FWC to consider devices to reduce diamondback terrapin deaths

Diamondback terrapins are named for the diamond-shaped patterns on their carapace.

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It's been a long 14 years for George Heinrich, a field biologist specializing in reptiles and founder of Heinrich Ecological Services in St. Petersburg. It was 2006 when he first asked the Florida Fish and Wildlife Conservation Commission (FWC) to require bycatch reduction devices (BRDs) on crab pots to reduce mortality rates of diamondback terrapins.

Last month the commission agreed to consider a petition from the Center for Biological Diversity (CBD), the Florida Turtle Conservation Trust and the Diamondback Terrapin Working Group asking for BRDs on crab pots.

Staff "is reviewing available information and assessing current and potential rules and measures to address diamondback terrapin conservation," writes Emily Norton, FWC general counsel. A staff recommendation will be brought before the commission this calendar year, she added.

The latest action by the FWC follows that formal petition. "Any person can petition any government agency asking them to adopt a regulation and they have 30 days to respond," said Elise Bennett, the CBD attorney specializing in reptiles and amphibians. "They can initiate the rule-making process or deny the petition with a written explanation."

Diamondback terrapins were once so plentiful that terrapin stew was a common dish in coastal communities from Massachusetts to Texas. Action by the FWC is necessary because the diamondback terrapin is not listed on the federal endangered species list, notes Heinrich. “Twenty percent of the species’ linear range is in Florida, where five of the seven subspecies live, including three that are endemic to Florida.”

Other states within its range have taken action to protect terrapins and they are listed as “Near Threatened” by the International Union for Conservation of Nature. In Florida, researchers tracking terrapins can spend days in the field without spotting a single animal.

Relatively small turtles at just five to 10 inches long, terrapins also are the only turtles that require brackish water habitats. Like all sea turtles, they’re threatened by habitat destruction, increased predation and sea-level rise.

Their biggest threat, however, could be crab traps. They share their preference for brackish water with blue crabs. But unlike crabs that can survive for days in a trap, terrapins must breathe air or they drown within about five hours.

That’s where the BRDs come in. Small, inexpensive plastic pieces, BRDs slide into the opening of a crab trap to keep most terrapins out. Ongoing studies across the country and in Florida show that the BRDs stop most terrapin from entering the trap with no significant difference in the size or number of crabs harvested.

Heinrich and Joe Butler, a biology professor at the University of North Florida, spent four summers in eight locations across Florida studying terrapin mortality in crab traps. “Using the BRD prevented 73% of the terrapins from getting into the traps,” he said. “And since mature females tend to be larger, most of the captured terrapins are males or juveniles.”

The distinction is critical. Unlike blue crabs, which reach sexual maturity at 12 to 18 months, female terrapins don’t begin reproducing until they are four to eight years old.

While apparently reluctant to adopt the BRDs, crabbers may actually benefit from them, Heinrich adds. Excluding them from traps means that crabbers need less bait. And since terrapins eat blue crabs, the crabs they catch are in better shape. Finally, some research shows that crabs avoid terrapins and are less likely to enter a trap where a terrapin is waiting.

“This issue has been well-studied – terrapins die in crab traps but BRDs are inexpensive and effective with no significant impact on crab fisheries,” Bennett said. “We know the biologists at the FWC care about them, and we hope the commission makes the right decision.”