

Harvest Exposure of Lesser Yellowlegs

Laura McDuffie

MS student University of Alaska Anchorage,
U.S. Fish and Wildlife Service

Katherine Christie (Alaska Department of Fish and Game)

Audrey Taylor (University of Alaska Anchorage)

Autumn-Lynn Harrison (Smithsonian Migratory Bird Center)

Jim Johnson (U.S. Fish and Wildlife Service)



Photo: L. McDuffie/USFWS

Conservation Status

>90% decline since 1966!

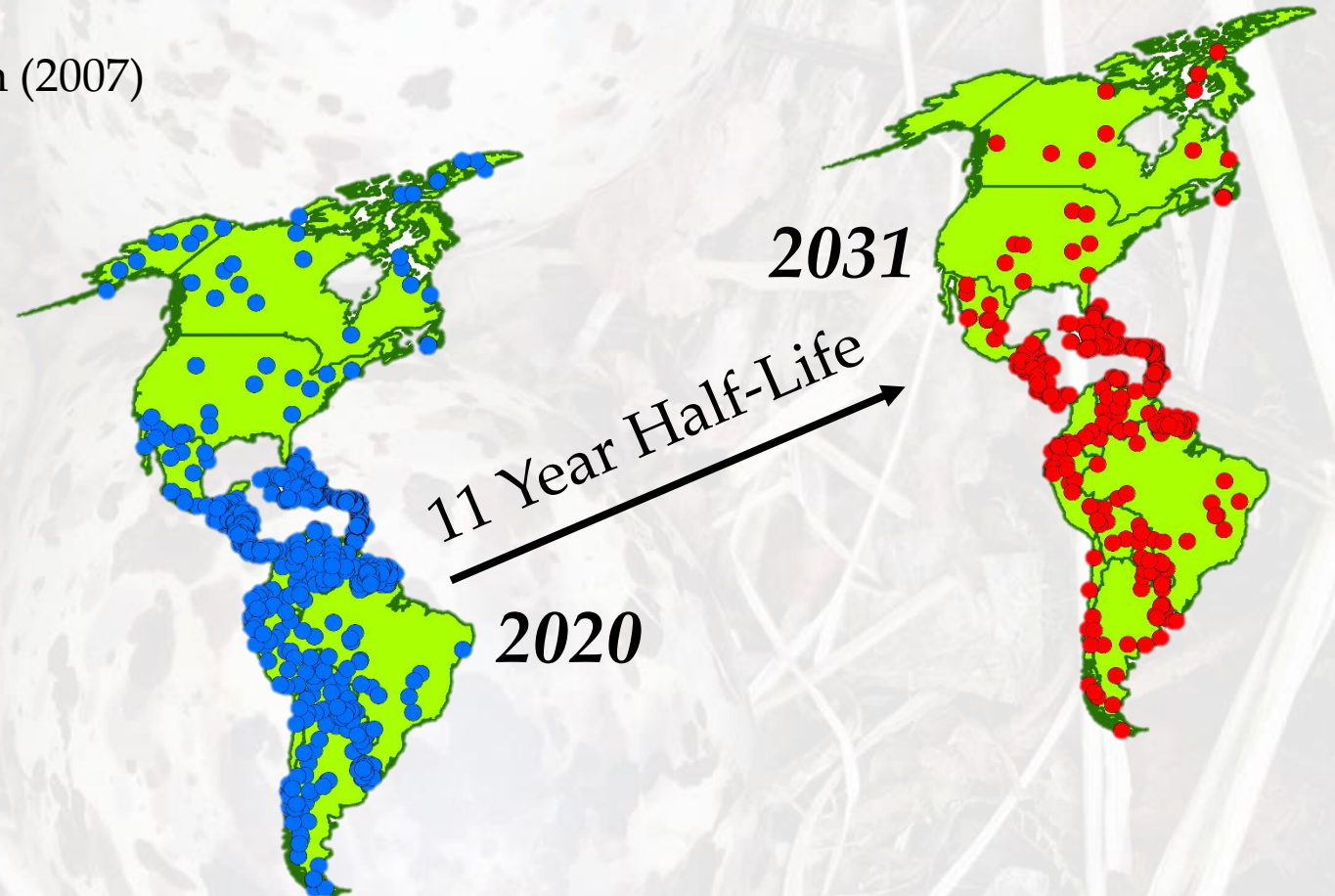
Sauer et al. (2017); Butcher and Niven (2007)

Tier 1 “3X” species

✓ *High Vulnerability*

✓ *Steep Decline*

✓ *High Urgency*



Threats

(Clay *et al.* 2012, Watts *et al.* 2015)



Agriculture near Calgary, Alberta/photo L. McDuffie/USFWS

- 1) Loss of Habitat
- 2) Agrochemicals
- 3) Climate Change
- 4) Harvest**

Estimated Annual Harvest

Jurisdiction	Shorebird Annual Harvest	LEYE Annual Harvest
Guadeloupe/St. Martin	2,100–5,400	1,365–3,510
Barbados	9,000–10,000	5,850–6,500
Martinique	9,100–12,700	5,915–8,255
Suriname	73,500–182,100	22,100–47,775
Trinidad & Tobago	0–1,000	unknown
Guyana	7,500–12,500	unknown
French Guiana	3,000–7,000	unknown
Brazil	5,000–10,000	unknown
TOTAL	109,200–240,700	35,230–66,040

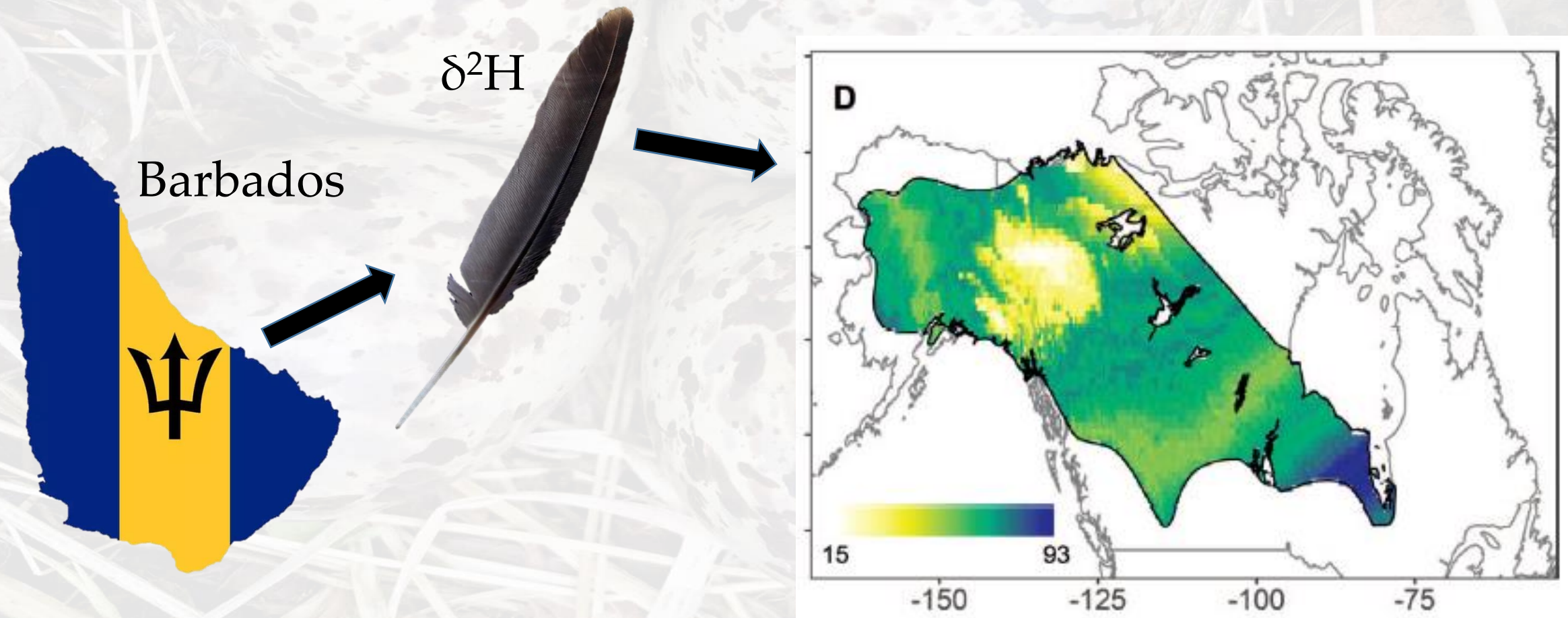


Photo: Guadeloupe hunter/2020

(Actions for the Atlantic Flyway Shorebird Initiative's Shorebird Harvest Working Group 2020–2025; B. Andres personal communication 2020)

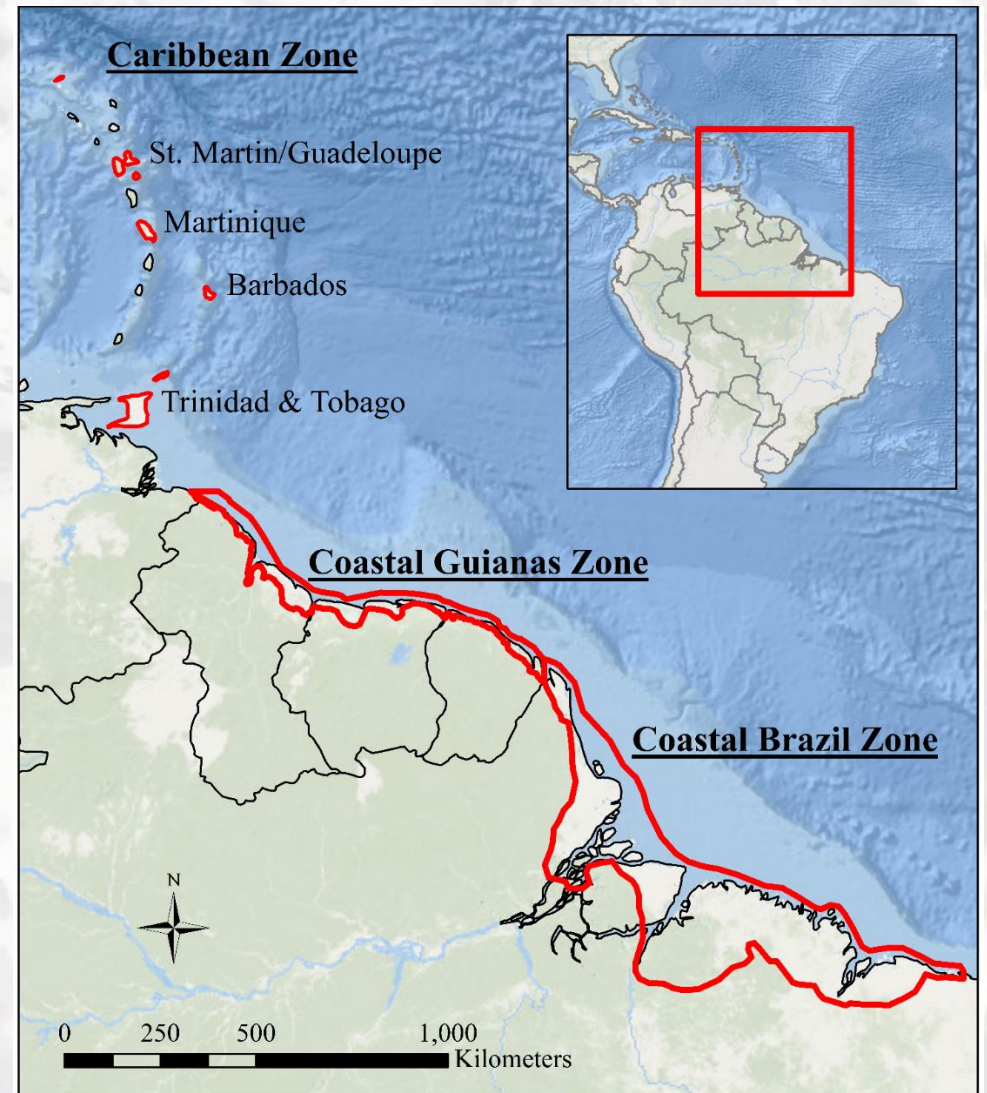
Stable Isotope Linkage

Reed et al. 2018, *Condor*



Objectives

- ✓ Probability of occurrence within harvest exposure zones in autumn
- ✓ Period of peak occurrence in autumn
- ✓ Predictors of duration



Methods: Tracking



Capture Locations: 2018-2020

Kanuti NWR ($n=10$)



Yellowknife, NWT ($n=11$)



Anchorage, AK ($n=46$)



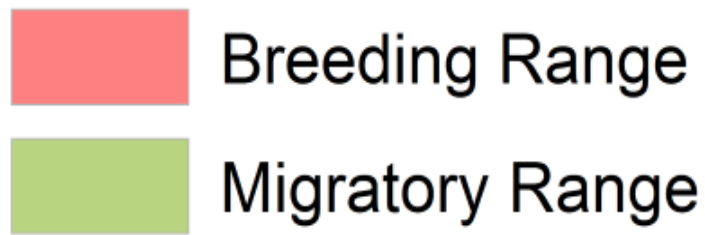
Churchill, MB ($n=20$)



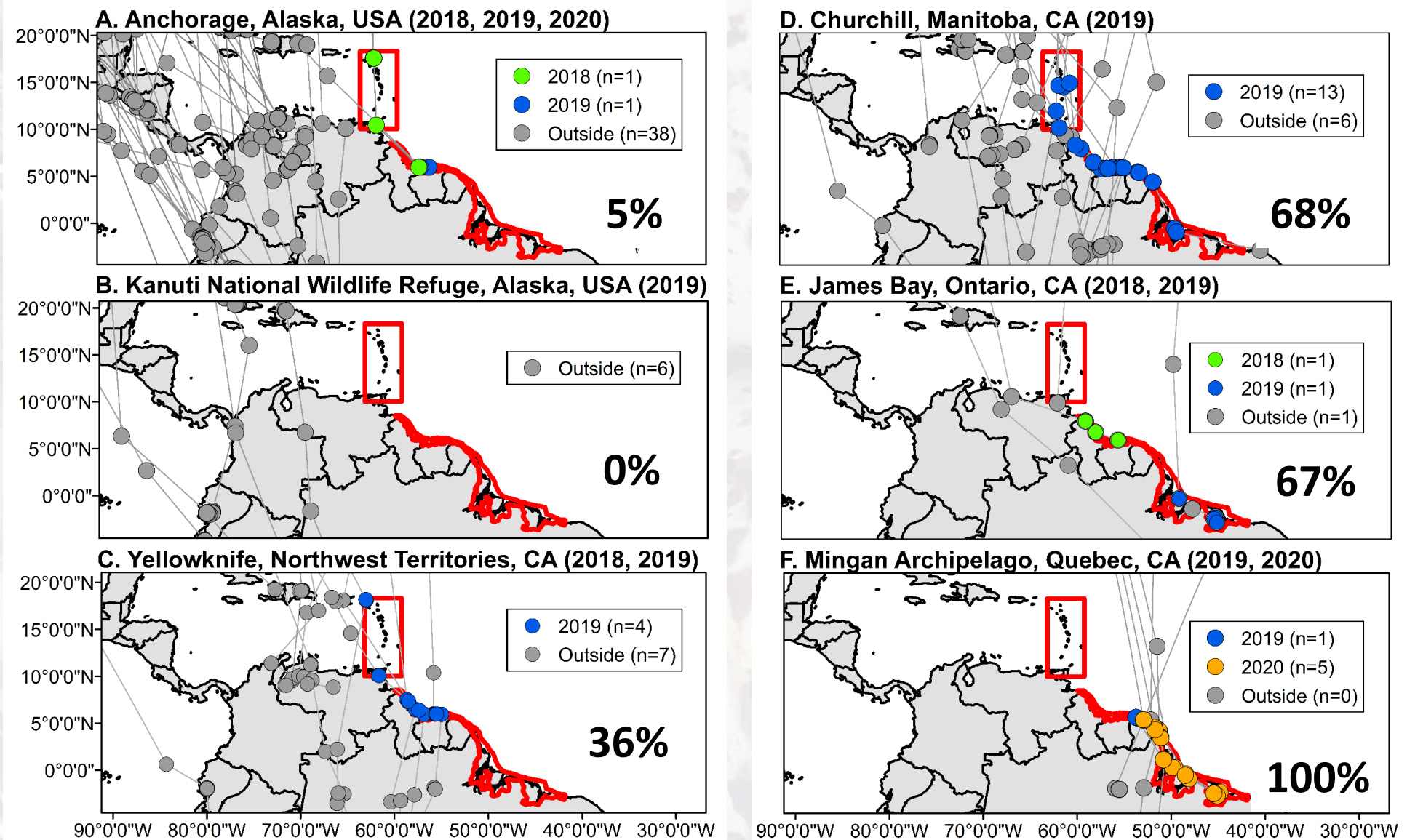
James Bay, ON ($n=9$)



Mingan, QC ($n=14$)

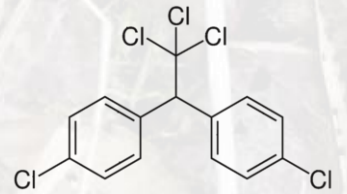


Exposure Proportion



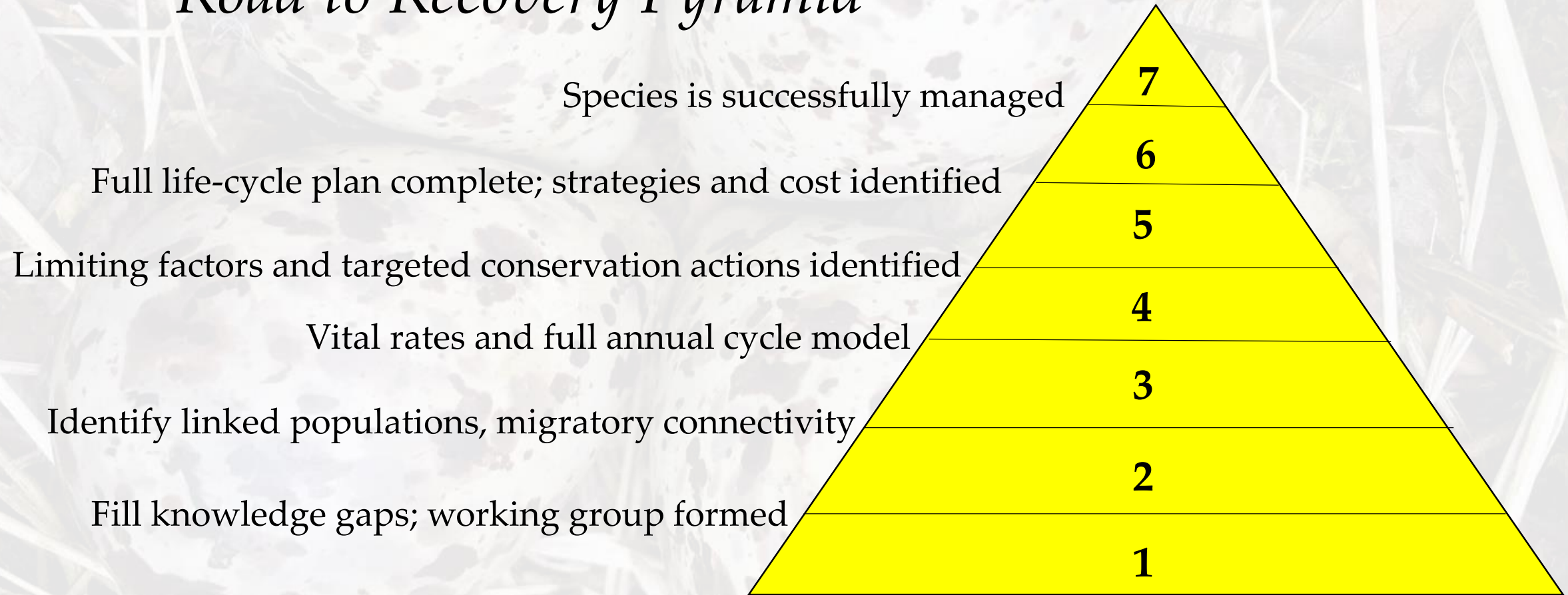
Conservation Implications

- Potential Biological Removal revision (will likely decrease) Watts et al. (2015)
- Improving sustainable shorebird harvest
 - ❖ Political will
 - ❖ Education
 - ❖ Laws & Policies
 - ❖ Compliance & Enforcement
 - ❖ Institutional Capacity & Funding
- Harvest is just one of many threats



Where do we stand?

Road to Recovery Pyramid



Funding

Department of Defense/673rd CES/CEIS

ADF&G State Wildlife Grant T-33-2020

USFWS Candidate Conservation Species Grant

Collaborators

Alaska Department of Fish and Game

Bird Studies Canada

Environment and Climate Change Canada

James Bay Shorebird Project

Joint Base Elmendorf-Richardson

Trent University

University of Alaska Anchorage

University of Alberta

U.S. Fish and Wildlife Service

USGS Alaska Science Center

Smithsonian Migratory Bird Center



Thank you!



Laura McDuffie
laura_mcduffie@fws.gov