

Annual Symposium on Biology and Conservation of Freshwater Turtles and Tortoises, August 5th-8th, 2009, St. Louis, Missouri

<http://www.turtlesurvival.org>

During this scholarship programme in USA, I attended the 7th annual symposium on biology and conservation of freshwater turtles and tortoises in St. Louis, Missouri. It is a joint annual meeting of the Turtle Survival Alliance (TSA), the IUCN Tortoise and Freshwater Turtles Specialist Group and Turtle Conservation Fund (TCF). More than 200 turtle scientists, conservationists and researchers attended the event.

An overview of Efforts to Conserve Pakistan's Freshwater Turtles

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Eight species of both soft and hardshell freshwater turtles are found in Indus River system, representing two families and six genera. Turtle capture on commercial scale, being a major threat to their survival, has resulted in significant population decline.

A series of investigative surveys were conducted to explore turtle capture and trade through questionnaires, field surveys and asking information from local communities, dealers and representatives of the relevant government agencies.

Surveys revealed that three softshell turtle species (*Aspideretes gangeticus*, *Aspideretes hurum*, and *Chitra indica*) are in great demand by turtle dealers for export to east-Asian countries for use as traditional medicines and other food sources. Fisherfolk and other riverine communities dependent on water resources for their subsistence were involved in trade businesses. Turtle trade network, national and local markets, trade routes and communities engaged in this business were uncovered.

It was assessed that turtle capture has declined significantly since the year 2000. Due to a substantial decrease in turtle supply from other countries, the pressure to support international market has shifted to Pakistan.

Efforts are being made to revise national legislations in conformity with international set of laws to protect wildlife especially the freshwater turtles. It is recommended that the target groups needs to be addressed through community based-conservation, provided with better livelihood opportunities in addition to education and awareness to help protect turtles effectively. There is also a need to address this issue at international level through CITES, IUCN-Turtles and Tortoises Specialist Group, TRAFFIC International and other concerned organizations.

Keywords: Freshwater turtles, Indus River System, Trade, dealers, communities, livelihoods, legislations, education and awareness.

Poster Presentation on Experiences with the Asian scholarship Programme for *in-situ* Chelonian Conservation-2009



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Experiences with the Asian Scholarship Programme for *in-situ* Chelonian Conservation



Asian Scholarship Programme for *in-situ* Chelonian Conservation

The Asian Scholarship Program for *in-situ* Chelonian Conservation, begun in 2000, is a professional training experience comprising of one or more venues. Of the many great ways to conserve wildlife, and particularly that of chelonians, the ASPin-situCC chooses to enable individuals with a vested community interest for their local chelonian fauna. The focus area is Asia, the focus chelonians are freshwater and brackish water inhabitants. The Asian Scholarship Program for *in-situ* Chelonian Conservation (ASPin-situCC) is primarily seated at the Wetlands Institute in Stone Harbor, New Jersey.

Beach Monitoring for Marine Turtles



Nesting beaches are monitored every morning and at night during the nesting season of logger-headed turtle. During these patrols, monitoring teams search for turtle tracks, signs of animal depredation, human interference, tidal inundation, signs of hatching and saturation tagging.

Satellite Telemetry

Satellite telemetry is an effective method of monitoring turtle movements and behaviour. It provides valuable information about turtle behavioural ecology, which is a major contributor towards the current research, understanding and conservation of sea turtles.



Marine Turtle Conservation Georgia Sea Turtle Center Jekyll Island, Georgia



Exposure to other marine turtle conservation projects



Flipper Tagging

Flipper tags are the most common tags that are used to mark sea turtles. They are made either from metal or plastic, and are attached by piercing through the skin of the turtle on the flipper.

Sea turtle releases; a way of creating awareness among general public



Passive Integrated Transponder tags

Passive Integrated Transponder tags, or "PIT tags," are small microchips (about the size of a grain of rice) that are injected into a turtle's shoulder muscle using a hand-held applicator/syringe. A scanner can detect the unique alphanumeric code of the PIT tag. Scanning turtles for PIT tags allows identifying turtles that have been previously tagged on nesting beaches.



St. Catherines Island, Georgia



Sapelo Island, Georgia

Diamondback Terrapin Conservation Project Wetlands Institute, Stone Harbor, NJ, USA



Diamondback terrapins are relatively small, harmless turtles that live in salt marshes. Since 1989, the Wetlands Institute, in cooperation with The Richard Stockton College of New Jersey, has conducted a diamondback terrapin conservation project. Each summer, college and university students come from all over the United States to assist these creatures that are so desperately in need of our help. International Student Researchers from Asia began joining the program in the year 2000. All of these researchers are joined in their efforts by a small group of dedicated local volunteers.



Monitoring of Nature Trail

Nature trail is located in the marshes near Wetlands Institute. It provides a suitable habitat for diamondback terrapins for nesting. Trail is monitored throughout the nesting season of diamondback terrapins. Nesting terrapins are observed and nest are protected by nest enclosures.



Road Patrols

Round-the-clock road patrols during the terrapin nesting season in June and July are considered important to minimize the number of road-kills of nesting females. A fixed route is followed everyday to look for dead diamondback terrapin in order to retrieve viable eggs. Injured diamondback terrapin are given further medical treatment.



Eggctomy

Eggctomy is a process of retrieving viable eggs out of a dead terrapin. The main objective of this process is to keep the population of diamondback terrapin sustainable, to compensate the loss of female turtles that get hit by the cars every year during nesting season.



Due to temperature dependent sex, viable eggs are incubated at a temperature suitable to obtain females.



Hatchlings are then raised for one year at the Stockton College Turtle Farm.



Road Patrol Statistics for 2009

Total number of terrapins hit by cars = 558
Total number of viable eggs retrieved = 700

No. of terrapins found = 81
No. of nests recorded = 59
No. of terrapins marked = 34
No. of terrapins recaptured = 49

Fencing of Roads

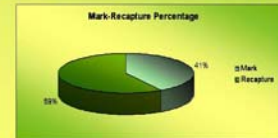
Potential road crossings selected on the basis of road-kills are fenced in order to minimize probability of terrapins being hit by cars.



Diamondback terrapins show strong nest fidelity by returning to nature trail for consecutive 1 – 5 years.

Mark Release Recapture data for 2009

Mark Release Recapture (MRR) program of diamondback terrapins was started in 1997.



PIT Tag ID	2009	2008	2007	2006	2005
128-758-625	■				
988-287-231	■				
800-111-042	■				
501-451-496	■	■			
306-412-006	■	■	■		
127-028-114A	■	■	■	■	
866-280-026	■	■	■	■	
988-428-088	■	■	■	■	
118-028-005A	■	■	■	■	■
127-023-866A	■	■	■	■	■

Release of terrapins



Average Inter-nesting period within the same year = 18.7 days

Venues still to be visited

Chelonian Research Institute, Oviedo, Florida
Behler Chelonian Center, Ojai, California



Tagging of Terrapins

Before releasing these hatchlings into the wild, they are tagged with Profound Integrated Transponder (PIT Tags).