Connecting Volunteers to Delaware Bay Culture Through Horseshoe Crab Tagging Program

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A Long Journey with a Pit Stop

Migration Route

Breeding Grounds

Delaware Bay

Tierra Del Fuego

Jan van der Kam

Joe Smith
Restoring the “Hidden Coast”

After Hurricane Sandy in 2012:

- Funding & attention was focused on the Atlantic Coast
- 70% of horseshoe crab spawning habitat was lost
- Red knot & horseshoe crab dynamic threatened

American Littoral Society in action:

- Five beaches restored in time for horseshoe crab spawning the following May
- Since then, almost 3 miles of beach has been restored
Restoring the “Hidden Coast”
Helping Horseshoe Crabs with Citizen Science

- Monitor crab activity on restored beaches in May & June
- Delaware Bay-wide Spawning Survey
- USFWS Cooperative Tagging Program
- Horseshoe crab talk, survey & tag
Volunteer Engagement

• A lot of crabs means a lot of volunteers
• www.horseshoecrabtagging.org
• Engage local schools & citizen groups through presentations
• First time experiencing the Delaware Bay & long-time residents

Volunteer Distribution:
   NJ, NY, DE, MD, VA, MA, IL
   Russia, Canada

Girl Scouts, Philadelphia Zoo, NJ Center for Aquatic Sciences, Defenders of Wildlife
Typical Survey Night

- PM high tide around the new and full moon
- Horseshoe crab talk - history & anatomy
- Survey crabs - contributes to population estimates
- Tag crabs - understand how crabs are using our beaches & where they are going
- Look for existing tagged crabs
Historical Use of Horseshoe Crabs

- Mid-1850s-1900s: Horseshoe crabs harvested for fertilizer & supplement livestock feed (1.2mil annually)
- 1970s: Brief recovery of population after decrease in harvest due to use of chemical fertilizers
- 1970s- today: Horseshoe crabs used as bait for whelk & eel harvest.

Resources & photos: Ecological Research & Development Group (ERDG)
www.horseshoecrab.org
Horseshoe Crab Use Today

• 1960s: Unique property of horseshoe crab blood discovered
• 1970s: Limulus Amoebocyte Lysate (LAL) endotoxin testing commercialized
• Late 2000s: Synthetic test developed

Important for public health: injectable drugs, vaccines, medical devices

2008: Moratorium passed in NJ with the help of ALS. Horseshoe crabs can only be harvested in NJ waters for biomedical use.
Since 2014...

- 115,447 crabs have been surveyed
- 18,841 tags have been deployed
- 1,512 tags have been found again
- 1,500 volunteers engaged

Horseshoe crab monitoring will continue in 2019.
Thank You

For More Info
www.LittoralSociety.org

Project Website
www.HorseshoeCrabTagging.org

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