Rapid Assessment Protocol for Spawning Horseshoe Crabs

This protocol is used to rapidly assess the spawning densities of horseshoe crabs in place of the standard quadrat method. The purpose of the rapid assessment is to estimate spawning densities quickly to determine when peak spawning occurs or to determine if the beach should be surveyed using the standard quadrat protocol in the future.

There are 4 necessary items that must be recorded for the rapid assessment:

1. Location, date, and time of day of the survey. Time of high tide if known. Indicate latitude/longitude coordinates of beach if known (these can be obtained from GoogleEarth)
2. Length of the beach that is observed (include units – meters or feet).
3. Width of area that is searched for crabs (preferably 2 meters wide)
4. Number of female and male crabs observed – It is important to identify the sex of the crabs observed so that spawning indices (number of spawning females) and spawning sex ratios can be calculated.

Protocol:
1. Record beach location (include town & state, coordinates if known), date, and time of survey.
2. Identify the length of beach that will be surveyed. Preferably use easily identifiable start and end points so that the total beach length can be estimated.
3. Walk the beach at the water line/swash zone
4. Count all male and female crabs within 1 meter of the water line. Tally as you go, then circle the total number of crabs.
   - For example: 1111 1111 11 12 (a total of twelve crabs seen)
   - Otherwise we don’t know if “11” is two or eleven.
5. Return survey sheet to MJ James-Pirri (address below)

Rapid Assessment Survey Data Sheet
Return Data Sheet to: MJ James-Pirri, Box 6, South Ferry Road, Graduate School of Oceanography, University of Rhode Island, Narragansett, RI 02882 or email a digital copy to: mjjp@gso.uri.edu

Date __________ Start Time of Survey_________  Day or Night Time of high tide ____________
(circle one)

Person conducting survey & contact phone number _________________________________________

Beach Name ________________________ Town & State ______________

Length of beach walked_______________________ (please include the unit of measurement (feet or meters))

Number of male crabs____________________________________________

Number of female crabs____________________________________________

Comments:
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Date __________ Start Time of Survey ___________ Day or Night Time of high tide ____________
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Person conducting survey & contact phone number _________________________________________

Beach Name ________________________ Town & State ______________

Length of beach walked_______________________ (please include the unit of measurement (feet or meters)

Number of male crabs _______________________________________________________________

Number of female crabs ______________________________________________________________

Comments:

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