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Malaclemys Terrapin **Eggs as Potential Nitrogen Supply for** ***Ammophila breviligulata***

Diamondback terrapin (*Malaclemys terrapins*), are a unique species that inhabits brackish water, and are native to the coast of Long Island. Recently nesting turtles have been considered as a potential supply of nitrogen to nutrient deficient dune ecosystems. Due to the decline of Diamondback terrapins from the culinary fad of terrapin soup, and their low recruitment of juveniles, assessing their ecosystem services is an important part to managing this species. To determine if ecosystem service was provided by the Diamondback Terrapin, I sampled *Ammophilia breviligulata*, commonly known as American beach grass, from sites with Diamondback terrapin nesting at Jamaica Bay Wildlife Refuge, and sites without Diamondback nesting around Gateway National Recreation Area. The stable nitrogen isotope ($\delta^{15}N$) composition was measured in the newest growth of the beach grass. The $\delta^{15}N$ values were higher in samples from sites without nesting, than sites with nesting. This study might have been complicated by a larger population of sea gulls in the sites without nesting, and their production of guano, which contains high levels of nitrogen derived from the marine source. Future studies can be done to isolate the plants from external side sources of nitrogen, as well as include controls of beach grass, grown in green houses that are exposed to Diamondback Terrapin nests.

Key words: Diamondback terrapin, American beach grass, allocthonous input, stable isotope, nitrogen