Effects of nest depredation and anthropogenic activities on diamondback terrapins (*Malaclemys terrapin*) in Delaware

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Nest depredation and anthropogenic activities are major conservation concerns for many different species of turtles. During June and July 2013, we surveyed upper Delaware Bay beaches for depredated diamondback terrapin (*Malaclemys terrapin*) nests. Six beaches were assessed including Bowers Beach, Collins Beach, Kitts Hummock, Pickering Beach, Port Mahon, and Woodland Beach. We counted a nest as depredated if we located an empty nest hole accompanied by one or more egg shells. Depredated terrapin nests (n = 238) were found on all six beaches. The number of depredated shells per nest ranged from one to sixteen with a mean of 6.3 ± 0.2 SE. We observed potential terrapin nest predators including raccoons (*Procyon lotor*), red foxes (*Vulpes vulpes*), brown rats (*Rattus norvegicus*), and feral cats (*Felis catus*) on or near nesting beaches. While some nests were located directly on the beach, the majority of nests were in *Phragmites spp.* stands near tidal marshes at the back of the beach. We also witnessed multiple interactions between anthropogenic activities and terrapins. At Port Mahon, we observed nesting terrapins climbing over riprap, crossing the road, and aggregating in the water proximate to commercial and recreational boating activities. We also found dead terrapins on roads near Pickering Beach, Port Mahon, and Woodland Beach with automobile injuries and one dead terrapin washed up on Kitts Hummock beach with boat injury scars. Nest depredation and anthropogenic activities appear to be threats to diamondback terrapins in Delaware by limiting recruitment to the population and causing injury and mortality.