Migratory Connectivity of Lesser Yellowlegs

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Why Lesser Yellowlegs?

Population DECLINING: 5.3% annually range-wide
5.3% to 9.2% annually Alaska
90% estimated population loss

Potential Threats:
1. climate change
2. wetland conversion
3. urban development
4. agrochemical application
5. unregulated shorebird harvest

Unregulated Shorebird Harvest

- **Suriname and French Guiana:** 10s of 1,000s of shorebirds are harvested annually and illegally sold
- **Barbados:** 5,700 to 19,900 Lesser Yellowlegs harvested annually
- **Guadeloupe:** annual harvest likely exceeds 8,000 Lesser Yellowlegs

- Harvest may represent 35-50% of the estimated annual allowable mortality

[Ottema and Ramcharan 2009; Hutt, M.B. 1991; Andres and Reed per. comm.; Watts et al. 2015]
The era of light-level geolocators


- Low spatial accuracy
- Negatively influenced by equinox
- Require recapture
But, substantial information gaps continue to exist
Overall Project Objectives

1. Determine if breeding populations are genetically distinct

2. Estimate demographic rates such as apparent adult survival

3. Determine nest and brood survival and juvenile recruitment through the collection of reproductive rate information

4. Describe migratory movements including pathways, duration and non-breeding sites
Thesis Objectives

1. Susceptibility of populations to shorebird harvest

2. Migratory pathways and non-breeding locations

3. Strength of migratory connectivity among populations

4. Movement modeling and habitat associations
Capture Methods

- Bow net at nest
- Bow net at foraging sites
- Mist net with audio lure
**PinPoint Argos-GPS Satellite**

**Pros**
- Accurate to 10m or less
- User defined schedule
- Do not require recapture

**Cons**
- Costly (~ $1500)
- Too heavy for small species
- Limited battery life

*Credit: L. McDuffie (USFWS)*
Preliminary Results: autumn migration and non-breeding (2018/2019)
Annual Migration
(June 2018 to Present)
Female average migratory distance and duration: 11,929km and 88 days

Male average migratory distance and duration: 8,199km and 79 days
Susceptibility to Harvest
Stay tuned for updates at ABC 2021

• 2019 Deployments:
  • Anchorage = 15
  • Kanuti NWR = 10
  • Yellowknife = 10
  • Alberta = 10
  • Churchill = 20
  • James Bay = 15
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