

NOTES ON THE ROCK IGUANA (*CYCLURA CARINATA*) OF THE CAICOS ISLANDSROBERT L. NORTON<sup>1,3</sup> AND NICHOLAS V. CLARKE<sup>2</sup><sup>1</sup>National Parks Trust, Ministry of Natural Resources,  
Box 860, Road Town Tortola, British Virgin Islands<sup>2</sup>ENCAMP-CANARI, 1106 Strand Street, Christiansted, St. Croix, USVI 00840<sup>3</sup>Present address: The Smithsonian Migratory Bird Center,  
National Zoological Park, Washington, D.C. 20009

Rock iguanas (*Cyclura* spp.) are reported to be found on several of the small off-shore cays of the southern Bahamas (Iverson 1978), yet little is known of the distribution or population size of the endemic West Indian rock iguana on the Turks and Caicos Banks. Iguana population decline on Pine Cay, Caicos Islands (Iverson 1978) was blamed on development, human activity, and introduced cats and dogs. The impact of increased human activity in this area, including hunting, could reduce the iguana population to extinction by the end of the next decade. Thus, an opportunistic census of a rock iguana population which has not been surveyed since before 1971 (Ray and Sprunt 1971) seemed desirable as a benchmark for further conservation efforts. Neither Buden (1981, 1987) nor Iverson visited Iguana Cay during the period 1970-1979 and we know of no ecological investigations of this cay.

Our census took place on Iguana Cay on 24 July 1987 at approximately 1500 hrs. Iguana Cay, 21° 46' N Lat, 71° 36' W Long., is a small uninhabited, limestone islet, which is approximately 0.4 km in length and 0.3 km at its widest point. Iguana Cay has an area of 0.06 km<sup>2</sup> (Buden 1987), and is located northeast of the Windward-Going-Through and Joe Grant's Cay, East Caicos. As is typical of the smaller cays in the Turks and Caicos, elevation of this cay is not more than 3-4 meters. The census consisted of a single, one-way walking transect 10 m wide running the width of the island, east to west. The substrate was open limestone clinker-pavement stewn with limestone slabs and large rocks with soil found only in the cracks. Vegetation generally was less than 1 m in height. Plant species from the eastern shore to the center of the island were *Rhachicallis americana*, *Erithalis fruticosa*, *Coccolobo wifera*, *Cassia chuseifolia*, *Strumpfia epiphyllantus*, *Cyperus* sp., *Cephalocereus millsphaughii*, and *Coccothrinax* sp. (Corell and Corell 1982).

We observed 8 female, 2 male and 2 juvenile rock iguanas (*Cyclura carinata*). The larger iguanas were sexed based on morphological characters such as size (Iverson 1979) and our prior (*in situ*) experience with male and female rock iguanas (*Cyclura pingius*) of Anegada, British Virgin Islands. Females appeared to be slightly shorter in length than the males we observed. We also found iguana tracks on the beach. The only other terrestrial vertebrates we encountered in the transect was another lizard, *Leiocephalus psammodromus*.

Ray and Sprunt (1971) suggested that Iguana Cay had "fine populations" of iguanas, but no estimate of *Cyclura carinata* numbers are known from Iguana Cay, East Caicos. Field (1986) noted that nearby Great Sand Cay also had iguanas. Both reports indicated periodic hunting of iguanas for food, and during our work in the Turks and Caicos we were also informed that iguanas at Big and Little Ambergris Cays, south of South Caicos, are taken for food. Other factors must be taken into account in these islands, as well as other locations where endemic ground fauna exist. For example, at Pine Cay (3.64 km<sup>2</sup>), located nearly equidistant from Providenciales and North Caicos, the iguana population was estimated in 1974 (Iverson 1978) to be 5,500. By 1976 there was evidence of only five individuals (Buden 1987: 7). Loss of habitat and the effect of introduced dogs and cats may have played

a major role in the iguana reduction there. Similar factors are reducing and threatening endemic iguana populations at Anegada (pers. observ.). We recommend additional census work at Iguana Cay and other islets where iguanas persist. We also recommend national recognition of the status of this endemic lizard as threatened in the southern Bahamas and the Turks and Caicos islands, and that international assistance in establishing conservation reserves and parks be expanded.

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#### LITERATURE CITED

- BUDEN, D. W. 1981. Endemism and patterns of distribution among terrestrial vertebrates in the Bahamas. *Bahamas Natur.* 5: 2-18.
- BUDEN, D. W. 1987. The birds of the Southern Bahamas. An annotated check-list. British Ornithological Union. Check-List No. 8.
- CORELL, D. S. AND H. B. CORELL. 1982. Flora of the Bahamas archipelago. Vanduz, Germany, Lubrecht and Cramer.
- FIELD, R. M. 1986. Ecological study of the Turks and Caicos Islands. UNEP Report to the Government of the Turks and Caicos Islands. Connecticut, R. M. Fields Assoc.
- IVERSON, J. B. 1978. The impact of feral cats and dogs on populations of the West Indian rock iguana, *Cyclura carinata*. *Biol. Conserv.* 14: 63-73.
- IVERSON, J. B. 1979. Behavior and ecology of the rock iguana (*Cyclura carinata*). *Bull. Florida Sta. Mus. Biol. Sci.* 24 (3): 175-358.
- RAY, C. AND A. SPRUNT, III. 1971. Parks and conservation in the Turks and Caicos islands. Grand Turks, Turks and Caicos: Government Office.

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#### MOVEMENTS OF A FEMALE BLACK BEAR IN NORTHWESTERN FLORIDA

JOHN B. WOODING,<sup>1</sup> STEPHEN M. SHEA,<sup>2</sup> MORGAN L. RICHARDSON,<sup>2</sup>  
AND D. Y. DOWLING<sup>2</sup>

*Florida Game and Fresh Water Fish Commission*

<sup>1</sup>4005 S. Main St., Gainesville, FL 32601

<sup>2</sup>6938 Hwy. 2321, Panama City, FL 32409-9338

Natural long distance movements of black bears (*Ursus americanus*) in Florida have been documented for dispersing subadult males and for adult males in the breeding season. In northcentral Florida, dispersal movements of four 1-2 year old males ranged from 22 to 56 km (Wooding and Hardisky 1988). Maehr et al. (1988) reported the movements of a 2 year old male that traveled 140 km in southwestern Florida. In the Ocala National Forest, an adult male moved 35 km outside of his normal home range during the breeding season (Wooding and Hardisky 1988).

Female black bears are less mobile than males. Females rarely disperse as subadults (Rogers 1987), tending instead to mature and reproduce in or adjacent to their natal home