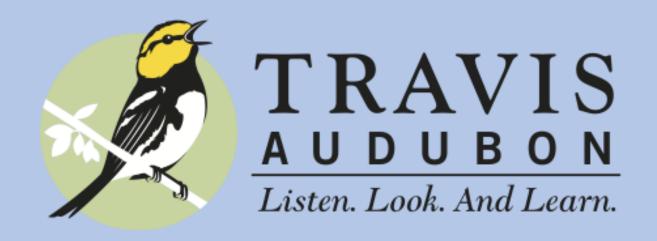
# The Marvels of Migration

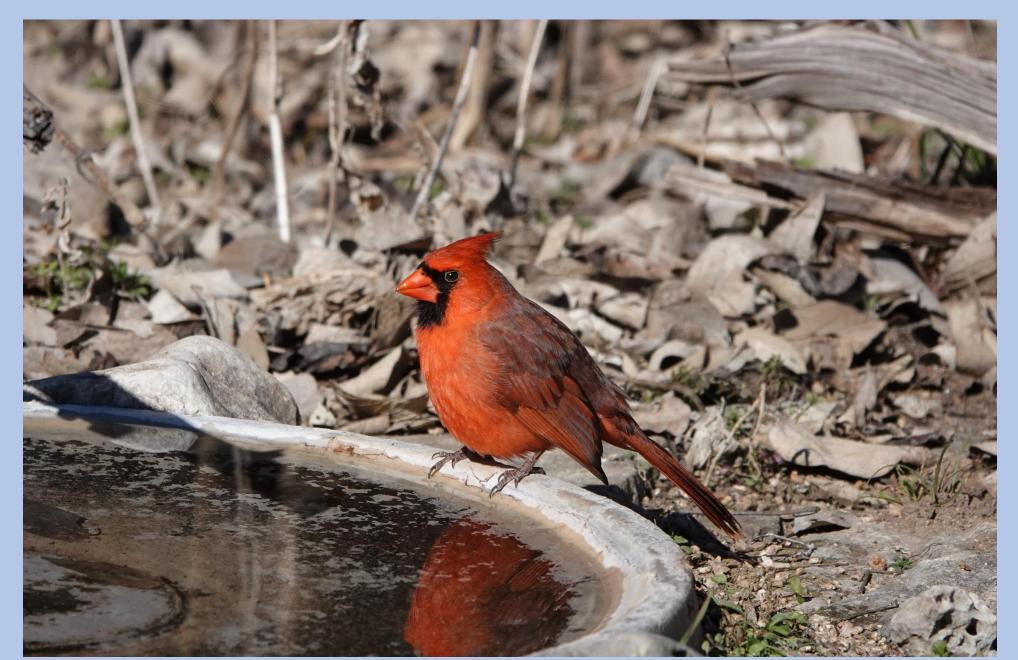
### Chris Gunter



## Northern Mockingbird



### Cardinal



## Blue Jay



### Black-crested Titmouse



### Carolina Wren



### House Finch



### Carolina Chickadee

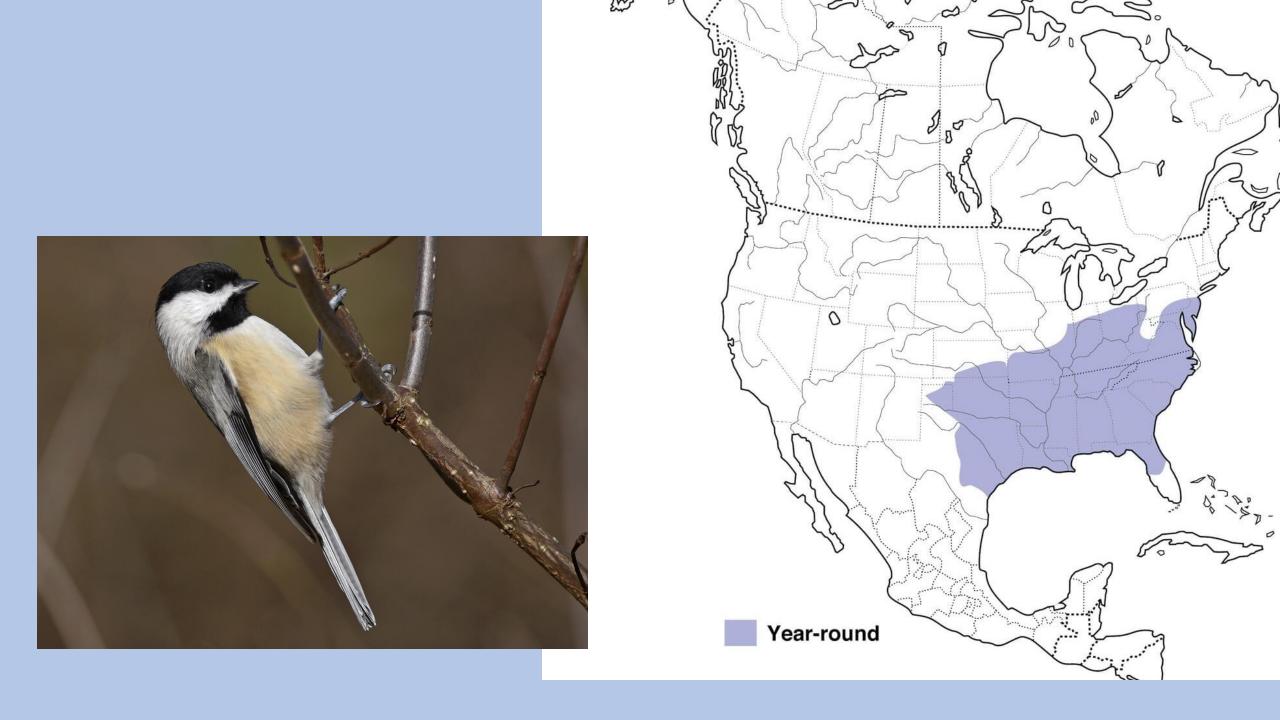


### Black Vulture



# What do all of these birds have in common?

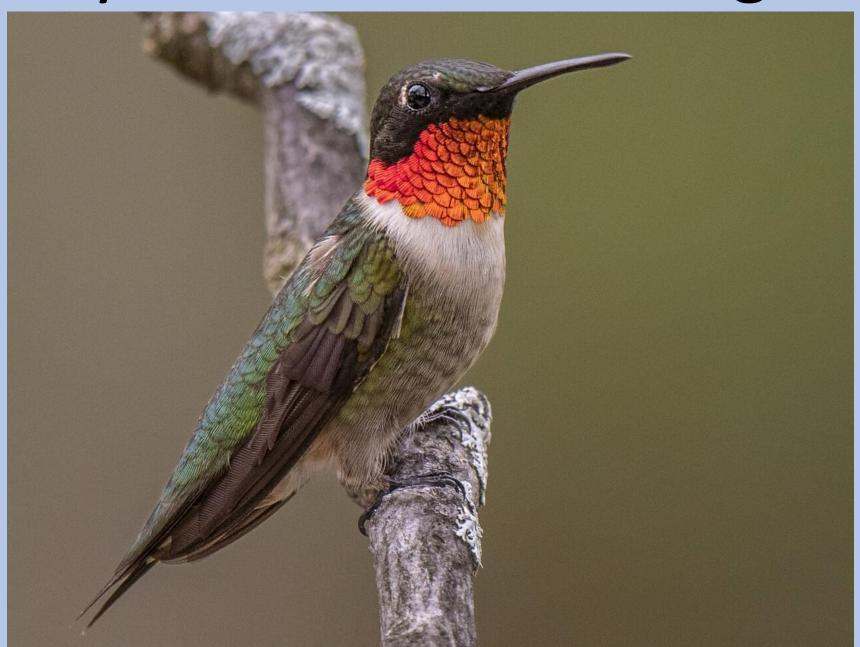
They live here all the time.







## Ruby-throated Hummingbird



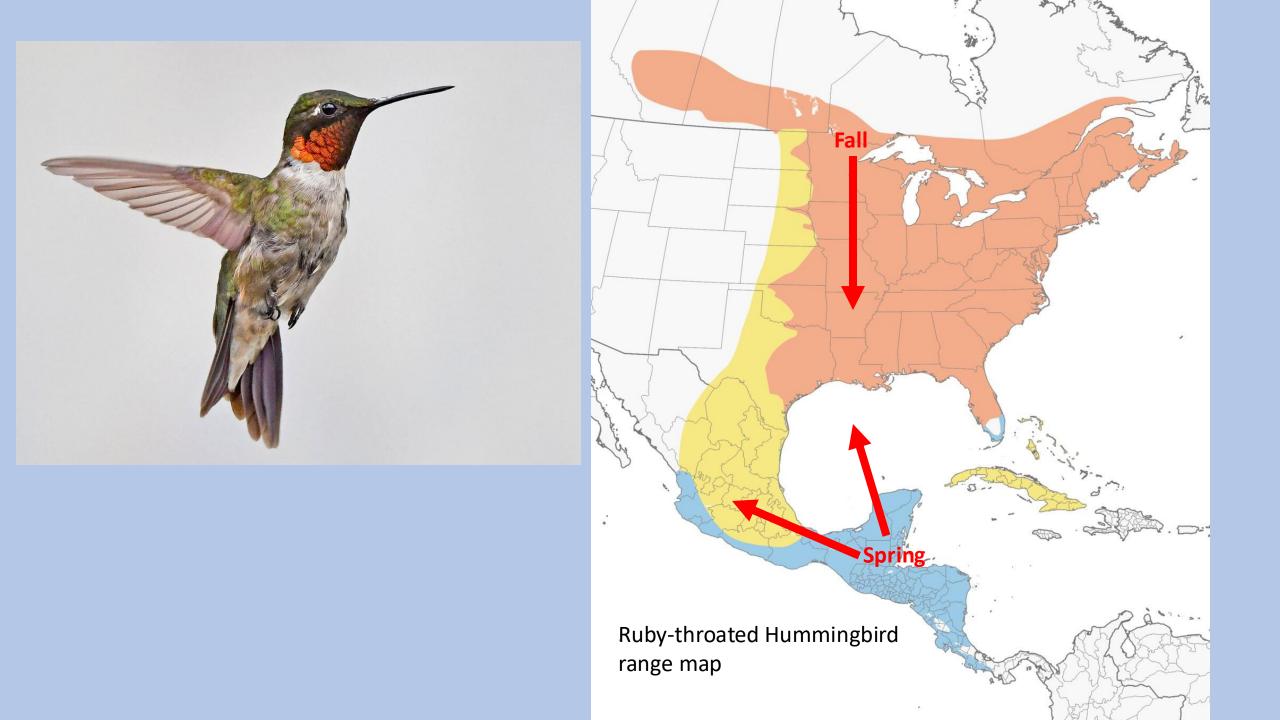
### What is migration?

The periodic movement of large numbers of animals from one place to another

 About 650 species of breeding birds in North America

About 350 migrate long distance

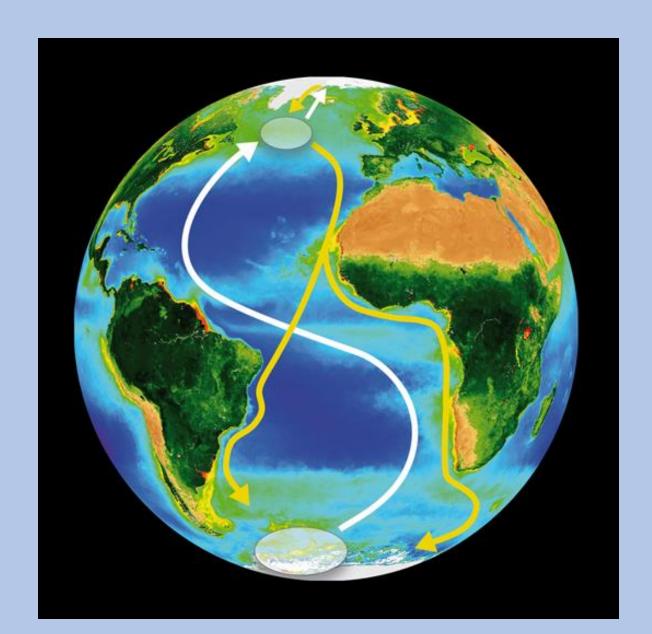
About 2 billion birds
migrate through Texas
each year!



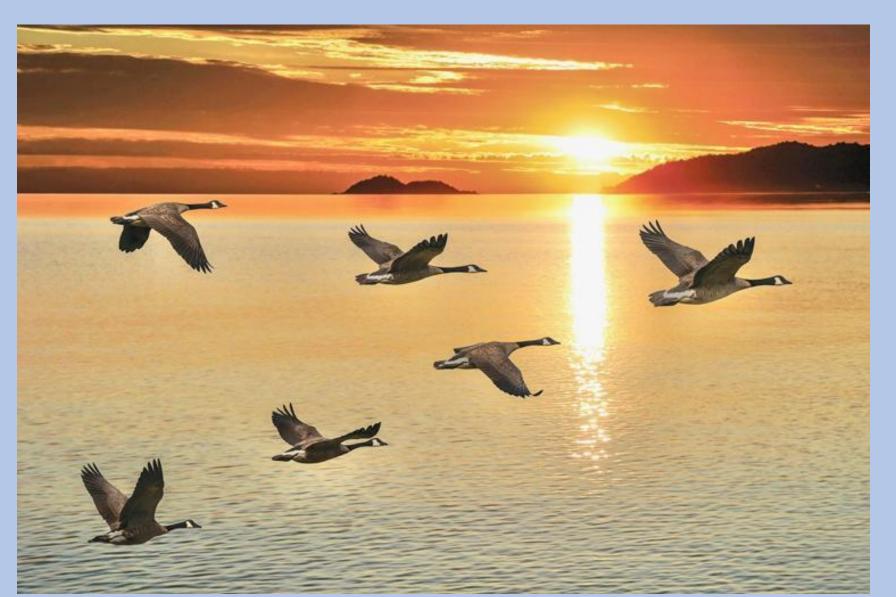


### **Arctic Tern**

25,000 miles a year!!!



# Why do birds migrate?



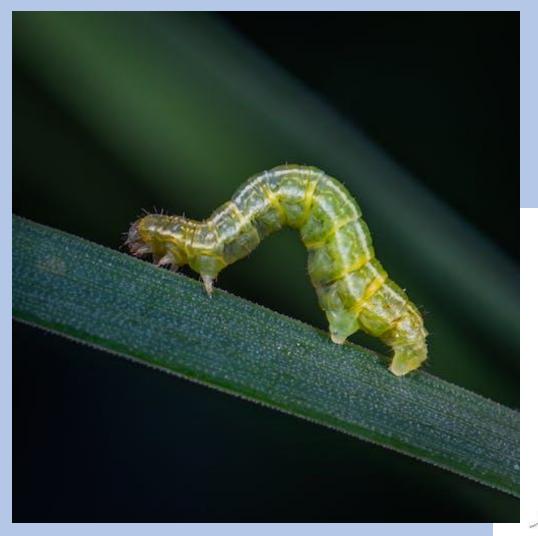


Cedar Waxwings

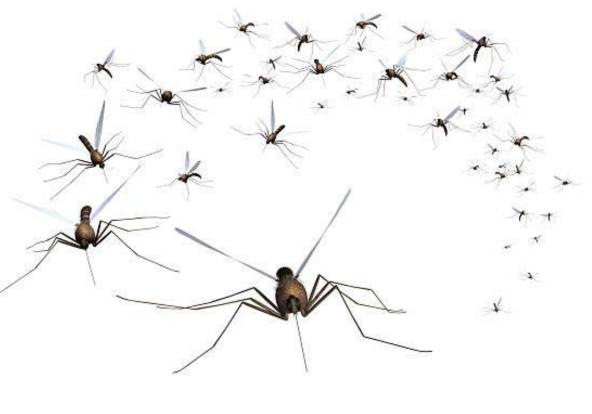


Yellow-billed Cuckoo













## How do birds know when to migrate?









## Changes in food supply





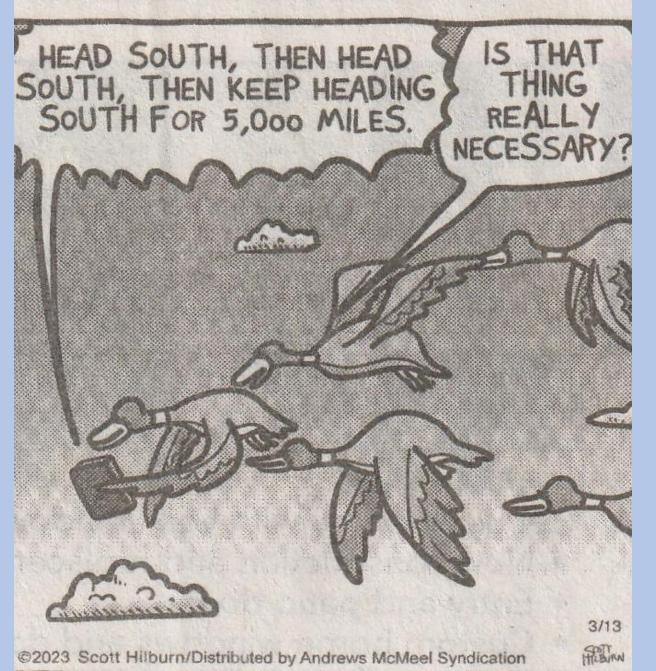




## How do birds navigate?



#### THE ARGYLE SWEATER

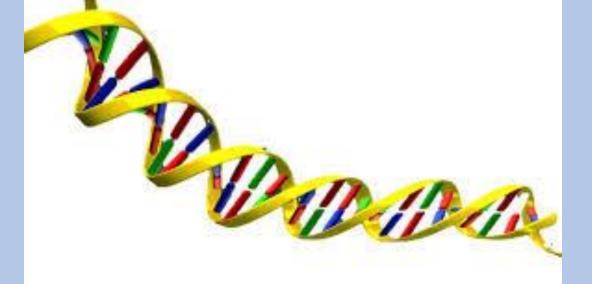


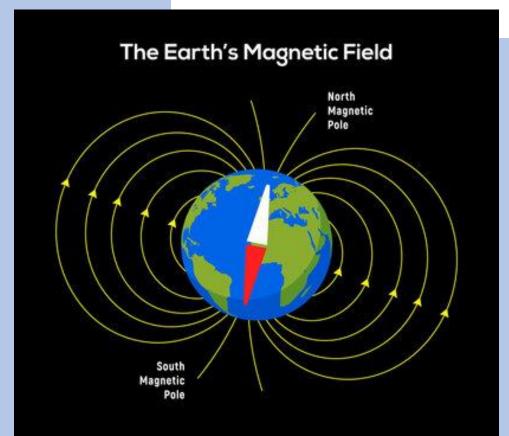












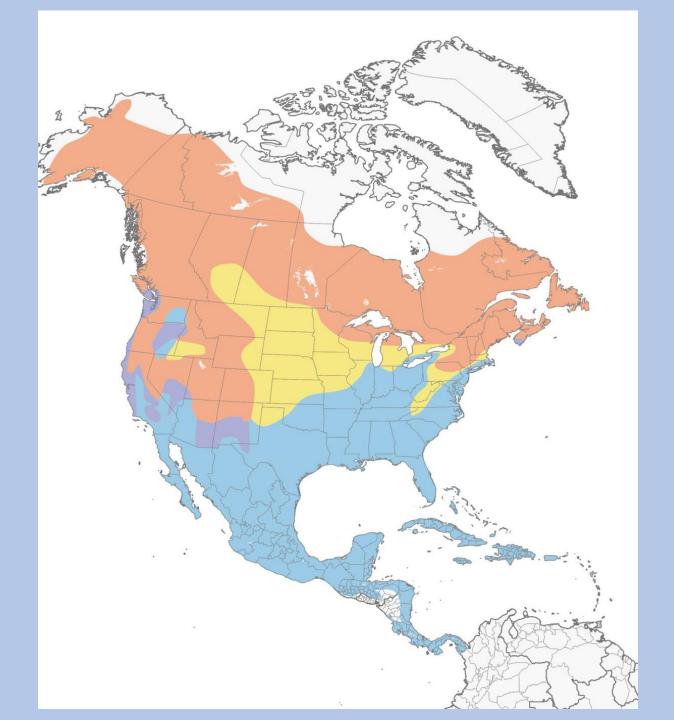


## Winter Visitors

Yellow-rumped Warbler



Yellow-rumped Warbler range map



#### Orange-crowned Warbler

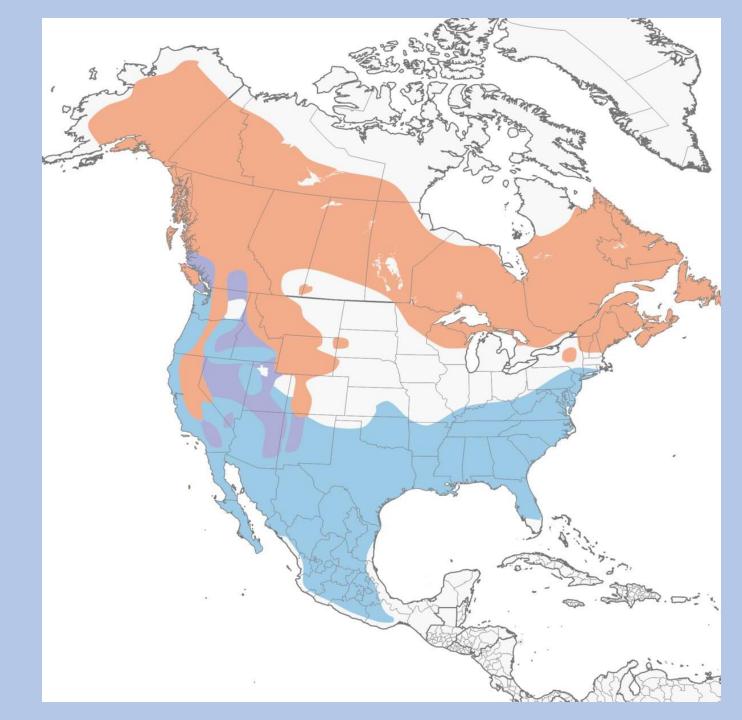


Orange-crowned Warbler range map

#### Ruby-crowned Kinglet



Ruby-crowned Kinglet range map



#### **Cedar Waxwing**

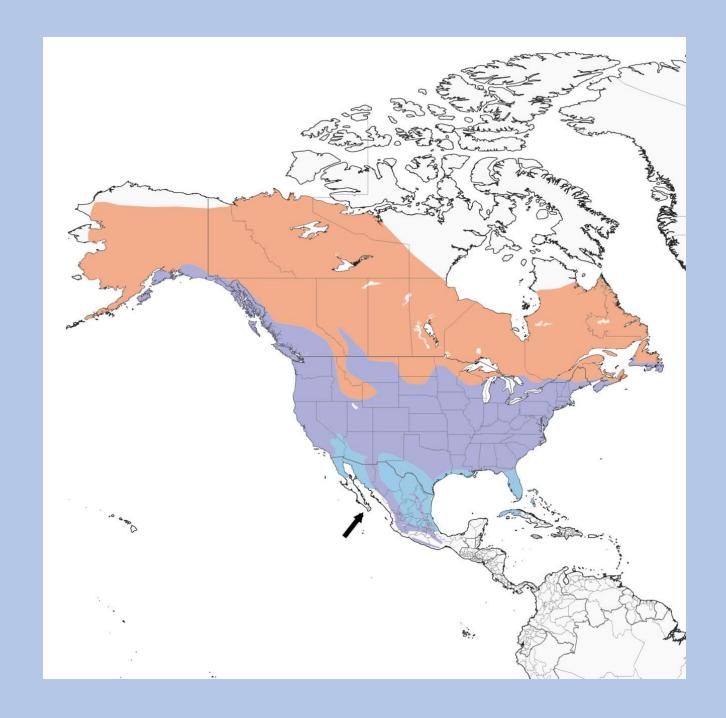


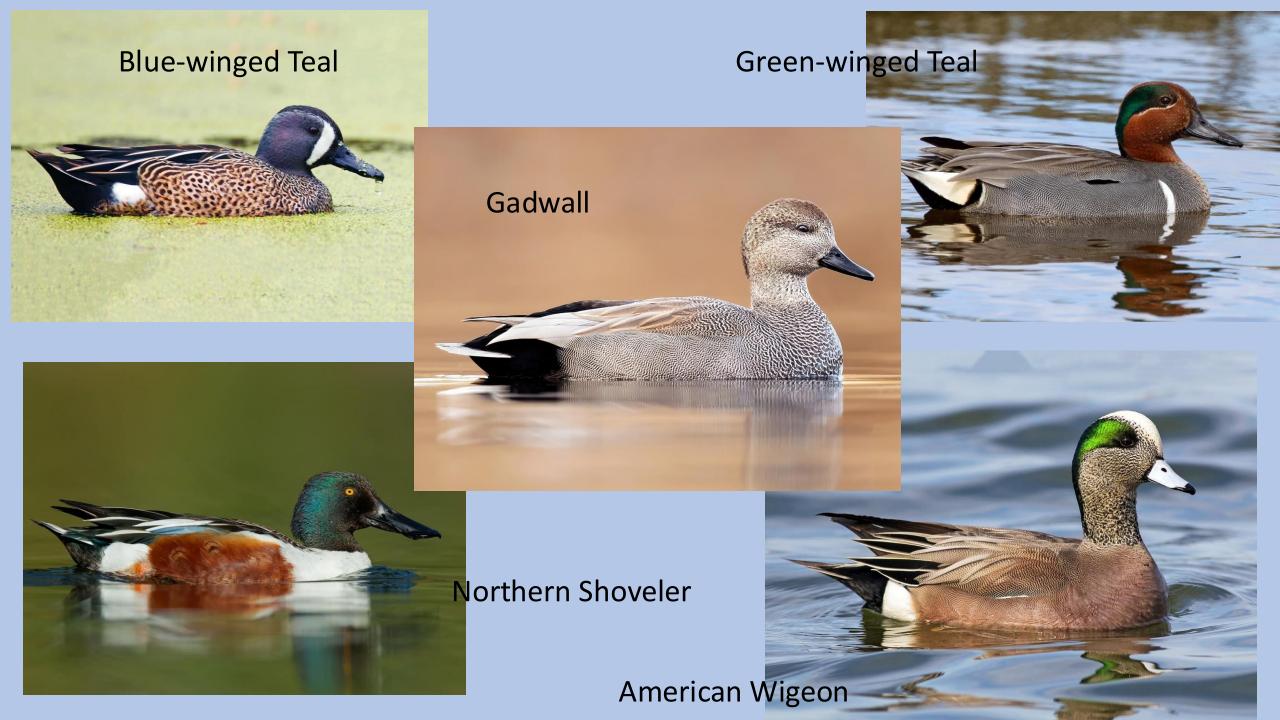
# Cedar Waxwing range map

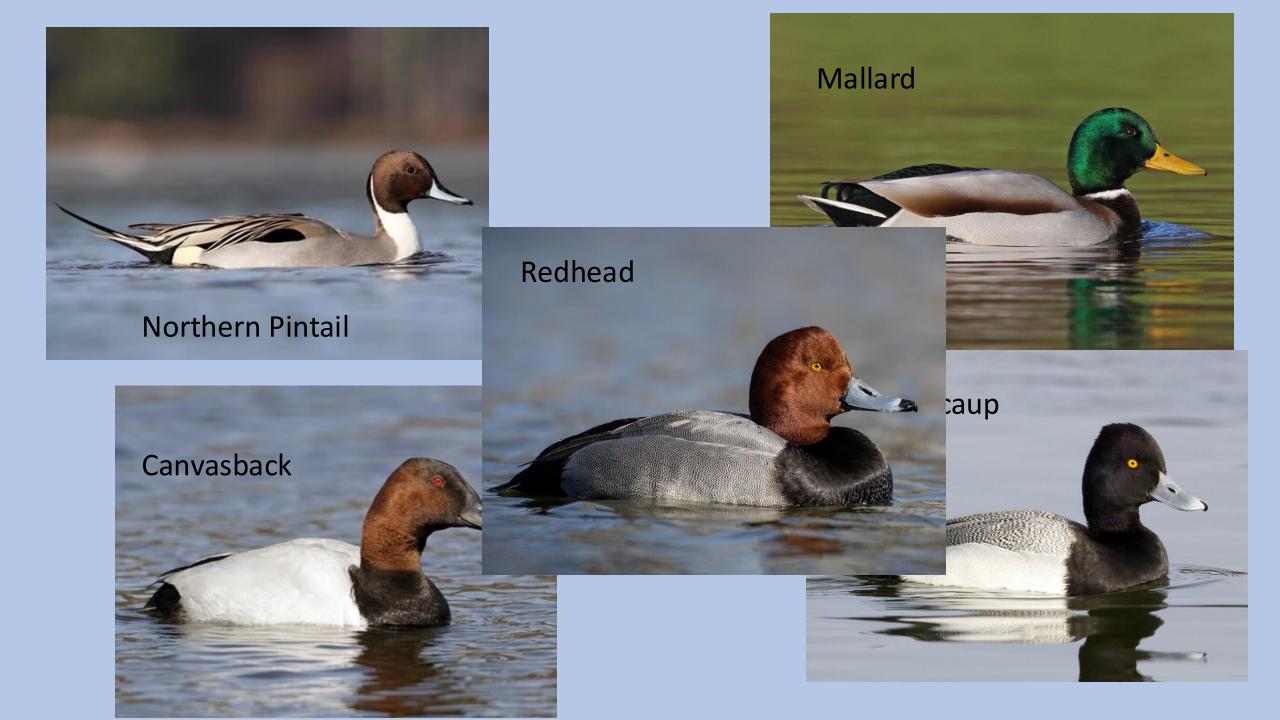
#### American Robin



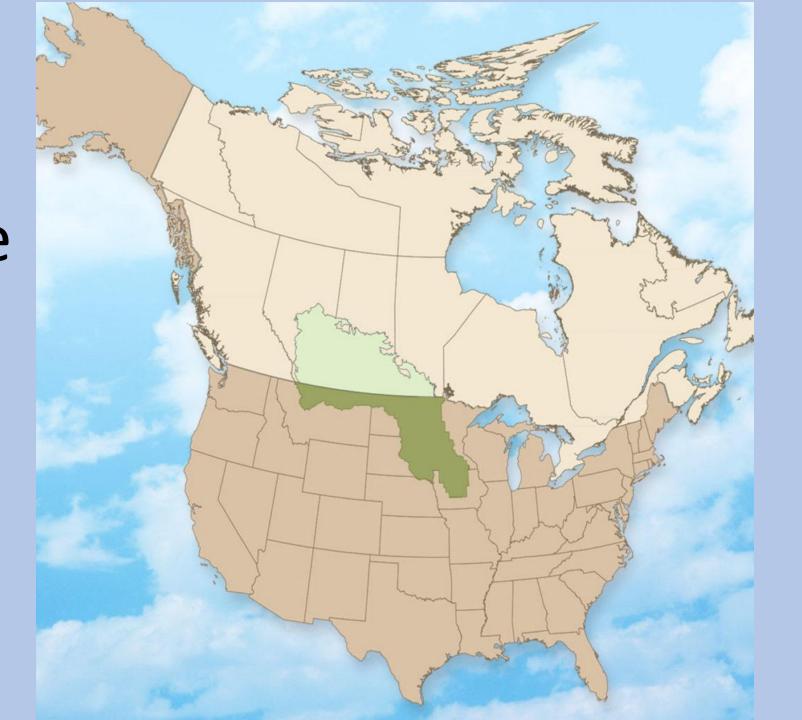
# American Robin range map







# Prairie Pothole Region





Savannah Sparrow

Song Sparrow



Harris's Sparrow





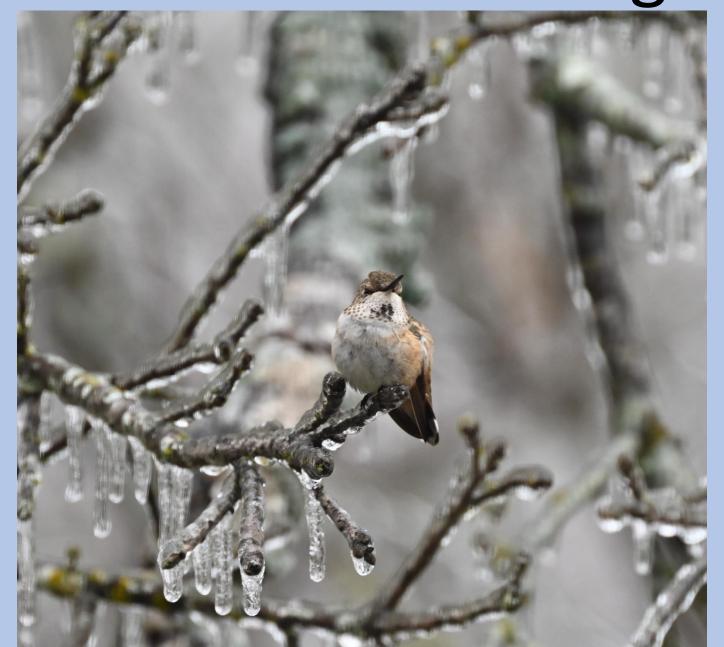
White-crowned Sparrow



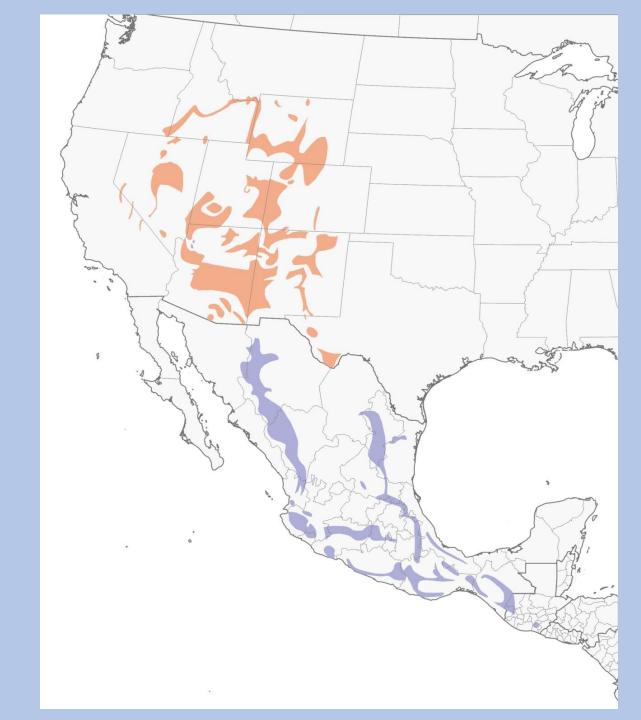
White-throated Sparrow

**Vesper Sparrow** 

# Broad-tailed Hummingbird



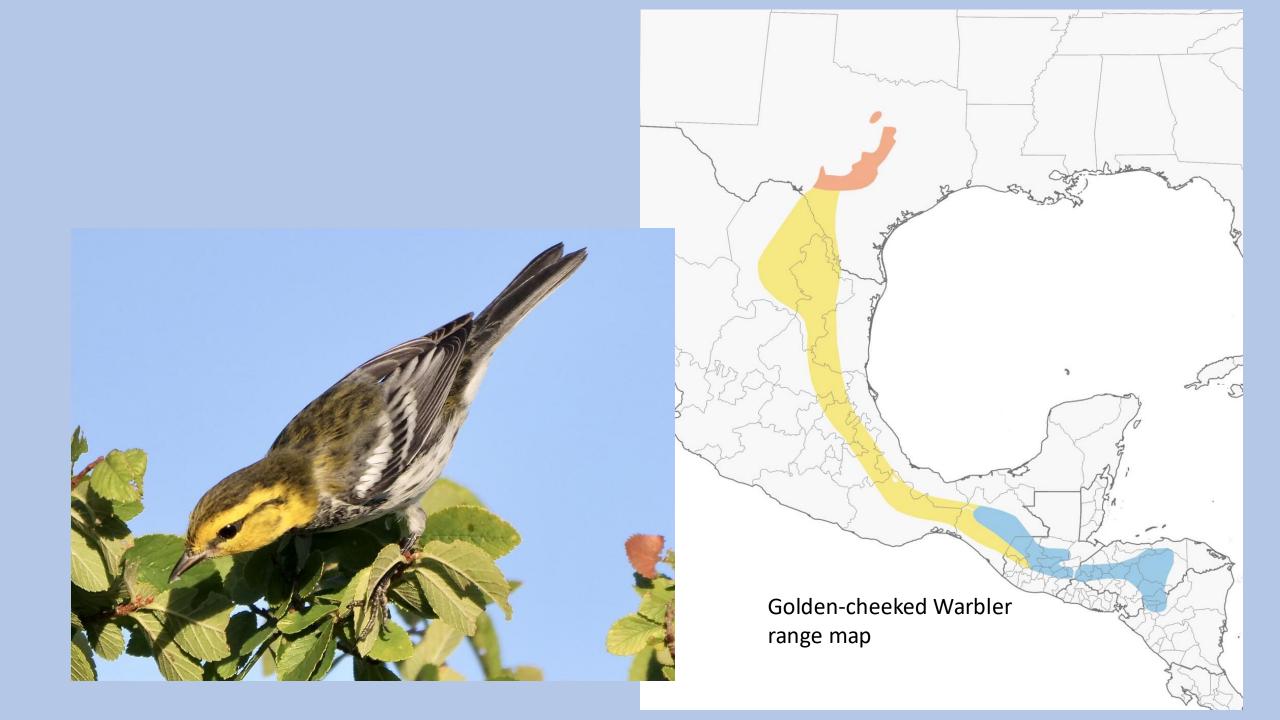
Broad-tailed Hummingbird range map



#### Summer Visitors

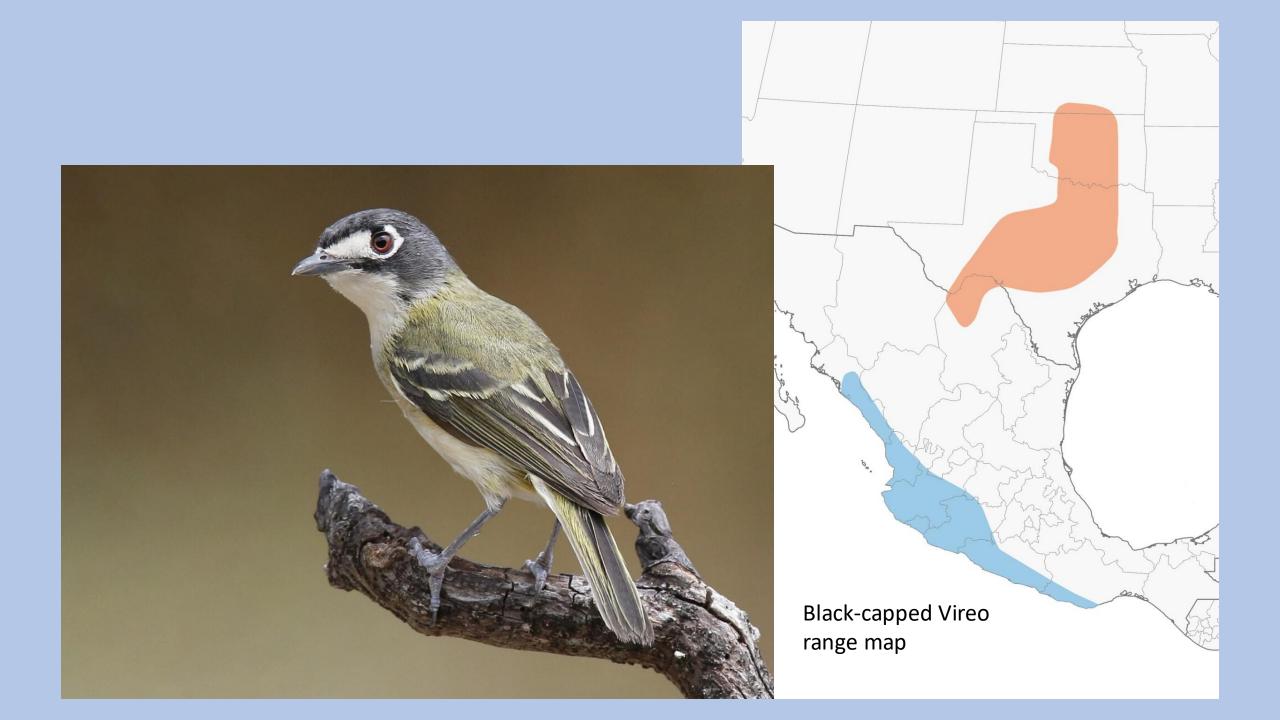
#### Golden-cheeked Warbler





# Black-capped Vireo

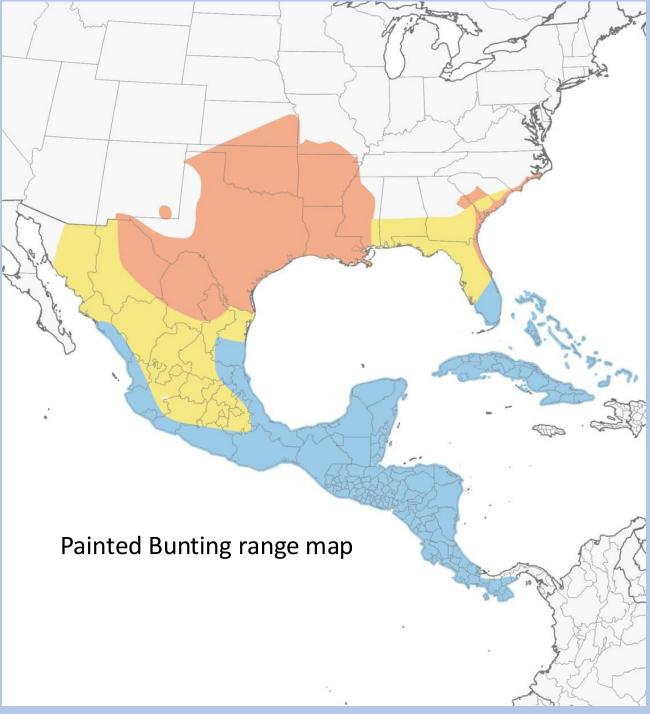




### Painted Bunting

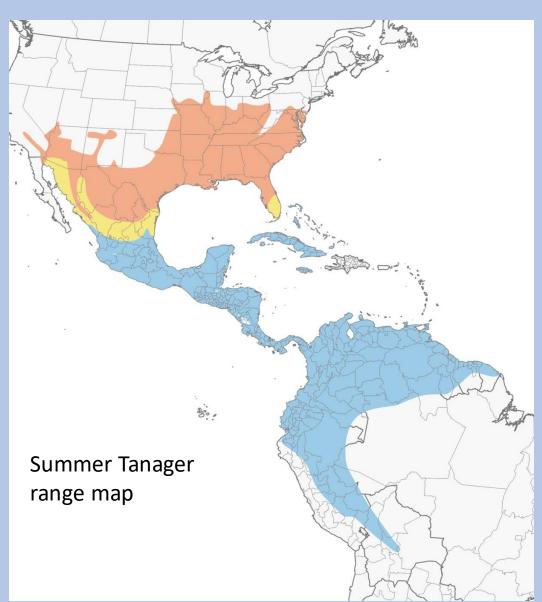






### Summer Tanager





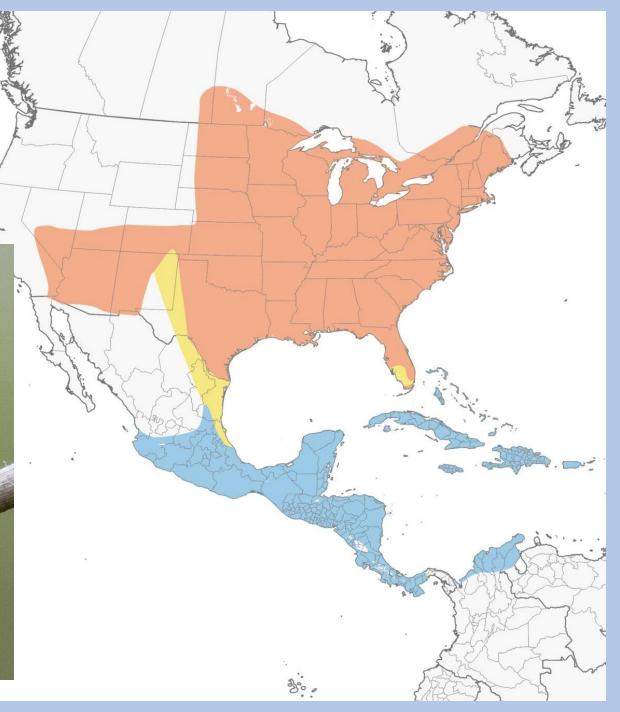


#### Indigo Bunting

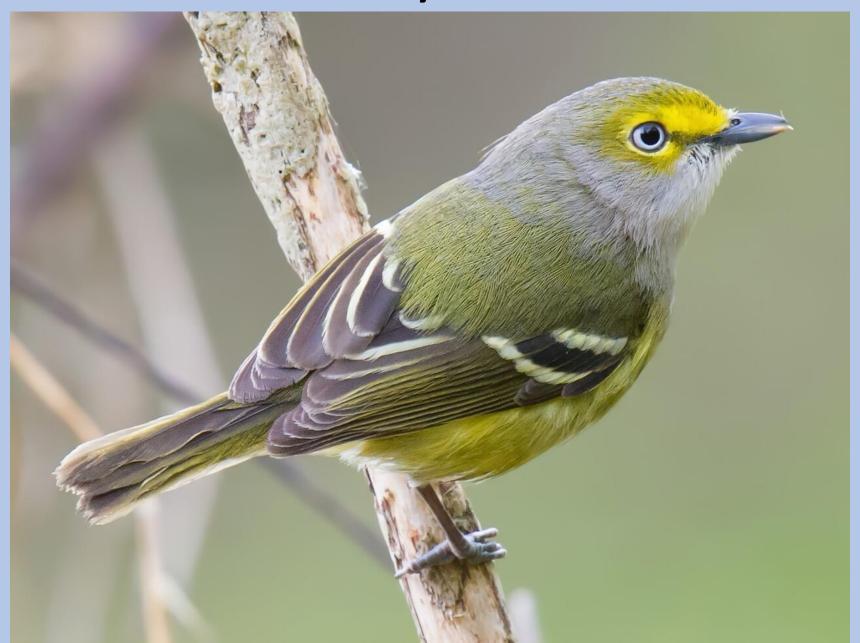


Indigo Bunting range map

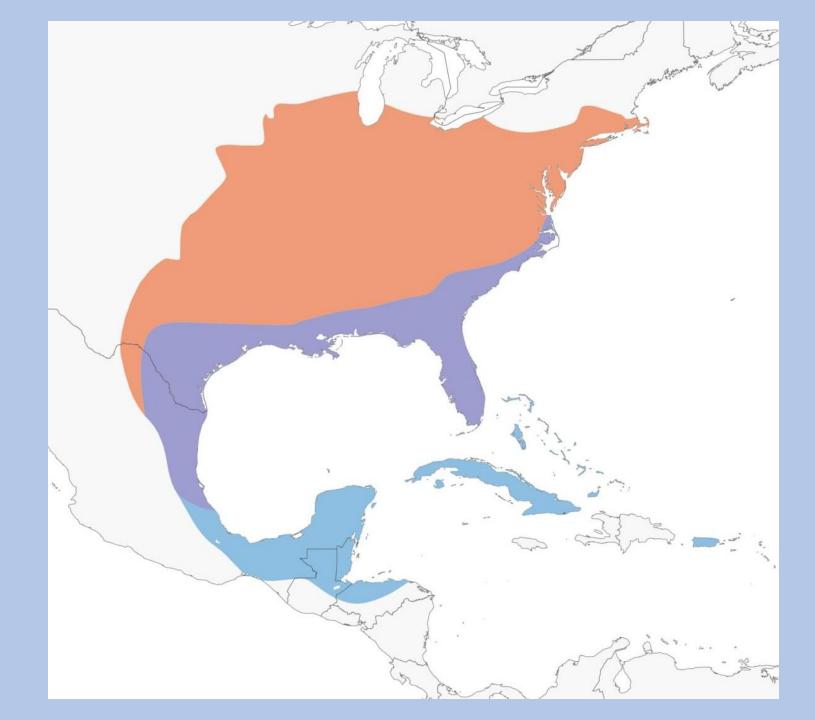




#### White-eyed Vireo



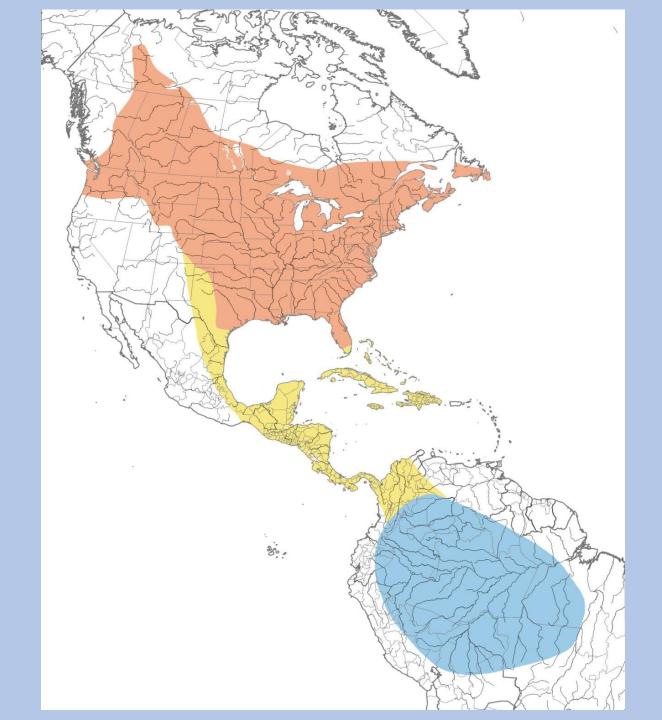
White-eyed Vireo range map



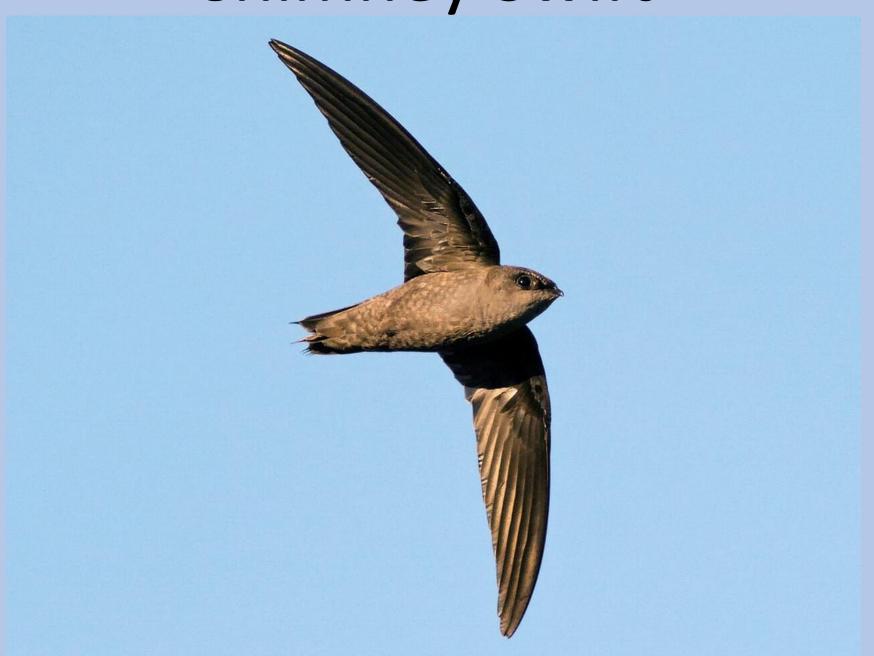
## Red-eyed Vireo



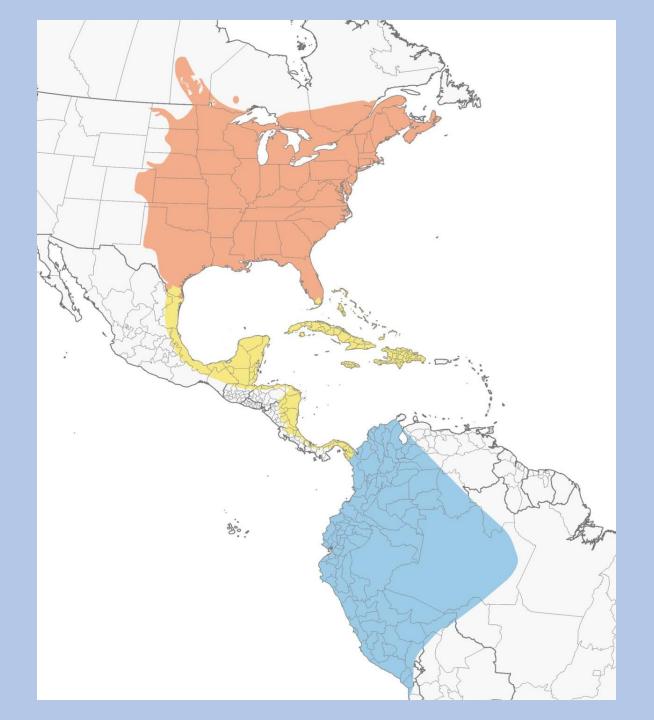
Red-eyed Vireo range map



## **Chimney Swift**



Chimney Swift range map



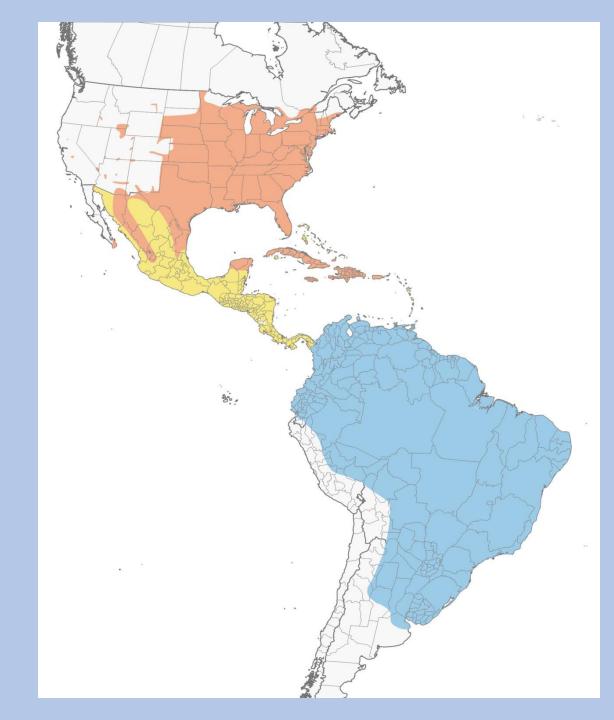




## Yellow-Billed Cuckoo



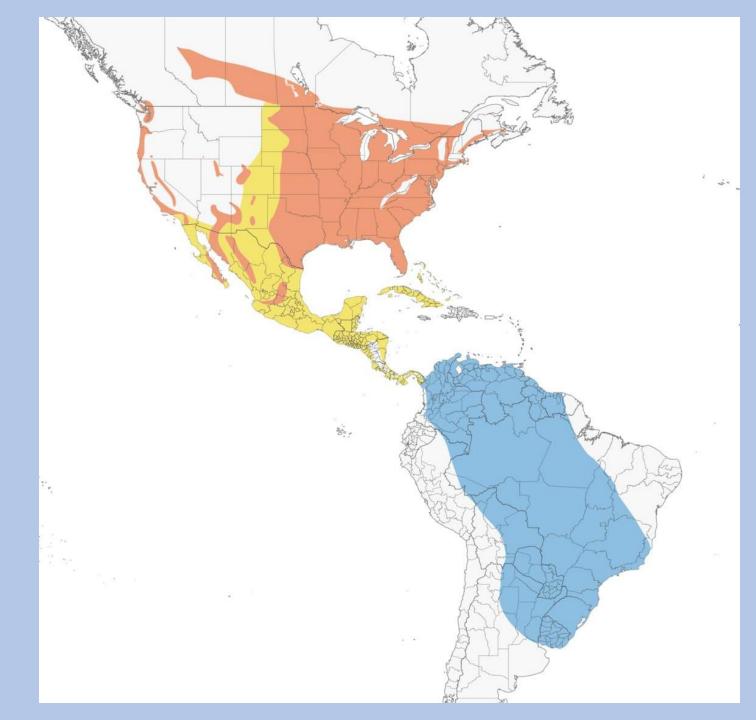
Yellow-billed Cuckoo range map



## Purple Martin



Purple Martin range map



## Purple Martins





## Passing Through

## Whooping Crane



Whooping Crane range map



## Blackburnian Warbler



## Ovenbird



## Chestnut-sided Warbler



White-rumped Sandpiper



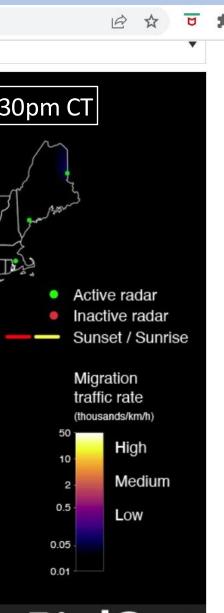
### When Are Birds Migrating Through Texas?

Spring Migration: March 1 - June 15

- Peak Migration: ~April 22 May 12
- 1 of every 3 birds migrating through the U.S. in spring passes through Texas

Fall Migration: ~ August 15 - November 30

- Peak Migration: ~ September 5 October 29
- 1 of every 4 birds migrating through the U.S. in fall passes through Texas



Live bird migration maps

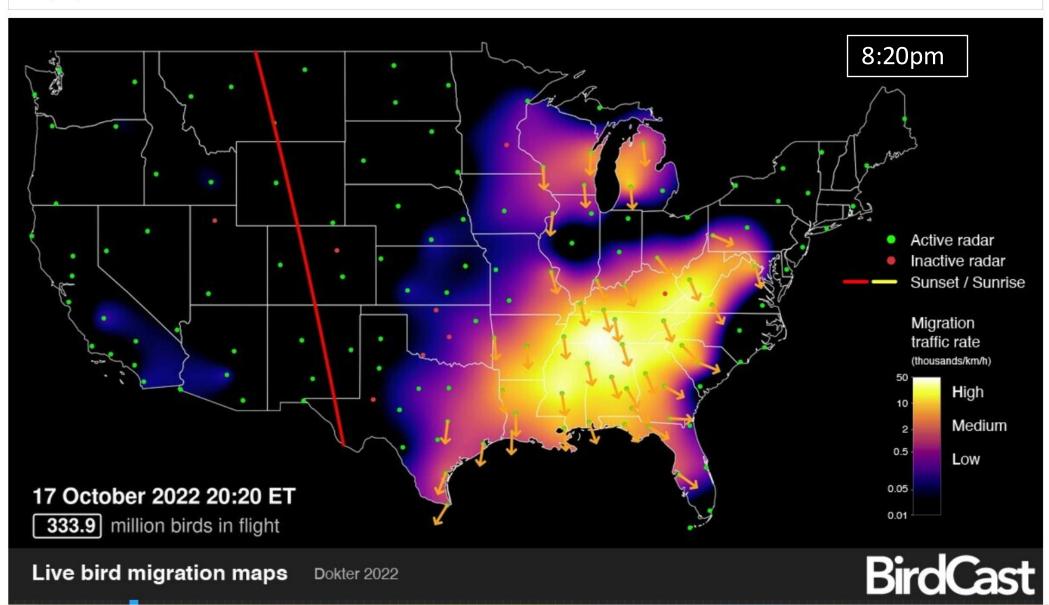
17 October 2022 19:30 ET

80.9 million birds in flight

Dokter 2022



2022/10/11































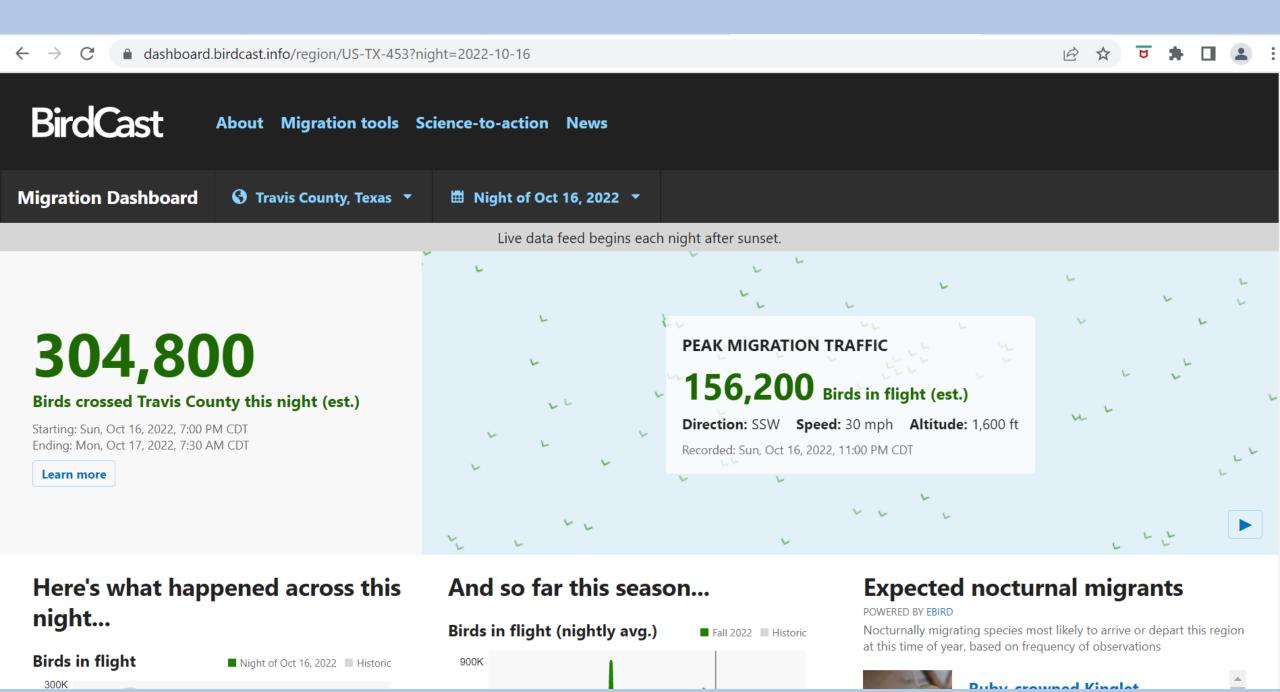


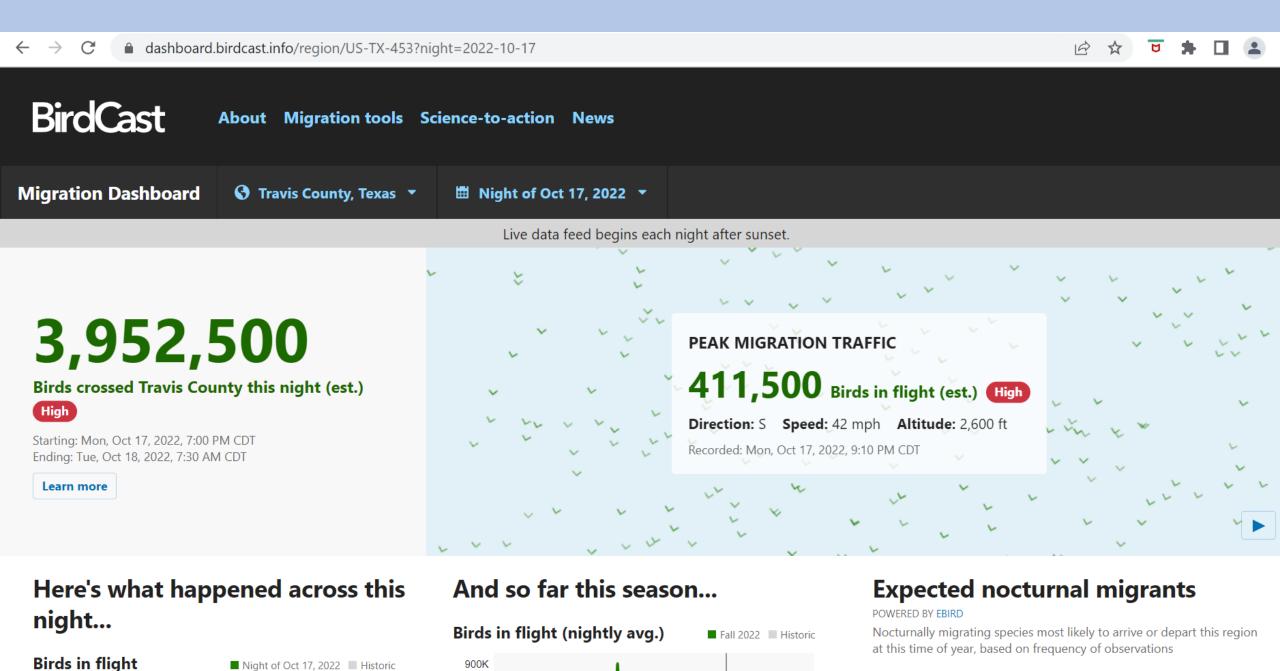


Dokter 2022

Live bird migration maps







450K

## Dangers during migration







#### DANGEROUS SKIES:

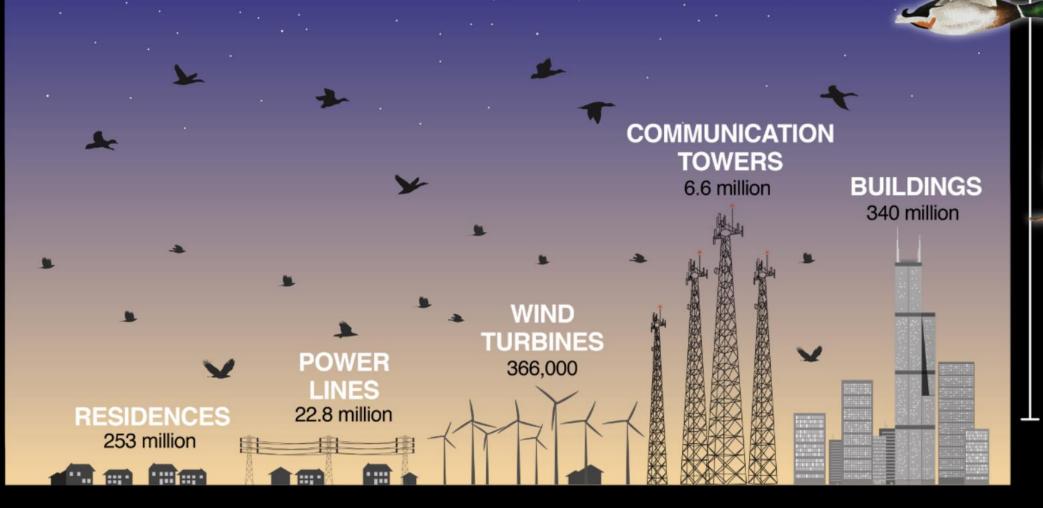
Estimated Annual Mortality from Collision Threats to Birds



WATERFOWL 200-4,000 ft

**SONGBIRDS** 

500-2,500 ft





Building collisions 2<sup>nd</sup> leading cause of bird fatalities: About 1billion each year!





#### What can you do to help?

- Keep cats inside
- Stickers/decals on windows
- Don't use pesticides
- Support bond proposals to buy greenspace
- Provide food and water for the birds
- Use native plants
- Join Travis Audubon Society



#### **Guidelines for EVERYONE:**

- •Turn off all non-essential lights from 11:00 p.m. to 6:00 a.m. each night during migration season.
- •Do not use landscape lighting to light up trees or gardens where birds may be resting.
- •For essential lights (like security lighting) use the following dark skies friendly lighting practices:
  - Aim lights down
  - Use lighting shields to direct light downwards and to avoid light shining into the sky or trees
  - Use motion detectors and sensors so lights are only on when you need them
  - Close blinds at night to reduce the amount of light being emitted from windows
- •If you own or manage a building, consider the following for custodial services:
  - Consider adjusting custodial schedules to end by 11:00 PM.
  - Ask custodial staff to ensure that lights are off after they finish their work.

#### **Bar-tailed Godwit**

 Banded bird left Alaska on October 13, 2022

Flew to Tasmania

- 8,430 miles
- 11 days NONSTOP





# TRAVIS AUDUBON

Listen. Look. And Learn.