Abstract
The structure of dung beetle communities inhabiting tropical forests are known to be sensitive to many kinds of environmental changes such as microclimate related to vegetation structure. I examined Scarabaeinae assemblages in two sites of undisturbed high forest and two sites of low forest forming a transitional zone with the open habitat of an inselberg in French Guiana. Sampling was made with pitfall and flight interception traps during 2003 and 2004. The driest and warmest conditions characterized the low forest sites. Across two years we obtained 2,927 individuals from 61 species with pitfall traps and 1,431 individuals from 85 species with flight interception traps. Greater species richness and abundance characterized all sites sampled with pitfall traps during 2003 more than 2004. In 2003 no differences were detected among sites by rarefaction analyses. In 2004 the species richest high forest site was significantly different from one of the low forest sites. For both years Clench model asymptotes for species richness were greater in high forest than in low forest sites. For both years, mean per-trap species richness, abundance and biomass among high forest sites were similar and higher than in low forest sites, especially where the lowest humidity and the highest temperature were recorded. Within the two low forest sites, species richness and abundance recorded during the second year, decreased with distance to edge. Different dominant roller species characterized the pitfall samples in one site of low forest and in other sites. Small variations in microclimatic conditions correlated to canopy height and openness likely affected dung beetle assemblages but soil depth and the presence of large mammals providing dung resource may also play a significant role. Rev. Biol. Trop. 61 (2): 753-768. Epub 2013 June 01.

Keywords
Inselberg, microclimate, trapping methods, Scarabaeinae beetles, species diversity, vegetation structure.