

Disney Worldwide Conservation Fund Allows Teachers to Broaden Awareness of the Plight of the Diamondback Terrapin

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When are we going to
Disney World????

Our Mission

- *Gain greater insight into the Terrapin Conservation Project through direct participation with scientists/interns at the Wetlands Institute*
- *Create lessons and activities that can be used throughout the state (and beyond) to help enlighten others about the terrapin crisis*
- *Provide instruction about the diamondback terrapin at upcoming conferences and disseminate our units to help enhance core standard teaching by incorporating terrapin education within objectives that are already in place in the classroom*

SAVING THE DIAMONDBACK TERRAPIN



Jane Krajewski
Quinton Township Elementary School

ISN'T SHE CUTE?



Diamondback terrapins are the only turtles that live in brackish (a mix of salt and fresh) water.



Terrapin Fast Facts!

- Females are usually bigger than males.

Do you know why?



- Females are larger because they are responsible for carrying the eggs.
- They also have smaller tails that don't get in the way when laying the eggs.



- Females leave the water to nest above the high tide line.
- They lay about 8-12 eggs.



- Females will dig a nest with their back leg.
- This plaster mold shows the size and shape of a nest.



WHY IS THE FEMALE TERRAPIN MORE ENDANGERED?



- Most turtles that cross the road are females.
 - Females enter the roadway because they are looking for suitable nesting sites.
- Because males do not have to do this, they are usually not the ones to get hit by cars.



- Females nest for a 5 or 6 week period. This usually starts the first week of June and ends approximately in mid-July.
- Diamondback terrapins nest around the clock. Half of the turtles that get killed are hit at night due to poor visibility.

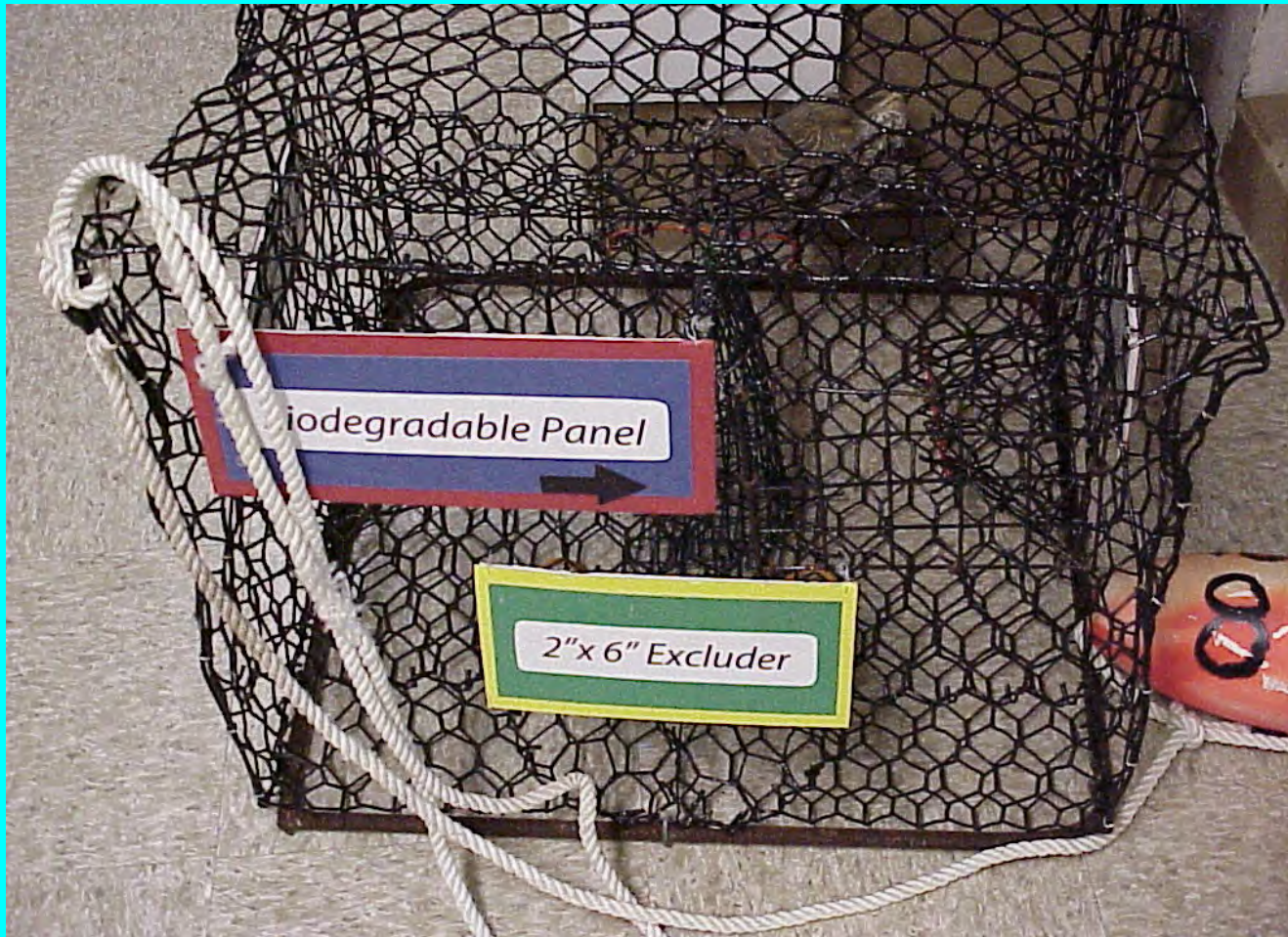
Can I have a terrapin as a pet?

Do not under any circumstances attempt to take an adult or hatchling terrapin home for a pet because:

- 1. You are breaking the law! Terrapins are absolutely protected from April 1 to November 1, and there are stiff fines for capturing terrapins by any means during this period or even having their eggs in your possession. During the rest of the year, terrapins are hibernating and almost impossible to find.
- 2. Diamondback terrapins will almost certainly die in captivity because they do not naturally occur in freshwater. Most people do not have the necessary salt water aquaria in their homes to provide adequate care for the terrapins. This equipment is very expensive and difficult to maintain.



ARE CRAB TRAPS A PROBLEM?



- In the year 2001, over 27,565 crab traps were recorded in use in the state of New Jersey. There are even more used today!
- Terrapins live in the same brackish water that crabs do. They are attracted to the bait in the traps.
- Once the turtles enter, they cannot escape!



- Terrapins do not have gills. They can only, **at the most**, stay under water for 3 or 4 hours in summertime temperatures!
- 14,000-15,000 drown because of this each year!!



How many turtles can drown in one trap?

- During the recovery of ghost traps, the matching of repeated turtle bones proves that sometimes 9 to 13 turtles have drowned in one trap!



Why don't crabbers want to use excluders?

- They are afraid they won't catch the BIG ONES!
- They think they won't catch as many crabs.



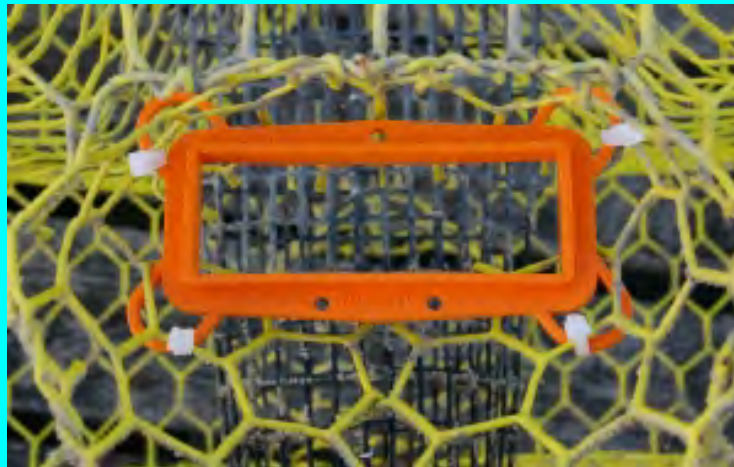
What is the solution?

- Dr. Wood and his team from The Wetlands Institute developed excluders to fit in the entrance of crab traps.



Wire excluder in funnel of crab trap

- Years of research have shown that there is no change in the amount of crabs caught or their size.
- Some traps actually catch more crabs because the excluders prevent them from escaping!



STONE LAWNS CAN BE DEADLY!



- Some terrapins will lay eggs in the stone lawns that are popular in the seashore areas.
- Did you know that many homeowners spray their lawns with pesticides to kill weeds?
- Mother turtles camouflage their nests so well that some people do not realize that nests are present before spraying their yard with these poisons.



What Else Can Decrease the Terrapin Population?



- Humans love to live near the water.
- Development of the sand dunes to create resort communities has stolen precious habitats from diamondback terrapins and other animals!



HOW DOES THE WETLANDS INSTITUTE HELP?



- Research scientists and volunteers go on road patrols to save terrapins that have been struck by vehicles.
- Turtles are brought back to The Wetlands Institute for veterinary care if they are still alive.



“Eggetomy”

Scientists extract eggs from the roadkilled females and begin incubation.



This intern is getting eggs ready for incubation in the lab.



HATCHLING NEWS!

- Hatchlings come out of their shells using an egg tooth.
- This is not a real tooth. It is made of keratin (just like our fingernails)!



- Hatchlings appear in late summer or early fall!



Baby terrapins arrive with a built in “lunchbox”. (This is an egg or yolk sac that feeds them until they are ready to get their own food.)



- Predator exclosures have been used to save the lives of hatchlings occurring in natural nesting sites. After observing a female terrapin laying her clutch of eggs, scientists will put this protective covering over it.



The Wetlands Institute staff and visitors check the exclosures as they walk the trails. When they see the babies have emerged, they remove them.



- Unprotected hatchlings can become “seagull potato chips”!!!



OH NO!



Recent Experiments

Terrapin Barrier Fencing

- Scientists have originally dug trenches and installed solid fencing to keep diamondback terrapins from crossing the road.



They recently found that corrugated tubing could replace the original style of fence used. It has proven to be just as effective, longer lasting, and easier to install!



Sonic Tracking

- Dr. Wood and his interns are trying use sonic tracking to examine where terrapins live and how far they travel. Current results show they do not venture too far from the area in which they were released.



Underwater acoustic receiver detects terrapins with transmitters.



The original sonic tracking team

HOW DO WE HELP?



- The Richard Stockton College of New Jersey is the site of the turtle farm for the Terrapin Conservation Project.
- A special license also allows some volunteers to help The Wetlands Institute raise hatchlings.



Turtles normally hibernate in the winter. The terrapins, or headstarters, are “kept up” in 80 degree F tanks so that they reach a 2 or 3 year old size in one year.



Stockton Turtle Farm

- The headstarters are microchipped at the Wetlands Institute so that they can be tracked during research.
- Mother terrapins found nesting at the institute are scanned to see if they have an identification number.





Inserting the microchip

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- A photograph showing a large tortoise, likely a Galapagos tortoise, being held by a person. The tortoise is dark brown with yellowish-brown markings on its shell. In the background, a clipboard with a calendar and a book titled "NEW JERSEY NATURE" by Stephen S. Watkins are visible. The calendar shows dates from May to June. The book features a cartoon illustration of a man. A person's hand is visible holding the book.

- Students join Dr. Wood and his interns for the official release!



WHAT CAN EVERYONE DO TO HELP SAVE THE TERRAPIN POPULATION?



- If you see a turtle crossing the road, pick it up and take it to the side of the road in which it was heading. Use the turtle “handshake”. Place 3 fingers on the bottom shell (plastron) and your thumb on the top (carapace) along the backbone.



- Do not drop a turtle! It would be like you falling off a building and can cause serious injury to the turtle and its eggs.



- Drive carefully and pay attention to turtle crossing signs!
- Use excluders on your commercial-style crab traps.
- Don't disturb terrapins while they are nesting.





Thanks for Helping to
Save Our Species!

