

What is the U.S. NABCI Monitoring Subcommittee working on?



April 2015

Katie Koch, co-chair

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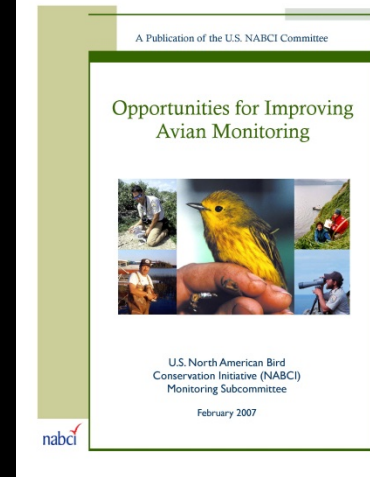


MISSION

The U.S. **NABCI Monitoring Subcommittee** was established in 2005 to provide technical expertise and recommendations for improving bird monitoring such that effective and efficient integrated monitoring programs are in place, institutionally supported, and informing conservation throughout the full annual cycle.

GOALS

- Fully integrate monitoring into bird conservation and management practices.
- Coordinate monitoring programs to solve conservation problems effectively.
- Increase the value by improving statistical design.
- Maintain bird population monitoring data in modern data management systems.



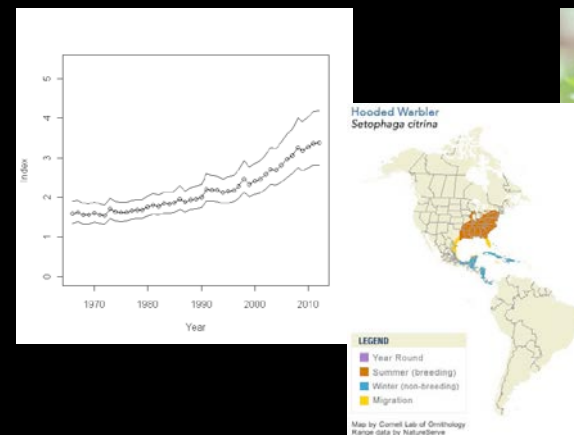
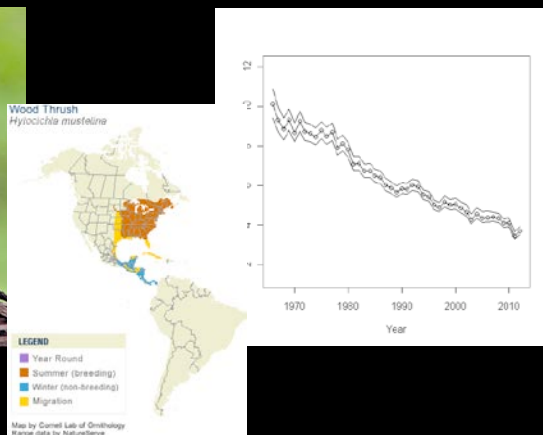


U.S. NABCI Strategic Plan 2014 - 2016

- Promote and advance outcome-based **monitoring and database management**
 - Collaborative data repositories/management systems
 - Metadata, reference grid & vegetation sampling standards
 - Improved decision support for impact management and Birds of Cons. Concern
 - **Workshop to Assess Demographic Monitoring Needs (November 18-20, 2014)**

Demographic Monitoring Workshop

- What limits and regulates populations?
- Why are some species declining and others increasing?
- What data do we need and how can we collect it?
- How to apply results to on-the-ground conservation?

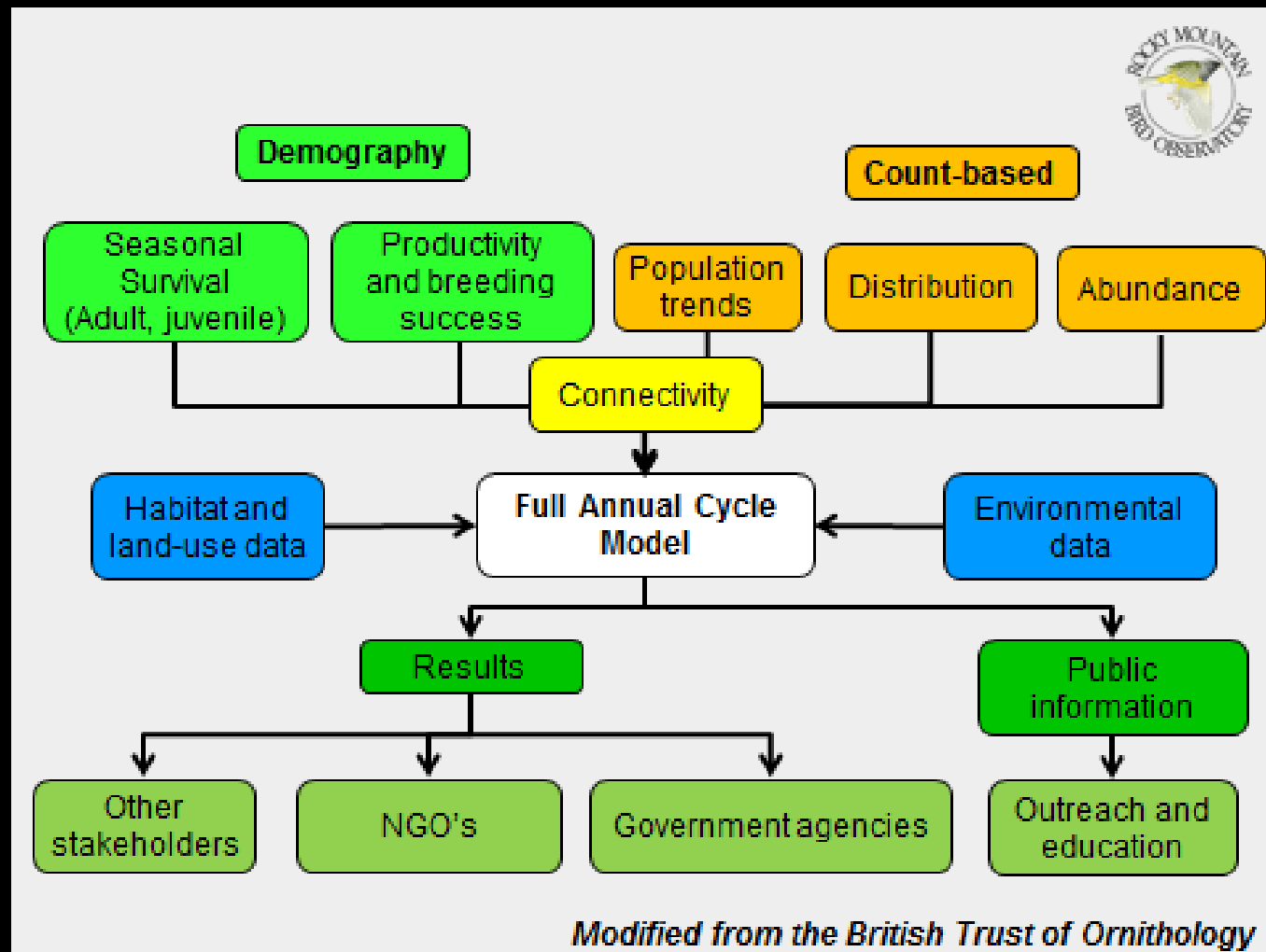


Demographic Monitoring Workshop

GOAL:
~~TASK~~:

1 DEVELOP A FRAMEWORK THAT GUIDES COLLECTION AND USE OF DEMOGRAPHIC DATA TO INFORM FULL LIFE CYCLE MODELS ~~FOR ALL~~ BIRDS → TO IDENTIFY WHICH LIMITING FACTORS ARE MOST IMPORTANT, WHERE & WHEN THEY MIGHT BE MOST EFFECTIVELY ADDRESSED, AND WHAT DECISION MAKING PROCESSES AND CONSERVATION ACTIONS ARE NECESSARY TO CONSERVE (ALL) BIRDS.

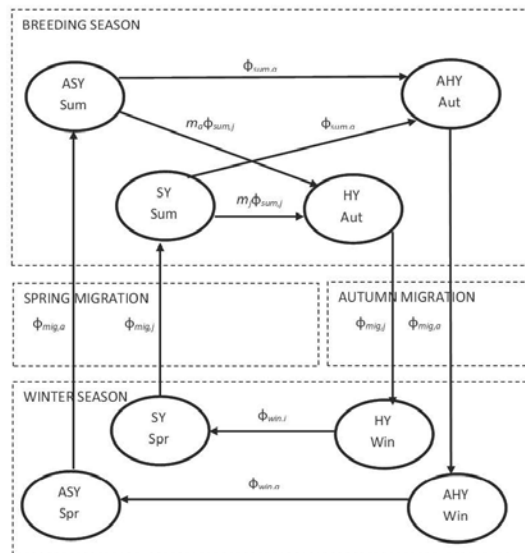
Demographic Monitoring Workshop



Demographic Monitoring Workshop

Technical Considerations

Wood Thrush model



Symbols and Acronyms:

- Dotted Box: Season
- Oval: State variables (in this case, number of birds)
- Black Arrow: Transition of number of birds
- ASY: After second-year
- SY: Second-year
- AHY: After hatch-year
- HY: Hatch-year
- m_j : SY fecundity
- m_a : ASY fecundity
- $\phi_{sum,j}$: Survival probability from fledging to end of summer
- $\phi_{sum,a}$: AHY summer survival probability
- $\phi_{mig,j}$: HY/SY migration survival probability
- $\phi_{mig,a}$: AHY/ASY migration survival probability
- $\phi_{win,j}$: HY/SY winter survival probability
- $\phi_{win,a}$: AHY/ASY winter survival probability



Demographic Monitoring Workshop

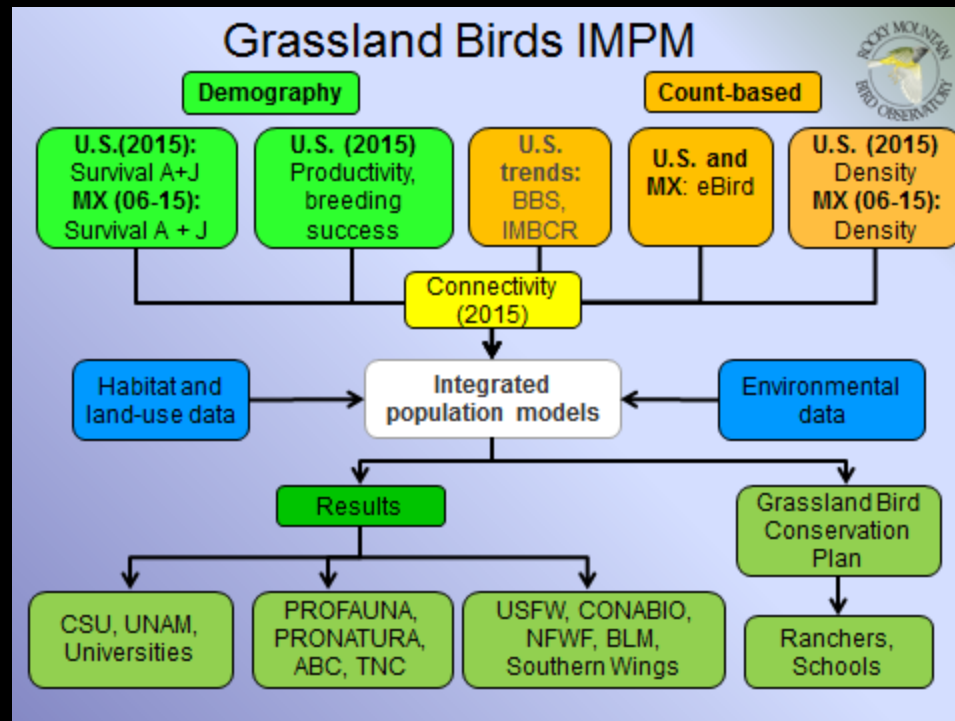
Decision-Making Considerations

At what scale do we do this?

- Link decisions at relevant scales
 - Local
 - Habitat management, restoration, protection (is it working?)
 - Regional
 - Joint Venture planning and conservation delivery
 - National
 - Selecting priorities, allocation of resources
 - FLC
 - Where do we need to work first (internationally)?

Demographic Monitoring Workshop

Integrate Knowledge and Activities



A Publication of the U.S. NABCI Committee

Demographic Monitoring for Strategic Bird Conservation in the Western Hemisphere



U.S. North American Bird
Conservation Initiative (NABCI)
Monitoring Subcommittee

December 2015