilian savanna, 10 riparian degraded forest and 10 exotic pasture areas (*Urochloa* spp.) in Anastácio and Aquidauana, MS. We analyzed four main functional traits: habit of resource allocation, diet preference, breadth of diet and body size. We use pitfall traps baited with fresh human and capybara feces, a large rodent native, representative of local wildlife. We collected 14,836 individuals, belonging to 17 genera and 34 species of dung beetles. Fragments of Brazilian savanna shared 23 species with the exotic pastures and 24 species with riparian degraded forest, while the riparian forests shared 19 species with the pastures. The land use change in the Brazilian savanna has different effects on taxonomic and functional structure of the dung beetle community. The biodiversity of dung beetles was negatively affected by the land use change, with a reduction in the species number in exotic pastures and degraded riparian forests, and change in species composition. However, functional diversity was not affected by the land use change. We believe that the high rates of species sharing between native and anthropic areas can be good predictors to explain the maintenance of functional diversity among the habitats types, causing a possible species functional redundancy. So, we indicate that public policy aimed at the preservation of different physiognomies, including the more efficient use of pastures, can be important tools for the biodiversity conservation of dung beetles and later the functionality of the different landscapes of the Brazilian savanna.

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