Hingeback Tortoises *(Kinixys sp.)*

Tortoises with an Extra Hinge

Hingeback tortoises are medium to large sized omnivorous species of tortoises with a shell and skin color of light to dark brown, grayish brown, to blackish, sometimes with yellowish orange scutes on the carapace. The most distinctive diagnostic feature of these tortoises are their hinged posterior thirds of their bodies and elongated shells. As with several other species of turtles and tortoises, the purpose of this hinged shell configuration is primarily for defense; when these tortoises are threatened by a potential predator, they are able to close and withdraw their heads, limbs, and tail into their shell for protection. Six species of hingeback tortoises are currently recognized, with commonly seen and available species in the pet trade, many of which may still be imported, including the Home's Hingeback tortoise (*Kinixys homeana*) and Bell's Hingeback tortoise (*Kinixys belliana*). As with many tortoises, they are also most active during the dawn and dusk hours, and remain hidden and less active during the peak of the day. These tortoises, if given the proper care, and live for 20 to 40 years or more and require long term care and commitment, as with many turtle and tortoise species.

Taxonomy

Life: All living, physical, and animate entities
Domain: Eukaryota
Kingdom: Animalia
Phylum/Sub Phylum: Chordata/Vertebrata
Class: Reptilia
Order: Testudines
Suborder: Cryptodira
Superfamily: Testudinoidea
Family: Testudinidae
Genus: Kinixys
Species: *Kinixys sp.**
**Taxonomy subject to change and revision.*

Lifespan and Longevity

Hingeback tortoises, if given the proper care, can live for 20 to 40 years or more and require long term care and commitment.

Distribution and Habitat

Hingeback tortoises are medium sized to large tortoise species indigenous to much of the tropical to sub-tropical forests, savannahs, and woodlands of sub Saharan Africa depending on species.

Conservation Status
Conservation status dependent upon the species. Some species are IUCN Least Concern (LC). Some are IUCN Near Threatened (NT), or Vulnerable (VU). Some Not Evaluated for the IUCN Red List (NE) or otherwise Data Deficient (DD).

Experience Level Required
Intermediate/Moderate to Advanced.

Size
Adult hingeback tortoises are small to medium sized tortoise species typically ranging from 6 to 12 inches in carapace, or upper shell length depending on the species, age, and gender, as well as locality.

Housing and Enclosure
Provide a secure and escape proof enclosure. If housed indoors, a minimum of a 6 foot by 4 foot pen, tortoise table, or other enclosure should be used. Substrates that enable burrowing such as a mix of fine aspen chips, organic bark, or coconut fiber substrates are acceptable substrates to use for these mid-sized tortoises. Outdoor pens can work during the warmer months in temperate to sub-tropical climates, and can provide ample access to natural sunlight. Outdoor pens must have a perimeter at least 8 to 9" deep and at least 12" high. Be sure the enclosure is adequately sealed to prevent access by outdoor predators. Although they derive much of their water from their food, it is best to provide a shallow water dish or pan within the enclosure, which should be changed every several days or if fouled. Soaking your tortoise at least weekly in lukewarm water can also serve as added hydration. Providing sufficient artificially heated hide boxes for these shy tortoises if housed in either indoor or outdoor enclosures can provide for added safety and security for these tortoises.

Temperature, Lighting, and Humidity
Providing the correct amounts of UVA/UVB overhead incandescent and florescent lighting, and calcium-to-phosphorus ratios is essential for ensuring the health and overall well-being of hingeback tortoises in captivity. Without UVA/UVB, or adequate amounts of it, they can be susceptible to the abnormal bone and shell growth and development known as Metabolic Bone Disease (MBD), and other health and development maladies. Pyramiding of the scutes and shell can also occur due to poor or improper diet, lighting, or heating. Always be sure to 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. These tortoises require a thermal gradient using a ceramic or radiant heat emitter, UTH (or under tank heating pad), and UVA/UVB overhead lighting. Ambient temperatures should be within 70 to 90 degrees F and the basking area from 80 to 85 degrees F. UVA/UVB lighting is not as essential for these tortoises as many other species, but can still further promote optimal health and well-being of these tortoises. Also be sure to maintain a light cycle of 12 to 14 hours per day and monitor temperatures with a quality thermostat. If kept outside, move inside if daily temperatures drop below 70 degrees, and below the 50's at night. Spot clean the enclosure for urates, feces, or uneaten food at least twice per week, and 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.

Feeding, Diet, and Nutrition

Herbivorous to Omnivorous; In the wild, hingeback tortoises tend to be more omnivorous than most other tortoise species. They will graze or feed on various fruit, vegetable, and other plant material, as well as consume insects, earthworms, slugs, other invertebrates, and even small rodents and carrion, or dead animal matter on occasion.

In captivity, providing a varied diet is important. Hingeback tortoises tend to be herbivorous to omnivorous, and can be given a variety of prey or food items including feeder insects of appropriate size, including crickets, roaches, mealworms, waxworms, superworms, or other insects. Gut load feeder insects and supplement these turtle's diets with calcium and vitamin D3 at least two to three times weekly for their optimal health and well-being. Some commercially available aquatic turtle, veggie, or omnivore mix diets can also be given. Other food items that can be used can include small feeder fish of appropriate nutritional value, redworms and earthworms, freeze-dried shrimp or krill, berries, and greens, fruits, and vegetables. Many of these are available in your local grocer's market, and can include turnip, mustard, and collard greens, bananas, tomatoes, watermelon, and several others. Additional books, websites, and other resources are also available that further detail foods that are suitable and unsuitable for these turtles. Small, frozen-thawed rodents can also occasionally be given, but any foods or diets high in fat or proteins should be done sparingly, if at all. Do not overfeed these turtles as well, as obesity and other health related concerns can result. Providing supplementation in their diets at least two to three times weekly is recommended. 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

Most small to mid-sized turtle and tortoise species that are not aggressive or prone to biting can be picked up and handled either by placing both hands along both sides of the shell, or from the rear of the carapace with the thumb on the carapace and index through pinky fingers on the plastron to reduce the chances of being kicked, scratched, or nipped when they are threatened. Although most species of chelonians are not outwardly aggressive, defensive, or dangerous, they can become stressed as a result of over-handling, however, and some species, and even individual animals can be shyer than others. These are some considerations to keep in mind when handling any chelonian species.
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

Disclaimer: Note that the information provided in these, or any care sheets, are not intended to be all-exhaustive, and further research and care should always be sought and provided when it comes to any species one may prospectively be interested in. These care sheets are also not intended to serve as substitutes for professional veterinary medical care and husbandry should any animal require it. Always seek proper and professional veterinary care for any animal should the need arise, and be prepared ahead of time for any and all husbandry costs and expenses that may occur with any animal beyond the initial purchase. Any animal owned is ultimately a matter of personal/individual care and responsibility.