*Aaron Bourque

Nile and Ornate Monitors *(Varanus niloticus)*

Versatility from the Nile

Nile monitors, and their similar conspecific, which were formerly considered a subspecies, the Ornate monitor, are large species of varanids, and are among the largest lizards in Africa. As with most monitors, Nile monitors are highly versatile animals that use their strong claws, limbs, and tails for digging, swimming, and climbing. The Nile monitor is a large to very large, moderately to heavily built monitor species that can vary in color and pattern, ranging from blackish, to olive-green, brownish-green, grayish-brown, or dirty yellowish in ground color with a series of lighter colored, whitish to yellowish dorsal bands, spots, flecks, or ocelli, and with lighter banding extending onto the broad, dorso-laterally flattened tails. The underside, and throat are paler yellow, to cream-whitish in color with fainter barring or markings. The head and neck are very elongated, and "snake-like", and can also be characterized by lighter colored "V-shaped" markings on the head, throat, and neck as well, while the jaws and underside have lighter and darker barring.

Nile monitors are a widely distributed species which can be found over most of sub-Saharan Africa, except perhaps the most arid regions of northern and southwestern Africa, although this species does follow the Nile River north to Egypt. Within this broad range, Nile and ornate monitors are quite versatile, and can occupy a wide variety of habitats and environments. They may occur in tropical to sub-tropical forests and woodlands, drier scrub forests and other open forests, savannahs and grasslands, scrublands to semi-deserts, agricultural and suburban areas, and evergreen forests, to swamplands, mangrove stands and other wetlands.

While Nile monitors are inexpensive and readily available in herpetoculture and the pet industry, they are perhaps one of the least suitable pet "large" monitor, or lizard species for all but the most experienced and dedicated keepers and enthusiasts. They are very intelligent, keen, and perceptive animals, and are certainly only for those reptile keepers willing to only provide this large species not only the respect they deserve, but very large, terrestrial enclosures with ample opportunities to dig and burrow and with ample access to water, heat, and UVB lighting. Nile monitors can be both very rewarding and challenging animals to keep, and certainly are not for everyone as a result.

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
Subgenus: Polydaedalus
Species: *Varanus niloticus**
**Taxonomy subject to change and revision.*

Lifespan and Longevity

If provided the proper care, Nile and Ornate monitors can attain longevity of 15 to 25 years or more.

Distribution and Habitat

The Nile and Ornate monitors are large, versatile, terrestrial to semi-terrestrial species of monitors widely distributed and indigenous to most of sub-Saharan Africa, except perhaps the most arid regions of northern and southwestern Africa, although this species does follow the Nile River north to Egypt. Within this broad range, Nile and ornate monitors are quite versatile, and can occupy a wide variety of habitats and environments. They may occur in tropical to sub-tropical forests and woodlands, drier scrub forests and other open forests, savannahs and grasslands, scrublands to semi-deserts, agricultural and suburban areas, and evergreen forests, to swamplands, mangrove stands and other wetlands. They are often found near temporary to permanent bodies of water as well, especially canals, lakes, ponds, rivers and streams, and other temporary or permanent pools of water, and are terrestrial and semi-aquatic, and well adapted for swimming, climbing, and burrowing whenever the opportunity or need arises.

Origin/History

Varanus niloticus (Linnaeus, 1758).

Nile monitors have been kept and imported in the pet trade for many decades, as far back as at least the 1960's and 1970's, where importation still occurs to this day. During the 1980's and 90's, and to a lesser extent to this day, hatchling Nile monitors unfortunately became readily available in pet stores and expos, where their initially small sizes and inexpensive prices made them attractive yet largely unsuitable pet reptile choices for most new or beginning reptile keepers and pet owners that would purchase them. The Nile monitor had also become a destructive and unwanted invasive species in Florida, where it was estimated to have been first detected in the southwest region of Cape Coral, Lee County, Florida in 1990.

Experience Level Required

Advanced.

Size

Nile and ornate monitors begin and range in size from about 7 to 12 inches as hatchlings, but will quickly grow. As adults, these monitors reach and average between 4 ½ to 6 ½ feet, or about 54 to 78 inches as adults. **Consider the potential size and space requirements of a Nile or**

Ornate Monitor prior to obtaining one.

Housing and Enclosure

Enclosure System: Primarily Terrestrial. Housing must also be sealed and escape proof. Hatchling Nile and ornate 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 Nile and ornate monitors will require a minimum of a six to eight foot by three foot terrarium or enclosure or larger. Very large, custom designed pens or enclosures are perhaps the most suitable housing for most mid to large sized monitors. As with other monitors, Nile and ornate 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. Nile and ornate monitors are primarily a terrestrial species, but will climb readily if given the opportunity.

Temperature, Lighting, and Humidity

For basking, create a thermal gradient (or a warm side) in the cage/enclosure with an appropriate sized under tank heating pad, ceramic, or radiant heat emitter. In general, the preferred ambient temperatures within the enclosure should be within the mid 70's to 80's to even 90's. Basking and warm side temperatures can be allowed to reach up to 120 to 150 degrees F on the warm, basking side. Nile and Ornate monitors also require overhead UVA, UVB incandescent and fluorescent lighting using the appropriate wattage bulbs or other heating elements. 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. 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. Most monitors are able to tolerate a wide gradient of overall relative humidity levels within their enclosures ranging from lows within the 30 to 50% range, to highs as much as 70 to 75% or more, through means of providing them with the correct and suitable substrates, as well as other humid hides and retreats. These husbandry components are perhaps the best ways of ensuring the proper humidity levels for your monitors in captivity.

Feeding, Diet, and Nutrition

Insectivorous to Carnivorous; In the wild, Nile and ornate 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. Nile and ornate 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

Nile monitors are a species that may initially be nervous and skittish, particularly newly acclimated 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, Nile monitors can become more acclimated to their surroundings provided that they are handled and interacted with regularly in a calm and deliberative manner. Nile monitors in particular, are a species with a notoriously poor reputation for their overall temperament and handleability, although with time and patience, even some Nile monitors can become relatively tame, although most of the time, this is an exception rather than the rule.

Most monitors are very different than many other reptiles in terms of their intelligence and perception, and each individual animal may differ in their temperament or personality. Some will come to acclimate with humans and being handled within a matter of a few months, while others may take many years. Two different trains of thought are out there when it comes to handling or "taming" one's monitors. The first is to handle and interact with them daily until they become used to or acclimated to handling. This method sometimes works, and sometimes does not, and depends on the individual animal and one's circumstances. This can also lead to the opposite desired effect, and make an animal further stressed. The other method, or train of thought is to simply leave them alone, and an added or increased trust among one's monitor may come over time with regular cage and enclosure cleaning, maintenance, or other routine duties. Over time, slow steps may be taken to continue to gain trust with, and eventually become able to handle and interact with them. With this second train of thought, many monitors will become more bold and curious, and interactive naturally on their own than if they are forced out of their hiding places or other areas in order to be handled. Moving slowly and deliberately is always better to help make the animal feel secure, rather than fast, rapid, or jerky movements.

Always keep in mind with regards to the second method, however, that large monitors especially, can still be potentially dangerous, or can be capable of delivering serious bites or scratches, and so some proper precautions when it comes to handling and interacting with them are always recommended. Even animals that can normally be considered "tame" can unexpectedly become threatened, or if one's hands and arms smell like their normal food. 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

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