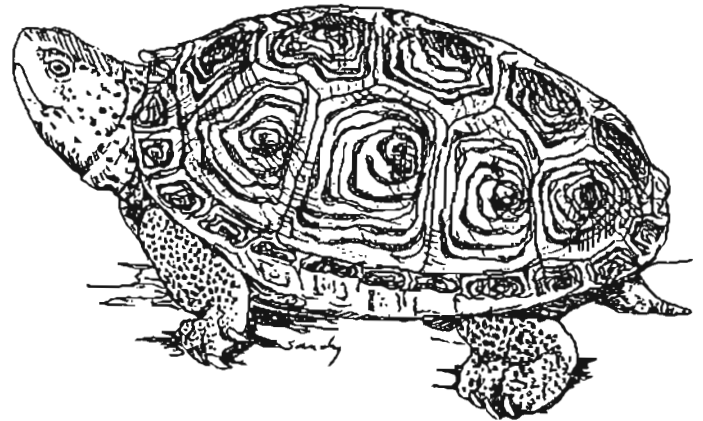


Early faunal accounts of the Chesapeake Bay indicate that the Diamond-back Terrapin (*Malaclemys terrapin*), the present-day mascot of the University of Maryland, was an abundant species in tidal creeks and salt marshes. Easy to capture, the turtles were a staple in the diets of colonial Marylanders. Eventually, an important Diamond-back fishery based largely on the gourmet dish of terrapin stew developed along the mid-Atlantic Coast and grew steadily throughout the 19th century, peaking in the late 1800's and early 1900's.

At the height of its popularity, terrapin stew was considered a status symbol among members of the upper class. The prices paid for Diamond-backs, for instance, \$90 per dozen in 1920, reflected the stew's appeal as a luxury item. As the demand for the soup increased, terrapin populations diminished drastically despite the emergence of commercial terrapin farms and the efforts of coastal states to regulate turtle harvests. In the Bay itself, turtle takes dropped from 89,150 lbs. in 1891 to 823 lbs. in 1920.

Further blows to the industry came when the stock market crashed in 1929 and the 18th Amendment (establishing prohibition) was ratified. The effect of the market crash is obvious but what did prohibition have to do with turtle stew? Quite a bit, as it turns out, for certain liquors were required for the proper preparation of a first-class stew! The combination of these factors sent the turtle trade into a tail spin from which it has never recovered.

The terrapin's shallow and salty choice of habitat is unique among eastern turtles. Any turtle found in these areas sporting a series of raised concentric humps along its upper shell (carapace) is most certainly a member of this species. Diamond-backs are omnivorous, feeding on mollusks, crustaceans, worms, carrion and marsh plants. The pronounced sexual dimorphism in this species, females being considerably larger than males (carapace lengths average 7.5 and 5 inches, respectively), is greater than that of any other North American turtle.



*Diamond-back Terrapin*

A terrapin's life begins as an egg in a nest, dug by a female in a sandy dune, beyond the reach of the highest tides. Hatching in the late summer or early fall, the young turtle seeks cover from predators by day under the nearest vegetation. At nightfall, it makes its way to the closest body of water.

Terrapin eggs and young are prey for the usual cast of characters: raccoons, scavenging and wading birds, and rodents. One Diamond-back "predator," however, is highly unusual. A grass whose shoots often provide the young turtles with valuable cover has been found to "steal" nutrients from terrapin eggs. The roots of Dune Grass (*Ammophila breviligulata*) form abnormally dense mats around terrapin nests and have been found to absorb nutrients that leach out of the eggs. Whether the leaching is natural or somehow stimulated by the plant is not known. When the eggs hatch, the turtles often perish because they cannot dig through the heavy tangle of roots.

Hatchlings that survive the onslaught of predators search out suitable hideaways and enter into a state of hibernation that lasts until spring.

(Continued on next page)

## TERRAPIN (Continued)

Little else is known about the lives of the immature turtles. Adult turtles also hibernate during the coldest winter months, usually bedding down in the muddy bottoms and banks of tidal creeks.

Mature terrapins (they mature in 7 to 13 years) emerge from hibernation in the early spring and commence with mating. Though actual copulation takes only about 3 minutes, one mating is sufficient to fertilize a female's eggs for up to four years. A female may lay as many as five clutches of eggs over the course of a summer with each one containing an average of 10-12 eggs.

Today, few fishermen consider the terrapin a primary commercial target, though they often capture them in seines and traps while fishing for other species. The small present-day market for terrapins is certainly a major reason why the Diamond-back no longer rates as a highly desirable commercial species. The existing market can be broken down into two major factions: Amerasians and exclusive restaurants. The former faction is largely based in the oriental communities of San Francisco and New York City. The latter segment of the market is smaller and reflects the fact that some still consider terrapin stew an elite gourmet delight.

Though the fishery is currently small, the potential for its regrowth still exists. Oriental markets in the United States are growing and new ones are opening overseas. What will happen to terrapin populations if these and other unforeseen markets renew the importance of the fishery in the Chesapeake region? At this point, no one can answer this question because little is known about the population dynamics of this species.

The lack of knowledge in this area has prompted administrative actions in the bay states of Maryland and Virginia. The Maryland Department of Natural Resources recently initiated a study of Chesapeake terrapin populations that may eventually shed some light on this problem. Virginia may go one step further by designating the terrapin a species of special concern which would eliminate the possibility of a Diamond-back fishery developing in state waters. (Under this proposal, watermen would not be penalized for accidentally capturing the turtles in their crab pots.)

It is highly commendable that these states are showing concern for a species while it is still common along some areas of their coastlines. Usually it is not until a species is on the verge of extinction that any action is taken. In this case, the terrapin was nearly fished out of existence in an earlier part of this Century and neither state wants it to happen again.

Unfortunately, the threat of a rejuvenated fishery is not the only problem confronting the terrapin. Like those of other beach-nesting species, Diamondback nests are being destroyed by dune buggies and predators; the latter being increasingly attracted to beaches by human litter. Dune stabilization projects are compromising turtle nesting success by increasing the prevalence of Dune Grass in nesting areas. Crab pots claim the lives of many terrapins, mostly males, that enter the traps to feed on the bait and drown when they cannot escape.

Protecting the terrapin from commercial fishing is not all that will be necessary to insure that healthy turtle populations continue to exist in the waters of Maryland and Virginia. These other problems must be nipped in the bud before they escalate and spell trouble for the Diamondback. It would be a shame to lose a species that has played such an important part in the history of the Chesapeake region.