

DIAMONDBACK TERRAPIN EXPLOITATION

By Steven D. Garber

Until recently it had been over 150 years since the last verified accounts of diamondback terrapins in the New York City vicinity. Once numerous in local estuaries and salt marshes, a number of factors contributed to their decline. Being the best-tasting turtle in the world, exploitation exceeded reproductive capacity, and they became rare. Also many marshes were "re-claimed" to make them economically "more productive." At the same time estuaries became the resting place for pesticides, herbicides, and other toxic wastes and pollutants dumped upstream, or washed in by runoff. Rivers and bays have traditionally been viewed as inexpensive, convenient repositories for wastes with little regard to longterm effects. Authorities have felt that such disposal was to the benefit of all—being simple, efficient, clean, and cheap. Sewage treatment plants have helped alleviate some of the problems, but not all.

Although environmental issues are now near the top of the public's list of priorities, it seems that species that have been rare for longer than most people can remember have fallen into a special category: They are considered lost causes—not worth worrying about.

While efforts to save endangered sea turtles are having some success, and the taste for turtle meat is all but gone from the American palate, it is disturbing to see turtles back in the markets. No doubt it will be surprising for most people to learn that in Philadelphia and New York City the demand far exceeds the supply. Philadelphians have always enjoyed snapping turtle soup, and although the market has shrunk, many restaurants, especially the older, more expensive ones, still move much of the soup.

In New York City, few snappers are consumed, but they are sold here and are served in some restaurants, particularly in Chinatown. Except for frogs' legs on occasion, Americans generally do not eat amphibians or reptiles. A walk through Chinatown, however, reveals thousands of live frogs and turtles for sale, not in pet shops, but in fish markets. The turtles include diamondback terrapins, red-ears, softshells, snappers, yellow-bellies, map turtles, and Chinese box turtles. Of these, diamondbacks are the most common, which was unexpected considering their rarity as well as the laws protecting them in many states. In New York, where they were protected under the state's Endangered Species Act as Threatened, their legal status has been moved to a species of Special Concern, which does not carry much legal weight. The primary objective of this status is to get the public's attention. The Nature Conservancy doesn't mention the diamondback terrapin in its listing for New York State; from this one may infer that its future is secure.

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In this article I intend to show that for the diamondback terrapin the situation is considerably more dire than most realize.

The Chinese, more than most ethnic groups, have kept true to their palate and have found North American equivalents to replace the various Asian species of mollusks, crustaceans, fish, frogs, and turtles that make up a significant part of their traditional diet. The diamondback has replaced the unavailable Asian turtles which do not taste nearly as good. Since diamondbacks are preferred, Chinatown has become the last stop for thousands each year. Many restaurants serve diamondback dishes and soup, but none are listed on the English menu. Turtle is always in Chinese to evade legal problems. Soup for two can cost about \$45.00. The demand brings a steady flow of terrapins through the Fulton Fish Market where buyers from fish markets throughout the tri-state area make their purchases each morning.

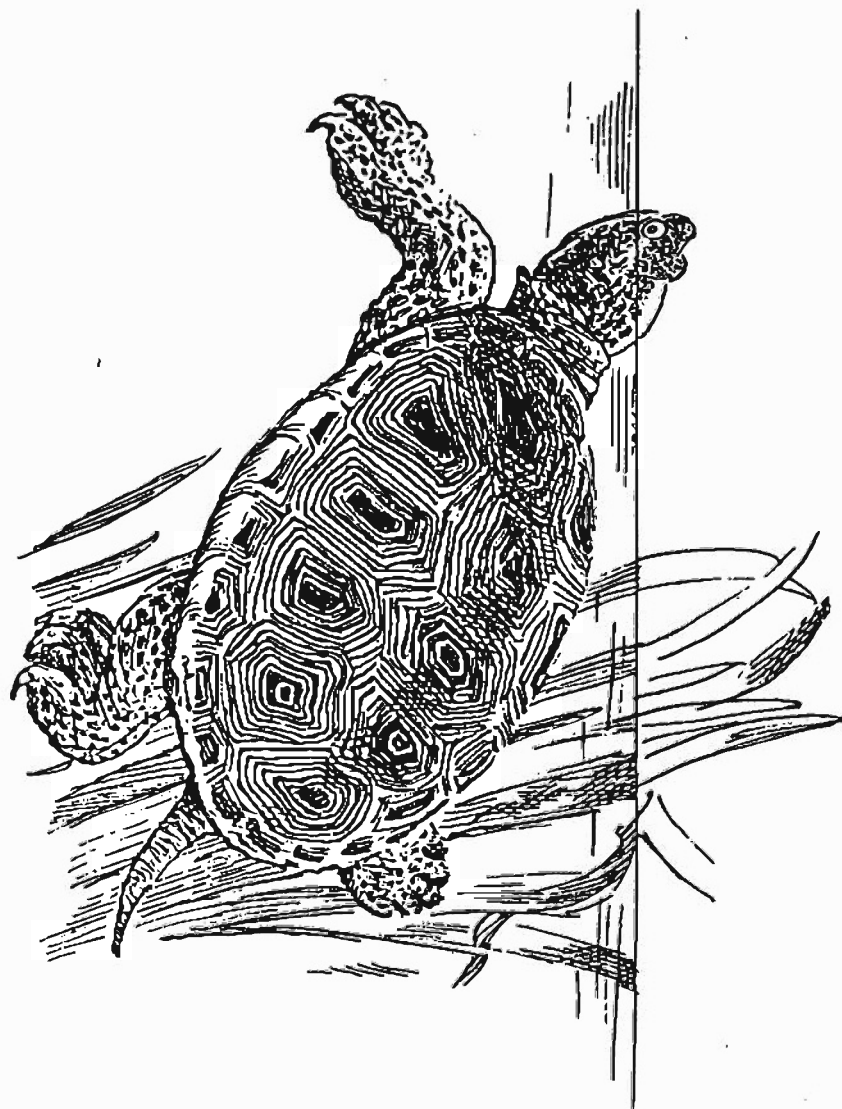
Wholesale vendors at the Market who carry diamondbacks agree that the turtles are not nearly as abundant or easy to acquire as before. Vendors all say the market will absorb as many diamondbacks as they can purchase. One vendor estimated he sold 2,000 last year. Another, Otto Raddatz, thought he had sold about 3,000, and said he could sell as many as 1,000 a week when they are in season. The larger diamondbacks wholesale for \$5.00 to \$10.00 and up. When sold by weight they retail for \$4.00 to \$5.00 a pound. Prices go up to \$20.00 for the large females.

Raddatz said a fish market in the Bronx will buy as many diamondbacks as he can deliver, but only the smaller, inexpensive ones, for which he receives about \$1.50 to \$2.50 apiece. These small turtles would normally have been thrown back, but now turtles too small for cooking are being sold as pets. While it was illegal to sell turtles in pet shops in New York City prior to June of 1987, this had been circumvented by selling the smaller animals as pets in fish markets. Since New York modified the regulations, turtles are again being sold in pet shops, so diamondbacks are now being sold through both outlets. This has been overlooked or tolerated by the New York State Department of Environmental Conservation (DEC) which coordinates law enforcement citywide for all matters related to endangered species.

To cater to the growing demand, baymen are trapping more turtles. The increasing popularity of crabs has also contributed to the overall problem, since turtles are caught in crab traps as well. When the overharvesting of crabs caused a decline in catches, prices rose, as happened with clams, oysters, and lobsters. In response, baymen set more crab traps, many of which have a new, more efficient design. These traps—formerly used only in the deep South—are baited and placed on mud flats where crabs and turtles feed. Unlike crabs, turtles must surface for air. When the traps are submerged at high tide, many turtles drown. Dead turtles are discarded or used as bait, and live ones are sold.

Diamondback Terrapin, *Malaclemys terrapin*

Drawing by Jerome Lo



A simple modification of the trap could eliminate the drowning. By attaching floats, the traps would rise to the surface when the tide comes in. But few baymen are willing to convert their traps without an economic incentive, unless forced; fishermen are notorious for fighting anything that conflicts with their freedom.

Most of the diamondbacks at the Fulton Fish Market are from the Carolinas, Virginia, Maryland, and southern New Jersey. Some are caught on the south shore of Long Island. Many caught in Jamaica Bay are sold in fish markets in Queens and Brooklyn. A conservative estimate is that over 10,000 diamondbacks are sold in the city each summer.

Because it is illegal to sell diamondbacks from many localities, vendors tend to be hesitant about answering questions, and very often keep their terrapins hidden from view. In Chinatown the situation is not much different. Between the language barrier and the fear of DEC officers inquiring about the possession of illegal species, there is a healthy amount of paranoia that one must deal with when asking questions. In addition organized crime plays a noteworthy role in the dynamics at the Fulton Fish Market and in Chinatown, which does not make matters any easier.

Luckily there are some factors that work in the diamondbacks' favor. With national and state parks, and wildlife refuges protecting specific coastal areas, some terrapin habitat is located where laws restricting fishing and hunting are enforced. Two such areas are Fire Island National Seashore and Gateway National Recreation Area. Diamondbacks have recently been found in both parks.

In New York, diamondbacks have been found in Pelham Bay Park, Alley Pond Park, and the Jamaica Bay Wildlife Refuge. The rediscovery of an economically important, threatened species in parks in the middle of New York City provides a research opportunity that could lead to an effective, practical, long-term management program.

The Jamaica Bay population is thought by fishermen to be derived from turtles that survived there undetected for over 150 years. However, it is possible they may be the result of the release of some of the turtles that were trucked in from the South for sale in fish markets. Or they might be a hybrid of natives and imports. It is also possible they were descendants of emigrants from a nearby population. A better understanding of taxonomic characters and biochemical systematics may reveal the geographic origin and genetic background of specific populations.

In New York diamondbacks are increasing after over a century of rarity. Concurrently, an unregulated market is absorbing more turtles than the popula-

tions can bear. We know from past experience that the laws allowing limited harvests were insufficient to stem the species' decline. Loopholes and inadequate enforcement render useless laws meant to protect diamondbacks.

It is unfortunate that the Department of Environmental Conservation is insufficiently staffed to enforce a majority of those laws under its jurisdiction, ranging from the illegal use of certain fish nets to overseeing the bottle deposit law. Nor do officers receive the necessary training needed to enforce laws meant to protect the many species illegally bought and sold in the city.

If diamondback terrapins are ever going to make a comeback, it will not be with inadequate law enforcement and the baymen's unrestricted right to drown thousands while shipping the rest off to market. Before anyone's livelihood depends too heavily on the diamondback terrapin, this species should be protected across the board. We need a total ban on the capture of diamondback terrapins. Crab traps which have not been modified to eliminate total submergence should be confiscated, and stiff penalties should be exacted for anyone found with improper traps or turtles in their possession. It is imperative that we move to protect these animals. If diamondbacks are encouraged to repopulate their former habitat along the east coast, populations can be studied, and in time, based on data and careful planning, policies may be modified. Otherwise the future of this species is bleak.

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The Linnaean Society, one of the oldest continuing conservation organizations in the world, was founded in 1878. The group holds monthly meetings at the American Museum of Natural History, publishes the *Linnaean Newsletter* as well as its *Transactions* and *Proceedings* volumes, and they conduct frequent field trips. For further information contact: Joseph Di Constanzo, (718) 788-4522 or write the Linnaean Society of New York, American Museum of Natural History, 79th at Central Park West, New York, NY 10024.