

Komodo Dragon *Varanus komodoensis*

1. Animal Type: Reptile
2. Conservation Status: Endangered
3. Size
 - a. Male: Can be up to 10 feet long and up to 366 lbs. More typical dragons weigh around 200 lbs.
 - b. Female: Usually under 8 feet and weigh approximately 150 lbs.
4. Social Structure: Solitary animals except during breeding season. Males defend territory and can patrol up to 1.2 miles a day.
5. Reproduction:
 - a. Time of year: Between May and August
 - b. Number of young: Clutches contain approximately 30 eggs.
 - c. Rearing / Mothering: The mother lays the eggs in September, and will keep them incubated for approximately nine months. Females may even lie on the nests. However, once hatched, there is no evidence that the babies are cared for.
 - d. Special Exhibit Needs: Places to burrow for nesting.
6. Behavior
 - a. Nocturnal vs. Diurnal: Diurnal.
 - b. Shy vs. Curious: Indifferent. They can wait hours in a spot for food.
 - c. Jumping Ability: Not much. They climb trees and swim.
 - d. Land speed: 13 mph for short periods
 - e. Water speed: Unknown, but can swim long distances from island to island. They can dive and stay underwater
 - f. Unique Behaviors: They have 50 different bacterial strains in their mouth, with at least 7 of them highly septic. Venom in a bite on a deer can usually kill it within one week.
 - g. Special Exhibit Needs: Places to wrestle and to hunt for their meat. They have decent eye sight, dim hearing, but amazing smell. They can smell carrion up to 5 miles away. The exhibit could provide many different scents for the animals.
7. Captivity
 - a. Frequency in captivity (rare, common, ubiquitous, never, etc): rare; approximately 300 including 60 born and bred in United States.
 - b. "Land of the Dragons" at The Phoenix Zoo
 - i. Size:
 1. Approximately 3500 sf total exhibit space
 2. 7,000 gallon pool within exhibit space
 - ii. Opening date: November 11, 2009
 - iii. Number of Animals: 2; Gaia and Ivan, siblings
 - iv. Characteristics
 1. "Being able to house this endangered species at the Phoenix Zoo is an honor,"..."We celebrate this privilege and hope our guests come away with a newfound respect for the Komodo dragon." says Bert Castro, CEO/President of the Phoenix Zoo
 - a. Tropically themed exhibit featuring variety of viewing experiences and interactives
 - b. Designed to highlight the amphibious behaviors of the reptiles in addition to land-based
 - i. Two separate outdoor exhibits with "bedroom" indoor viewing nest/future nursery in between
 - ii. Large heated rocks at viewing panels
 - v. Designer: WDM Architects; Wichita, KS
 - c. "Tropical Discovery: Komodo Dragon Habitat" at The Denver Zoo
 - i. Size: 5500 square feet; world's largest indoor at opening date
 1. Final exhibit in the "Tropical Discovery" house
 - ii. Opening date: 1993
 - iii. Number of Animals: 3 adult males, 9 babies

- iv. Success
 - 1. The exhibit has continued to be popular for nearly twenty years because of commendable back of house operation and implementation by zoo staff
 - 2. The program has hatched dragons on three different occasions
 - a. There is currently a litter of 9 babies hatched during fall 2010
 - i. "The Denver Zoo is committed to being a leader in captive management and reproduction of this magnificent, endangered giant lizard" says Denver Zoo Curator of Reptiles and Fishes Rick Haeffner
 - v. Designer: Anderson Mason Dale Architects; Denver, Colorado
- d. Articles
 - i. Tragic and costly lesson on Komodo Dragon exhibit design standards– London Zoo 2004
 - 1. http://articles.cnn.com/2004-08-21/world/komodo.death_1_komodo-dragon-london-zoo-enclosure?s=PM:WORLD
 - a. A wall ranging from 7.2 – 8.2 foot in height was not tall enough barrier for a 6.5 foot long female, especially poor considering it was the wall separating two proposed mates
8. Husbandry Regulations and Recommendations
 - a. No regulations or recommendations specifically address Komodos at this time.
9. Enrichment
10. Fun Facts
 - a. Komodo Dragons are immune to their own toxic bacteria
 - b. They will sometimes eat their own young, so smaller lizards tend to roll in fecal matter, thus making the larger ones avoid them.
 - c. They can swallow huge chunks of meat rapidly, due to an unusually wide lower jaw, movable joints, and an intramandibular hinge.
 - d. They can consume up to 80 percent of their own body weight in a single meal because of their expanding stomach.
 - e. They vomit the contents in their stomach if they need to reduce their weight in order to flee quickly.
 - f. They only leave 12 percent of their kill as waste. They will eat the intestines, but will swing them around first to remove the fecal matter.

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