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Mid-Upper Coast Surveys of Texas Diamondback Terrapin

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1st Meeting of the Texas Diamondback Terrapin Working Group
TAMU-CC NRC, Corpus Christi, TX
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Mid-Upper Texas Coast Surveys

• Population Distribution – San Antonio Bay, Matagorda Bay, and Sabine Lake
• Funded by TPWD Grant (2-year study)
• Goal – using literature (gray and published) and new field data, attempt to update information on:
  • Distribution
  • Density
  • Demographics
Objectives

• Compile historical database for distribution and sightings along the Texas coast
• Perform field searches in historically known and previously undocumented areas along the mid to upper Texas coast
• Compile a modern database for distribution and sightings along the Texas coast
Field Survey Site Selection

- ArcGIS Modeling
  - Randomized locations
  - Include ideal and non-ideal habitat types
- Clusters of sites within bay systems
  - Sabine: 60 sites; 7 clusters
  - Matagorda: 100 sites; 14 clusters
  - San Antonio: 100 sites; 9 clusters
- Randomly selected site visits
Field Survey Methods

- Modified crab traps
- Head count surveys
- Walking transect surveys
Field Survey Results

• 24 sites sampled across mid-upper Texas coast (8 per bay system)
  • Terrapin found at 3 sites in Sabine Lake (n = 19)
  • Terrapin found at 2 sites in Matagorda Bay (n = 5)
  • No terrapin found in San Antonio Bay
    • Terrapin observed around Goose Island – need to search further south from San Antonio Bay
Modern Database Compilation

- Online questionnaire developed
- Included: agency officials, fisherman, crabbers, charter captains, eco-tourism representatives, etc.
- Open from April-August 2014
- Included:
  - All 8 major bay systems
  - Clickable map for sightings
  - Estimated # terrapin observed
  - Season observed
Distribution of modern and historical terrapin observations compiled during 2014 mid-upper coast study.
Teal = TPWD independent monitoring reports from 1977-2013; yellow = incidental sightings reported to EIH personnel from 2008-2014; red = captures made by EIH personnel from 2008-2014; blue = observations reported in 2014 online questionnaire.
Past and Current Research

- On-going long-term population studies of West Bay terrapin populations.
- By-catch Mortality & Critical Life History Parameters of the Texas Diamondback Terrapin (in prep).
- Current & Historical Distribution of the Texas Diamondback Terrapin (in prep).
- Factors Influencing the Distribution & Abundance of Texas Diamondback Terrapin (in prep).
Future Research Endeavors

- Abundance/density of known areas of terrapin populations
- Overall population status of subspecies
- Demographic data compilation and analysis
- Movement, home range, and habitat association
- Role of major weather events on survival and dispersal
- Better definition of sources of mortality (including crab fishery and others)
Thank You!