MOVEMENT IN WHITETAIL DEER (*ODOCOILEUS VIRGINIANUS)* IN ITHACA, NY

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Abstract

Whitetail deer (*Odocoileus virginianus)* are overpopulated, causing negative consequences both to the environment and to people. Whether it is through overbrowsing of forest vegetation or car accidents, the whitetail deer are leaving an impact. By looking at the space use of deer, we can determine what habitats they prefer in order to help with future management plans in Ithaca, and more specifically Ithaca College campus. The goal of this study was to determine if whitetail deer prefer certain habitats within a small urban-forest area and if breeding season (rut) affects this. During the study, trail cameras were set out to capture pictures of animals in different habitat patches around Ithaca College (Appalachian oak hickory, successional shrubland, successional Northern hardwood, perched swamp whiteoak, and built campus-near farm pond road). The bucks(male deer) were identified by their rack (antlers) so they could be tracked over multiple pictures. Counts of deer in each habitat and season (rut VS pre-rut) were compared to random use with chi-squared tests or multinomial tests. Post experiment, I found that deer do indeed prefer certain habitat types, but were found in different habitats during the different seasons (breeding VS not breeding). During the pre-rut(non-breeding) deer prefer the successional shrubland habitat type and during the rut(breeding) the deer prefer built campus habitat type, located near farm pond road on campus. In addition, buck movement increases during the rut(breeding season), and all identifiable bucks(6) moved into the built campus(near farm pond road) during the rut. Successional shrubland habitat type may be used pre-rut since the shrubs provide both food and shelter. The food sources also may very in successional shrubland habitat type from different types of leaves to nuts or berries as well. The built campus habitat type near farm pond road may be a more accessible area for gathering for the rut itself. My results suggest urban landscapes may be attracting deer specifically as a breeding area.