AMOY Rangewide Breeding Survey Redux: an incremental approach to survey design and implementation

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Overarching objectives of a rangewide breeding survey as expressed by US states and Atlantic Canada in 2011

1. Determine the number and distribution of oystercatcher breeding pairs by surveying all suitable breeding habitat.
2. Document the number, spatial distribution, age and breeding status of banded individuals during the nesting season by incorporating a complete resighting effort in the rangewide breeding survey.

Take a step back and re-evaluate

Take incremental measures towards removing sampling biases to obtain a statistically sound rangewide breeding population estimate.

Conduct an expanded pilot study over the next 2 – 3 years that will allow us to chip away at the issues currently dogging us.

Issues that need to be resolved

1. Determine which metric serves as the most accurate measure of breeding pairs.
2. Develop a consistent methodology to obtain breeding pair estimates that will work across all habitat types within the range.
3. Account for spatial bias by surveying in areas with low, medium and high probability of detecting AMOYs.
4. Account for potential differences in detectability rates among all habitat types (i.e., beaches, marshes, shell rakes, human-created habitats, *others?*).

Minimum requirements for an expanded pilot study

1. Obtain representation from other parts of the breeding range (mid-Atlantic, Northeast, Southeast, Gulf) to determine the feasibility, costs and logistical constraints of conducting repeated surveys in these areas.
2. Survey areas with low, medium and high abundances (i.e., low, medium high habitat suitability) of AMOYs in order to establish detection probabilities across all spatial scales.
3. Conduct a validation trial (intensive nest searches) at one or more sampling plots per habitat suitability strata.

Repeated surveys methods

1. Shortened survey window: middle (at first hatching?) of the breeding season.

2. Conduct surveys during high tide, perhaps when adults are less likely to be out feeding or provisioning food for young.

3. Conduct a minimum of 3 surveys at each sampling plot.

4. Conduct a validation trial (intensive nest searches) at one or more sampling plots per habitat suitability strata.

Benefits to states and provinces participating in the expanded pilot study

1. Development of state/province-specific methods that may extend to other breeding species utilizing similar habitats.

2. Establishment of detectability rates across all habitat types.

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