Natal dispersal, home range and habitat use of hatchlings of the Mona Island iguana (*Cyclura cornuta stejnegeri*)

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Abstract. In the last two decades our knowledge of the biology of the highly threatened rock iguanas (*Cyclura*) has been expanding. However, most studies have focused on the adults and none has been conducted to document the biology of the younger stages. In some instances, such as the Mona Island iguana (*Cyclura cornuta stejnegeri*), the biology of young stages has been overlooked due to their low relative abundance in the population. The causes of this population trait remain unknown and their extent from the conservation perspective is important because the scarcity of young stages has been considered a symptom of a declining population. We used radio telemetry to document life history of Mona Island iguana hatchlings during the first five months of life. Hatchlings dispersed following specific individual bearings from 102 m to 5080 m from the releases sites. Hatchlings settled down in diverse habitats used or not used by adult iguanas. Once settled, hatchlings spent most of the time (63%) in trees or perch locations above the ground. We report a conservative survival rate of 22% during the study period and Minimum Convex Polygon home ranges that vary from 0 m^2 to 530 m^2 (mean = 297). Our results suggest that the low relative abundance of the juvenile stages in the population is caused both by high predation rates during their dispersal phase, and hatchling microhabitat selection which precludes their detection in population surveys.

Key words: *Cyclura*; hatchling biology; natal dispersal; survival.

Introduction

Dispersal is defined as the one-way movement of an animal from the place of birth to the place where it will reproduce (Howard, 1960). Dispersal is a critical factor in evolution, population dynamics, behavior and conservation (Krebs and Davies, 1993; Small et al., 1993). Among the factors motivating the dispersal of individuals are: competition (Tonkin and Plissner, 1991; Lambin, 1994; Gundersen and Andreassen, 1998), inbreeding depression and habitat quality (Dobson and Jones, 1985; Ruckeshaus et al., 1997). Most studies of animal dispersal have been conducted with birds (Giesen and Braun, 1993) and mammals (Krohne et al.,