Cuban Rock Iguana, *Cyclura nubila* (male). Sally Russ Photography photo.

THE CAPTIVE HUSBANDRY AND PROPAGATION OF THE CUBAN ROCK IGUANA, *CYCLURA NUBILA* PART 1. CAPTIVE ENVIRONMENT

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I first became familiar with the Cuban Rock Iguana, *Cyclura nubila*, in the mid-1980's when I purchased a pair from a Florida animal breeding facility. These animals were part of a group of iguanas imported into Florida from the introduced colony on Isla Magueyes, Puerto Rico. In the mid-1960's approximately seven *C. nubila* escaped or were released on Magueyes. This 7.2 ha (18 acre) mangrove encircled island provided excellent habitat. The sandy interior of Isla Magueyes provided many nesting sites and allowed rapid expansion to occur. By 1985, the thriving population was estimated at 157 adults. Dispersing individuals occasionally reach the Puerto Rican mainland, but a range extension to the dry forests of the southwestern part of the island has not occurred. This region was probably home to the endangered Anegada Rock Iguana, *Cyclura pinguis*, until about 150 years ago.

My original pair was soon determined to be two males. But in the next several years four additional animals were acquired. Two of these iguanas were females.

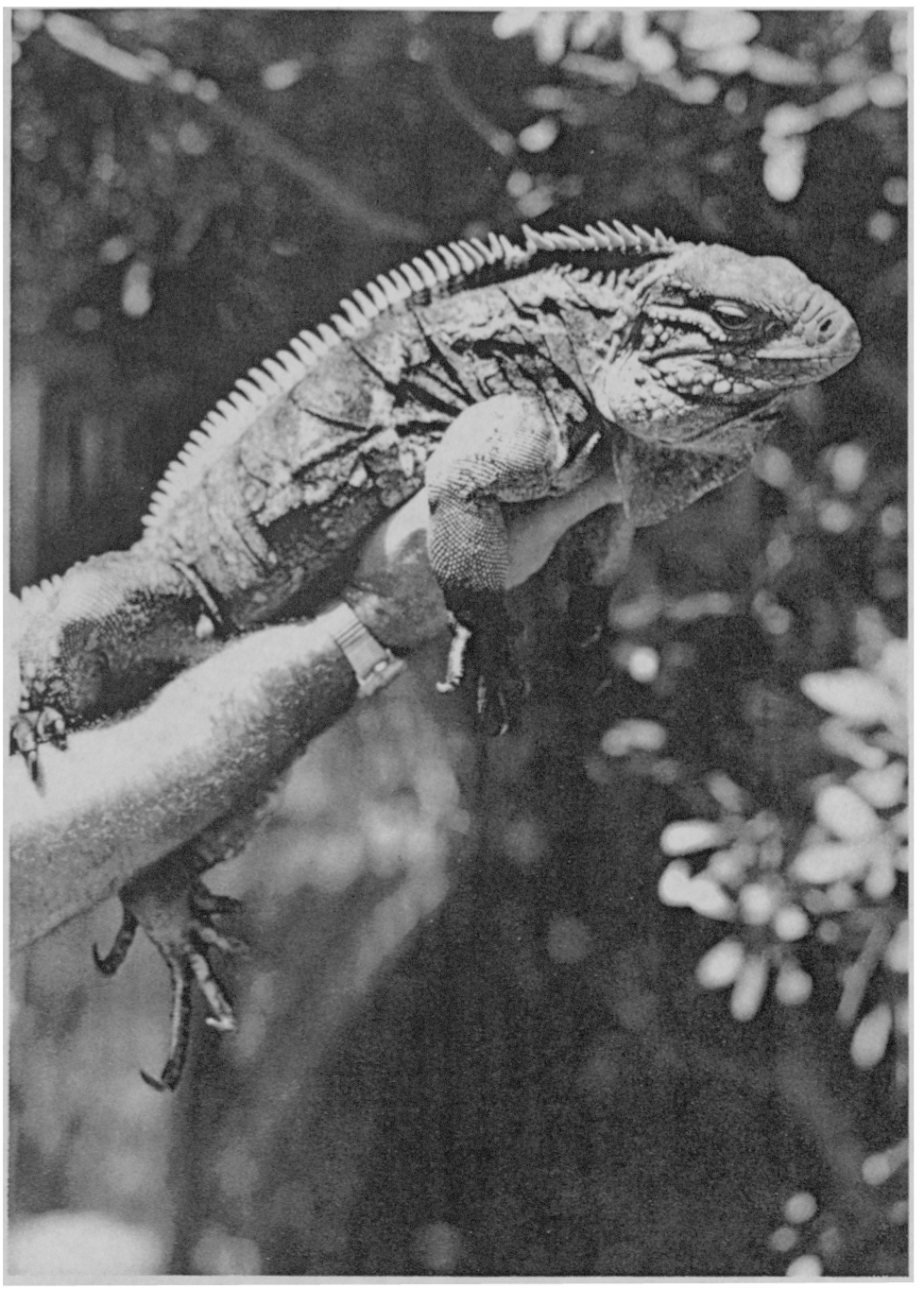
The Cuban Rock Iguana is the largest member of the genus, with males reaching 745mm snout-vent length (almost 30 inches). It also has the largest range of any *Cyclura* originally occurring throughout the 800 mile (1,280 km) long island and on many of the surrounding satellite islands. As with any species with an extensive natural range, *C. nubila* probably has many geographic variations which are presently unfamiliar to us. Like most members of the genus, it inhabits sandy open areas with adjacent eroded limestone ridges and dry West Indian scrub forest. Although commonly found in xeric areas, it also occurs in mesic habitats with strongly seasonal rainfall.

C. nubila is sexually dimorphic with adult males being considerably larger than adult females. Males have massive heads, large jowls, bulkier throatfans, and a pronounced dorsal crest. An adult male commonly has a head twice the size of that of a similar-aged female. Femoral pores of both sexes are small except in breeding males, when waxy secretions occur. *C. nubila* has a background color of tan to brown with strong black chevrons persisting in adults, an uncommon trait in *Cyclura* where juvenile banding usually fades by the second or third year. The front feet are very darkly colored producing a "glove" effect.

The Cuban Rock Iguana is probably the most adaptable species of iguana in captivity. It is generally calmer and more "easy going" than many other species. I have also found it to be an accomplished digger, and individuals have dug tunnels up to 2 meters (6.6 ft) long in my captive enclosures.

At Finca Cyclura, iguanas are kept in pairs in enclosures 8 x 8 ft. (2.43 x 2.43 m), 8 x 10 ft. (2.43 x 3.04 m), and 10 x 10 ft. (3.04 x 3.04 m) with a height of 8 ft. (2.43 m). Larger enclosures 10 x 16 ft. (3.04 x 4.86 m) house two pairs of two different species (*C. cornuta* and *Iguana*, or *C. cornuta* and *C. nubila*). Since *C. cornuta* is sympatric with *Cyclura ricordi* in some locations in Hispaniola, this arrangement has been successful. Iguanas recognize their own species and appear less stressed with other species and genera.

These enclosures were in many instances built around existing vegetation. They generally have wooden shelves and are furnished with large rocks, logs, and tree limbs. These amenities actually increase the amount of space available to animals considerably. If any animal seems to



Cuban Rock Iguana, *Cyclura nubila* (male). Sally Russ Photography photo.

spend most of its time on a high shelf, it is safe to assume it is under pressure from its cagemate. Vegetation, rocks, and partition walls can act as visual barriers to provide relief for subordinate animals.

There is no such thing as an iguana enclosure that is too large. Iguanas transferred from one cage to a larger one, will immediately explore the entire enclosure. They will utilize all the newly available space, increase their activity level, and grow more rapidly.

I consider the optimum captive enclosure to be 150-200 sq. ft. (13.5-18 m^2) of floorspace for one pair of adult iguanas. Half of the floorspace should be coarse sand 18-24 inches (45.8-61 cm) deep and the other half, large rocks cemented together to form several retreats and many basking areas. Rocks should be carefully placed and cemented to avoid possible collapse. Plants are a nice addition, but optional.

In the frost-free lower Florida Keys, insulated and heated shelter buildings are not necessary. In any other area of the southern United States, they would be mandatory. In my case, concrete and rock structures provide adequate shelter. All of my enclosures are facing the south with solid walls on the north. Steel v-drain roofing provides rain protection over 20%-25% of the total area of the enclosure. Iguanas can choose among a variety of conditions and are protected from tropical storms.

On very rare occasions (e.g. Christmas 1989, when Miami temperatures dropped below freezing and Big Pine Key temperatures reached 45°F or 7.2°C), underground retreats are covered with a thick layer of mulch to keep residents well insulated from cold air temperatures. Sub-adults and juveniles are brought indoors to rooms supplied with space heaters. Fortunately, cold fronts are usually of short duration. Big Pine Key is farther south than Nassau, Bahamas, and is at the same latitude as the habitats of a number of iguana species.

Until the last decade, captive longevity statistics for *Cyclura* were generally very grim. Wilke (1982) of the Frankfurt Zoo, calculated an average longevity of only 2.5 years for *C. cornuta* based on 155 individuals in 39 zoos. Wiewandt (1977) speculated that the natural lifespan exceeds 40 years on Mona Island. Lack of sufficient space and natural UV light are the main reasons for failure in maintaining iguanas in captivity.

If we are to keep animals in captivity, it is our responsibility to provide an adequate captive habitat. Our reward is to be able to observe these creatures much as they would be in the wild, but without their apprehension to our presence.

CONTINUED IN NEXT ISSUE

Iguana Nesting Behavior

Robert Ehrig reports unusual nesting behavior of *Cyclura nubila* at Finca Cyclura. For the third consecutive year, a female Cuban iguana has opened up her nest 3 to 5 days after her clutch had begun hatching. All of the eggs were removed from the nest shortly after laying and were incubated indoors. In all cases, the female dug up the tunnel into the egg chamber shortly after young began hatching at the incubation location. This female has been a dedicated nester, guarding her nest site long after laying, and making life miserable for her various mates. In all three years, the female chose the same nesting site, an excavation sometimes used as a den out of the breeding season. It is too early to interpret this behavior, but we wonder if anyone has observed similar activities with any other iguanas.