



*Brittany Kay

Mangrove Monitor (*Varanus indicus*)

Brackish Area Monitors

Mangrove monitors are medium sized monitor species that also go by the common names for this including the mangrove goanna, and western pacific monitor. The Mangrove monitor is a relatively moderate to large sized monitor with heavily versatile claws, limbs/digits, tails, and bodies, as with most monitors. Dorsal ground color ranges from blackish, dark brown, olive brown, to occasionally pale bluish with numerous rows of golden-yellowish, whitish, to paler bluish spots and ocelli and a paler yellow to cream colored belly, or ventral surface.

Taxonomy

Life: All living, physical, and animate entities

Domain: Eukaryota

Kingdom: Animalia

Phylum/Sub Phylum: Chordata/Vertebrata

Class: Reptilia

Order: Squamata

Suborder: Lacertilia

Infraorder: Platynota

Family: Varanidae

Genus: Varanus

Species: *Varanus indicus**

**Taxonomy subject to change and revision.*

Lifespan and Longevity

If provided the proper care, Mangrove monitors can attain longevity of at least 15 to 25 years or more in captivity.

Distribution and Habitat

Mangrove monitors inhabit the damp, moist tropical to sub-tropical forests and woodlands near the coastal rivers, mangroves, inland lakes, and other permanent bodies of water within their range. The Mangrove monitor is a very widely distributed monitor species, ranging from northern Australia, New Guinea, and through the Solomon Islands, to the Marshall Islands, Caroline Islands, Mariana Islands, and other island chains within the Pacific region.

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Conservation Status

IUCN Red List Least Concern (LC).

Legal and Regulatory Status(*Subject to Change)

Varanus spp. are CITES Appendix II (Except the species included in Appendix I) as of October 2017. Also consult with your local, municipal, and state ordinances and regulations for any ownership restrictions.

Experience Level Required

Intermediate/Moderate to Advanced.

Size

Hatchling to juvenile mangrove monitors typically range from 8 to 10 inches. As adults, Mangrove monitors will vary in size depending on their species and locality, but most will range within 2 to 4 ½ feet, or 24 to 54 inches.

Housing and Enclosure

Housing must also be sealed and escape proof. Hatchling mangrove monitors can be started out in a 10 to 20 gallon long enclosure, but will soon require larger accommodations. Enclosure size should be increased accordingly depending on the animal's size. If standard glass terrariums with screen tops are used at any point, ensure that adequate humidity and temperatures are maintained using additional steps to retain it. Adult mangrove monitors will require a minimum of a six foot by three foot terrarium or enclosure. Very large, custom designed pens or enclosures are perhaps the most suitable housing for most mid to large sized monitors. As with other monitors, mangrove monitors also powerful diggers, and should also be provided with substrates that enable burrowing and retain humidity well such as chemical and pesticide free potting soil, cypress mulch, orchid bark substrates. Be sure to provide at least 18 to 24 inches of substrate. Monitors in general are very intelligent, alert and perceptive animals, and will require sufficient levels of safety, security, and stimulation and enrichment in order to do well in captivity. Provide a hide box and artificial foliage, driftwood, rocks, slabs, or logs for ample basking and hiding opportunities. A large enough water bowl or dish that they can readily enter and exit from that can work with one's enclosure setup and arrangement is also strongly recommended for maintaining adequate longer term hydration, humidity, and quality of life for these monitors. Water should be changed or filtered regularly at a minimum of every other day to maintain cleanliness and sanitary conditions. Mangrove monitors are primarily a semi-arboreal species, and will climb readily if given the opportunity.

Temperature, Lighting, and Humidity

For lighting and heating, mangrove monitors require higher temperatures, as their biology and natural history indicate being from warmer, more humid Pacific region environments. Maintain ambient temperatures inside the enclosure from 80 to 90 degrees F that can be allowed to drop about 10 degrees F from this at night (ensure that temperatures, daytime or nighttime, do not fall below 70 degrees F for prolonged periods of time). Mangrove monitors will also bask, and require basking temperatures of anywhere from 120 to 130 degrees F. This can be provided through overhead UVA/UVB lighting of appropriate wattage, under tank heating pads (UTHS), ceramic or radiant heat emitters, and/or red bulbs. Temperatures should also be adequately monitored using a reliable thermostat as well. A 10 to 12 hour day/night cycle or photoperiod can also be beneficial. It is also important to always ensure that the animal never comes into direct contact with any heating device or element. Spot clean the enclosure for urates, feces, or uneaten food at least twice per week. Be sure to periodically replace the substrate, clean, and disinfect the enclosure and its furnishings at minimum every 2 to 3 months, particularly water

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bowls and substrates intended for raising humidity levels (such as cypress mulch, sphagnum moss, etc.). More specific lighting, heating, and humidity product suggestions and recommendations that can best suit one's needs, as well as those of one's animals can be given as well.

Feeding, Diet, and Nutrition

Insectivorous to Carnivorous; In the wild, mangrove monitors are primarily carnivorous to insectivorous, and will feed on a wide variety of food including insects and other invertebrates, crustaceans, mollusks, and other invertebrates, as well as many small vertebrates including small mammals, birds, bird and reptile eggs, amphibians, and other smaller reptiles. They will also eat carrion, or dead and decaying plant and animal matter as well.

In captivity, variety is essential to a proper and adequate monitor diet. Mangrove monitors can be fed a variety of feeder insects of appropriate size including crickets, roaches, mealworms, superworms, and waxworms supplemented with vitamin D3 and calcium. Frozen-thawed rodents of appropriate size and raw food items such as turkey, beef, or eggs can also be offered, but sparingly, if at all, as these food items are high in fat and protein for monitors. It is also important to remember not to overfeed any monitors, as they can become very prone to obesity. Feeding schedules can depend on the age, size, and overall health of your monitor, but typically, an appropriate feeding regime for young and hatchling monitors should be two to three times weekly. Most monitors are very alert, intelligent and personable species that can become food aggressive when in the presence of food, and therefore require additional care when handling. More specific dietary and supplementary product suggestions and recommendations that can best suit one's needs, as well as those of one's animals can be given as well.

Handling

Mangrove monitors are a species that may initially be nervous and skittish, particularly imported and wild caught specimens or those that have otherwise been only recently acquired. They may bite, claw, tail whip, defecate, or otherwise attempt to flee or escape from what they perceive to be a potential threat or predator. However, with regular handling, interaction, captive born mangrove monitors can become more tame and personable pets to maintain provided that they are handled and interacted with regularly in a calm and deliberative manner. Any new animal should of course also be allowed to acclimate to its environment and surroundings before handling attempts are made. Overall, each animal is an individual, and these techniques may not be effective for all monitors, but are nonetheless the most commonly utilized.

****Also be sure to practice basic cleanliness and hygiene associated with proper husbandry after touching or handling any animals or animal enclosures to prevent the possibility of contracting salmonellosis or any other zoonotic pathogens****

Contact

Authored by Eric Roscoe. For any additional questions, comments, and/or concerns regarding this animal, group of animals, or this care sheet, please email and contact the Madison Area Herpetological Society at info@madisonherps.org

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