



Diamondback Terrapin (*Malaclemys terrapin*)

Still recovering, the diamondback terrapin was nearly eaten into extinction by the early 1900's. Considered a gourmet delicacy and prestigious to serve, this tasty turtle was the main ingredient in terrapin soup or stew. To make matters worse, at nearly three times the size of males and said to yield a superior

stew, females were in even greater demand. In Maryland, the only state that kept records, terrapin harvests peaked in 1891 when 58,000 females were captured. By 1900, that dropped to a mere 1400. Higher prices followed as did hard economic times (The Great Depression), but oddly enough Prohibition saved the Diamondback. Sherry was a must-have ingredient for the stew and without it, the dish was all but forgotten. After more than 70 years the Diamondback has not made a significant recovery. Although hunting is prohibited, their comeback has faced other obstacles including intense coastal development, loss of nesting habitat and predation, especially of eggs. To this day, a significant number of Diamondback Terrapins become roadkill, are injured or killed by boat propellers, or drown in commercial or abandoned crab traps.

The Diamondback Terrapin is the only living turtle species of approximately 270 worldwide that can exclusively live in brackish water, including the coastal marshes of the New York /New Jersey Harbor Estuary. The population is small and scattered throughout the turtle's range which covers the thin strip of coastal estuaries and salt marshes from New England to Florida and Texas. Local mating grounds for these turtles includes the dunes, sandy beaches and shrub-lands of Jamaica Bay and Sandy Hook. Mating season in our region lasts from early May to late July. During this time, the terrapins frequently cross roadways to get from their salt marsh habitat to their sandy beach nesting areas. Many wind up as road-kill. Throughout the Estuary, they tend to gravitate to deserted, quiet areas with reeds or grasses to hide in. They spend most of their time in water, coming onto land primarily to bask in the sun or lay eggs. Even though these terrapins spend most of their time in brackish water, they do need fresh water to drink. In winter they hibernate buried in the mud along creek banks or they sink to the bottom of marsh creeks where they remain inactive.

The Diamondback Terrapin's shell is covered with plates called scutes. The grooves, rings or ridges on the scutes form a concentric patterned diamond shape which, more than likely, earned this turtle its common name. Individual scutes peel off like fingernails as the shell grows underneath. Coloring on their carapace (top shell) and skin varies far more than other turtle species, ranging from a light brown, to gray or black on the carapace with head, neck, and limbs in shades of light gray with black markings that look like small specks, spots, dots, stripes, or lines. The plastron (bottom shell) is usually yellowish to olive in color.

The Diamondback Terrapin is sexually dimorphic, meaning that the male and female may vary in color, size, or some other trait. Males grow to be about 5 inches in size and become sexually mature around the age of 3. The females grow to be much larger, up to 9 inches and become sexually mature around the age of 6. The females can lay 4-18 eggs at one time in the sand above the high tide line. The eggs will hatch approximately 90 days later. The gender of a baby terrapin is determined not by chromosomes but by the temperature in which the eggs are incubated. Higher temperatures yield females. Predation of nests by raccoons, skunks and foxes is common. Raccoons especially have adapted well to urban areas and their appetite for terrapin eggs takes its toll. In Jamaica Bay National Wildlife Refuge predation of terrapin nests by raccoons rose from 7% in the 1980's to over 92% in the late 90's. Raccoons will also attack and kill adults.

Both New York and New Jersey have programs to prevent terrapin mortality. In New Jersey barrier fences have been installed along coastal highways. New Jersey also has passed legislation requiring the use of turtle extruders on commercial crab traps. Both states have volunteer programs to protect nesting sites and require licenses on taking turtles in the wild. Strict regulations apply in both states. In New Jersey the terrapin is listed as a "Species of Special Concern."



This entry was researched and written by Claire Antonucci, Rosemary Higgins and Cathy Yuhas of the New Jersey Marine Sciences Consortium/New Jersey Sea Grant Extension Program. It is part of a larger project, "The Key Species of New York/New Jersey Harbor Estuary" produced with funding from the New York/New Jersey Harbor Estuary Program.