

## The Diamondback Terrapin (*Malaclemys terrapin*)

Diamondback Terrapins are small turtles that live in salt marshes extending from Cape Cod, Massachusetts to the Texas Gulf Coast.

The Diamondback Terrapin is considered a unique species of turtle as it is one of the only species in the world that lives exclusively in brackish water (water that is part fresh and part salt).

In New Jersey, the Northern Diamondback Terrapin is a year round resident of the local backbay and Delaware Bay waters. They are typically active from April through October, and forage for fish, crabs, and snails that are in abundance during warmer months.

During the spring and early summer months, female terrapins can often be seen as they emerge from the water to lay a nest of 8-12 eggs. During colder months, terrapins hibernate in the marshes by burying themselves in the mud. Northern Diamondback Terrapins will generally live between 15-20 years and females can grow up to 9 inches in length.



## Bycatch Reduction Devices Help Keep Terrapins Out of Crab Pots



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## The Issue

Blue Crabs (*Callinectes sapidus*) are a popular and important species for commercial and recreational crabbers, and a main food source for terrapins. When terrapins encounter a crab pot full of blue crabs, they are easily enticed.

Unfortunately, once inside, many terrapins are unable to escape the funneled entrances of the trap. Since terrapins breathe air like humans, many terrapin lives are lost in submerged crab pots every year. In New Jersey alone, it is estimated that tens of thousands of terrapins die in pots annually<sup>1</sup>. This astounding number has played a part in the decline of New Jersey's Diamondback Terrapin population.



## A Step Toward The Solution

By New Jersey law, commercial-style crab pots set in any body of water less than 150 feet wide at mean low water or in any man-made lagoon must be fitted with Turtle Excluder Devices, commonly termed Bycatch Reduction Devices (BRDs), at funnel entrances<sup>2</sup>. Plastic or metal BRDs are simple devices that can be quickly and easily installed on a crab pot and are highly effective. Situated at funnel entrances, BRDs reduce the entrance size so that most mature terrapins are unable to squeeze their way into a pot. BRDs prevent a large number of terrapin deaths without reducing the number of crabs caught in pots as terrapins are no longer able to sneak in for a snack<sup>3</sup>.



## How You Can Help

Crab pots, no matter where they are set in New Jersey waters, are a greater threat to terrapins when they do not have BRDs in place. Although BRDs are not required in every body of water where a commercial-style crab pot is set in New Jersey, terrapins still make their way into crab pots set in areas larger than 150 feet wide. In fact, Wetlands Institute staff find terrapin remains in crab pots pulled from bodies of water of all sizes during our Ghost Trap

Recovery work. To help the cause, be sure to follow the steps below on how to properly place a BRD on your commercial-style crab pots, or on someone else's.

### How to Install a BRD

**Step 1:** Obtain one 1 ¾ x 4 ¾ BRD (metal or plastic) for each funnel opening of your crab pot.

**Step 2:** Install BRDs by positioning them as far as you can into funnel entrances.

**Step 3:** Attach BRDs with zip ties or with hog rings if they are metal. Make sure to use a minimum of 4 zip ties or hog rings to attach each excluder.

**Step 4:** Be sure to mark your trap well and to check its contents often.

**Step 5:** Remember to retrieve your trap at the end of the crab season.

## Did You Know?

Dr. Roger Wood of The Wetlands Institute originated the concept of using simple excluders to keep terrapins out of commercial-style crab pots. In the early 1990s Dr. Wood and fellow Institute researchers developed a "Terrapin Excluder Device" made of stiff metal soldered into 2x4 or 2x6 rectangles. With the implementation of many tests in partnership with the New Jersey Division of Fish and Wildlife, these simple excluders were found to be so effective that their required use went into New Jersey state law in 1998.



Many iterations of Dr. Wood's invention have developed over the years. Today the Bycatch Reduction Device (or Terrapin Excluder Device) is now mass produced and used throughout the country.



## References and Useful Resources

<sup>1</sup> Wood, R. C. (1997) The Impact of Commercial Crab Traps on Northern Diamondback Terrapins, *Malaclemys terrapin*. Proceedings: Conservation, Restoration, and Management of Turtles and Tortoises - An International Conference: 21-27.

<sup>2</sup> New Jersey Division of Environmental Protection. (2012) Recreational Crab Pots and Trot Lines. Division of Fish and Wildlife. [http://www.state.nj.us/dep/fgw/pdf/marine\\_noncomcrabapp-regis.pdf](http://www.state.nj.us/dep/fgw/pdf/marine_noncomcrabapp-regis.pdf).

<sup>3</sup> Roosenburg, W., J. Green. (2000) Impact of a Bycatch Reduction Device on Diamondback Terrapin and Blue Crab Capture in Crab Pots. *Ecological Applications* 10(3): 882-889.