

AN INFORMAL SURVEY OF DIMAMONDBACK TERRAPIN POPULATIONS FROM  
MASSACHUSETTS TO TEXAS

FALL 1988

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In using this document, please keep in mind that the information was collected over the telephone from individuals in a variety of disciplines. The majority of people contacted stressed that they had little or no actual numerical data concerning diamondback terrapin populations. Most, however, expressed concern that the populations appear to be declining in their areas.

We asked the following questions:

1. What is the status of the diamondback terrapin population(s) in your state? Do your numbers appear to be increasing or decreasing? Do you feel that your populations are threatened or endangered?
2. What appear to be the main threats to diamondbacks in your area? Are these threats increasing?
3. Is there a commercial fishery for diamondbacks? How extensive is it? Do you feel that it is impacting population levels?
4. What legislative protection do diamondback terrapins have in your state? Are you aware of any efforts to increase this protection?
5. Are you aware of any other individuals or organizations working with diamondback terrapins in or outside of your area?

We hope that you find this information useful to the conservation of diamondback terrapins in your state. Please feel free to direct any corrections, comments or suggestions to Jim VanAbbema, Reptile Dept., Bronx Zoo, Bronx, NY 10460 (home: 212-654-5705).

## MASSACHUSETTS

**Populations Status:** Populations, mainly located in the Cape Cod region, are slowly increasing, continuing the recovery from early 1900's commercial exploitation. This recovery is being slowed by habitat loss. The relatively small number of diamondbacks found in this area reflects the effects of large-scale harvest of these animals, not a natural decline due to the northern limitation of the species' range.

**Legislative Protection:** Diamondbacks are fully protected by 321 CMR 9.01 (restricting the pet trade of "exotic" wildlife") and 321 CMR 3.05 (restricting the hunting of reptiles and amphibians).

**Other:** Diamondbacks were once popular in the food and pet trade. Snapping turtles, the only other turtles that may be legally harvested, are collected commercially. Recent threats to the diamondback include off-road vehicles. Diamondback hatchlings naturally crawl down as they seek the shelter of the marsh. Once they walk into a vehicle rut, they follow it and are often run over. Peter Auger has worked with others to move off-road vehicle traffic away from nesting areas. Because hatchling sex determination is temperature dependant, changes to the nesting habitat (i.e. the planting of dune grass) will change the sex ratio.

Contact: Peter Myrick, Field Headquarters, Fisheries and Wildlife Office, Westboro, MA 01581 (617) 727-2864, and Peter Auger, Cap'n Lijah's Road, Centerville, MA 02632, (508) 771-6325.

## RHODE ISLAND

Population Status: According to Chris Raithel, Rhode Island has only one or two diamondback terrapin populations, with no perceivable threats. Mike Klemens mentioned that there is sustainable population in Narangansett Bay. Peter Auger noted that a new population was recently discovered, and speculated that additional populations will be found as research continues.

Legislative Protection: It is illegal to harbor any wild animals, including turtles, without a rehabilitation or other special permit. Diamondbacks are considered a "Species of Special Concern" and are on the state "threatened" list. Removal from the wild is restricted except by special permit (for scientific purposes, etc.).

Other: Diamondbacks in Narangansett Bay are struck by boat propellers during June, but usually not killed. Skunks eat diamondback eggs, and the skunk population is increasing in Rhode Island.

Contact: Janice Thurston, Secretary, Division of Fish and Wildlife, Department of Environmental Management, (401) 789-3094 and Chris Raithel, biologist, Division of Fish and Wildlife, Great Swamp Headquarters, West Kingston, RI 02887, (401) 789-0281. See New York's Section for information about Mike Klemens.

## CONNECTICUT

Population Status: The population is stable. Long Island Sound populations from the mouth of the Connecticut River west are doing well and possibly increasing in some areas where salt marsh restoration has taken place. This includes areas that are polluted and receive heavy boat traffic. The populations are small and scattered east of the Connecticut River's mouth. This may reflect the natural limits of the species' range.

Legislative Protection: Connecticut has no laws protecting diamondbacks.

Contact: George Brys, Assistant Director, Wildlife Bureau, Department of Environmental Protection, 165 Capitol Avenue, Hartford, CT (203) 566-4683.

## NEW YORK

Population Status: Diamondbacks are increasing after a "century of rarity." There is a large population in Jamaica Bay, and in the areas of Queens and Kings counties. There are significant populations along Long Island as well.

**Legislative Protection:** Diamondbacks are listed as a Species of Special Concern in the state Endangered Species Act. This status does not provide any legal protection. The New York Turtle and Tortoise Society is working with a number of organizations to increase the species' protection under the New York State Environmental Conservation Law 11-0311. The New York State Department of Environmental Conservation is responsible for all matters related to endangered species.

**Other:** According to Steven Garber, diamondbacks are threatened by increasing demand for turtle meat, which currently exceeds supply in New York City turtle markets. The large Asian community consumes large numbers of terrapins, many of which are brought in from the Carolinas, Virginia, Maryland and the southern part of New Jersey. Diamondbacks are also threatened by incidental capture in crab traps in Long Island Sound and other areas. Crabbers sell diamondbacks that are commercially valuable and use the others for bait. Mike Klemens feels that the single greatest threat to the terrapins of southern New England may be interference with local populations from the introduction of non-local and often diseased terrapins. Well-meaning but un-informed individuals are "rescuing" turtles from New York markets and releasing them in the surrounding areas. This may have a detrimental effect on the gene pool and general population health. Pollution is also threatening diamondbacks in New York waters.

**Contact:** Jim VanAbbema, Editor, Plastron Papers, New York Turtle and Tortoise Society, Reptile Dept., Bronx Zoo, Bronx, NY 10460 (home: 212-654-5705); Dr. Steven Garber, Biologist and Author, 462 West 49<sup>th</sup> St., New York, NY 10019, (212) 757-1405; Alan Breisch, Endangered Species Unit, Division of Fish and Wildlife, New York State Department of Environmental Conservation, Wildlife Resource Center, Delmar, NY 12054, (518) 439-7635; and Mike Klemens, American Museum of Natural History, Central Park West at 79<sup>th</sup> Street, New York, NY 10024 (212) 769-5856.

## NEW JERSEY

**Population Status:** While no actual population study had been done, Bruce Freeman feels that the species is declining. Less turtles are being seen now than were four or five years ago.

**Legislative Protection:** Diamondbacks may be hunted from November 1 to March 31. No traps, pots, fykes, seines, weirs, or nets are allowed to be used to collect this species. They must measure 5" or more along the length of their lower shell (Steve Herb noted that this rules out most or all males). Eggs are not allowed to be collected or destroyed. There is no maximum take, and no restriction about shipping across state lines, either alive or dead.

**Other:** Bruce Freeman is very concerned with the incidental catch of terrapins in crab pots. Fishermen are increasingly setting traps in marshy areas and tributaries where diamondbacks feed and nest. He mentioned that recreational crabbers, who fail to check their pots regularly, significantly add to the terrapin mortality. Some recreationalists abandon their pots at the end of the season which continues the killing. He and his staff designed a crab pot with an escape vent for terrapins but their designs are dismissed by the crab industry, who claim that they would allow crabs to escape as well as turtles. The commercial terrapin fishery in New Jersey accounts

for less than one thousand turtles annually. These turtles are sent to the Philadelphia market for soup; this market is showing no signs of increasing. Habitat loss was also cited as a problem for terrapins in New Jersey.

Contact: Steve Herb, Chief of Law Enforcement, Division of Fish, Game and Wildlife, Department of Environmental Protection, CN 400, Trenton, NJ 08625, (609) 292-6216, and Bruce Freeman, Administrator for Marine Fisheries, (same address), (609) 292-1056.

## PENNSYLVANIA

Population Status: Diamondback terrapins are not considered part of the native fauna of Pennsylvania, and there have been only one or two documented sightings of diamondbacks in the state. It is believed that these were either released or escaped animals. It is possible that occasional waifs may be found in the lower Delaware River.

Legislative Protection: Diamondback terrapins are not protected in Pennsylvania because they are not considered a native species.

Contact: Clark Shiffer, Herpetology and Endangered Species Coordinator, Fish Commission, 450 Robinson Lane, Bellefonte, PA 16823 (814) 359-5113.

## DELAWARE

Population Status: No recent studies have been done specific to the diamondbacks but shellfish biologists are finding abundant numbers in the Delaware Bay area, with no evidence of decline.

Legislative Protection: Diamondbacks may be hunted from July 15 through October 1. There is a statewide minimum size restriction of 5 ½" (measured lengthwise along the bottom of the shell) on "heifer" (young female) terrapins. There is a 4" minimum on all males taken in Sussex County, and a 6" minimum on all terrapins taken in the Indian River, the Delaware Bay and adjacent waters. There are no catch limits and no restrictions on out of state trade in live turtles or turtle meats. It is illegal to harvest diamondback eggs and to dredge for terrapins in the Indian River, Delaware Bay, or adjacent waters.

Other: Lloyd Alexander mentioned that there was not much of a fishing industry for diamondbacks. There is a significant fishery for snapping turtles, encouraged by the Div. Of Fish and Wildlife, because snappers are considered "pests" due to their impact on the waterfowl. Their populations do not seem to be declining due to the increased fishery. He said that crabbers do not note significant incidental capture of diamondbacks in crab pots.

Contact: Lloyd Alexander, Manager, Wildlife Section of the Division of Fish and Wildlife, Department of Natural Resources and Environmental Control, P.O. Box 1401, Dover, DE 19903, (302) 736-4431.

## MARYLAND

Population Status: Diamondback terrapin populations were reviewed several years ago. No problems were noted, and populations are expected to remain stable due to limited fisheries.

Level of Protection: Diamondback terrapins are considered game fish. They may be commercially harvested all year with no limit. They must be a minimum of 6" or more in length along the bottom shell. Commercial fishing requires a license, but individuals may keep up to 3 diamondbacks as pets without a permit.

Contact: Peter Jensen, Department of Fisheries, Department of Natural Resources, Tawes State Office Building, 580 Taylor Avenue, Annapolis, MD 21401, (301) 974-3558.

## VIRGINIA

Population Status: There are no population figures available; especially for diamondbacks in the Chesapeake Bay. Joe Mitchell said that populations were doing well on Virginia's barrier islands. He believes that crab pots are selectively killing the male terrapins, due to their smaller size (but did not mention juveniles). He said that the turtles entered the submerged pots.

Level of Protection: Diamondbacks are listed as a nongame species and therefore are not protected under game laws. Harassment is illegal, as is keeping terrapins as pets, but these regulations are not enforced. Licenses are required to harvest for commercial sale. Licenses are reviewed on a case by case basis. No regulations bar out of state sale.

Other: A meeting to review the state Endangered Species Act is scheduled for April 1989. The Amphibian and Reptile Committee may recommend that the diamondback terrapin be given "Undetermined" status, and possibly listed as a "Species of Special Concern." A new graduate student at the Virginia Institute of Marine Science, working with Dr. Jack Musick, is beginning a study of diamondbacks.

Contact: Joe Mitchell, Chair of the Amphibian and Reptile Committee dealing with Virginia's Endangered Species Act, Department of Biology, University of Richmond, Richmond, VA 23173, (804) 289-8234 and Helen Kitchell, Research Associate, Virginia Department of Game and Inland Fisheries, 4010 West Broad Street, Richmond, VA 23230 (804) 367-1000.

## NORTH CAROLINA

Population Status: Frank Schwartz said that the Outer Banks populations are "in good shape and holding their own." Populations on the mainland side are being affected by conversion of wetlands to farms and agricultural runoff. He said that populations on the southern barrier islands are declining rapidly and are "just holding on." He attributed this in part to the proximity of these islands to the mainland, making the terrapins more accessible to fishermen.

Level of Protection: Diamondbacks are not protected in North Carolina.

Other: Frank Schwartz mentioned that crabbers keep incidentally caught diamondbacks that are over 4" (smaller ones don't have enough meat to make them worthwhile) to eat or sell.

Crabhouses in the northern part of the state buy terrapins for sale to the north. There are several small diamondback fisheries operating in the state. Diamondbacks were commercially ranched in this area in the early 1900's until the 1930's for eggs and meat.

Contact: Mark Hughes, Telecommunicator, Enforcement Division, Department of Wildlife, 512 N. Salisbury St., Raleigh, NC 21611, (919) 733-7191; Frank Schwartz, Institute of Marine Sciences, UNC, 3407 Arendell St., Morehead City, NC 28557, (919) 726-6841.

## SOUTH CAROLINA

Population Status: South Carolina populations appear to be doing well, with no apparent declines in recent years.

Level of Protection: Diamondback season is closed from April 1 through July 15. A dealer's license is required to possess and (therefore hunt) diamondbacks. Terrapins must be at least 5" or more in length along their bottom shell.

Other: Thousands of diamondbacks are caught in crab pots each year. In a recent study, the ratio of incidentally captured males to females was 2.3:1., perhaps reflecting the smaller size of the males, who could more easily enter the traps. Few drown if the traps are checked daily. The commercial fishery for diamondbacks is very limited.

Contact: Sally Murphy Hopkins, South Carolina Wildlife and Marine Resources Department, Rembert C. Dennis Building, P.O. Box 167, Columbia, SC 29202 (803) 734-3886; Bob Campbell, Coastal Information Specialist, SC Wildlife and Marine Resources Dept., P.O. Box 12559, Charleston, SC 29403, (803) 722-2996.

## GEORGIA

Population Status: Population sizable enough to allow for commercial harvesting.

Level of Protection: Illegal to harvest between April 1 and August 1 of each year. Can only harvest using gill net of 5 1/2" size. Must have a license to harvest.

Contact: Tiece Gignilliat, Asst. Senior Writer, Communications Office, Coastal Resources Division, Department of Natural Resources, 205 Butler St. SE, Suite 1258, Atlanta, GA 30334 (404)856-3530.

## FLORIDA

Population Status: 3 to 5 subspecies of diamondback terrapins are designated around the coast. None is given special protection. Populations are doing well where the habitat is still good, including the Cape Canaveral area, Merritt Island, the Keys and Tampa Bay. Not as common on the Florida Panhandle as they once were.

Level of Protection: Commercial harvesting is allowed. Licenses are required if the turtles are sold live, but not if they are killed and then sold. There is no maximum take or minimum size requirement. No license is required for personal "use." Paul Moler has made a preliminary proposal to require licensing for the sale of diamondback (as well as other turtle and snake) parts in addition to live specimens. The Florida Department of Natural Resources may have some jurisdiction over diamondback terrapins because they are estuarine. They do not appear to be included under the guidelines for Freshwater Turtles.

Other: According to several people, the diamondback turtle has so little meat compared to other species of Florida turtles that it has never been extensively fished in the state. The majority of crabbers contacted said that they did not keep or sell diamondbacks incidentally caught in their traps. Some revive and release diamondbacks found still alive in their traps. At least one merchant was buying diamondbacks from crabbers and selling them to New York markets in the past several years.

Contact: David Cook, Biologist in the Nongame Wildlife Program, Division of Wildlife, Florida Game and Freshwater Fish Commission, 620 S. Meridian St., Farris Bryant Bldg., Tallahassee, FL 32399-1600 (904) 488-3831, and Major Kyle Hill, Law Enforcement (same address as David Cook) (904) 488-6253; Dr. Peter Meylan, (813) 821-2486, U of South FL, Dept. of Biology, Tampa, FL 33620; Dr. Trip Lamb, Savannah River Ecology Lab, Drawer E, Aiken, SC 29801, (803) 725-2472, Mr. Paul Moler, Biology Administrator, Wildlife Research Lab, Florida Game and Freshwater Fish Commission, 4005 S. Main St., Gainesville, FL 32601.

## ALABAMA

Population Status: Large female diamondback terrapins are now uncommon in many areas of suitable habitat. Numbers have declined in recent years and more declines can be expected if the diamondback's welfare and that of its habitat are neglected.

Level of Protection: Completely protected since July 1987 by the Department of Conservation's Nongame Wildlife Species Regulations. The only animals not protected by this regulation are poisonous snakes. The Mississippi diamondback terrapin is listed as a Species of Special Concern in the state of Alabama. A scientific collector's permit is needed to legally capture this species.

Other: A small number of people along the coast still harvest diamondbacks for food. Hurricanes wiped out parts of the species' habitat. Increasing numbers of crab traps are placed

close to marsh areas resulting in inadvertent capture (from Joe Meyers article in Vertebrate Animals of Alabama in Need of Special Attention).

Contact: Dr. Joe Meyers, Program Coordinator, Nongame Wildlife Activities, Game and Fish Division, Department of Conservation and Natural Resources, 64 North Union, Montgomery, AL 38130 (205) 261-3469.

## MISSISSIPPI

Population Status: Not as common as they once were.

Level of Protection: All non-game animals are protected under the Nongame and Endangered Species Act. Therefore the diamondback terrapin is completely protected in Mississippi. The only legal way to collect a diamondback is with a scientific collector's permit obtainable through the Bureau of Fisheries and Wildlife.

Contact: Mr. Ken Gordon, Program Coordinator of Heritage, Natural Science Museum, 111 N. Jefferson, Jackson, MS 39201, (601) 354-7303.

## LOUISIANA

Population Status: Diamondback terrapins population is fairly small in state. Most abundant along marshes of offshore islands with well developed grass beds and shell/sand beaches.

Level of Protection: No regulations or limits concerning the harvesting of diamondback terrapins. In fact, there are no state laws covering state listed threatened or endangered species. Louisiana uses a ranking system (1-5) to rank species bases on its population size with 1 being endangered, and 5 being abundant. The diamondback terrapin has a ranking of 2.5 which places it between threatened (2) and rare (3).

Other: Department of Wildlife and Fisheries is in the early stages of revamping state wildlife laws. They hope to have something in the legislature by the spring of 1989. According to Lloyd Mitchell, there are several turtle and reptile farms in Louisiana. By law, all of the animals produced on these farms are supposed to be the offspring of existing breeding stock, but the potential exists to remove animals from the wild. Local fishermen mentioned that the Asian community eats diamondbacks.

Contact: Mr. Lloyd Mitchell, Department of Wildlife and Fisheries, Non-Game Program, P.O. Box 98000, Baton Rouge, LA 70898-9000 (504) 765-2355, and Mr. Richard Martin, Natural Heritage Program Biologist-Zoologist, (504) 342-7943

## TEXAS

Population Status: While no specific data are available, populations were noted to be disjunct and threatened by habitat loss. Andy Price said that the Heritage Program office is concerned with the population status.

Level of Protection: Animals are not protected in Texas unless federally listed. Texas does have a state list of endangered and threatened species, but the list has no legal standing. There are no licensing restrictions on the harvest of diamondback terrapins, but permits are required to collect on state lands. Mr. Adams said permits are only give to people collecting for scientific purposes.

Other: Andy Price mentioned that habitat destruction from dredging and other alterations is a major threat. An informal survey of Texas fishermen revealed that 50% of the incidentally caught diamondbacks are caught in crab traps and 21% in shrimp trawls. He is submitting a proposal to the Texas Department of Parks and Wildlife to study the status of state populations.

Contact: Andy Price, Natural Heritage Program, Resource Protection Division of the Texas Department of Parks and Wildlife, 4200 Smith School Road, Austin, TX 78744 (512) 389-4360; David Diamond, same office, (512) 389-4364, and George Adams, Licensing, same address, (512) 389-4364.