

Landbird Migration Monitoring in Alaska

The Need to Evaluate Past and
Current Efforts to Direct Future
Sampling



Bud Johnson Tetlin National Wildlife Refuge



A little history.....

- Tom Pogson - ABO
- Anna Marie Benson - ABO
- Donna Dewhurst – APB NWRC
- Terry Doyle – Tetlin NWR
- Brad Andres - MB

Ongoing migration monitoring programs

- Alaska Bird Observatory
- Tetlin National Wildlife Refuge
- Denali Institute
- BLM – Campbell Track

Objectives for migration monitoring

- Monitor population changes of landbirds during migration
- Examine the timing of life history events of landbirds (e.g., migration, reproduction, molt, dispersal, and seasonal differences in body condition)
- Provide public education programs relating to avian ecology and conservation

So how are we doing?

- Banded over 100,000 birds
- At least two stations have more than ten years of data
- Provided education and outreach to the public
- Published summary reports and papers (few)
- Completed comparative analysis of banding data from ABO & Tetlin

Comparative Analysis for ABO & Tetlin NWR

- Compare age-related differences in timing of migration
- Identify species that could potentially be monitored
- Examine how daily weather events affect captures
- Determine if abundance estimates from two stations are correlated
- Calculate power to detect trend

Findings

- Large numbers of several species were captured annually but few adults
- Patterns in the timing of migrant passage were remarkably similar
- Annual abundance estimates were not correlated
- Ten species could be monitored with 80% probability to detect 50 % decline in 25 yrs
- Objective of 90% probability could not be met for any species

Caveats

Lack of correlation in abundance estimates between two sites may indicate:

- we're not monitoring the same populations
- some important weather variables were not available for analysis
- Type I errors may have occurred because only five years of weather data were available
- Behavioral differences between HY & AHY may result in high or low capture days

Where to now?

- Larger scale analysis
- Estimate trends and evaluate power to monitor using different models and/or criteria
- Compare to other trend information e.g. BBS
- Formalize statewide network with more collaboration and standardization of methods and databases
- Collaboration with Canadian Migration Monitoring Network

Discussion

