

Demographic Profile of the FAU Gopher tortoise Preserve- 11 years later

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Gopher tortoises (*Gopherus polyphemus*) are a keystone species that dig burrows which provide shelter to over 360 invertebrate and vertebrate commensal species. Florida Atlantic Universities' gopher tortoise population inhabits approximately 90 acres of grassy and disturbed scrub habitats on the FAU Boca Raton campus. In 2011, the gopher tortoise population was assessed, and 199 active burrows were identified and 63 tortoises were hand-captured and marked. The gopher tortoise burrows were surveyed in 2011 and since then the habitat has been managed by utilizing chemical herbicides, bush hogging, and mowing, which all improved the habitat quality for the burrowing owls and gopher tortoises. My study consists of a reassessment of the gopher tortoise population, 11 years later, to evaluate whether the gopher tortoise population has increased due to the habitat management practices. We surveyed the preserve by laying out belt transects and using a double-blind observer method to locate burrows. When all the burrows have been found we will compare our data to the data that was collected 11 years ago to investigate population demographics, which allow us to know the age distribution of the gopher tortoises in the preserve. Assessing whether the population is reproducing (more young tortoises are identified) is important because gopher tortoises are ecosystem engineers, and their burrows act as a framework for many commensal species that live in or around their burrows. If the gopher tortoise population declines, the species living in or around their burrows will also most likely decline.