First Breeding Of Rhinoceros Iguana, Cyclura cornuta, at The National Zoo

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We are happy to announce the first hatching of a Rhinoceros iguana, *Cyclura cornuta* at the National Zoo. Our iguanas are housed indoors in a spacious, glass-fronted exhibit measuring 14' (4.3m) x 8' (2.5m) x 11' (3.4m). The enclosure is modeled after Indianapolis Zoo's exhibit and has four man-made burrows in two lava rock piles in the rear corners. Builders sand is used as substrate to a depth of 6" (15cm) over a concrete floor. The center of the exhibit is dominated by a large Seagrape, *Coccoloba uvifera,* whose branches spread out over both lava rock piles. A smaller lava rock pile, also centrally located, serves as a visual barrier to reduce aggression and provides an ideal basking site beneath a 500 watt quartz heater, where temperatures reach 89.6°F (32°C). Two additional basking areas are heated by another 500 watt quartz heater and an infrared lamp. Ambient temperatures within the exhibit range from 83-91°F (28.3-32.7°C), while burrow temperatures are cooler at 81°F (27.2°C). A full skylight is supplemented by broad spectrum fluorescent lighting and two mercury vapor lamps that intensify light levels. Two rainy seasons in the spring and fall are brought on by daily late afternoon showers created by an overhead sprinkler system.

In our exhibit, only a single pair of adult iguanas is housed together. Originally from Taronga Park Zoo, Australia, our pair consists of one 13 year old male weighing 14 lbs. (6.27kg) and a female weighing 8.61 lbs. (3.89kg) with a SVL of 17" (42.5cm). Courtship behavior begins in March with

Hatching Rhino iguana, Cyclura cornuta, October 1992. *Photography: Ron Harrod*

the male chasing the female. Although copulation has yet to be observed, we know now that oviposition occurs in late July or August. Man-made burrows in the lava rockpiles are not used for egg laying, although two of the four burrows were filled with soil to encourage the female to dig out her own egg chamber. However, a large soil-filled planter, in the top of a lava rock pile, has become the preferred egg laying location. A sheet of plywood covering the surface of this cavity has an entrance hole cut into one corner. Using this entrance, the female digs out a burrow under the plywood. Exploratory digging at this location was observed in early summer and increased in late July of 1992. This was followed by the disappearance of the female, whose abdomen had become distended and swollen. After four days the female emerged on August 3, 1992, noticeably thinner. The plywood was removed, and 16 eggs were found underneath at the plywood/soil interface.

Of the 16 eggs, only nine were judged by candling to be fertile. These eggs averaged 61.8g in weight, ranging from 60-63g. Average length and width of the eggs was 68.1mm and 41.1mm, respectively. Eggs were set up in a container with a vermiculite-to-water ratio of 2:1. Eggs and vermiculite were weighed twice per week to monitor embryo development and maintain consistent humidity levels. At the time of laying, available incubator space was limited to a suboptimal 28-29°C temperature, and all eggs were incubated at this temperature for one month, until additional space was available in a 30°C incubator. Only four of the eggs were transferred to the higher temperature to prevent a potential loss of all eggs. Embryonic development was documented in all eggs throughout the incubation period by progressive weight gain and presence of blood vessels upon candling. Hatching began after 92 days on November 6, extending to November 19. However, between the two groups of eggs, only five hatched. Three hatched from the 28-29°C incubator, all requiring assistance to emerge, but later died. Two that hatched from the 30°C incubator appeared normal, but only one survived past December 1992. It is believed that the initial lower temperature incubation period resulted in lethargic embryo development, indicated by large, external yolk sacs present on full term hatchlings, despite the influence of optimal temperatures during the latter part of the incubation period. Although the yolk sacs resorbed normally, three of the four hatchlings later died.

The mean weight of hatchlings was 43.3g (ranging from 41-44g), while the mean SVL was 9.54cm (ranging from 9.4-9.8cm). The surviving hatchling is housed in a 55-gallon aquarium with long lengths of stacked cork bark providing hide areas. The cage is heated with full spectrum lighting (U.V. included). Daytime temperatures range from 80.6-89.6°F (27-32°C) with a nighttime drop to 75.2°F (24°C). The hatchling is fed every other day with our standard salad diet composed of chopped kale, shredded carrots, diced apple, and soaked dog food crumbled into small pieces. Diced banana was initially offered to stimulate feeding, but was later dropped from the diet after the hatchling began eating well. A light dusting of the salad mix with a vitamin/calcium powder supplement was provided once per week. Adult iguanas receive the same salad mix five days per week, with supplemental vitamin/calcium powder dusting increasing in frequency during the breeding and egg laying season from once per month to once per week.

In an exhibit like ours, time and location of oviposition are difficult to determine. However, with the results we have obtained last year, time and location of egg laying is more predictable, and optimism for future *C. cornuta* reproduction seems high.

DEDICATION

This issue of *Iguana Times* is dedicated to the at least thirty **Yanomani Indians** that were slaughtered by wildcat gold miners in the state of **Roraima, Brazil** or just across the border in **Venezuela** during the week of 16 August, 1993. When the indigenous people of the isolated rainforests are not safe in their homelands, the natural resources and wildlife of these areas are vulnerable to destruction as well. We hope the government of Brazil will take action to prevent the future slaughter of the rainforest's innocent inhabitants. *Source: Miami Herald*