

Spatial ecology of the Mona Island iguana *Cyclura cornuta stejnegeri* in an undisturbed environment

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Abstract. The population of the endangered iguana *Cyclura cornuta stejnegeri*, endemic to Mona Island (Puerto Rico), is characterized by a low density and an adult-skewed age distribution. In this study we measured space use patterns in nine adult iguanas (five males and four females) during the non-breeding period in an undisturbed environment in order to determine to what extent spatial and territorial behavior contributes to the observed low density. Minimum Convex Polygon and the 50% and 90% Kernel methods were used to estimate the home range of radio marked iguanas. Male-female home range overlap was extensive while male-male overlap was minimal. Females were distributed randomly in the study area, while males exhibited a regular spacing pattern. The lack of home range overlap among males and their regular distribution pattern suggests that males of the Mona Island iguana are highly territorial, and that their home range areas appear to be equivalent to territories. Previous studies had attributed the low iguana densities on Mona Island to the scarcity of mid-size iguanas that precluded recruitment into the adult stages. The high levels of territoriality among Mona Island iguana males documented in this study suggests an additional factor that may explain the low densities in this population. Our data suggest that male carrying capacity may have been reached at Mona Island since there appear to be no “vacant” areas for additional male territories.

Key words: *Cyclura*; density; home range; territorial behavior.

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