CHANGES IN MYCORRHIZAL ABUNDANCE OVER NATURAL NUTRIENTS GRADIENTS AND IN RESPONSE TO UNGULATE HERBIVORY ON AN EAST AFRICAN SAVANNA

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Mycorrhizae are an ancient symbiotic relationship that developed between the roots of plants and fungi. Since their description almost 125 years ago, mycorrhizae have been shown to be extremely important to plant communities. They help a plant harness scarce soil nutrients and potentially provide protection against herbivores and pathogens and even increase resistance to drought. Despite the recognition of the importance of mycorrhizae to plants, we still don't know how diverse ecological factors affect mycorrhizal abundance. My research focused on how natural nutrient gradients created by termites (Order Isoptera: *Odontotermes* sp.) and grazing by native and domestic ungulates change arbuscular mycorrhizal abundance**.** In order to explore how high nutrient conditions and ungulate grazing impact mycorrhizal abundance I collected root samples from evenly spaced points on 40 pre-designated termite mounds, half of which were fenced and half of which were unfenced. Using an ink and vinegar stain and quantification methods of McGonigle et al., I am estimating the degree of mycorrhizal infection. Preliminary results suggest that mycorrhizal abundance decreases in response to high nutrient conditions but increases in response to increased herbivore grazing.