Mutualisms are among the most ubiquitous interactions on earth. They include interactions between plants and pollinators, plants and protective ants, and ants tending aphids and honeydew-producing hemipterans. In addition to the benefits accrued to the partners, mutualisms may indirectly benefit non-mutualistic members. For example, plants hosting ants and honeydew-producing hemipterans may indirectly benefit by the defensive behavior of ants protecting hemipterans. Hemipterans feed on phloem and secrete honeydew, a substance rich in carbohydrates and amino acids. Ants tend the hemipterans and collect the honeydew as a rich food source. In turn, ants remove hemipteran predators and parasitoids; however, ants also remove other herbivores, which may indirectly benefit the host plant. My objective is to determine the effects of ant-hemipteran mutualisms on plant fitness across a soil nutrient gradient. I hypothesize that host plants of ant-hemipteran mutualisms are indirectly benefiting from ants tending hemipterans because ants are indiscriminately removing more damaging herbivores that are feeding and parasitizing fruits and flowers. I am investigating this hypothesis at the Welder Wildlife Refuge in south Texas. Mesquite (*Prosopsis glandulosa*) is the dominant hardwood and hosts a suite of ant species that tend hemipterans. During the summer of 2012, I selected 90 mesquite trees across a nutrient gradient and surveyed the trees for the presence of ants and whether or not they were tending hemipterans. I counted fruits and flowers produced on each tree as a proxy of fitness. My first field season results support the hypotheses that host plants are receiving an indirect fitness benefit from ant-hemipteran mutualisms. Significantly more fruits and flowers were produced in trees with ants tending hemipterans then trees with no ants, and the presence of non-tending ants had no effect. These results were consistent over the nutrient gradient.