



## Patuxent Wildlife Research Center Science Brief for Resource Managers

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## Spatial Ecology and Habitat Use of the Indigo Snake (*Drymarchon couperi*) in Georgia

### Description:

The indigo snake (*Drymarchon couperi*), a large non-venomous reptile with a maximum length of 2.6 m, inhabits xeric sand ridges to hydric forests and wetlands in Alabama, Georgia, and Florida. The US Fish and Wildlife Service listed the species as threatened in 1978, but only preliminary research has been completed since that time. Information is lacking to develop suitable management guidelines for indigo snakes in Georgia. We propose to study adult indigo snakes at replicated sites in Georgia by using radiotelemetry to determine the home range, survival, movement patterns, microhabitat use, landscape ecology, habitat selection, and site fidelity by groups for sex, season, and year. Indigo snakes will be captured near winter denning sites and fitted with implanted radio transmitters with a battery life expectancy of 36 months. Growth rates will be calculated annually by recapturing snakes to determine if habitat differences are related to survival and growth. Radiolocations will be collected for each snake for up to three years during active seasons by locating the individuals visually when possible. Home range will be analyzed by minimum convex polygon and kernel methods for use in comparison with other studies and for use in understanding the snakes habitat requirements in space and time. Information will be used to develop management guidelines and to provide basic life history data for

conservation of the indigo snake and its critical habitat.

### Progress to Date:

Project has just begun. Eighteen snakes are being radio-tracked at this time. No results at this time.

### Management Implications:

Basic information is needed for managing this snake's habitat. Future research beyond the initial phase will emphasize forest management practices and the ecology of the indigo snake.

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