MICROHABITAT CHARACTERISTICS OF SITES USED BY SWAMP RABBITS (*SYLVILAGUS AQUATICUS*)

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Abstract: The swamp rabbit (*Sylvilagus aquaticus)* is one of the least studied North American lagomorphs and a better understanding of the habitat types it uses will improve management of this species. We studied microhabitat characteristics of sites associated with specific behaviors of the swamp rabbit. During spring–summer (15 April – 1 October) and fall–winter (1 October – 15 April) we examined sites used by rabbits for fecal deposition, browsing, and daytime resting. Sites were located in 3 different macrohabitats (mixed pine hardwood upland forest, mature bottomland forest, and cut-over bottomland forest). We compared the microhabitat characteristics of these sites via logistic regression to the same measurements from a random sample of plots in each macrohabitat and season. Sites used for fecal deposition were distinguishable from random points based on the presence of downed logs, closed canopies, and great basal area. Browse sites could not be predicted in 3 of the 5 combinations of season and macrohabitat. Additionally, we did not observe consistent relationships with microhabitat characteristics for browsing as each of the significant models included different predictive variables. Daytime resting sites were distinguishable from random points based on positive associations with percentage of the ground covered by shrubs and downed treetops, as well as herbaceous vegetation and negative associations with canopy closure and basal area. These results demonstrate for swamp rabbits that microhabitat features of a forest, such as canopy gaps, may be associated positively with certain activities and associated negatively with other behaviors. This implies that microhabitat analyses for swamp rabbits and, possibly, other wildlife species can be improved by stratifying observations according to activity or specific behaviors prior to analysis.

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