Some forest birds shift habitat use from mature forest habitat to early-successional habitat. Management efforts have primarily focused on breeding habitat for migratory songbirds, but the post-breeding period could be equally important given that birds can spend an equal or greater amount of time in this stage. We used constant effort mist netting to capture birds in regeneration cuts to examine variation in forest bird abundance. We radio-tracked daily movements of juvenile Ovenbird (Seiurus aurocapilla), Worm-Eating Warbler (Helmitheros vermivorum), and Red-eyed Vireo (Vireo olivaceus), captured in clearcuts, to determine habitat selection. There was variation in abundance of mature forest-breeding birds among species and ages in early-successional habitat during the post-breeding season. Radio telemetry showed that Ovenbirds and Worm-eating Warblers remained in the early-successional habitat where initially captured. In contrast, juvenile Red-eyed Vireos used both late successional and early-successional habitat. Our study expands on existing information and captures habitat use for independent juvenile Ovenbird and Worm-eating Warbler, while contributing new information on habitat use for independent juvenile Red-eyed Vireo. Our analyses allow us to speculate on which other mature forest-breeding species may make post-breeding movements to early-successional habitat and those that do not. The clear differences in habitat use between species classified as mature forest-breeding birds make evident the importance of obtaining habitat use information across the whole annual cycle for all species. This information can help guide habitat management decisions to potentially increase bird populations.