



*Russ Gurley

Diamondback Terrapin (*Malaclemys terrapin*)

Brackish Water Residents of the East

Diamondback terrapins are unique, semi-aquatic turtles (or terrapins) which can vary greatly in color and pattern, and can have gray, brownish, or blackish carapaces with intricate ornate or diamond patterns on each scute. Skin color can range from grayish, brown, to whitish with black mottling, dots, streaks, and stripes. Diamondback terrapins are even more unique among chelonians in that in their indigenous ranges, tolerate, and can be found in brackish wetlands and other water bodies water (which contains a mixture of fresh and salt water). Unlike other chelonians, diamondback terrapins possess several unique features and adaptations for living in saline and brackish environments. These include having a largely impermeable to salt shell and skin, as well as lachrymal salt glands to reduce dehydration. They can furthermore distinguish between fresh and saline waters as well. As with many other emydid turtles, diamondback terrapins can also be frequent baskers, and may often be seen basking during warm or sunny conditions on or along river or stream banks, submerged rocks, locks, or other debris, where they will usually quickly dive into the water if disturbed or approached too closely. These turtles also have large and powerful jaws used for crushing and consuming hard shelled crustaceans, mollusks, and other invertebrates they can locate. Over most of its range in the United States, diamondback terrapins have become threatened or endangered due to coastal development, as well as over-collection for the pet trade, human cuisine, and other factors such as nest and adult predation, all leading to significant declines in their overall numbers.

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: Emydidae

Subfamily: Deirochelyinae

Genus: *Malaclemys*

Species: *Malaclemys terrapin**

*Taxonomy subject to change and revision.

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Lifespan and Longevity

With the correct captive care and conditions, diamondback terrapins can reach longevity of 30 to 40 years, or more.

Distribution and Habitat

Diamondback terrapins are relatively small to medium sized turtles found in coastal and brackish water regions of the eastern, northeastern, and southern United States.

Conservation Status

IUCN Red List Lower Risk/Near Threatened (LR/NT).

Experience Level Required

Intermediate/Moderate.

Size

Adult Diamondback terrapins usually reach a carapace, or upper shell length of 5 ½ to 9 inches, with females being larger than males.

Housing and Enclosure

Diamondback terrapins are semi aquatic turtle species. Provide a sturdy, escape proof aquarium or commercially available plastic or galvanized stock tank or turtle tub of sufficient size with an elevated dock or basking area/access to dry land using a substrate dam. The latter are perhaps preferred for maintaining aquatic to semi-aquatic turtles in, as they are easier to clean, move/transport, and maintain than aquariums. Provide a minimum of 10 gallons of space per inch of shell, or about 50 to 90 gallons for most adult diamondback terrapins. A general rule of thumb to follow for most aquatic to semi-aquatic turtles is to provide water that is at least 1 ½ to 2 times the turtle's height in depth to allow for complete submersion, and at least two to three times the carapace length for adequate swimming and movement. A powerful water filter rated at least twice that of the amount of water in the enclosure is highly recommended for aquatic turtles, as they are messy and require frequent cleaning and regular water changes. Use a submersible water heater with a guard to maintain water temperatures of 75 to 85 degrees F. Substrate is optional, and foregoing it makes for easier cleaning and maintenance, but small to medium sized gravel can be used. Additional rocks, logs, live or artificial foliage can also be provided for additional foraging, basking, and hiding opportunities.

Temperature, Lighting, and Humidity

Water salinity should also be considered when housing diamondback terrapins. Captive bred and born terrapins can usually be maintained normally in freshwater with very few to no issues. Wild caught specimens do need to be maintained at the correct balance of salinity, otherwise this species can become susceptible to shell rot and other husbandry related disorders. Some may choose to maintain captive born animals in brackish setups as well, in which case PH should be monitored in between 6.8 and 7.0. 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 diamondback terrapins 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 turtles require a thermal

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gradient using a ceramic or radiant heat emitter, UTH (or under tank heating pad), and UVA/UVB overhead lighting. Provide a warm, or basking area of 85 to 92 degrees F, and cooler, ambient and water temperatures of 70 to 80 degrees F. 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

Primarily Omnivorous to Carnivorous; In the wild, diamondback terrapins are primarily omnivorous to carnivorous, feeding on aquatic to semi-aquatic insects, crustaceans, mollusks, and other invertebrates, as well as smaller vertebrates including small fish, amphibians, and carrion, or dead and decaying plant and animal material. Some algae and other aquatic plants may also be consumed. In captivity, variety is important with most aquatic to semi-aquatic turtle's diets. Diamondback terrapins can be given feeder insects of appropriate size including crickets, roaches, mealworms, waxworms, superworms, or other invertebrates. They can also eat small, frozen-thawed rodents of appropriate size, but offer these sparingly, if at all. Other food items that will be accepted by these turtles can include many of the commercially available aquatic to semi-aquatic turtle or omnivore mix diets, small feeder fish of appropriate nutritional value, earthworms, redworms, freeze dried shrimp or krill, or some other meats. Dog and cat foods can also be used, but use these sparingly, if at all as well. They can also be fed some chopped greens, fruits, and vegetable material as well. Gutloading any feeder insects and providing additional calcium and vitamin D3 is essential for these turtle's optimal health and well-being. Without proper supplementation, they are susceptible to Metabolic Bone Disease, pyramiding of the shell, and other abnormal bone, growth, and health maladies. Feeding frequency will depend on the age, size, and overall health of your turtle, but typically in most cases should be twice to three times weekly. Do not overfeed them, though as obesity and other health related issues can become a concern. 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

Captive born and raised diamondback terrapins can become very tame and personable pets, often even approaching their keepers for food. 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

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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.

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