

Abstracts of Presented Wildlife and Fisheries Technical Papers

Population Status and Habitat Associations of Cerulean Warblers from the Southern-most Breeding Range in Alabama

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Abstract: Cerulean warbler (*Dendroica cerulea*) is one of songbird species of the United States that had the highest population decline during the past decades. Alabama represents a portion of its southern-most breeding range where they were once considered common and even numerous in several counties. Today, cerulean warblers are rarely encountered in Alabama and are classified as a Priority One species (highest conservation concern). With the funding from Section 6 of USDI Fish and Wildlife Service and USDA Forest Service, we conducted a study of this species in Alabama with the objectives to: 1) determine distribution and relative abundance, 2) examine habitat use and avian associations, 3) quantify microhabitat characteristics, 4) investigate landscape associations, 5) locate potential breeding habitat using Geographic Information Systems (GIS), and 6) measure home ranges and core use areas using radio-telemetry. Point counts and habitat assessments were conducted in areas of cerulean warbler presence and random locations, and a subsample of males were captured and fitted with radio transmitters for monitoring habitat use and home range size. Cerulean warblers occurred in three disjunct locations: one in Bankhead National Forest, Lawrence County; and two in Jackson County along Larkin Fork and in Walls of Jericho along Hurricane Creek. Density of ceruleans was low at all three locations, but population size was relatively stable during the study period (2004–2008). The species selected habitats containing a variety of tall, large diameter deciduous tree species with a high percent canopy cover, sparse understory, and a moderately complex canopy structure. The species bred in contiguous tracts of deciduous forest close to streams but far from areas experiencing rapid human development. Cerulean warblers associated most often with sympatric, deciduous forest-dwelling Neotropical migrants. Radio-tracked males (10) had an average home range of 5.36 ha (SE ± 0.89) with an average core area of 0.55 ha (SE ± 0.1).

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