Abstract

Subterranean termites are an important component of below ground biodiversity since they live in the soil and they provide physical niche opportunities for lower level organisms determining their community structure. The distribution and abundance of termite species are used to indicate termite community structure. Soil physical and chemical properties are often affected by termite activity. Therefore, land use systems are suggested to be influenced by termites' density and diversity through the different operations executed by the farmers and the type of vegetation cover. This study was instituted to determine termite diversity and abundance in different land cover types in correlation to soil physical and chemical characteristics. It was carried out over a period of 6 months during a dry period and a wet season. Two transects of 5m x 40m and 200m x 600m were employed based on vegetation cover. Our results using mainly the macrotermitinae termite community structure showed that land cover type and season significantly affected the termites' abundance ($P=0.005$). That termites created islands of fertility in ecosystems via a type of ecosystem engineering. This also study concluded that the conversion of forest into farmland negatively affects termites' abundance and consequently the soil quality decreases. Therefore, sustainable use of agro- ecosystems is suggested to focus on the use of organic manure to conserve termites which are important in improving soil fertility.