

Narragansett Bay Estuary Program

Roger Williams University, 10-06-23



Biophilia

Deirdre Robinson, Co-director
Saltmarsh Sparrow Research Initiative

Philia = from the ancient Greek φιλία (*philia*), meaning non-romantic love or friendship (Aristotle, 320 BCE).

The Biophilia Hypothesis = the innate tendency to connect to other living beings (E.O. Wilson, 1993).



Dusty Patched Bumble Bee carrying pollen. Photo by Tamara Smith / iStock.com

Biophilia

can be an agent

for behavioral change.

What is the opposite of
Biophilia?

Biophobia

Anthropocene





SALTMARSH SPARROW RESEARCH INITIATIVE

Steve Reinert, Deirdre Robinson, Jim O'Neill

<https://www.salsri.org/>



Jason Jaacks

Why study Saltmarsh Sparrows?



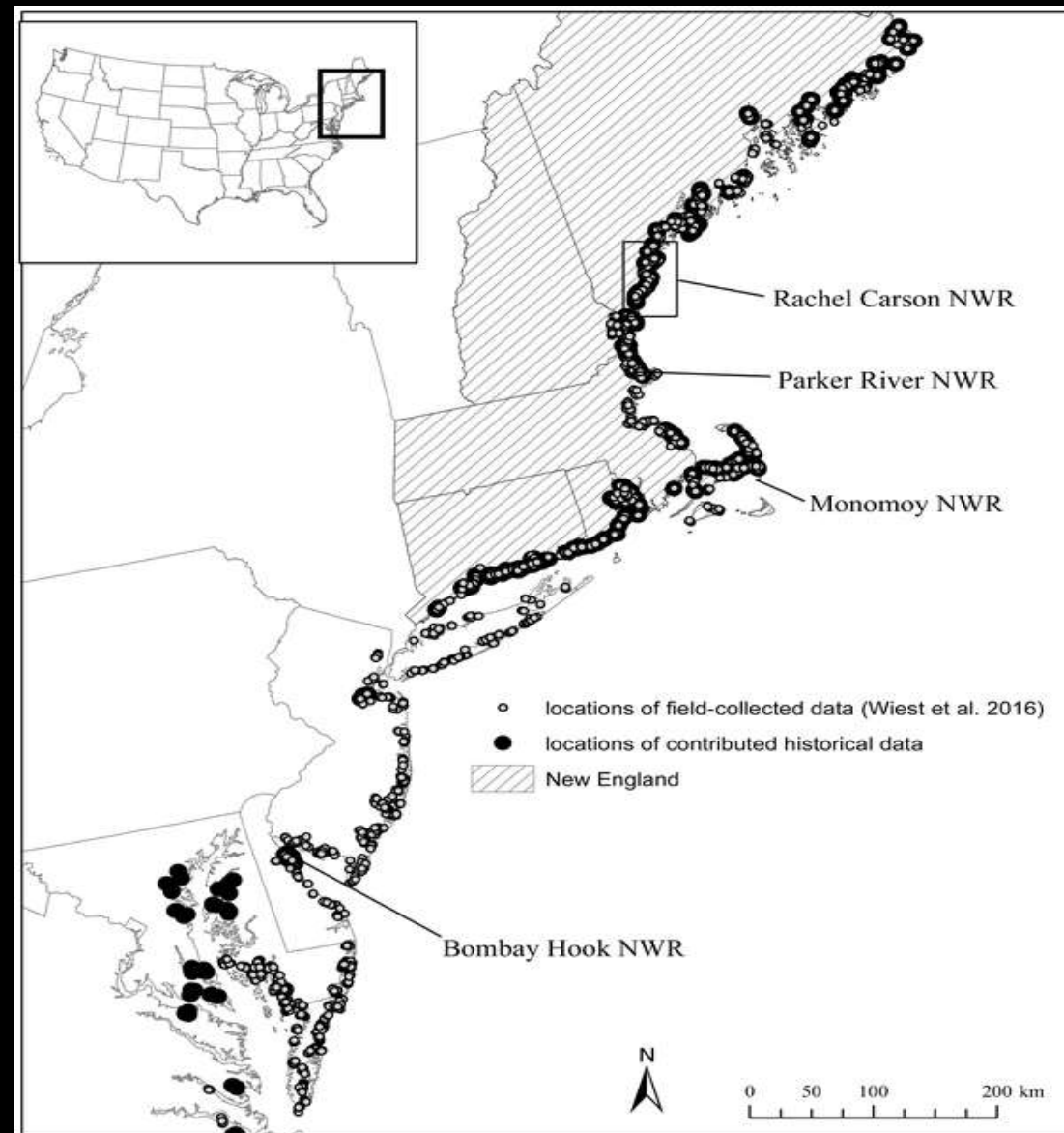
because they are *exceptional*.

Unlike most birds, Saltmarsh Sparrows...



- are non-territorial;
- have only a rudimentary song;
- nest just above the ground;
- often prefer running.

They evolved to become obligatory saltmarsh specialists nesting only between VA and ME in the entire world;





They have an unusual breeding system termed **polygynandry**, which is very rare in birds.

The female mates with multiple males and is solely responsible for all parental care.



Jason Jaacks

Why study Saltmarsh Sparrows?



because they are on the brink of extinction.

Saltmarsh Sparrows are the **Canaries** in the Coal Mine for **Rising Sea Levels**





Journal of Avian Medicine and Surgery
30(4), 386-391, (1 December 2016).

Joel S. Eckerson

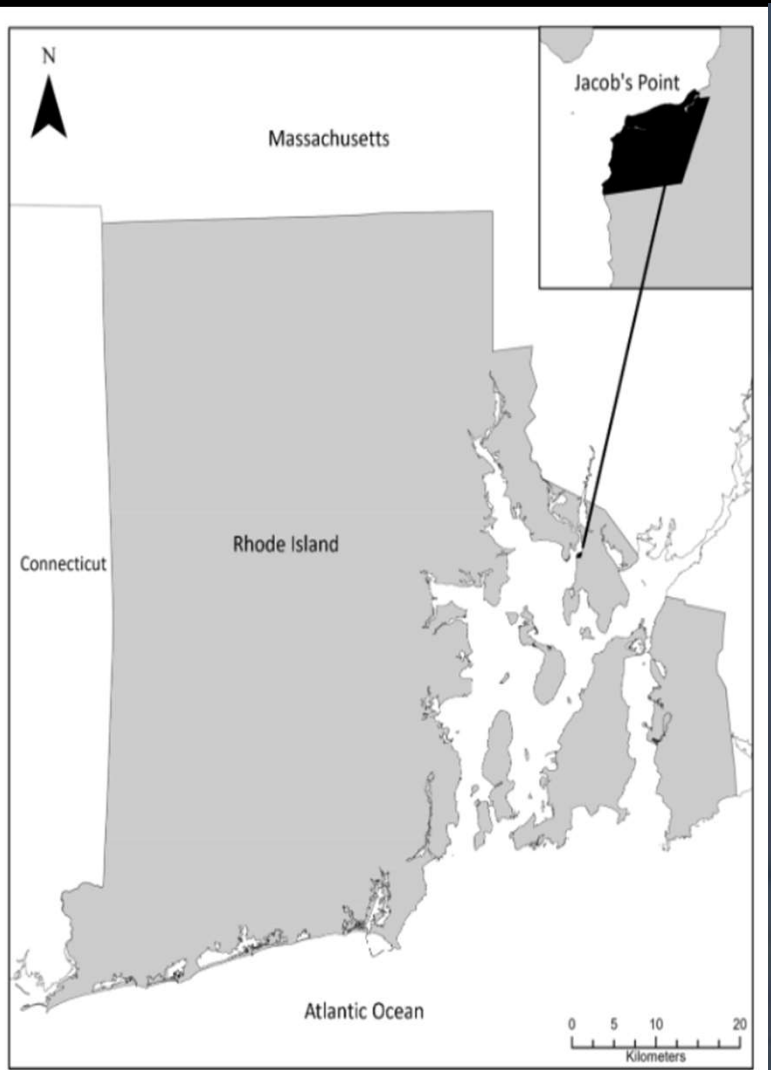


Figure 1. Study area at Jacob's Point salt marsh in Warren, Rhode Island. Jacob's Point has an area of approximately 14-ha and is comprised primarily of *Spartina* grass species.



Butch Lombardi



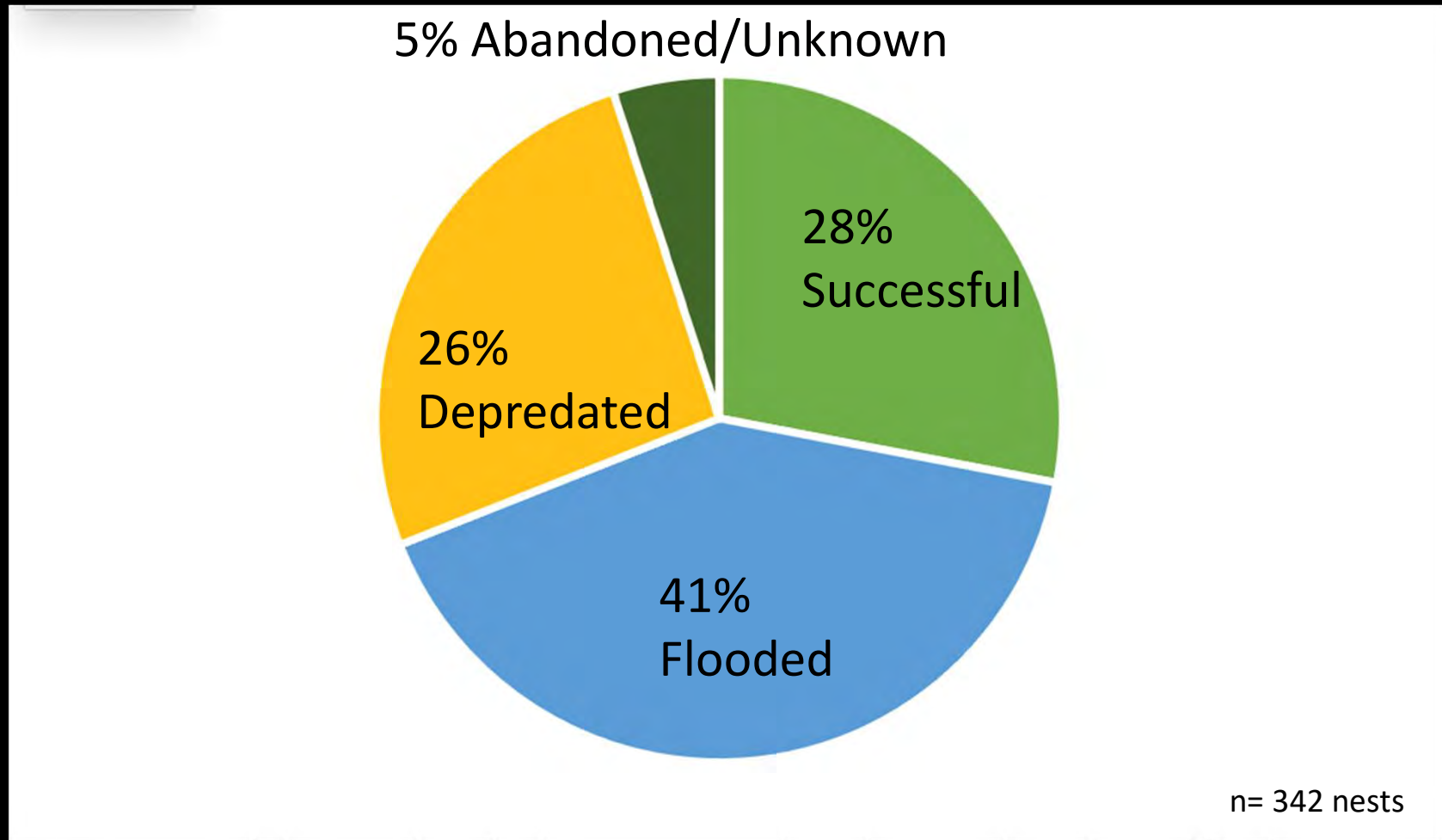
Butch Lombardi







Nest Outcomes 2017-2023 at Jacob's Point



??



David DelPolo,
Providence Journal

1. Is vegetation associated with nesting success?



Steve Reinert identified the vegetation surrounding each nest and compared it to random locations.

2. Who are the predators?







Jim O'Neill installed trail cameras at 32 randomly selected nests.



Rorschach Test



Figure 2. White-tailed Deer apparent depredationa Saltmarsh Sparrow nest on 24 June 2022 in Jacob's Point, Warren, RI.

3. Are there morphological changes over time that may be driven by rising temperatures?



Deirdre Robinson

Allen's Rule (1877)

Animals adapted to cold climates have shorter and thicker appendages than animals adapted to warm climates.

Maasai Mara



Inuit



<https://www.masaimara.travel/maasai-tribe-facts.php>

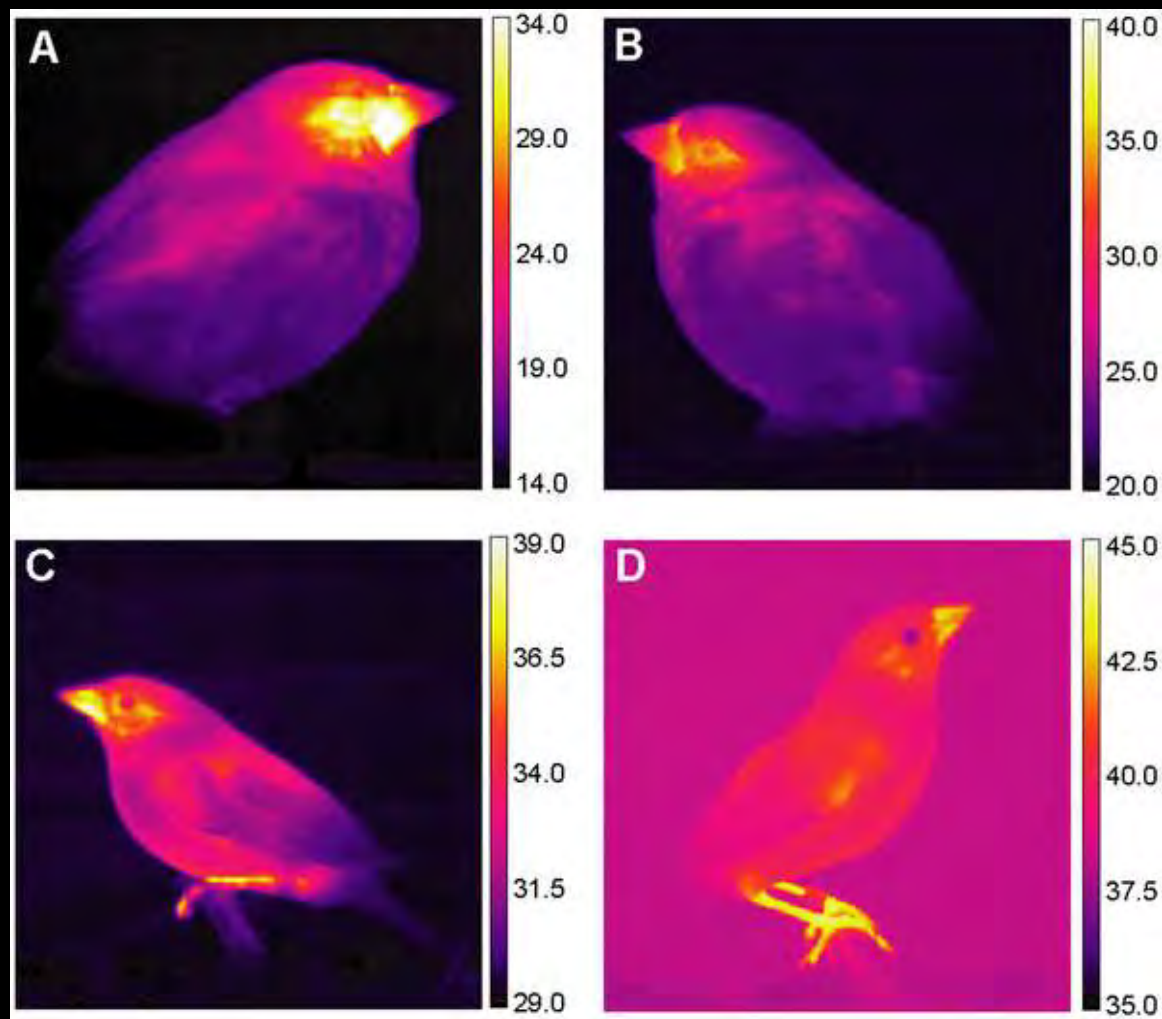
Wikipedia

Song Sparrow Infrared images

Eastern (*Melospiza melodia melodia*)

vs.

Atlantic (*M.m. atlantica*)



Greenberg R, Cadena V, Danner RM, Tattersall G (2012) Heat Loss May Explain Bill Size Differences between Birds Occupying Different Habitats. PLOS ONE 7(7): e4093
<https://doi.org/10.1371/journal.pone.0040933>

<https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0040933>



Museum of Natural History
Roger Williams Park

Martin Sluk, Curator



Museum of Comparative Zoology
Harvard University

Jeremiah Trimble, Curator



4a. Can nests be lifted above flooding thresholds?



4b. Will females feed nestlings in a raised nest?



4c. Can nests be camouflaged from predators?



Conservation Biology is a
discipline with a *deadline*.

E.O. Wilson



“What if we don’t change at all ...
and something magical just happens?”

Never doubt that a small group of thoughtful, committed **citizens** can **change the world**; indeed, it's the only thing that ever has.

— *Margaret Mead*





1. Expand your vocabulary to include:
Biophilia, **Biophobia**, and the
Anthropocene.

2. Consider that Conservation Biologists
need to understand how to overcome
resistance to change.

3. Nurture **Biophilia** in ourselves and others.

4. Summon the courage to ask others to change their behavior toward protecting life on this planet.



Be the change
that you want to see
in the

