

# NOTE ON THE USE OF PHOTOGRAPHS

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TRAVIS AUDUBON SOCIETY

BE A BETTER BIRDER (B3)

CLASS

2025

# INTRODUCTIONS

- ▶ Instructors

- ▶ Jeff Patterson

- ▶ 512-487-2755

- ▶ [jepbird@att.net](mailto:jepbird@att.net)

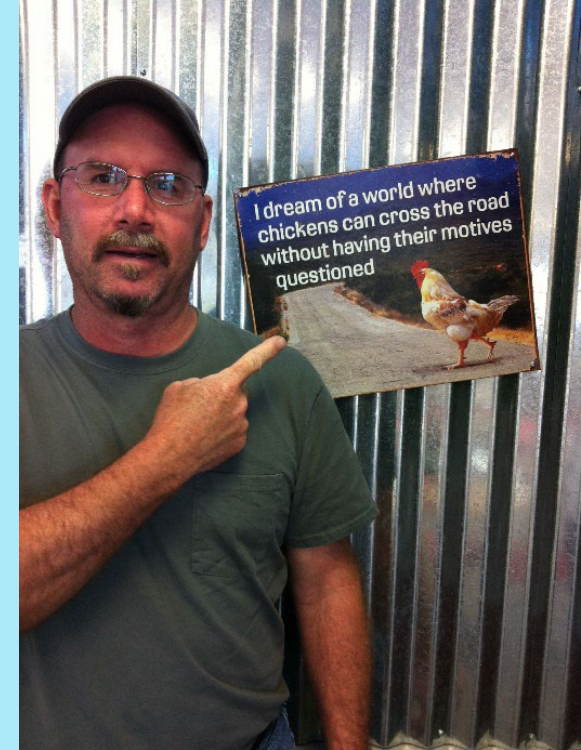
- ▶ Eric Stager

- ▶ 512-470-4134

- ▶ [estager@utexas.edu](mailto:estager@utexas.edu)

- ▶ Graduate Assistant

- ▶ Lance Felber



# TRAVIS AUDUBON CLASSES SINCE 2010

CLASS	YEAR																	TOTAL
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Spring 24	Fall 24	2025	
Shorebirds (Jeff & Eric)				X	X	X	X	X	X	review	X	X	X	X	X	X	X	13
Be a Better Birder (Jeff & Eric)											X	X					X	3
Songbirds	X	X	X	X	X	X			X	X								8
Empids												X	X	X				3
Flycatchers												X	X					2
Gulls												X	X	X		X	?	4
																	TOTAL	33

## Statistics (includes 2025)

- 33 classes
- 119 class sessions
- 303 hours of lecture
- 80 class field trips
- 247 individual students

# GENERAL FORMAT OF EACH CLASS

1. Field trip
2. What did you learn in the last class?
3. Identification lectures & photos
4. Topic lecture
5. Exercises or Quizzes
6. Breaks (any time)
7. Videos ?
8. Summary
9. Homework ?

2025 Schedule

CLASS	MONTH	DATE (Sunday)	SESSION	TIME	LOCATION
1	February	2/9/2025	Field Trip	7-11 am	Hornsby Bend
			Class	1-5 pm	Hornsby Bend
2	March	3/9/2025	Field Trip	7-11 am	Granger Lake Area
			Class	1-5 pm	Hornsby Bend
3	April	4/11-13/2025	Field Trip & Class	Noon Friday - Noon Sunday	Field Trip to Corpus Christi Area & Class
4	May	5/18/2025	Class	1-5 pm	Hornsby Bend
5	September	9/14/2025	Class	1-5 pm	Hornsby Bend
6	October	10/12/2025	Field Trip	7-11 am	Commons Ford
			Class	1-5 pm	Hornsby Bend
7	November	11/9/2025	Field Trip	7-11 am	Too be determined
			Class	1-5 pm	Hornsby Bend
8	December	12/14/2025	Class	1-5 pm	Hornsby Bend

**Ask questions any time !!!**

*“Questions raise our pulse and sharpen our delight”. Adam Frank (NPR)*

# LECTURES FROM B3 (2020-2021)

Type	Subject	
ID	Birds of Black (grackles, startling, blackbirds, ravens, crows)	Previous Lecture
ID	Bluebirds	Previous Lecture
ID	Carpodacus Finches	Previous Lecture
ID	Cormorants	Previous Lecture
ID	Flycatcher Sayornis	Previous Lecture
ID	Flycatchers Contopus	Previous Lecture
ID	Flycatchers Empids Eastern	Previous Lecture
ID	Flycatchers Empids Western	Previous Lecture
ID	Flycatchers Myiarchus	Previous Lecture
ID	Flycatchers Tyrannus	Previous Lecture
ID	Goldfinches	Previous Lecture
ID	Gulls of Texas	Previous Lecture
ID	Hérons & Egrets	Previous Lecture
ID	Meadowlarks	Previous Lecture
ID	Nightjars	Previous Lecture
ID	Raptor Families	Previous Lecture
ID	Raptors Accipiters	Previous Lecture
ID	Swallows & Swifts	Previous Lecture
ID	Terns	Previous Lecture
ID	Thrushes	Previous Lecture
ID	Vireos	Previous Lecture
ID	Sparrows of Texas	Previous Lecture
Topic	Being a Better Birder	Previous Lecture
Topic	Bird Artists	Previous Lecture
Topic	Birding Authorities, Organizations, Citizen Science, Bird Checklists	Previous Lecture
Topic	Darwin's Theory of Ornamentation & Beauty	Previous Lecture
Topic	Finding & Documenting Rarities	Previous Lecture
Topic	History of Birding	Previous Lecture
Topic	Taxonomy & the Species Concept	Previous Lecture
Topic	Titmice Evolution & Hybridization	Previous Lecture

# POSSIBLE TOPICS B3 (2025)

Type	Subject	
ID	Buntings & Grosbeak	Possible addition
ID	Difficult Ducks (Mallard-type, Scaup...)	Possible addition
ID	Ducks in flight	Possible addition
ID	Grebes	Possible addition
ID	Hummers	Possible addition
ID	Ibis	Possible addition
ID	Longspurs in winter	Possible addition
ID	Loons in Winter (include flying)	Possible addition
ID	Orioles	Possible addition
ID	Pipits	Possible addition
ID	Tanagers	Possible addition
ID	Thrashers	Possible addition
ID	Warblers of High Island & East Texas	Possible addition
ID	Woodpeckers	Possible addition
ID	Wrens	Possible addition
Topic	Bird Evolution Overview	Possible addition
Topic	Ebird & Ebird Reviewers Processes	Possible addition
Topic	Flight GISS (Birds in Flight)	Possible addition
Topic	Migration & Migration mechanisms	Possible addition
Topic	Molt	Possible addition
Topic	Overview of Bird Biology	Possible addition
Topic	Photography for Bird ID	Possible addition
Topic	Topology (feather groups)	Possible addition
Topic	Weather Birding & Radar Ornithology	Possible addition

# MY WEBPAGE

- ▶ Place to share handouts, PDFs of presentations & more photos
- ▶ Under construction
- ▶ Password for each class
- ▶ Will email password

# GETTING ACQUAINTED: YOUR NAME?

**Briefly answer 1 or more** of the following:

1. What was your “spark bird”? And why?
2. Who were/are your mentors?
3. What bird would you most like to see? And why?
4. What are your favorite birding locations?

*“Songs are really simple. But because they’re so simple, it’s like bird-watching, you know.*

***You gotta know something about birds or you won’t see anything.....***

***just you and your binoculars and a stupid look on your face.”***

**--Tom Waits**





# BUT VIRGINIA..... YOU HAVE TO STUDY!

Eric Stager



A lot of this material is  
meant to be studied  
later !!!

Photo by Jeffrey E. Patterson

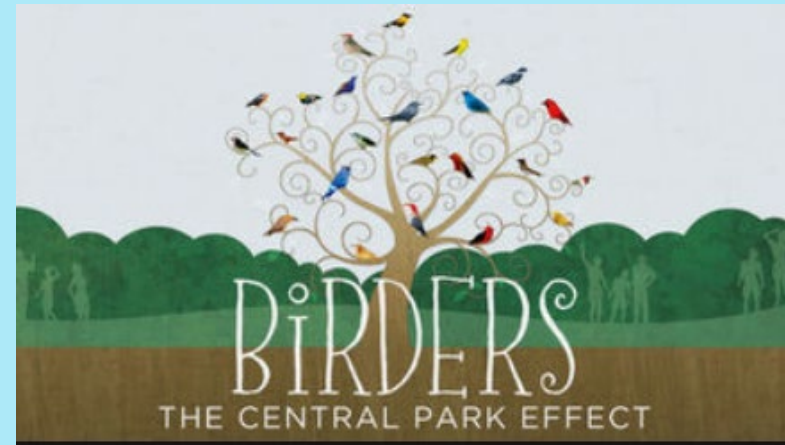
# 3 STEPS OF LEARNING

1. Understanding
2. Processing & Storing
  - a. Memorizing – Mnemonics
3. Application (field trips & on your own)

# 7 (+5) THINGS TO LOVE ABOUT BIRDING

FROM *THE CENTRAL PARK EFFECT* (CHRIS COOPER)

1. The beauty of the birds.
2. The beauty of being in a natural setting.
3. The joys of hunting, without the blood.
4. The joy of collecting.
5. The joy of puzzle-solving.
6. The pleasure of scientific discovery.
7. The Unicorn Effect.
8. The joy of being part of your tribe.
9. The joy of socializing with like-minded people.
10. The joy of solitude in nature.
11. The joy of purpose to your peregrinations.
12. The joy of embracing the fact that you're a nerd.



*“I don't believe people are looking for the meaning of life.....”*

*.....as much as they are looking for the experience of being alive.”*

Joseph Campbell

# CLASS GOAL – BETTER BIRDERS

- ▶ Be a better observer – Better Birder = Better Observer !!!!
- ▶ The more you know about a subject – the more interesting it is.
- ▶ **OWN THE ID !!!** – Have the identification at your finger tips.
- ▶ Calibrating your eye
- ▶ Fast & accurate field identifications
- ▶ Preparation for the field
- ▶ Increase knowledge/confidence – lead field trips for TAS ?
- ▶ “I don’t do Empids.”    “I don’t do gulls.”
- ▶ My expectations:
  - ▶ Intermediate Birders improving
  - ▶ Send me pix
  - ▶ Tell me good birds you saw
  - ▶ Join the conversation on difficult IDs (e.g. empids and gulls, etc.)
  - ▶ Citizen Science – birding with purpose

# WHAT IS A BETTER BIRDER?

- ▶ **Birdwatcher** – someone who enjoys watching birds.
- ▶ **Birder** – an wild-bird enthusiast, who actively pursues this interest by:
  - ▶ studying bird ID and habits,
  - ▶ searching for specific species, and
  - ▶ recording sightings over time.

*“There’s an element of fanaticism to birding !!!”*

*Lovitch*

- ▶ **Good Birder** –
  - a) Good observer !!!
  - b) well-versed in the habits, distribution, and ID of birds;
  - c) good at finding birds; and
  - d) skilled at recording information about them.

*“From fanaticism to barbarism is only 1 step!!”*

Denis Diderot  
French philosopher

# 4 BIGGEST STEPS TO BECOMING A BETTER BIRDER

1. Learn distribution (Habits 1,2,3)
2. Learn GISS/Structure (Habit 4)
3. GO BIRD & make your own IDs (Habits 5, 6,7)
4. Use a process until it becomes 2<sup>nd</sup> nature

# SEVEN HABITS OF HIGHLY EFFECTIVE BIRDERS

- 1) Where are we? – County, sub-county...
- 2) When are we? – Season, month, 1/2 month...
- 3) Where is he? – Habitat, micro-habitat...
- 4) GISS & Structure – posture, behavior, primary extension ...
- 5) Bill & Head – length, shape, thickness, use...
- 6) Field Marks – plumage, pattern, behavior...
- 7) Diagnostic Field Marks – differentiate closely related species

Distribution !!

Identity !!

**RESULTS IN A DIAGNOSIS !!!**

# MODERN BIRDING

- ▶ Look for an Ebird hot spot
- ▶ Check Ebird for list of species
- ▶ Go to the hot spot
- ▶ Meet someone on trail – who tells you everything to see
- ▶ Go see species on the list

# ANOTHER WAY TO BIRD

## ▶ **Search & Discovery approach**

- ▶ Go bird at a favorite location
- ▶ Don't listen to recent birders
- ▶ Discover the birds and ID them yourself
- ▶ Keep records

# BIRDING IS OBSERVING !!!

Observation skills,

*“You can observe a lot just  
by watching”.*

Yogi Berra

and thus birding skills,

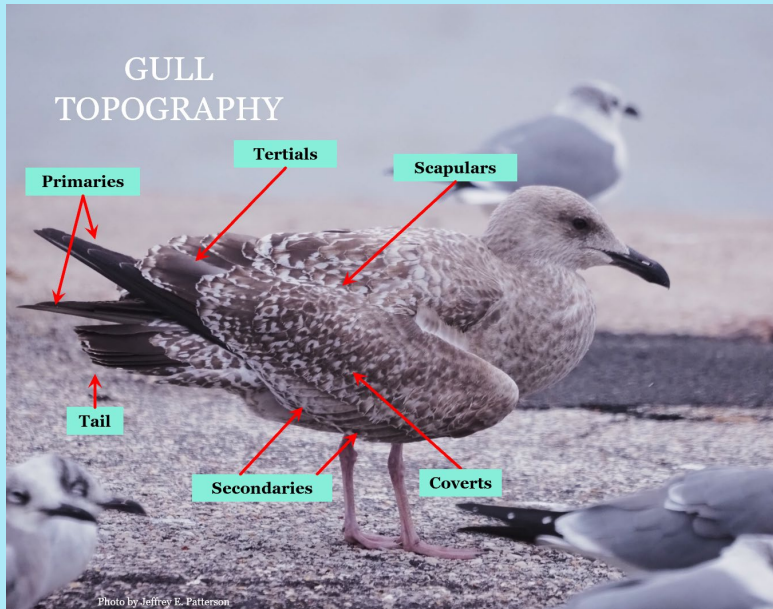
can be learned and improved.

# BIRDING IS OBSERVING

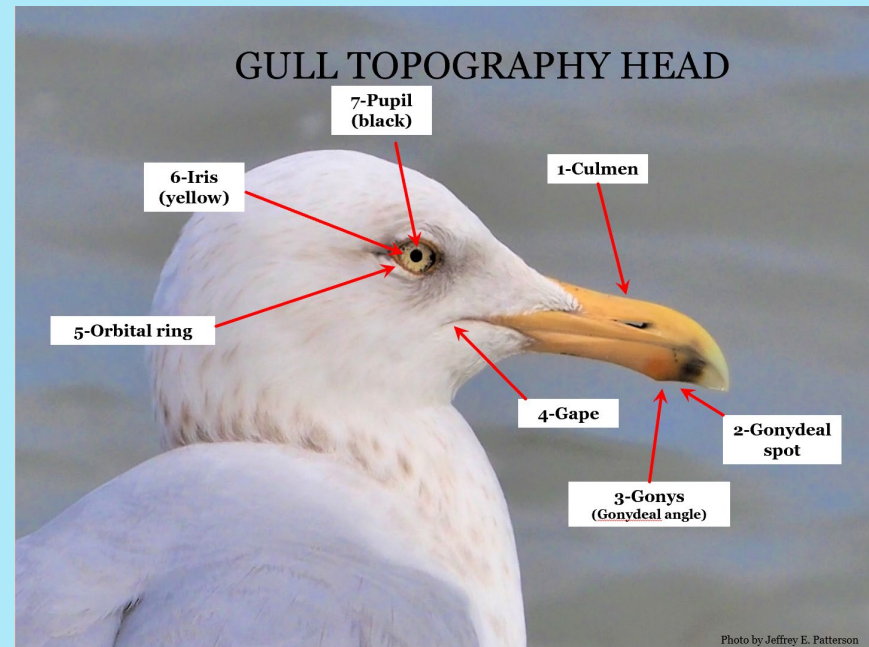
- ▶ Where to Look ? – Everywhere!
  - ▶ Down canals, fence lines, power lines, tops of trees
  - ▶ Out of place birds, sick birds, edge birds
  - ▶ Multiple micro-habitats
  - ▶ Edges of habitat
  - ▶ Behind you
  - ▶ Ahead before rounding a turn in trail
  - ▶ Keep watching as bird flies away
  - ▶ Observe birds that have already been Ided
  - ▶ Listen for tiny little movements in the leaves

# BIRDING IS OBSERVING

- ▶ Where to Look on the bird? – That depends!
- ▶ But start with the Bill & Head (Habit 5)



“I’m not sure I got everything. But you showed me a new way of looking at birds”  
Student in Gulls Class 2024



# OBSERVATION CAN BE DEVELOPED

## HOW TO BE AN EXPLORER OF THE WORLD.

1. ALWAYS BE LOOKING.  
(NOTICE THE GROUND BENEATH YOUR FEET.)
2. CONSIDER EVERYTHING ALIVE & ANIMATE.
3. EVERY THING IS INTERESTING. LOOK CLOSER.
4. ALTER YOUR COURSE OFTEN.
5. OBSERVE FOR LONG DURATIONS (AND SHORT ONES.)
6. NOTICE THE STORIES GOING ON AROUND YOU.
7. NOTICE PATTERNS,  
MAKE CONNECTIONS.

8. DOCUMENT YOUR FINDINGS (FIELD NOTES) IN A VARIETY OF WAYS.
9. INCORPORATE INDETERMINANCY.
10. OBSERVE MOVEMENT.
11. CREATE A PERSONAL DIALOGUE WITH YOUR ENVIRONMENT. TALK TO IT.
12. TRACE THINGS BACK TO THEIR ORIGINS.
13. USE ALL OF THE SENSES. IN YOUR INVESTIGATIONS.

By Keri Smith

# “SEARCH IMAGE”

▶ Used in psychology

Attention is something we have to learn.  
....., we have taught our brain to recognize  
which signals are important ....

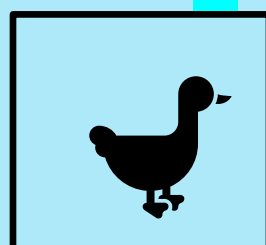
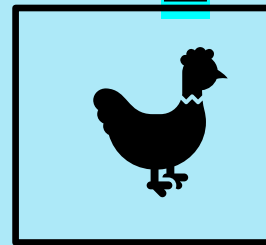
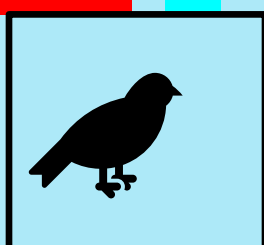
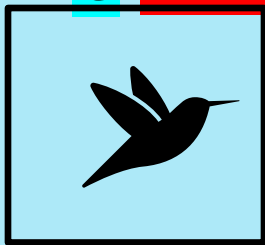
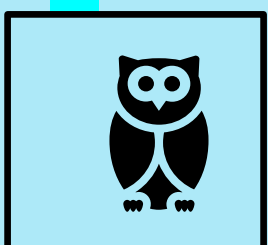
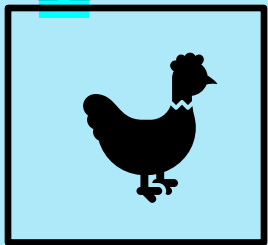
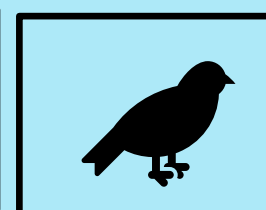
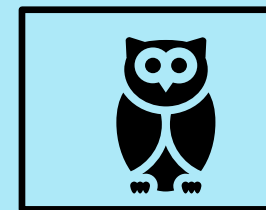
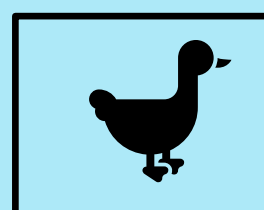
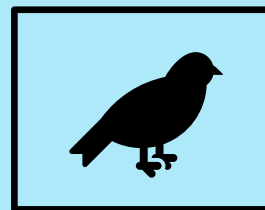
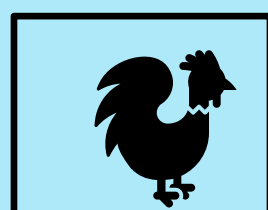
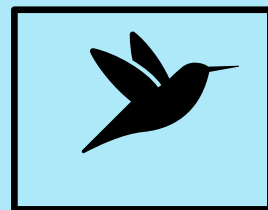
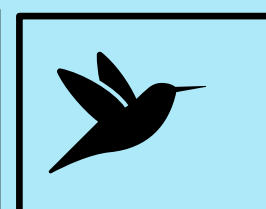
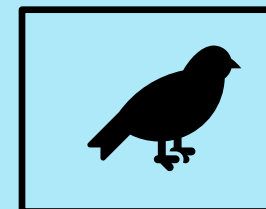
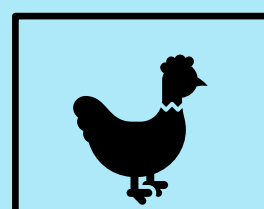
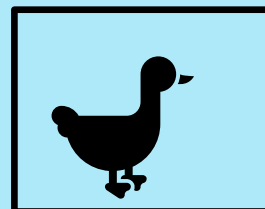
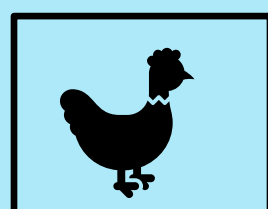
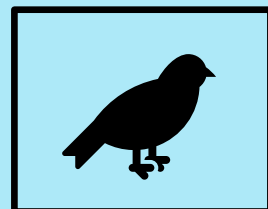
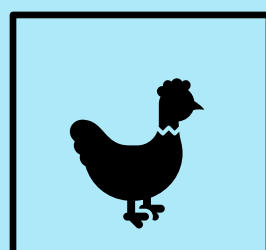
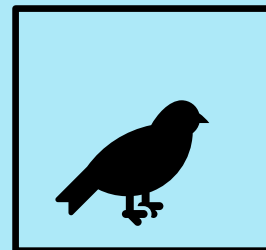
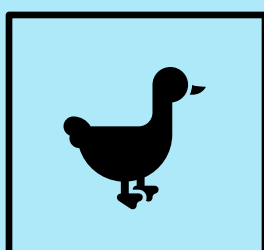
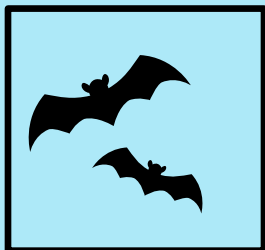
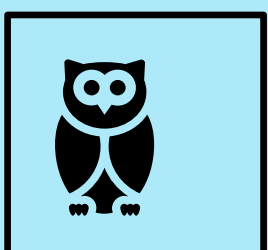
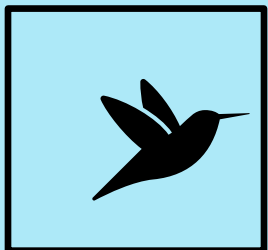
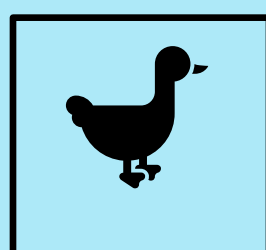
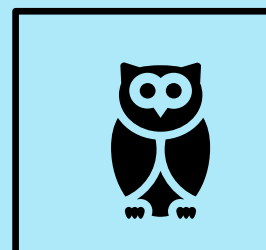
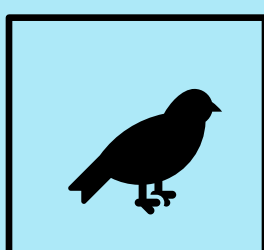
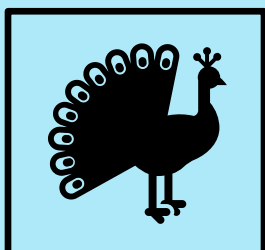
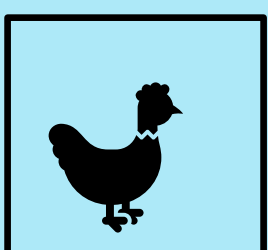
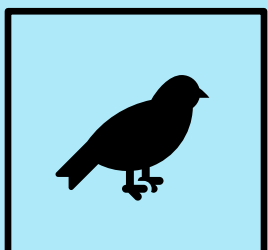
Cathy N. Davidson, *Now You See It*

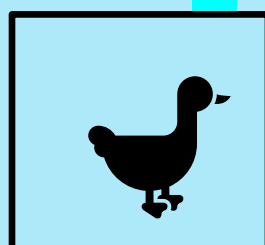
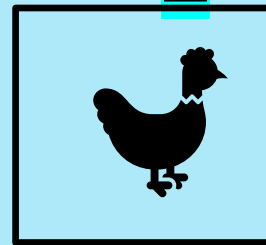
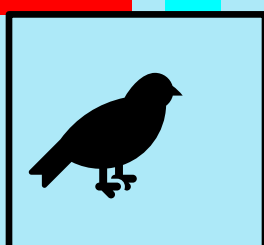
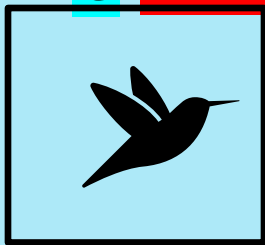
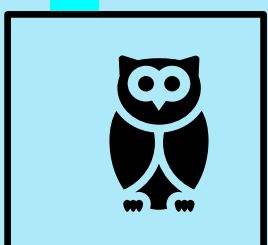
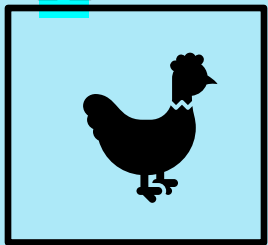
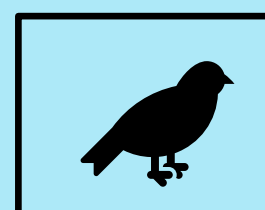
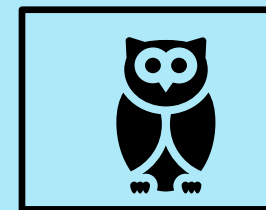
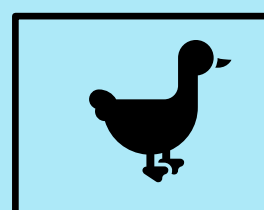
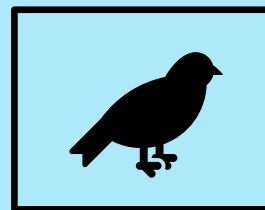
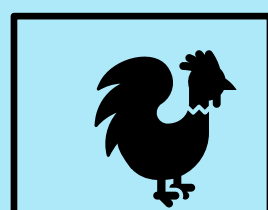
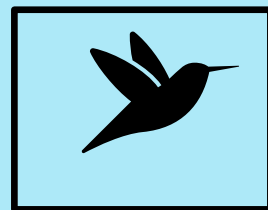
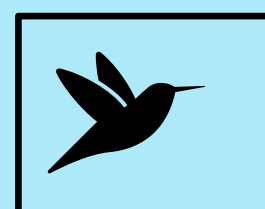
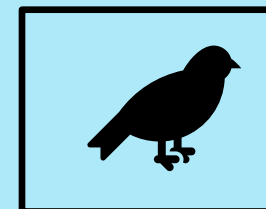
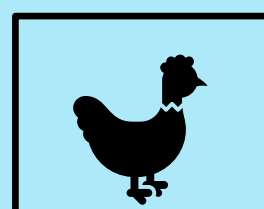
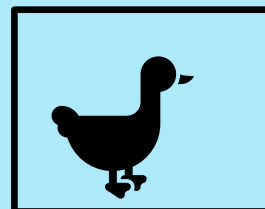
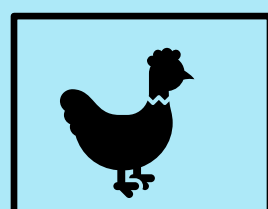
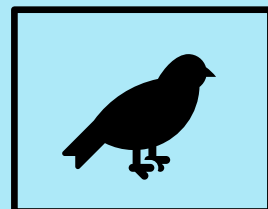
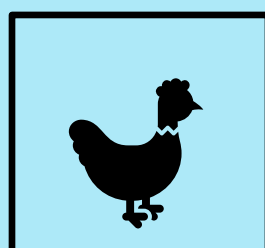
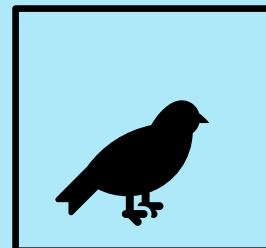
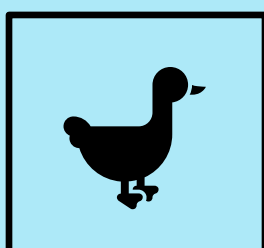
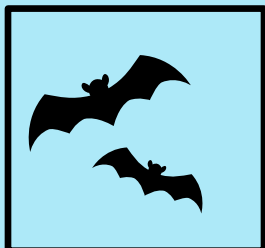
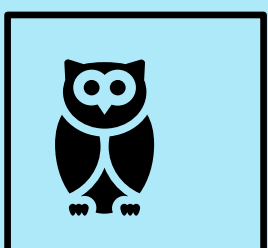
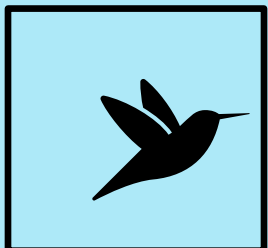
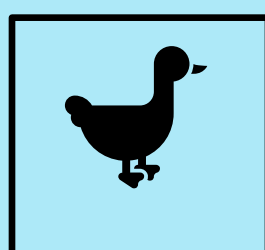
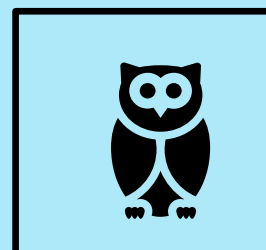
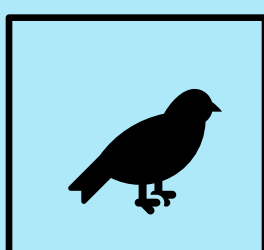
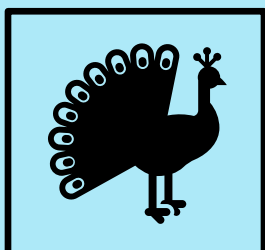
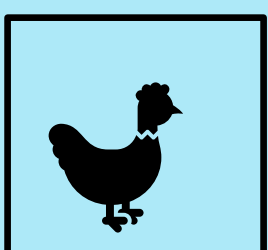
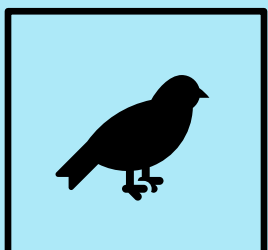
▶ Used in behavioral biology

▶ The imaginary image in your head – of the thing you are searching for.

# SEARCH IMAGE

- ▶ On the following page –
- ▶ Try to find a peacock as fast as you can
- ▶ Keep answer to yourself initially
- ▶ But first – form a search image

**A****B****C Columns****D****E****F****1****2****3****ROWS****4****5**

**A****B****C Columns****D****E****F****1****2****3****ROWS****4****5**

# OBSERVATION

Watch Video

Count how many times players dressed in white pass the ball

[https://www.youtube.com/watch?v=IGQmdoK\\_ZfY](https://www.youtube.com/watch?v=IGQmdoK_ZfY)

<https://ccmit.mit.edu/observation/>

# IMPROVING OBSERVATION

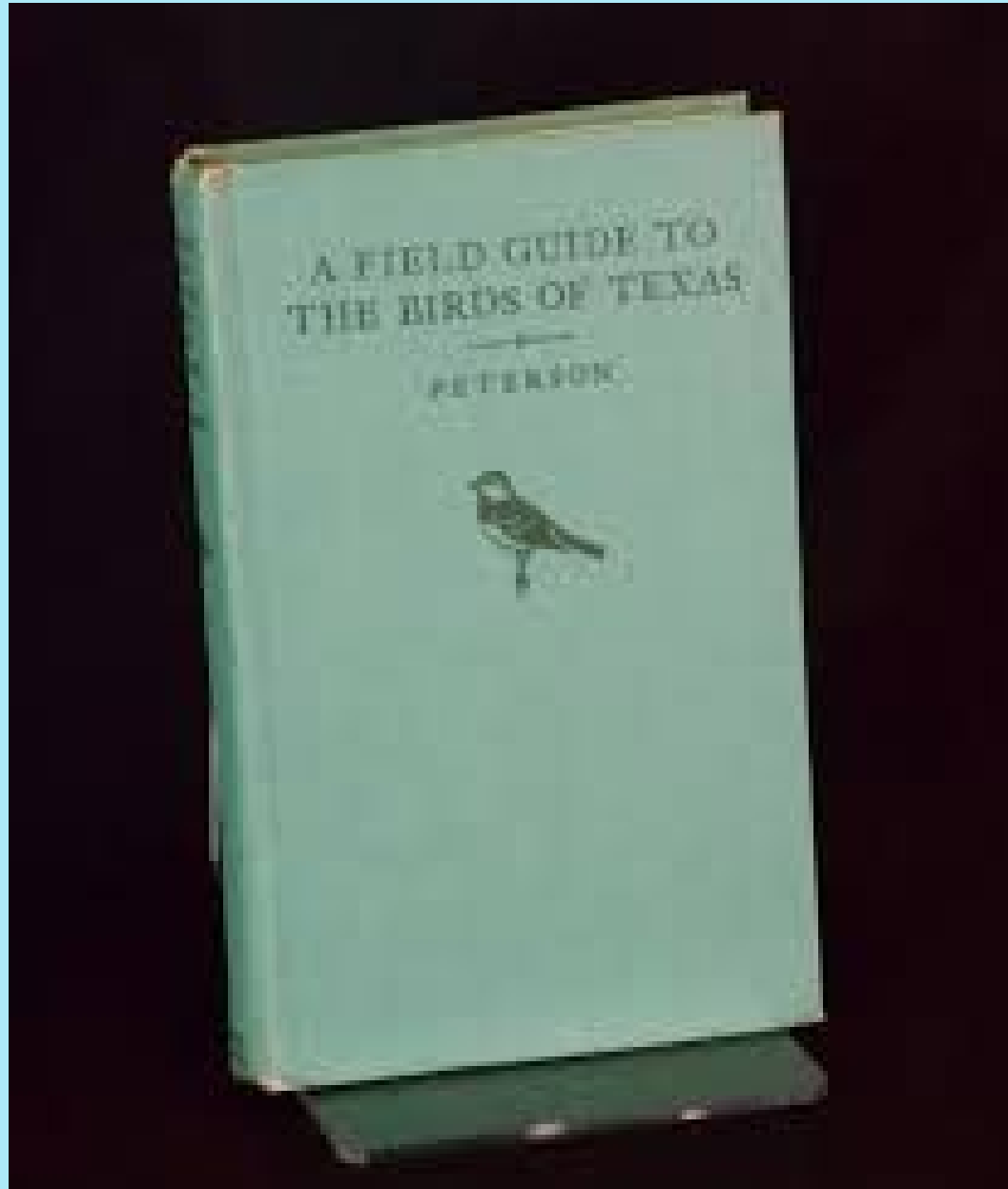
- ▶ Search Images
- ▶ Inattention blindness
- ▶ Focusing vs Dis-focusing (movement)

# SEARCH IMAGE

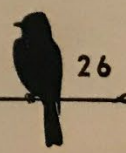
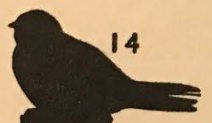
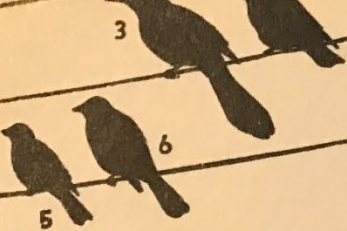
- ▶ On the next page – find a bird
- ▶ First – form a search image
- ▶ (keep answer to yourself initially)

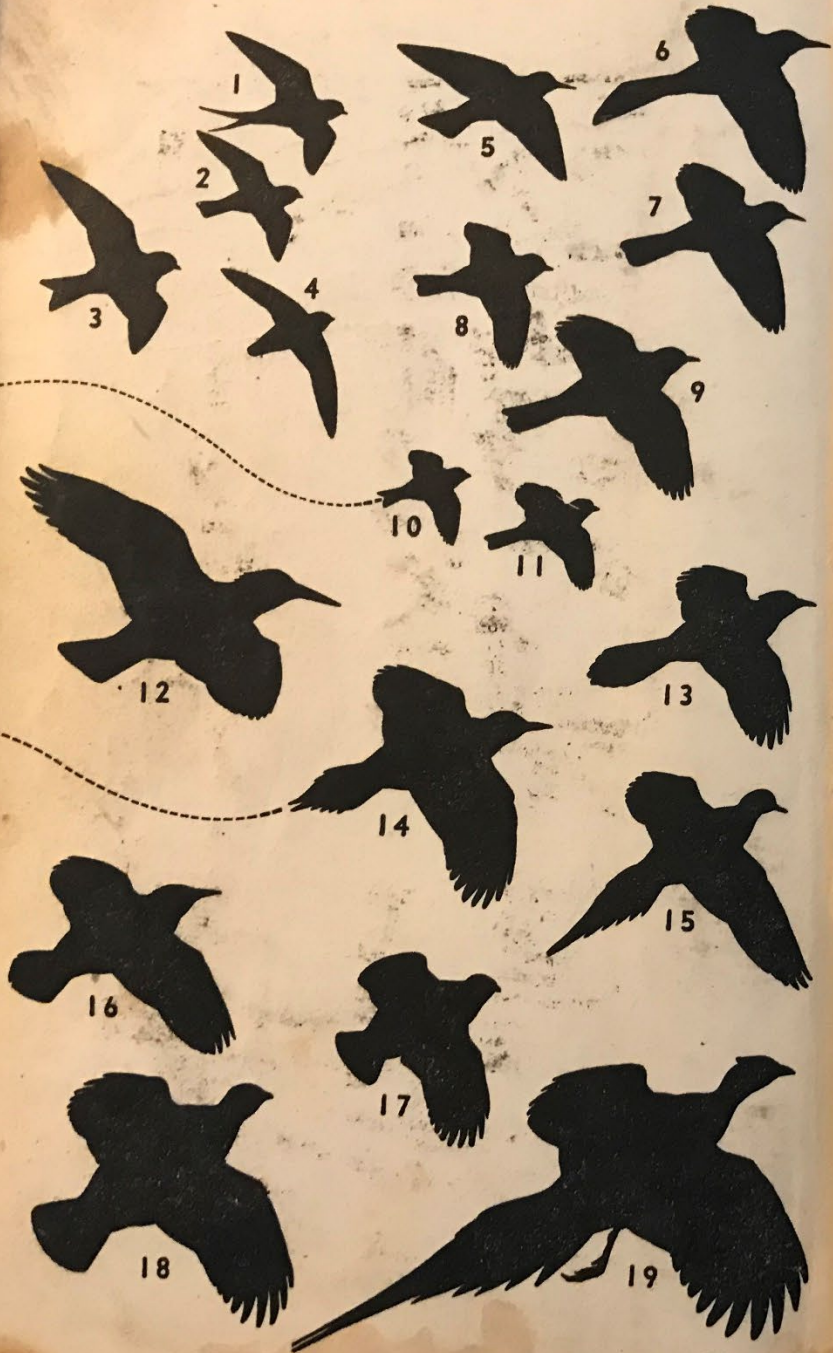


# SILHOUETTES



Roadside  
Silhouettes





# SEARCH IMAGE

- ▶ Form a search image of a Grackle
- ▶ On the next page – find the Grackle
- ▶ (keep answer to yourself initially)





SEARCH IMAGES

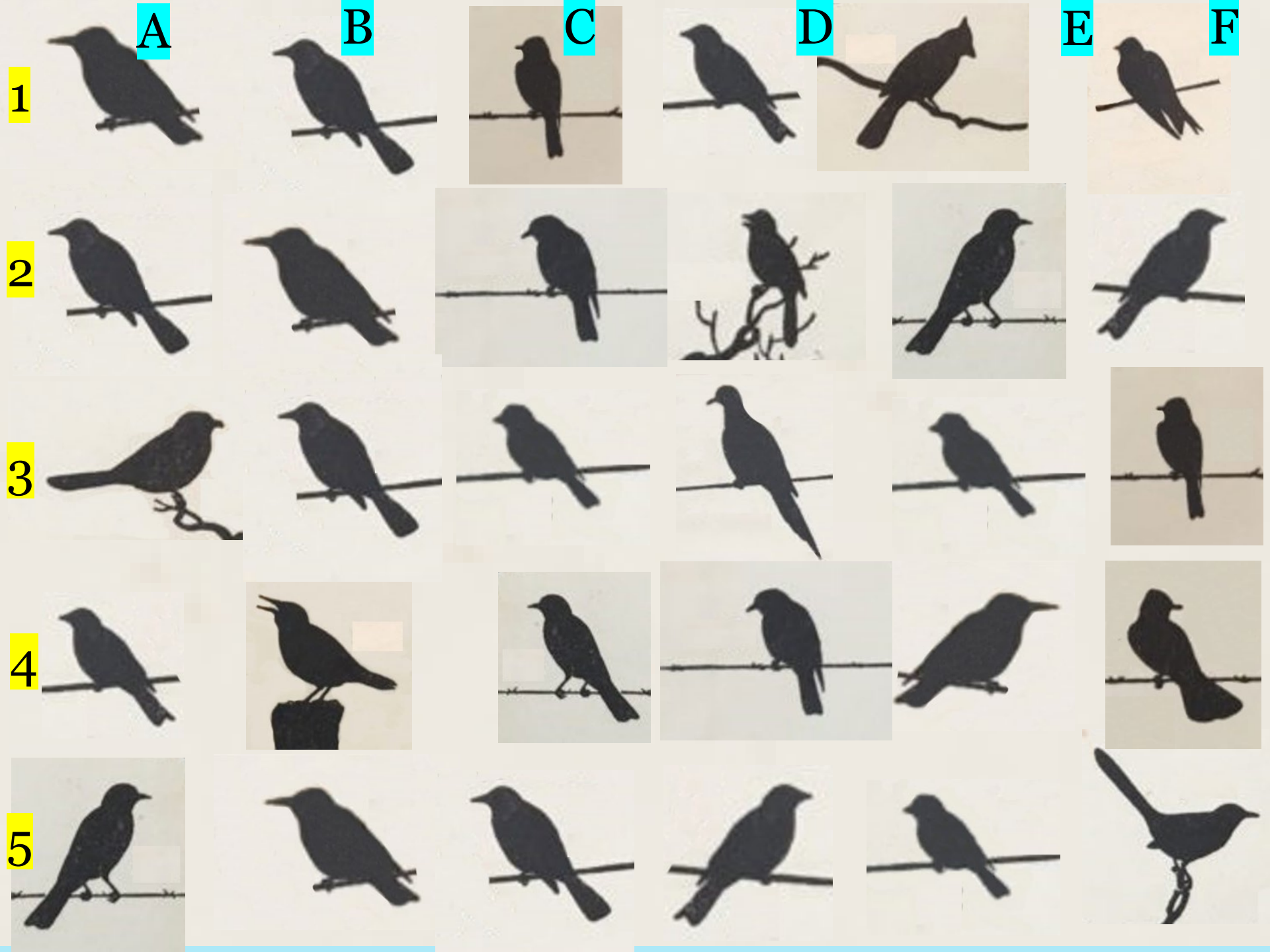
FIND THE  
KESTRAL

**A****B****C****D****E****F****1****2****3****4****5**



SEARCH IMAGES

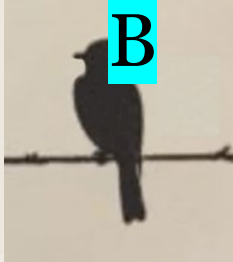
FIND THE  
SHRIKE

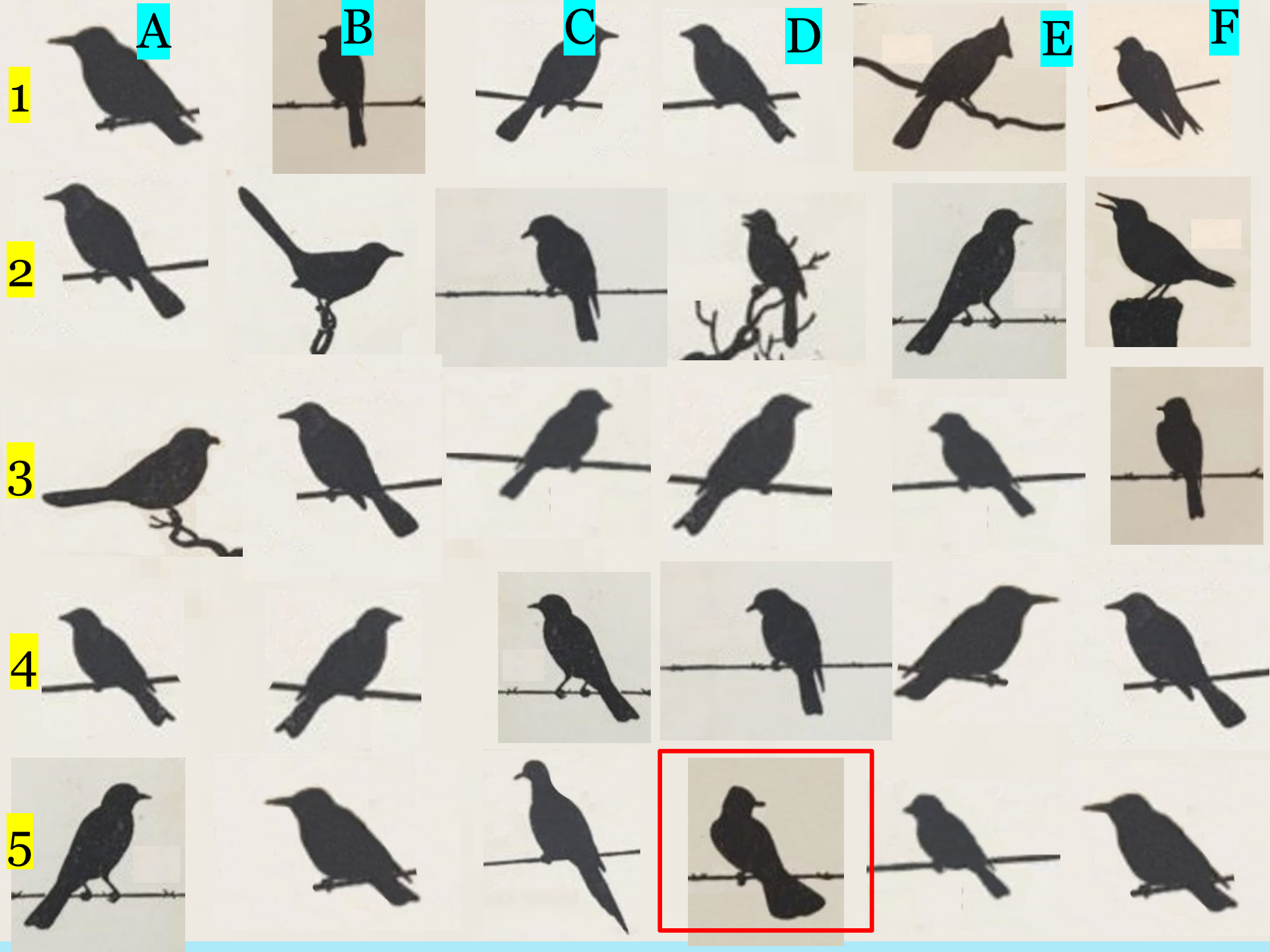




SEARCH IMAGES

FIND THE  
KINGBIRD

**A****B****C****D****E****F****1****2****3****4****5**



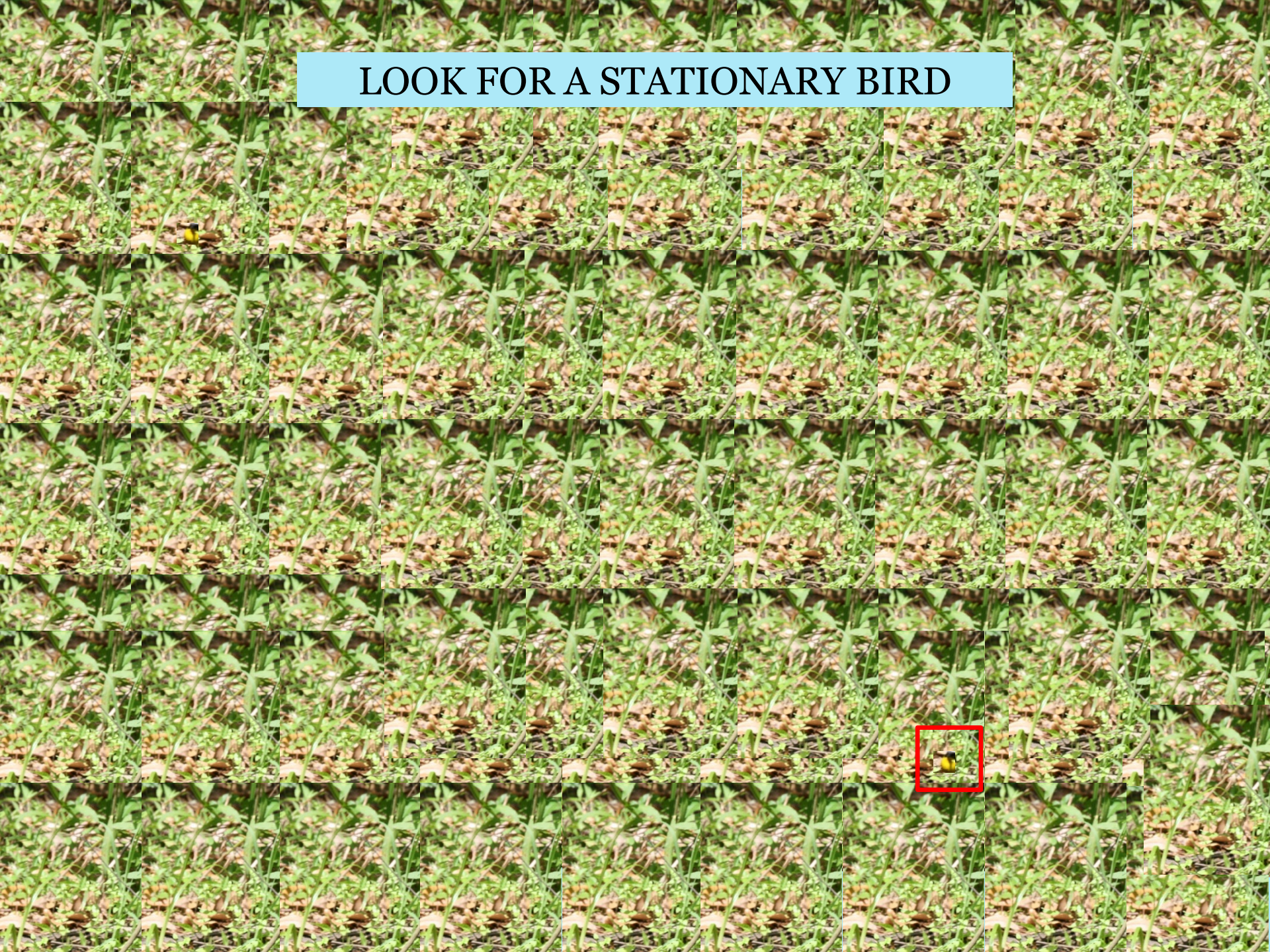
# IMPROVING OBSERVATION

- ▶ Focusing vs Dis-focusing (movement)

# MOVEMENT VS STATIC

FIND A  
BIRD

LOOK FOR A STATIONARY BIRD



3D STEREOGRAM  
YOU USE “DIS-FOCUSSING” TO SEE





SCANNING FOR MOVEMENT

USING “DIS-FOCUSING”

TO AVOID “INATTENTIONAL BLINDNESS”

# ENJOY THE ACT OF OBSERVATION (**ENJOY BIRDING !!!**)

- ▶ Not just “fast and accurate ID”
- ▶ Slow down
- ▶ Study small details (feather group, bill...)
- ▶ Observe behavior
- ▶ Enjoy observing
- ▶ Teach someone else

# OBSERVATION EXERCISE

## BIRDING IS OBSERVING

- ▶ Without looking at references or photos:
- ▶ **Describe a Blue Jay (write a few notes).**

# POSSIBLE DESCRIPTIONS

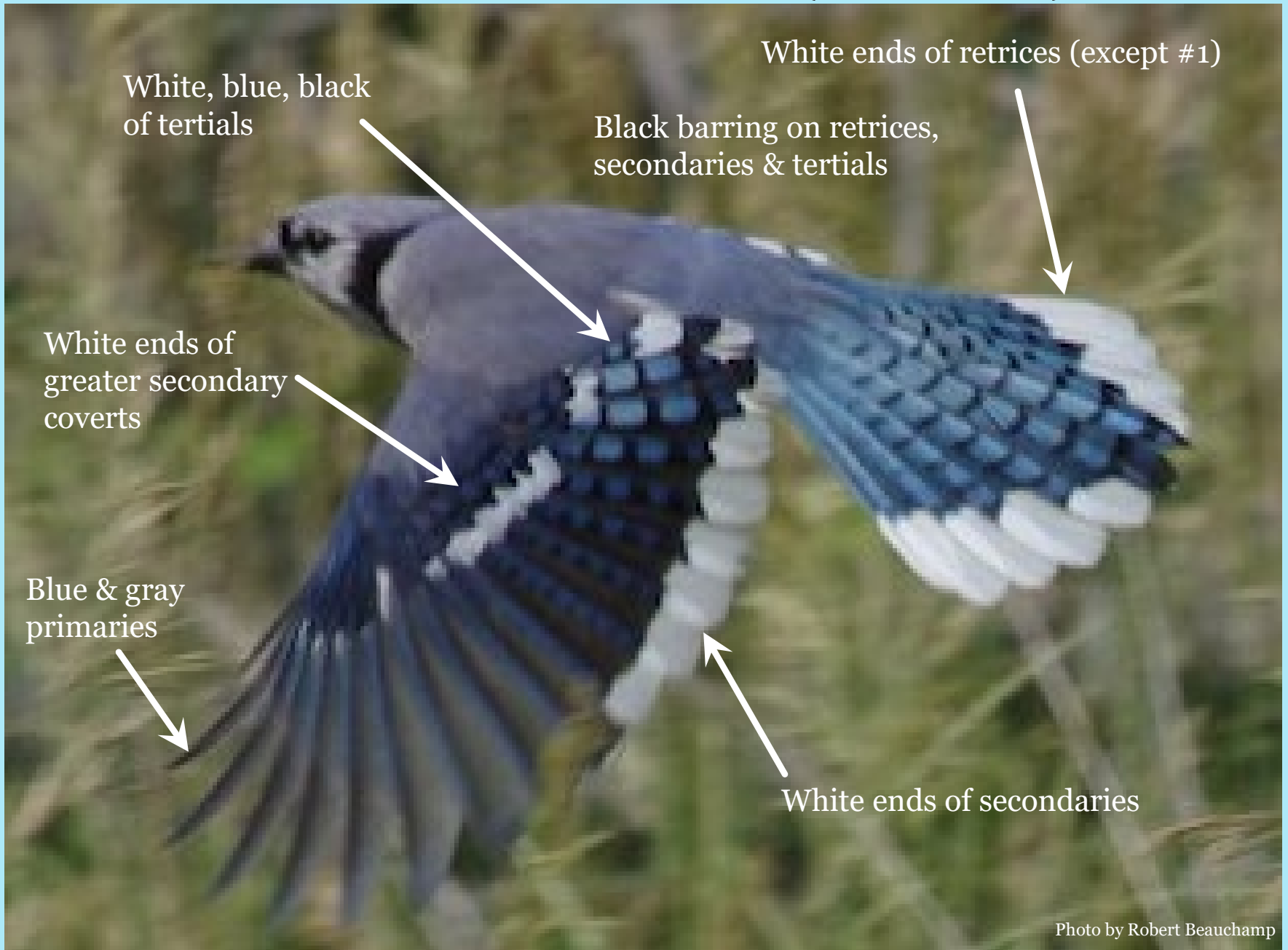
- ▶ Might include:
  - ▶ GISS
  - ▶ Posture, shape
  - ▶ Vocalizations
  - ▶ Plumage colors
  - ▶ Description of feather groups
  - ▶ Description of individual feathers
  - ▶ Behavior
    - ▶ (mobbing, at feeder, at mud, at bird bath)

# OBSERVATION (SEEING)



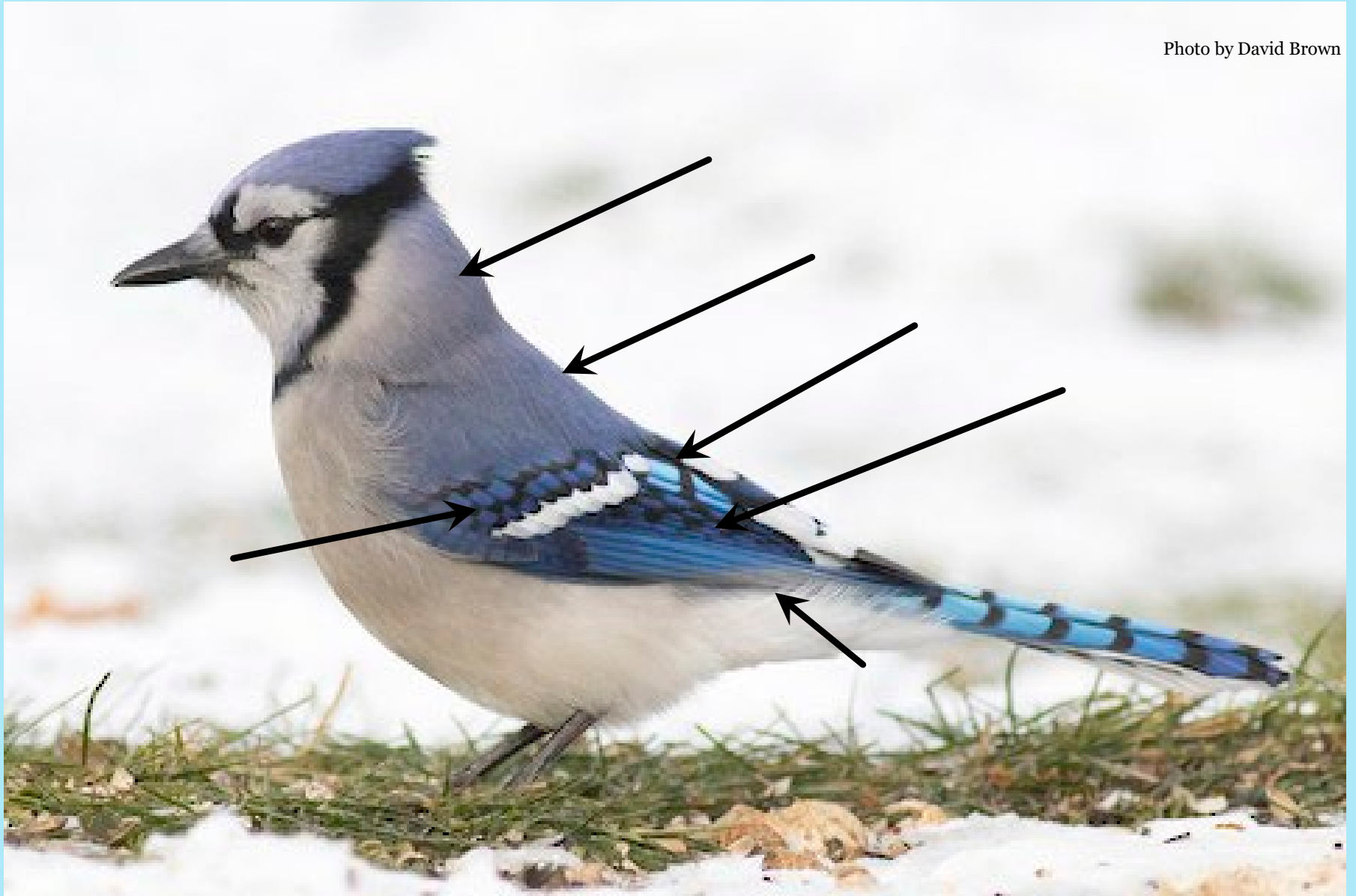
Photo by Robert Beauchamp

# OBSERVATION (SEEING)



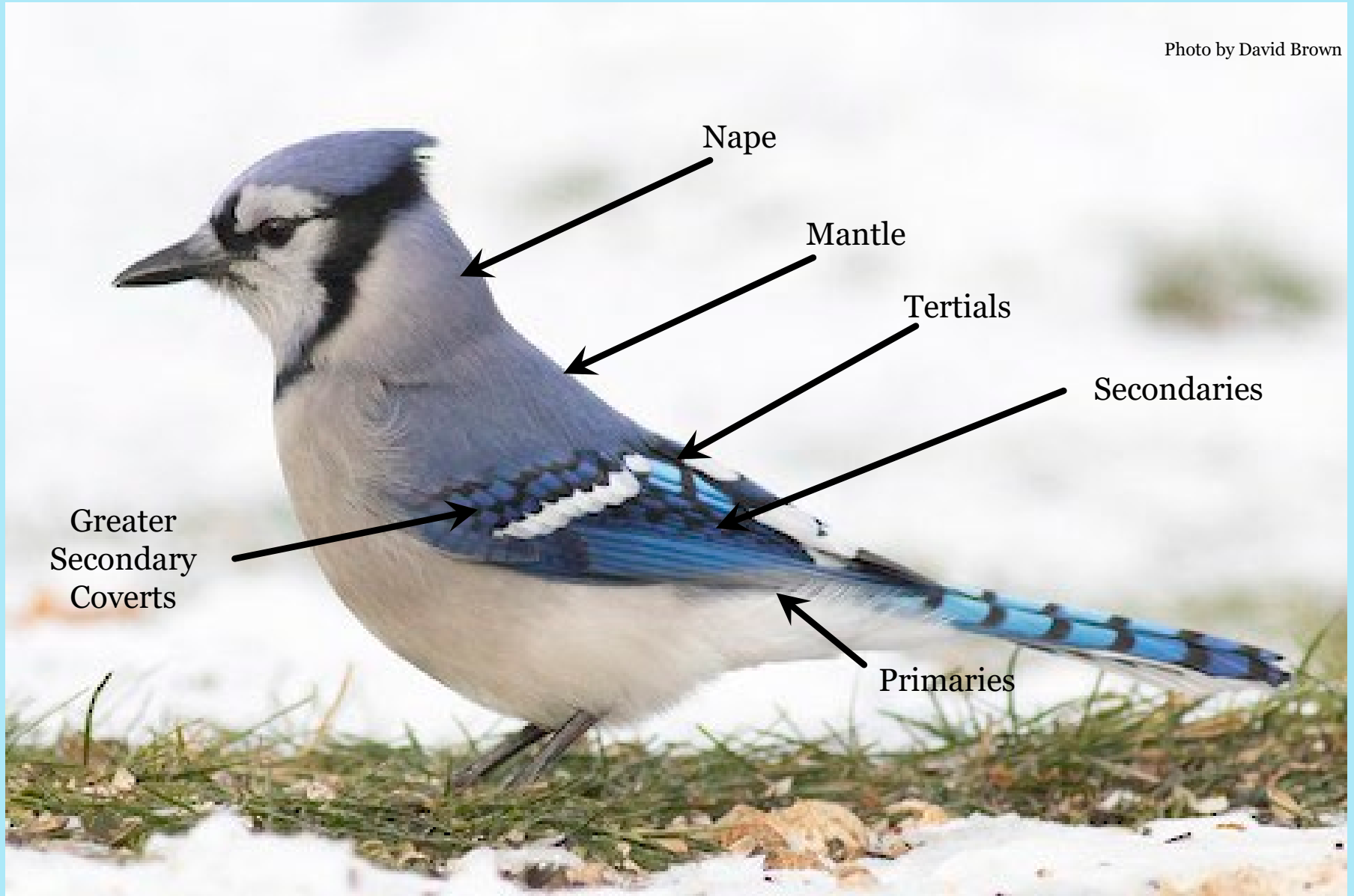
# OBSERVATION (SEEING)

Photo by David Brown

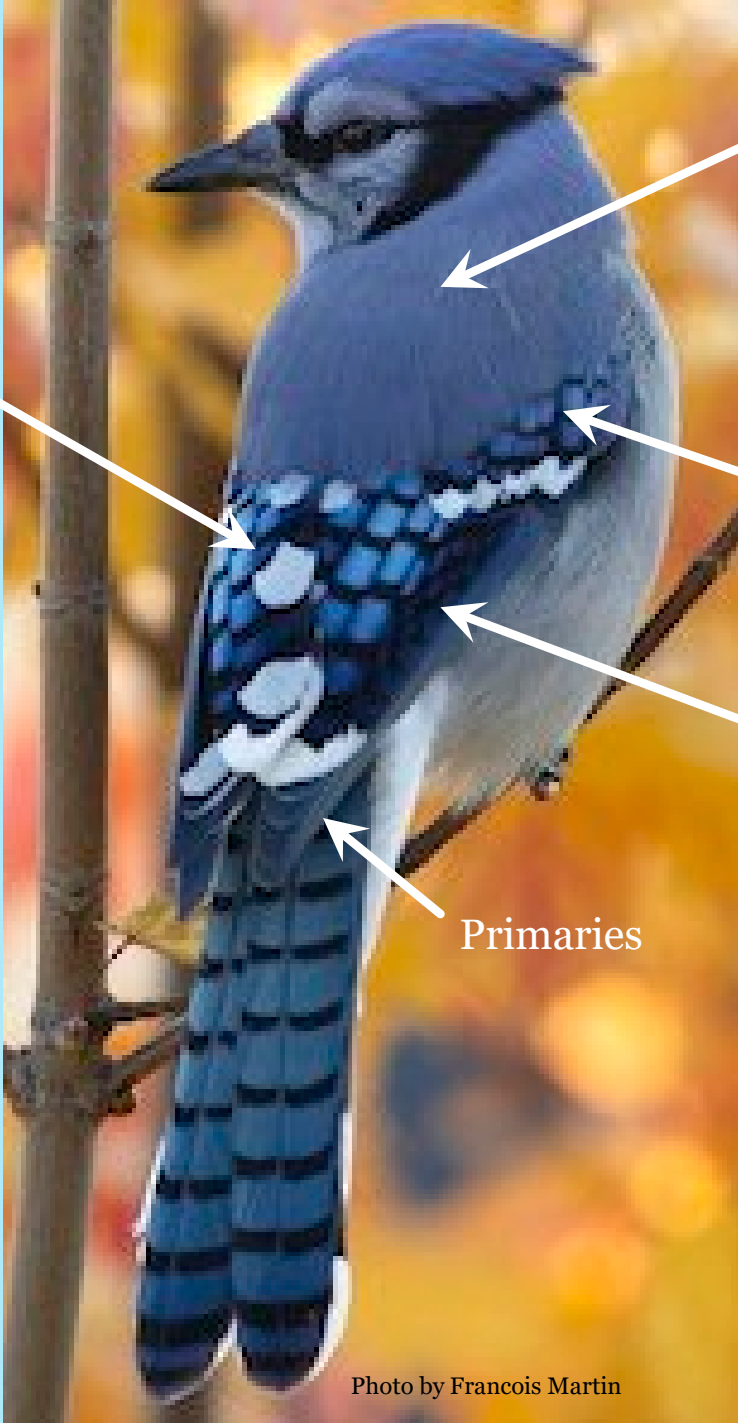


# OBSERVATION (SEEING)

Photo by David Brown



# BLUE JAY



Mantle

Tertials

Greater Secondary Cover

Secondaries

Primaries

Photo by Francois Martin

# BLUE JAY

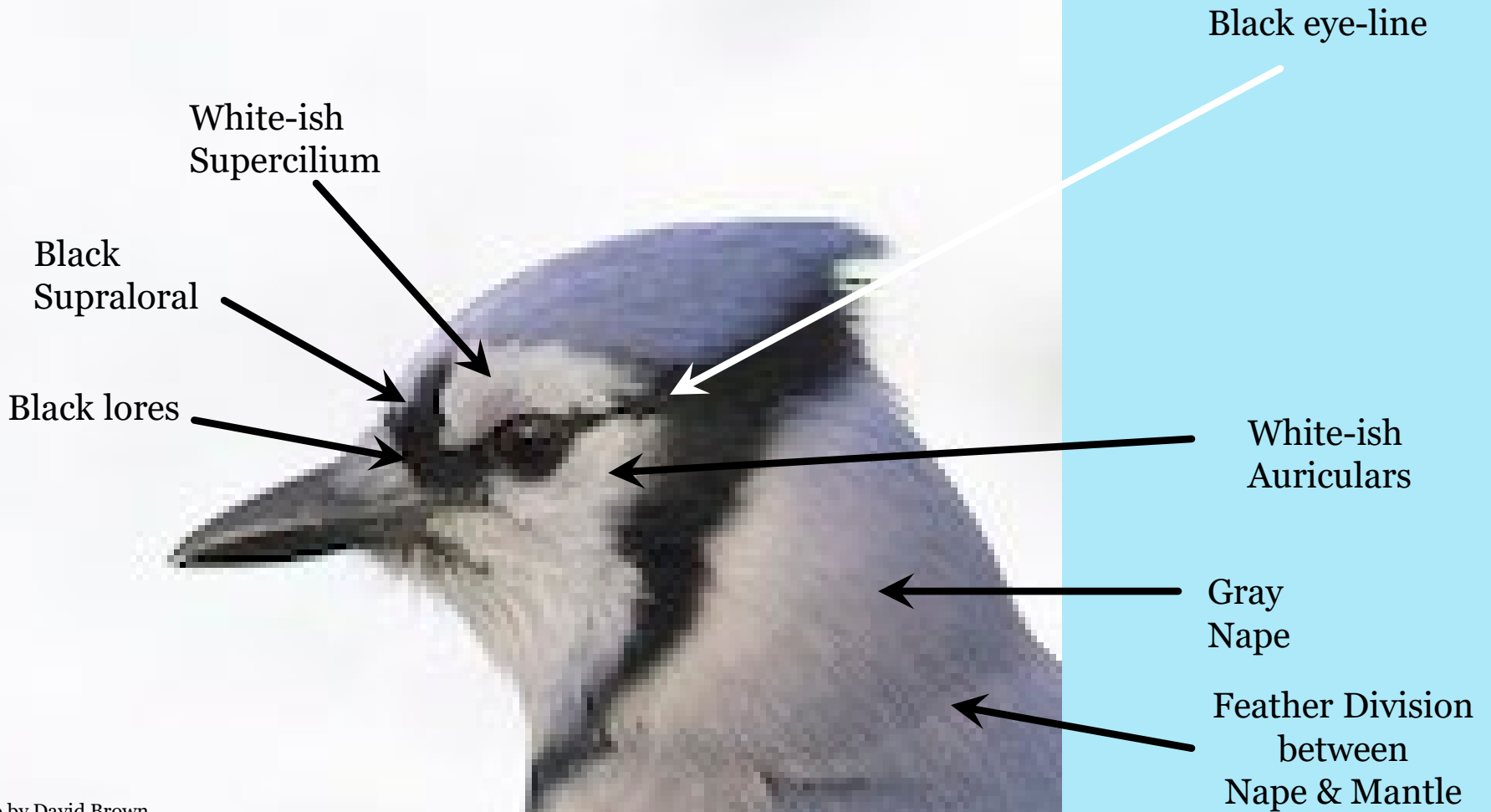
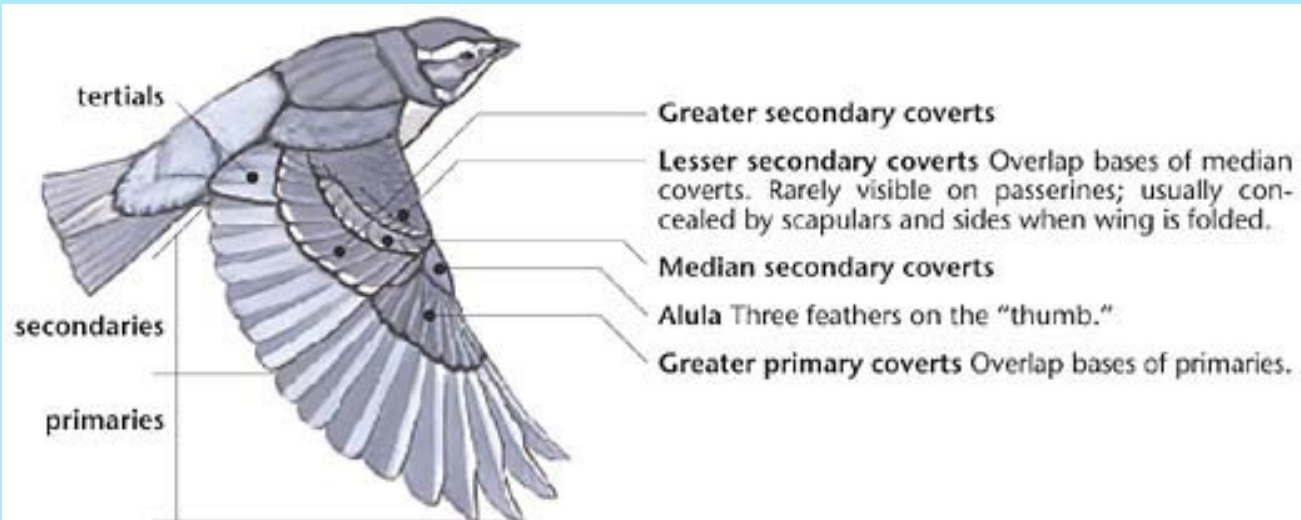
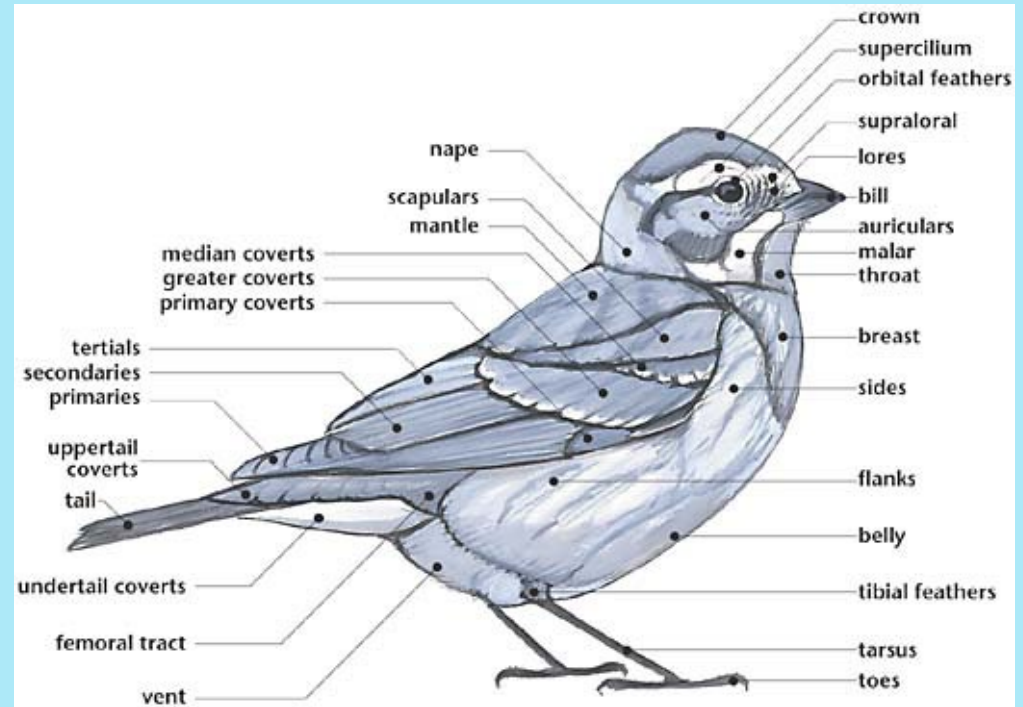
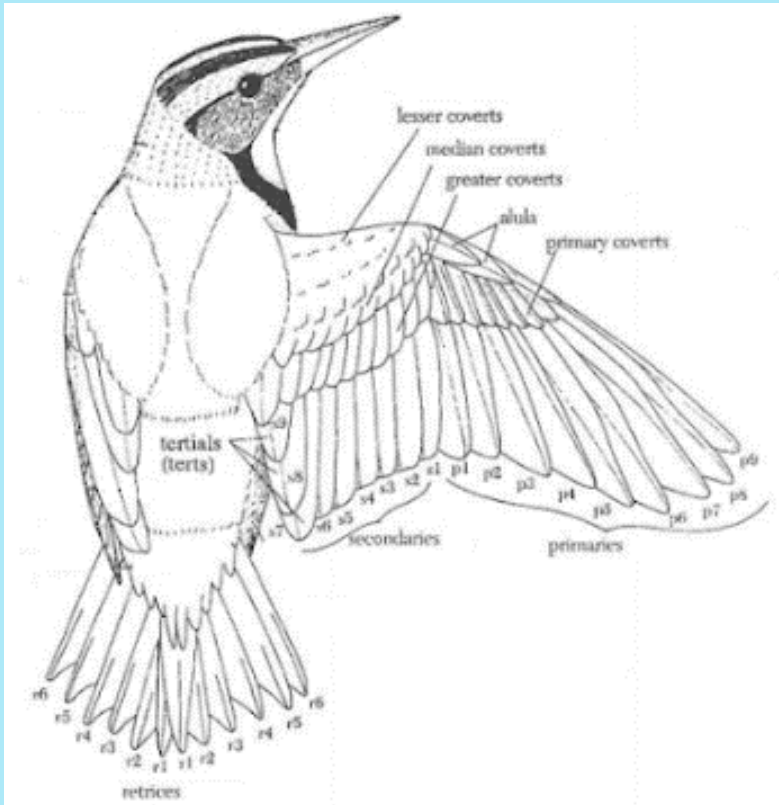


Photo by David Brown

# TOPOLOGY



Graphics by  
David A. Sibley

# TAXONOMY

SYSTEMATIZED BY CARL LINNAEUS (SWEDISH BOTANIST)

Taxonomy – the science of naming, describing and classifying organisms

- ▶ Domain:
- ▶ Kingdom:
- ▶ Phylum:
- ▶ Class:
- ▶ Orders:
- ▶ Family:
- ▶ Genus:
- ▶ Species:

Do Kings Play Chess  
On Fine Green Silk

# TAXONOMY OF BIRDS

Domain: *Eukarya*

Kingdom: *Anamalia*

Phylum: *Chordata*

Class: *Aves*

Order: 41 bird orders

Families:  
248 world wide  
81 in North America

Genus

Species:  
~10,000 bird speices

“Birds”



# SEVEN HABITS OF HIGHLY EFFECTIVE BIRDERS

- 1) Where are we? – County, sub-county...
- 2) When are we? – Season, month, 1/2 month...
- 3) Where is he? – Habitat, micro-habitat...

Distribution !!

- 4) GISS & Structure – posture, behavior, primary extension ...
- 5) Bill & Head – length, shape, thickness, use...
- 6) Field Marks – plumage, pattern, behavior...
- 7) Diagnostic Field Marks – differentiate closely related species

Identity !!

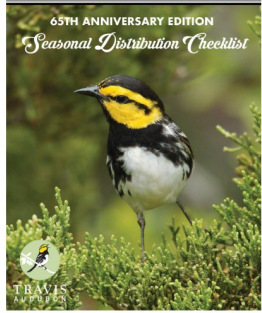
## RESULTS IN A DIAGNOSIS !!!

By Jeffrey E. Patterson

**Diagnosis** – ID of the nature of a problem by examination of the symptoms.

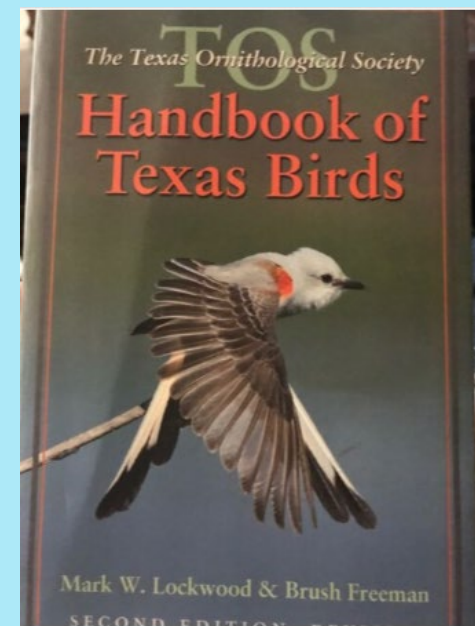
# BIRDS<sup>®</sup>

OF THE AUSTIN, TX REGION



## DISTRIBUTION

- 1) WHERE ARE WE?
- 2) WHEN ARE WE?



- ▶ Ebird
- ▶ Field guides
- ▶ *Birds of North America* online
- ▶ *The TOS Handbook of Texas Birds*,
  - ▶ Lockwood & Freeman
- ▶ *Birdlife of Texas*
  - ▶ Oberholser & Kincaid
- ▶ TAS Checklist (new!!)
- ▶ Experience, experience, experience!!!



# DISTRIBUTION

**1) WHERE ARE WE?**

**2) WHEN ARE WE?**

- ▶ 3 major activities of birds
  - ▶ Energy expensive
  - ▶ Not much overlap
  - ▶ Affects “where” and “when”
  - ▶ Can aid in ID
- ▶ Can you name them?

**1. Breeding**

**2. Migrating**

**3. Molting**

# DATA VISUALIZATION

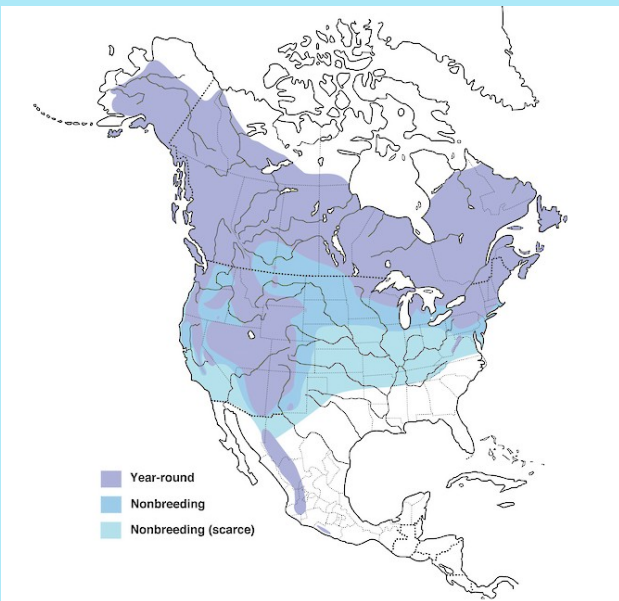
The representation of information and data using charts, graphs, maps, and other visual tools

# RANGE/STATUS/DISTRIBUTION

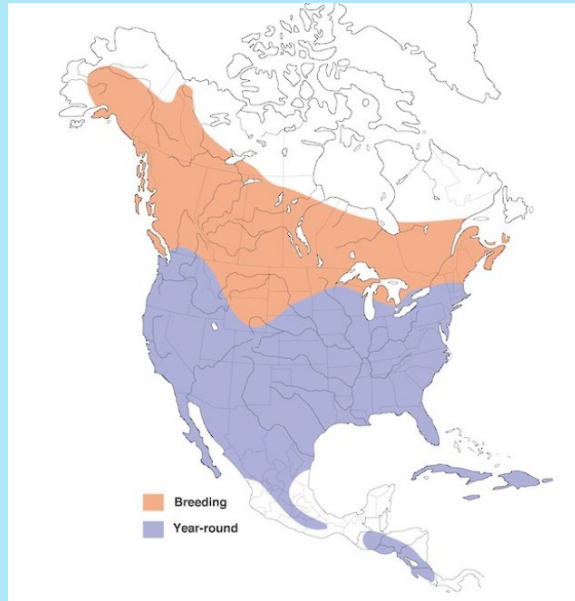
**Range** – area over which a species is regularly found in a given season

**Status** – the numerical abundance of a species in right habitat at right time

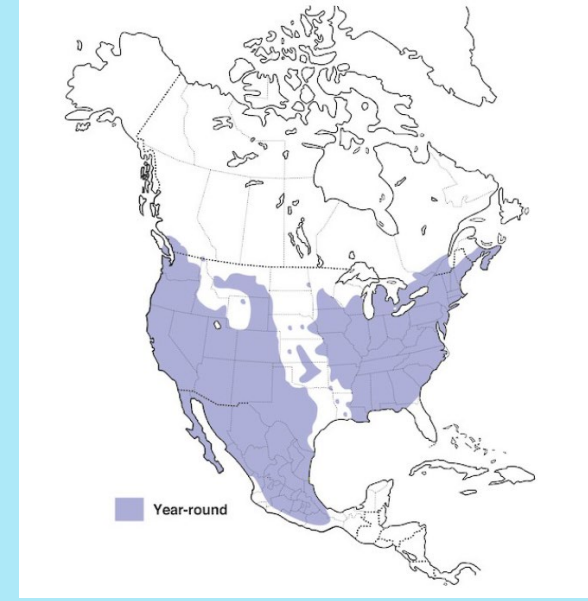
**Distribution** (= Range + Status) – where and when birds are regularly found and how common or rare they are at different seasons



Northern  
Goshawk



Red-tailed  
Hawk



House  
Finch

# DISTRIBUTION TOOLS

- ▶ Range map (field guides, online)
- ▶ Ebird sightings map (observational data)\*
- ▶ Ebird frequency graphs \*
- ▶ Abundance map (eBird) (distribution)\*
- ▶ Animated abundance map (eBird)\*
- ▶ Trend maps (eBird)\*

\* No observers = no data

# RANGE MAP

## ISSUES

- ▶ Shows range only
- ▶ Doesn't show status (abundance within the range)
- ▶ Created by 1 or a few people (generally)
- ▶ Many are out of date



Cassin's Sparrow

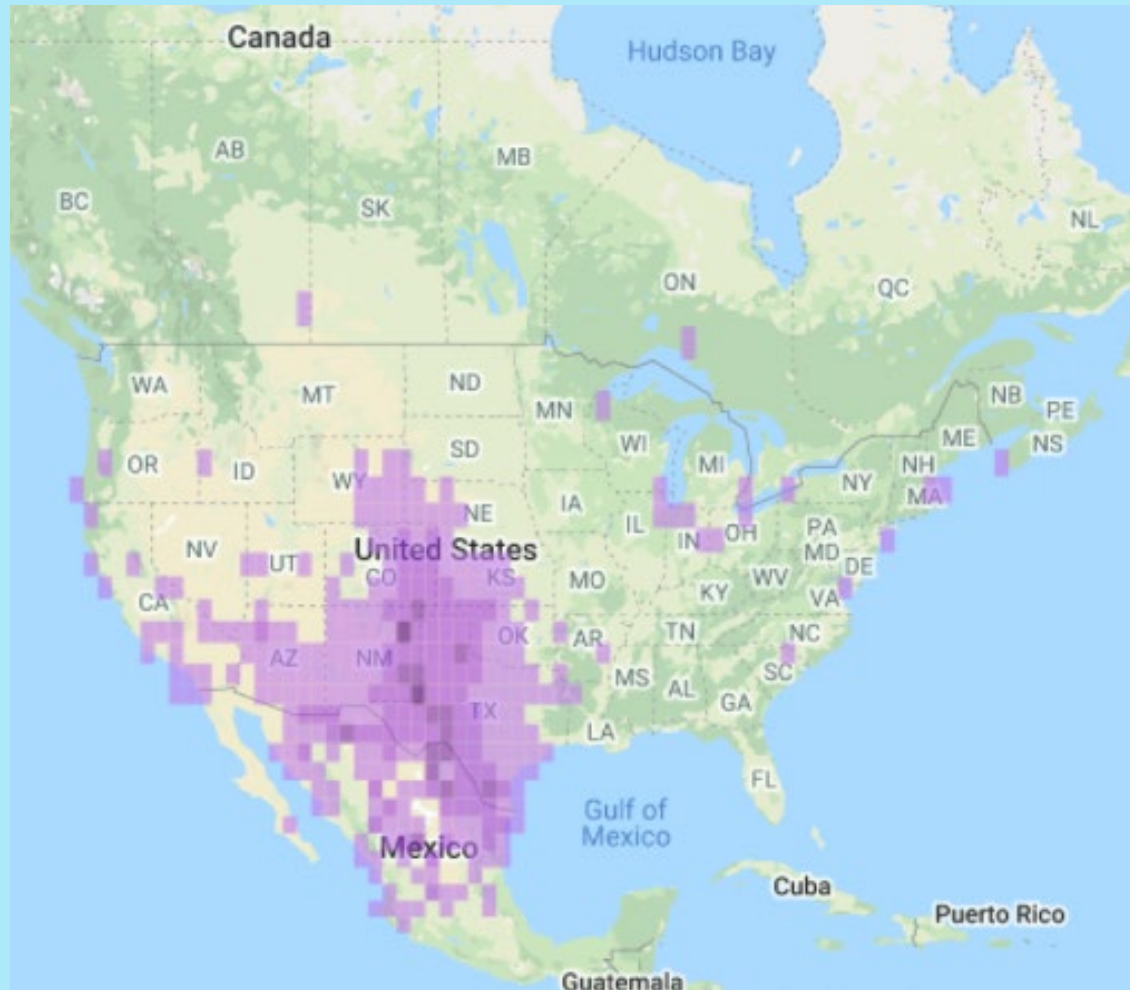


+ Enlarge

# EBIRD SIGHTINGS MAP

## ISSUES

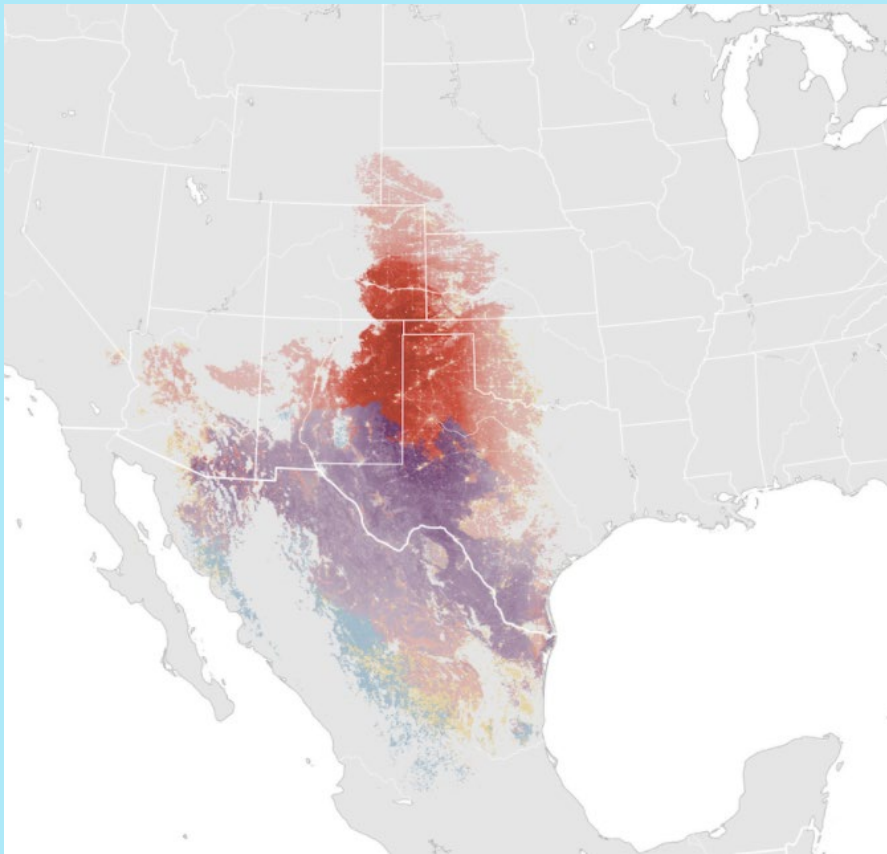
### Cassin's Sparrow



- ▶ Coverage – observers needed in out of way places
- ▶ Birds must be detectable
- ▶ Identification must be correct
- ▶ Over-emphasizes single sightings
- ▶ Over-emphasizes single birds with multiple sightings
- ▶ Data for all years (unless you filter)

# ABUNDANCE MAP

## Cassin's Sparrow



## ISSUES

- ▶ **Distribution & abundance**—not just range
- ▶ Ebird sightings data + Habitat data
- ▶ De-emphasizes single sightings
- ▶ Uses multiple years of observation to model 1 year of the population
- ▶ Subject to observer limitations (as above)

# ANIMATED ABUNDANCE MAP

Issues  
ice ?



# 10-YEAR TREND MAPS


▶ COMING SOON !!!

# METHODS OF DATA COLLECTION

- ▶ Ebird checklist
- ▶ Bird surveys
- ▶ Breeding bird surveys (BBS)
- ▶ Christmas bird counts (CBC)
- ▶ Breeding bird survey (Breeding Bird Atlas)

# WORDS DESCRIBING DISTRIBUTION

- ▶ Abundant
  - ▶ Common
  - ▶ Fairly common
  - ▶ Uncommon
  - ▶ Accidental
  - ▶ Local
  - ▶ Irregular
- ▶ **Rare** – occur annually in NA, but in very low numbers.
  - ▶ **Casual** – not annual, but 6 or more total records in NA, including 3 or more records in past 30 years.
  - ▶ **Accidental** – 5 or fewer times in NA, or 3 times or fewer in the last 30 years.



Increasing  
Abundance

Definitions  
agreed upon by  
ABA & AOU

# DETECTION CASSIN'S SPARROW IN EL PASO

“Migratory/winter status of species is poorly known in many areas, due to secretive nature of non-singing birds. Latest records in some areas reflect only when males stop singing, not when birds depart”.

Barry Zimmer

Species status of Cassin's Sparrow in El Paso, TX, region throughout typical year.

PERIOD	START OF PERIOD	END OF PERIOD	STATUS
Fall	September	December	Gone, approximately 2 records for area
Winter	Late December	1st week of March	Very scarce, 1-2 birds recorded in typical day of intense field work
Spring	1st week of March	1st week of May	Singing, common
Early Summer	1st week of May	Mid-July	Gone
Mid Summer	Mid-July	Mid-August	Singing heavily, common
Late Summer	Mid-August	September	Singing decreasing in intensity, stopping in September

Data from J. Donaldson and B. Zimmer pers. comm.

# EBIRD FREQUENCY GRAPHS

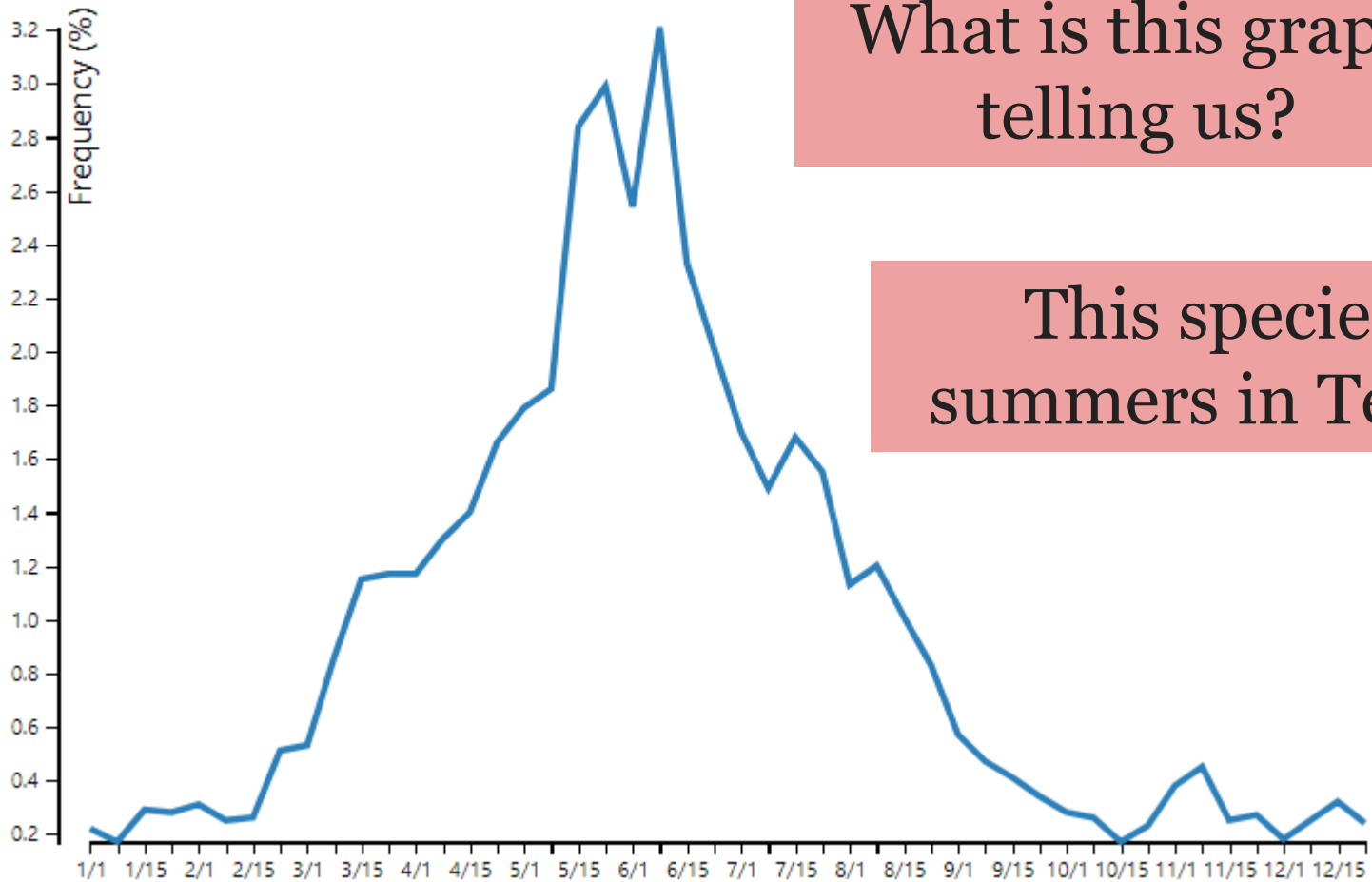
DIFFERENT SHAPES

DESCRIBE

DIFFERENT DISTRIBUTIONS

# EBIRD FREQUENCY GRAPH FOR SPECIFIC GEOGRAPHIC AREA (E.G. TEXAS)

Frequency (e.g. number of checklists)

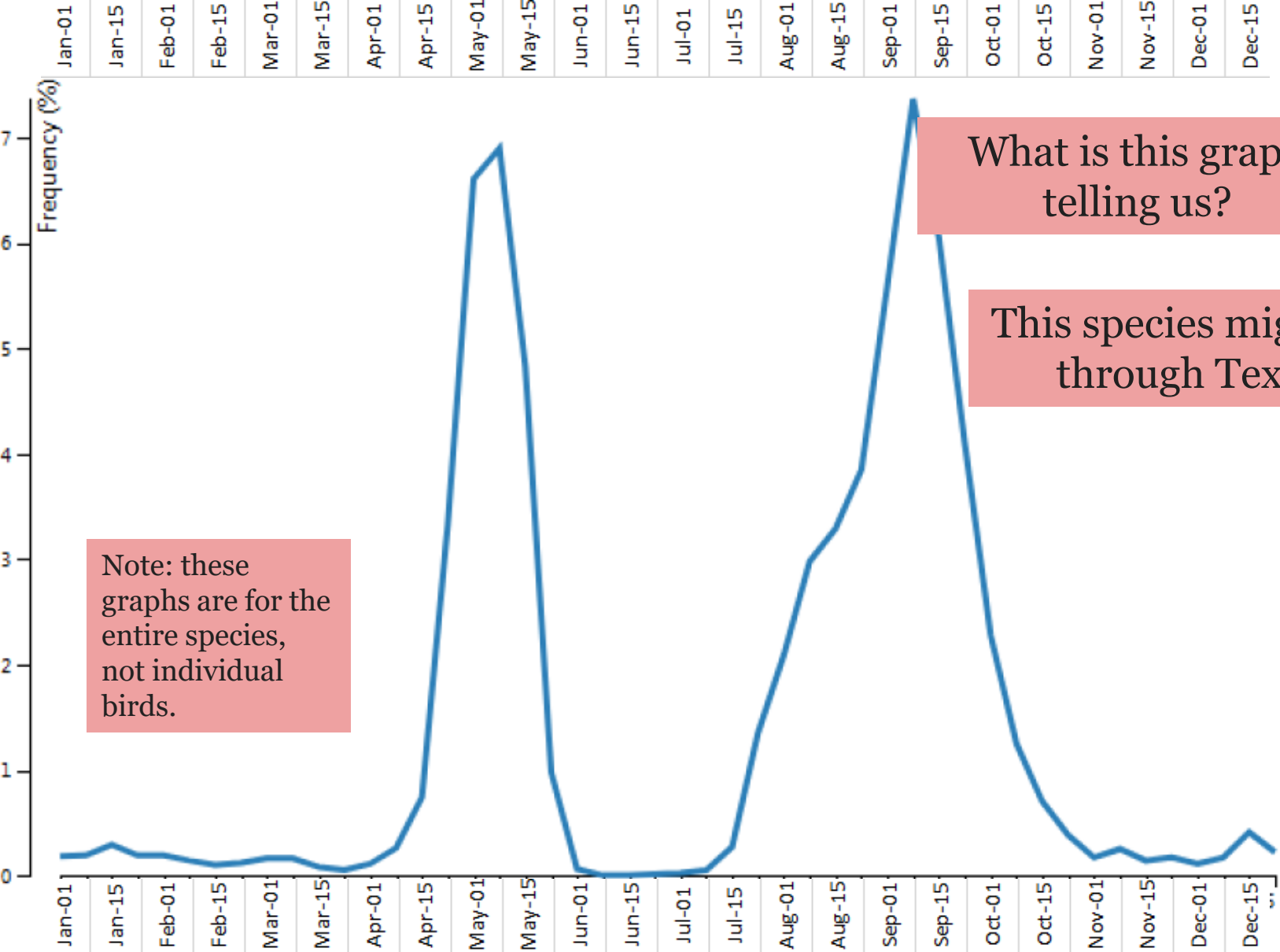


What is this graph telling us?

This species summers in Texas

Time (1/2 months)

# Least Flycatcher Timing in Texas



Note: these graphs are for the entire species, not individual birds.

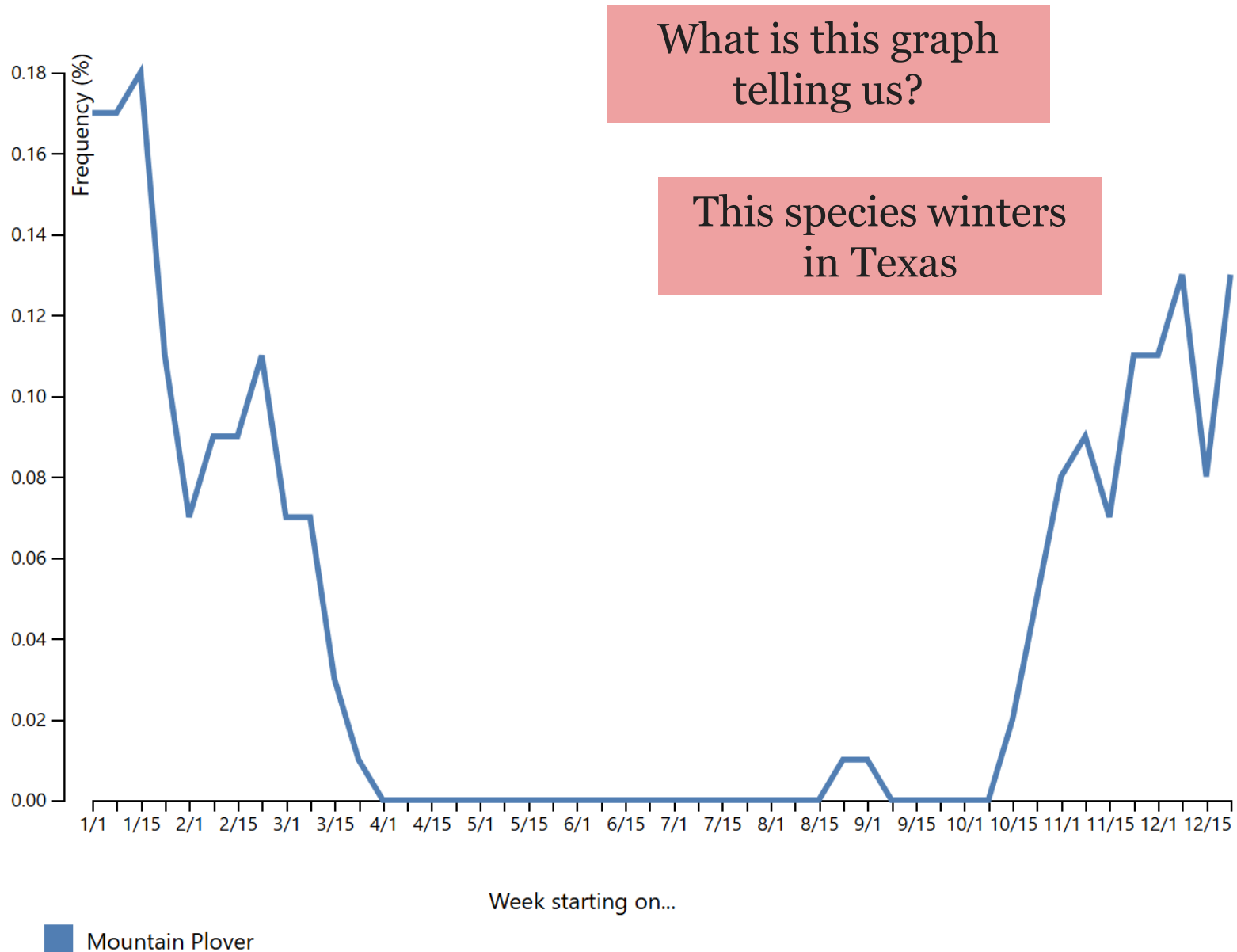
What is this graph telling us?

This species migrates through Texas

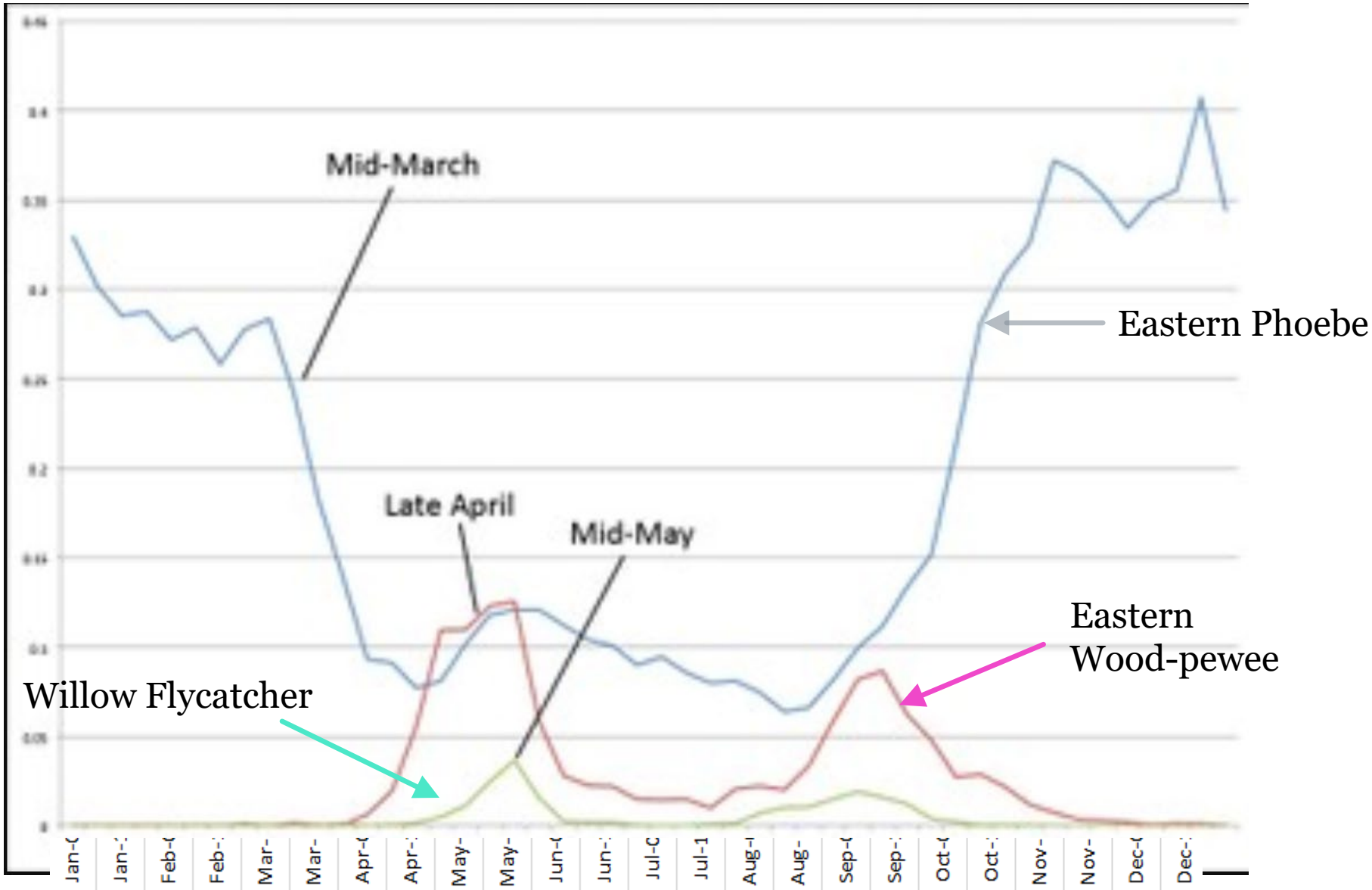
# FREQUENCY GRAPH (HABITS 1,2,3) FOR SPECIFIC GEOGRAPHIC AREA (E.G. TEXAS)

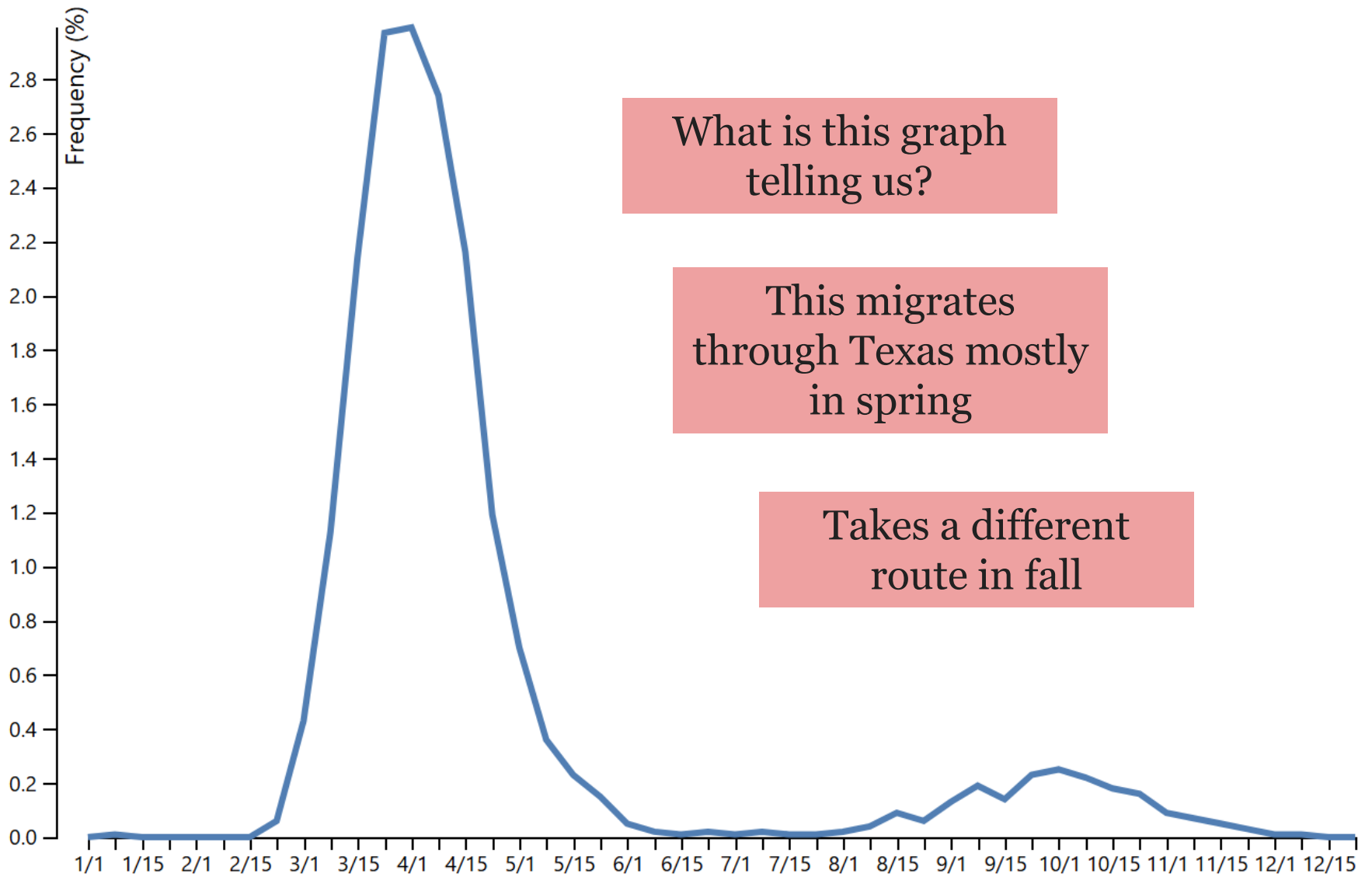


# MOUNTAIN PLOVER TIMING IN TEXAS



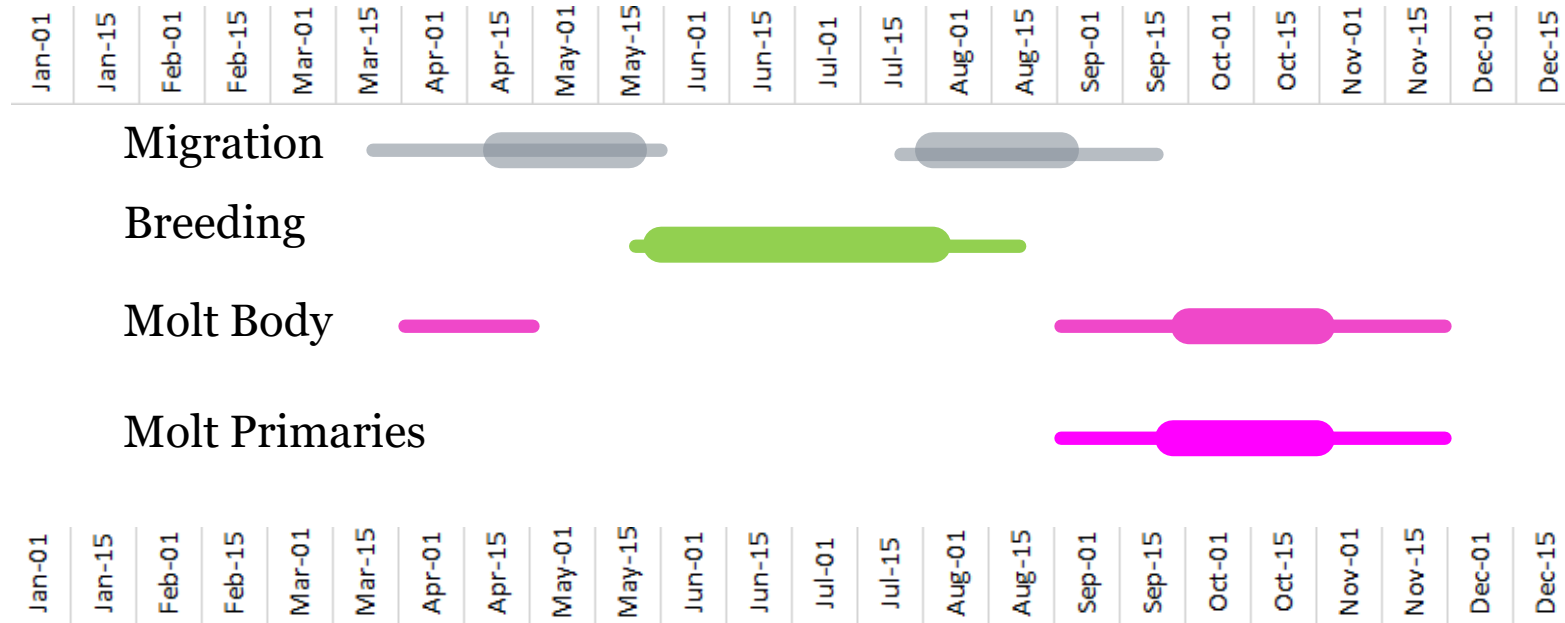
# Migration Timing of 3 Flycatchers in Texas





# Another Type of Graph

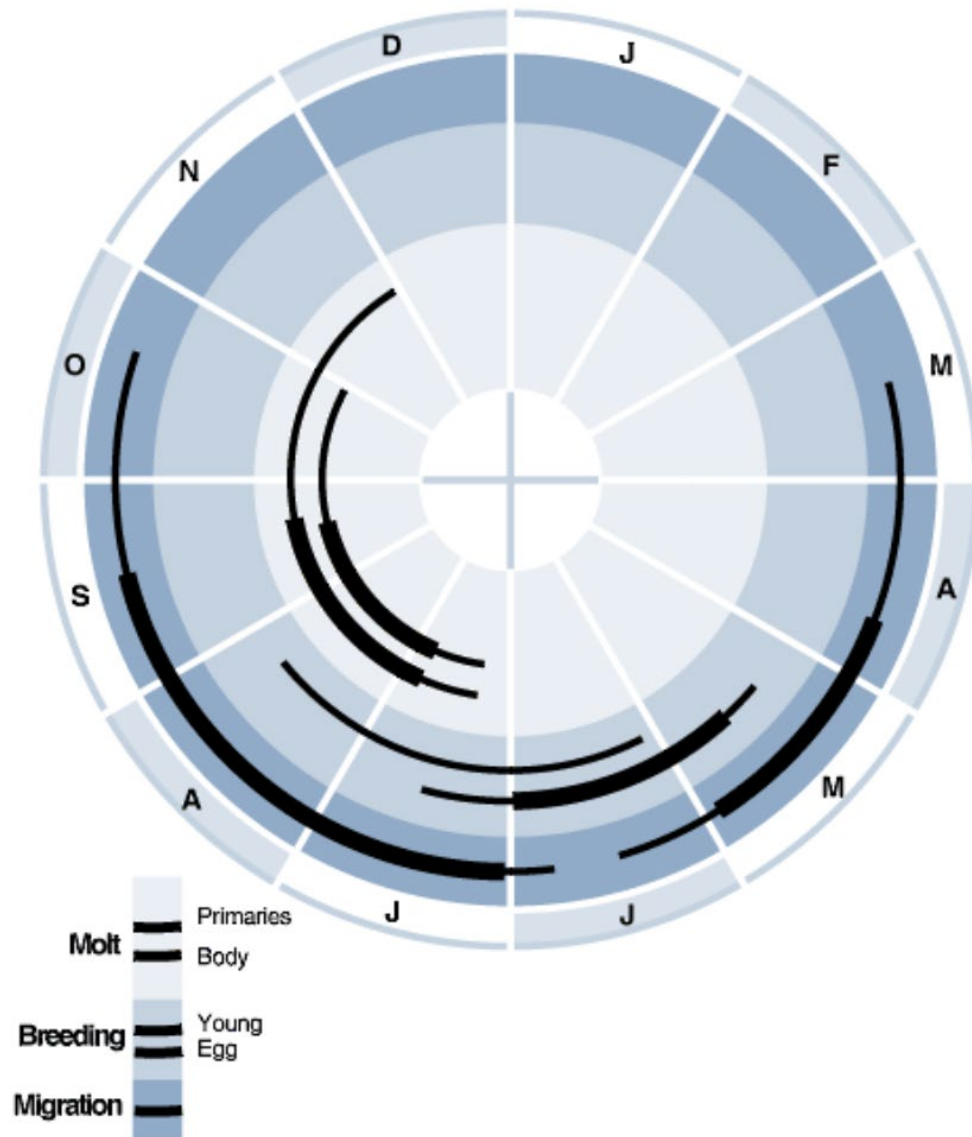
## Least Flycatcher Timing

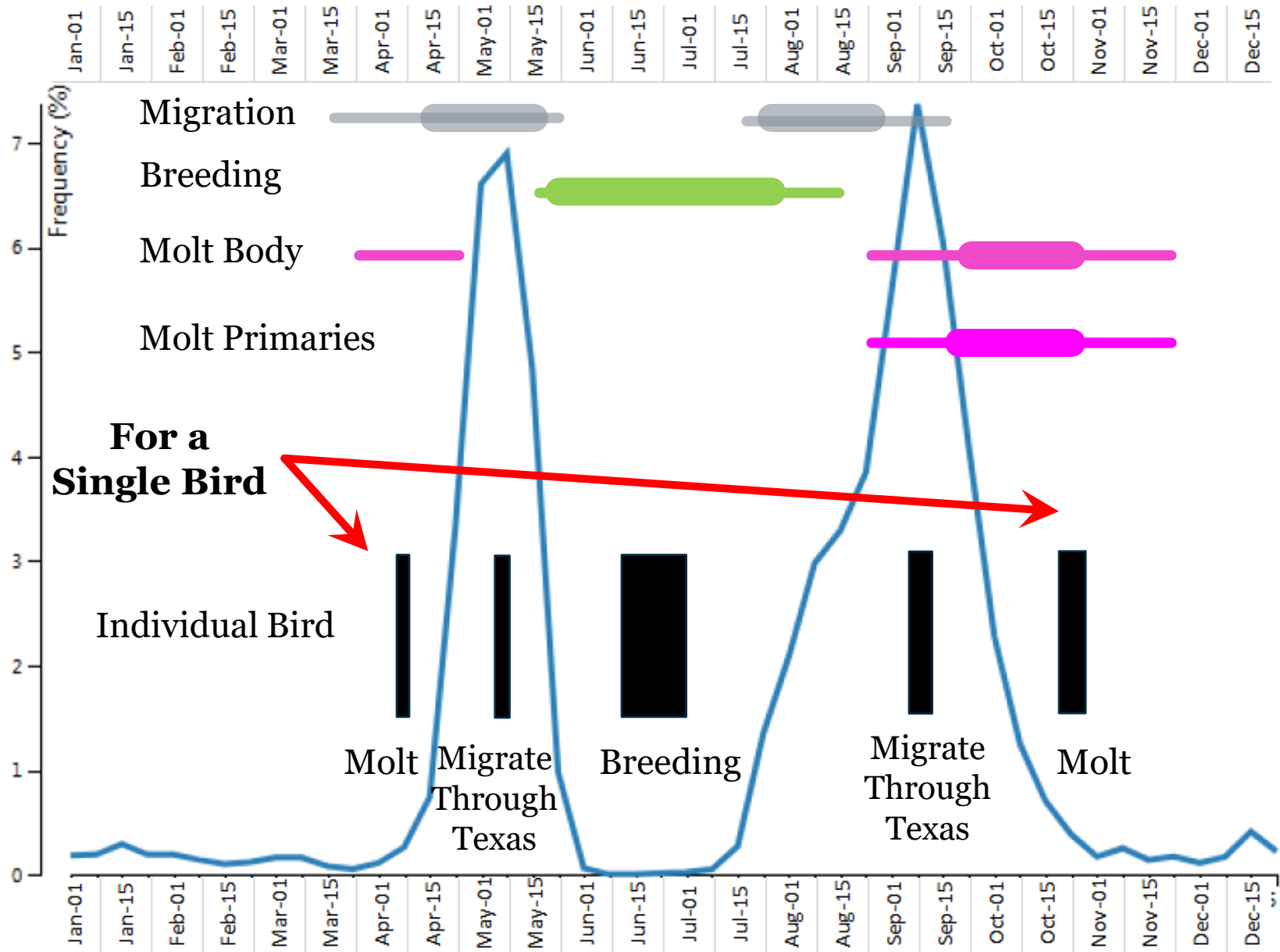


Source: Birds of the World

# Another Type of Graph

## Least Sandpiper Timing

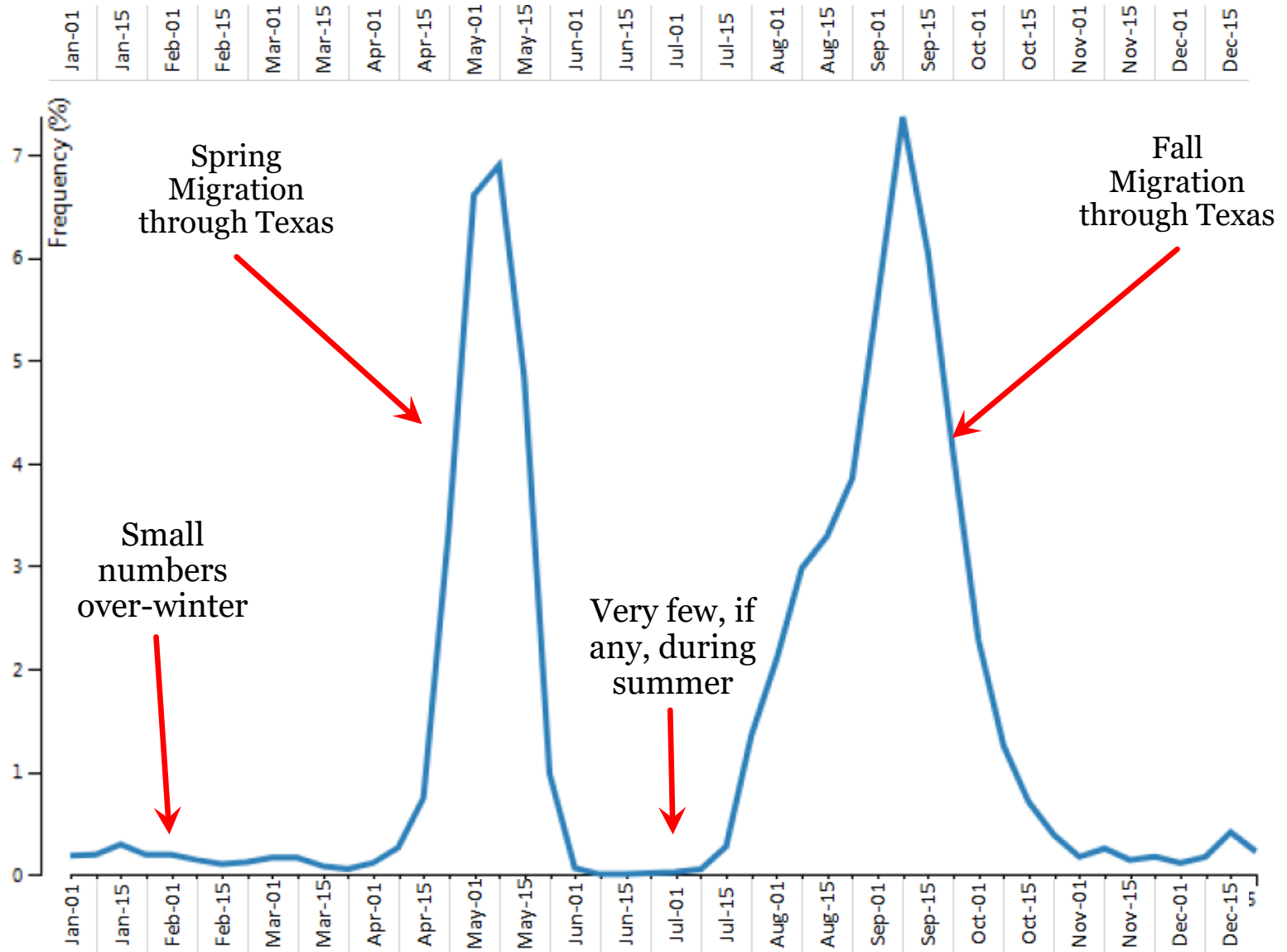




Least Flycatcher Timing in Texas (for an individual)

# FREQUENCY GRAPH (HABITS 1,2,3) FOR SPECIFIC GEOGRAPHIC AREA (E.G. TEXAS)

## Least Flycatcher Timing in Texas (for the entire species)



# SEVEN HABITS OF HIGHLY EFFECTIVE BIRDERS

- 1) Where are we? – County, sub-county...
- 2) When are we? – Season, month, 1/2 month...
- 3) Where is he? – Habitat, micro-habitat...
- 4) GISS & Structure – posture, behavior, primary extension ...
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Identity !!

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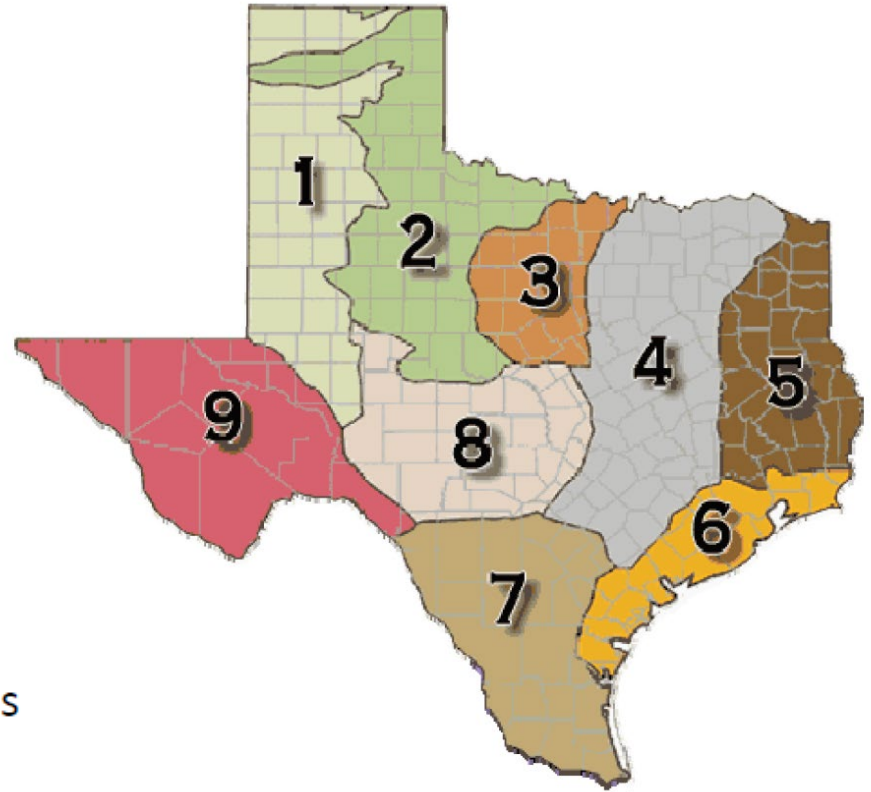
# DISTRIBUTION

## HABITAT

- **Habitat** – natural environment of an organism.
  - Provides:
    - food
    - water
    - shelter
    - space to survive

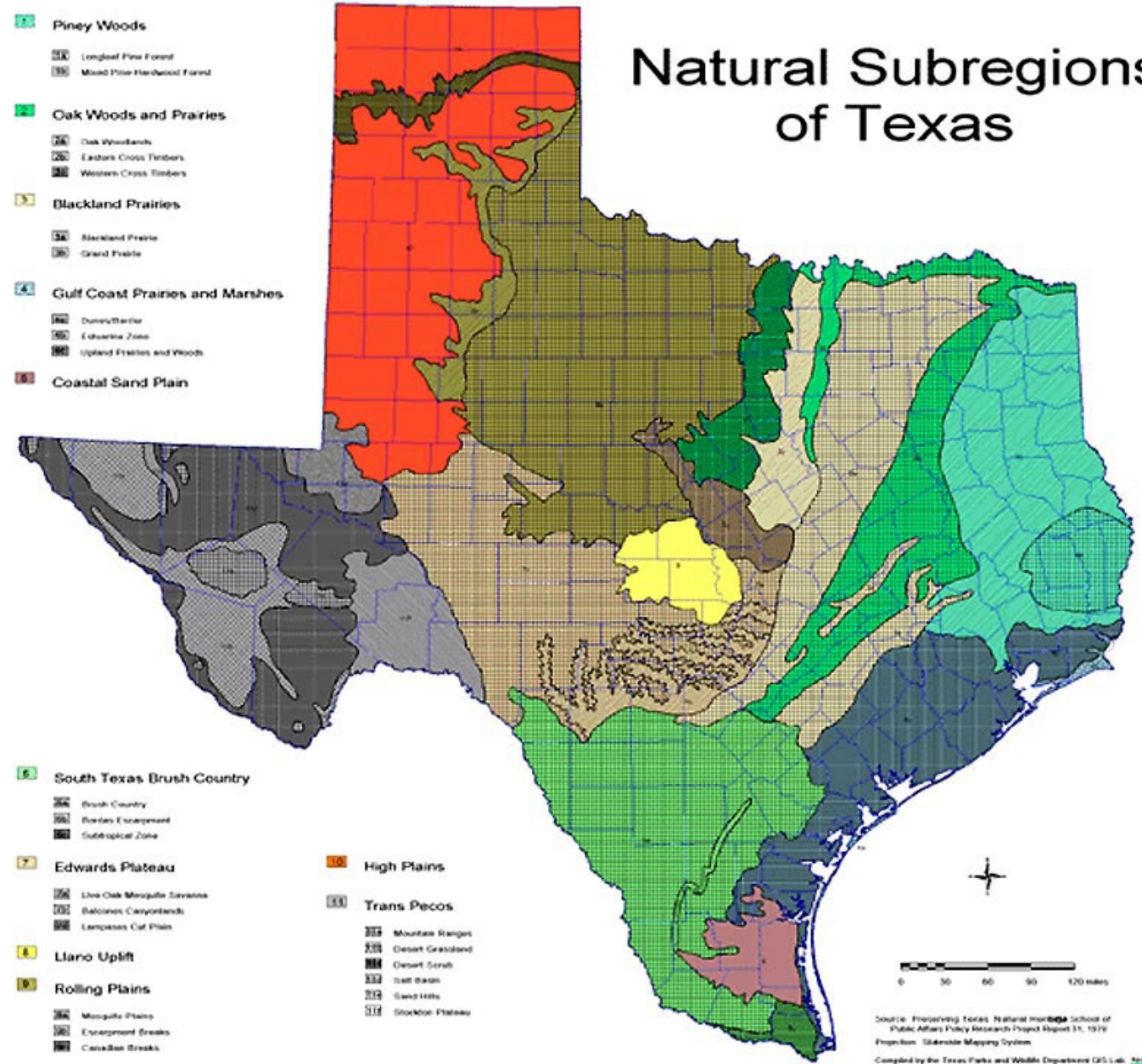
# DISTRIBUTION

## 3) REGIONAL HABITAT



1. High Plains
2. Rolling Plains
3. Osage Plains
4. Post-Oak Savannah and Blackland Prairies
5. Pineywoods
6. Coastal Prairies (and Coastal Sand Plain)
7. South Texas Brush Country
8. Edwards Plateau
9. Trans-Pecos

# Natural Subregions of Texas



- 1. Piney Woods**
  - 11 Longleaf Pine Forest
  - 12 Mixed Pine Hardwood Forest
- 2. Oak Woods and Prairies**
  - 21 Oak Woodlands
  - 22 Eastern Cross Timbers
  - 23 Western Cross Timbers
- 3. Blackland Prairies**
  - 31 Blackland Prairie
  - 32 Grand Prairie
- 4. Gulf Coast Prairies and Marshes**
  - 41 Dunes/Barrier
  - 42 Estuarine Zone
  - 43 Upland Prairies and Woods
- 5. Coastal Sand Plain**

- 6. South Texas Brush Country**
  - 61 Brush Country
  - 62 Border Escarpment
  - 63 Subtropical Zone
- 7. Edwards Plateau**
  - 71 Live Oak Mesquite Scrubland
  - 72 Balcones Canyonlands
  - 73 Lampasas Cut Plain
- 8. Llano Uplift**
- 9. Rolling Plains**
  - 91 Mesquite Plains
  - 92 Escarpment Breaks
  - 93 Canadian Breaks

- 10. High Plains**
- 11. Trans Pecos**
  - 111 Mountain Ranges
  - 112 Desert Grassland
  - 113 Desert Scrub
  - 114 Salt Basin
  - 115 Sand Hills
  - 116 Stockton Plateau



Source: Preserving Texas, Natural Heritage, School of Public Affairs Policy Research Project Report 31, 1979  
 Projection: Statewide Mapping System

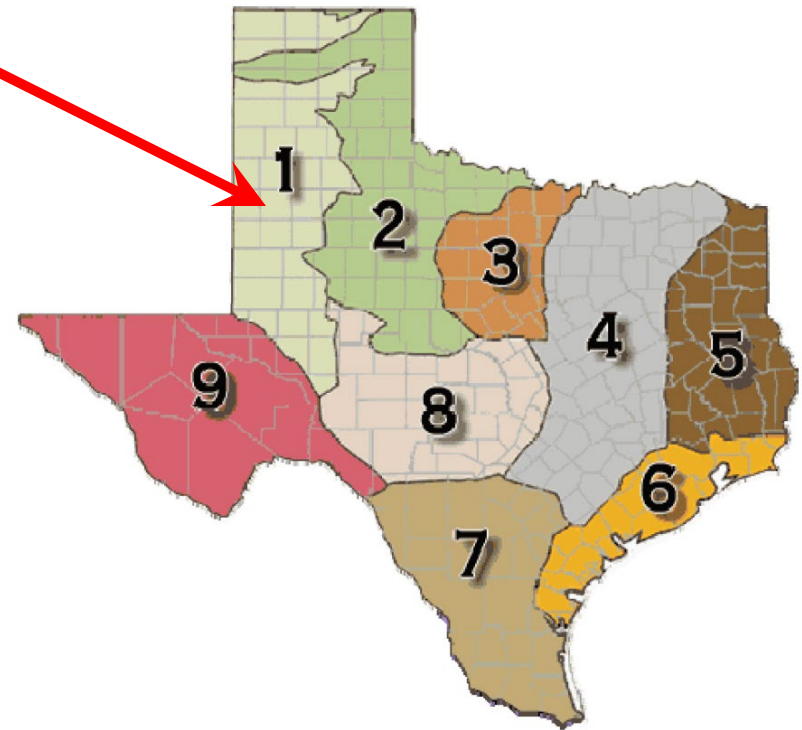
Compiled by the Texas Parks and Wildlife Department (TPWD). All claims are made to the accuracy of the data or to the suitability of the data for a particular use.  
 A companion book on this map can be found online at <http://www.tpwd.state.tx.us/naturalheritage>.



**MICRO-HABITAT:** – a small specialized habitat, within a larger habitat

▶ Short grass prairie of the Llano Estacado

- ▶ Temporary pool
- ▶ Decomposing log
- ▶ Native grasses
- ▶ Rocky outcrop
- ▶ Leaf litter under trees

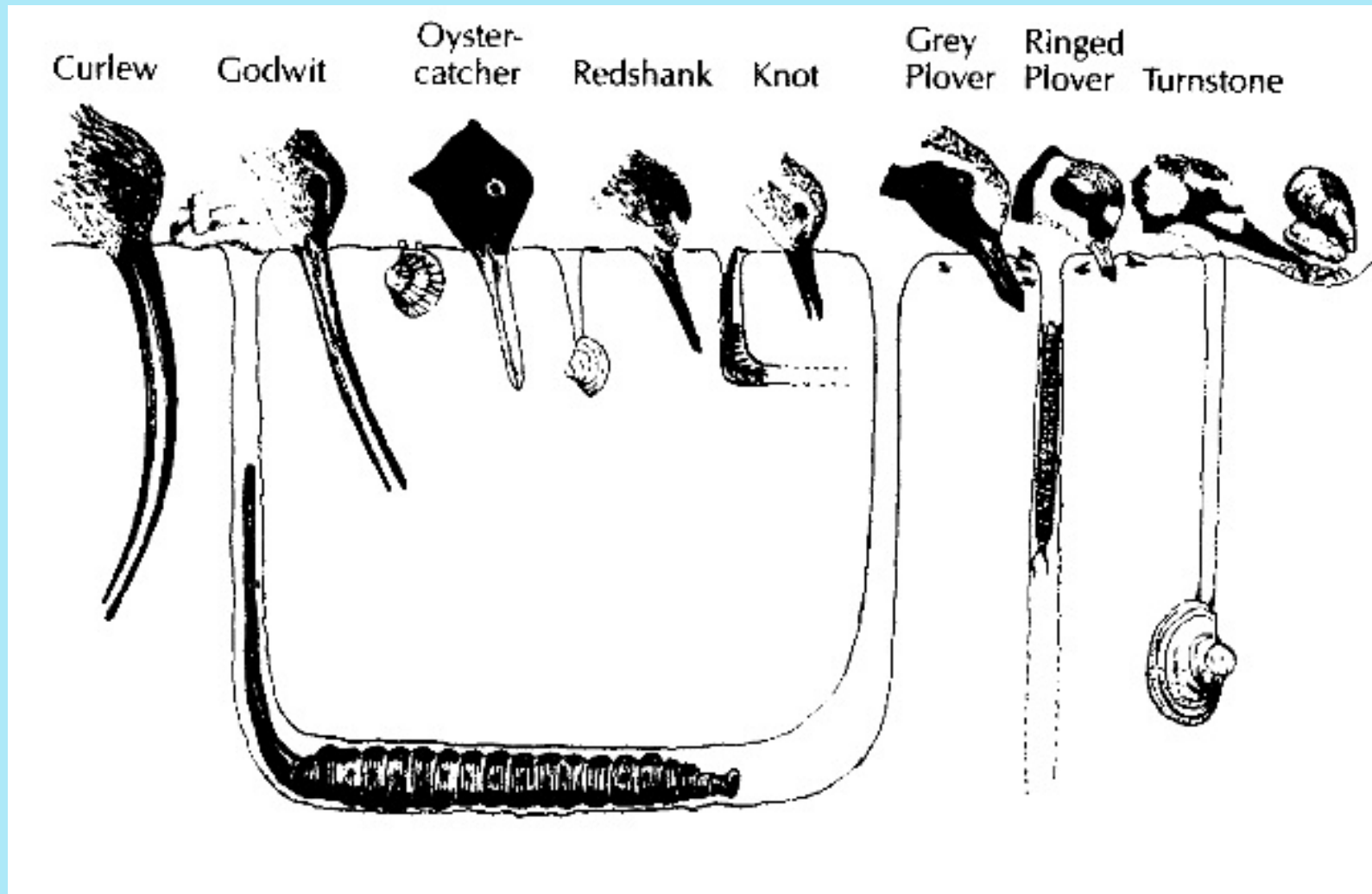


# SELECTION OF MICROHABITAT BY EGRETS & HERONS

- ▶ Many factors (not just food availability)
  - ▶ social issues
  - ▶ water level
  - ▶ vegetation proximity and height
  - ▶ life stage (breeding, molting, migrating...)
  - ▶ prey availability (complex)



# SELECTION OF MICROHABITAT BY SANDPIPERS & PLOVERS



# MICROHABITAT BY SPECIES

- ▶ Clear tumbling forest stream:
  - ▶ Louisiana Waterthrush
  
- ▶ Slower moving bog:
  - ▶ Northern Waterthrush



# SEVEN HABITS OF HIGHLY EFFECTIVE BIRDERS

- 1) Where are we? – County, sub-county...
- 2) When are we? – Season, month, 1/2 month...
- 3) Where is he? – Habitat, micro-habitat...

Distribution !!

- 4) GISS & Structure – posture, behavior, primary extension ...
- 5) Bill & Head – length, shape, thickness, use...
- 6) Field Marks – plumage, pattern, behavior...
- 7) Diagnostic Field Marks – differentiate closely related species

Identity !!

**RESULTS IN A DIAGNOSIS !!!**

# DISTRIBUTION – DEDUCTIVE REASONING EXAMPLE

- ▶ You see a bird ???
- ▶ Clues:
  - ▶ Very active
  - ▶ Fussing repeatedly
  - ▶ Deep within bush
  - ▶ Small brownish bird
  - ▶ Long upright tail
- ▶ Wren !!



# DISTRIBUTION – DEDUCTIVE REASONING

- ▶ Beginning birder – 10 wrens in NA field guide
  - ▶ **Bewick's**
  - ▶ **Cactus**
  - ▶ **Canyon**
  - ▶ **Carolina**
  - ▶ **House**
  - ▶ **Marsh**
  - ▶ **Pacific**
  - ▶ **Rock**
  - ▶ **Sedge**
  - ▶ **Winter**



# 1,2,3) DISTRIBUTION – DEDUCTIVE REASONING

▶ 10 wrens in North America.

▶ **Bewick's**

▶ **Cactus**

▶ **Canyon**

▶ **Carolina**

▶ **House**

▶ **Marsh**

▶ ~~**Pacific**~~

▶ **Rock**

▶ **Sedge**

▶ **Winter**



Location, Location,  
Location: Texas

# 1,2,3) DISTRIBUTION – DEDUCTIVE REASONING

▶ 10 wrens in North America.

▶ Bewick's

▶ Cactus

▶ Canyon

▶ Carolina

▶ ~~House~~

▶ ~~Marsh~~

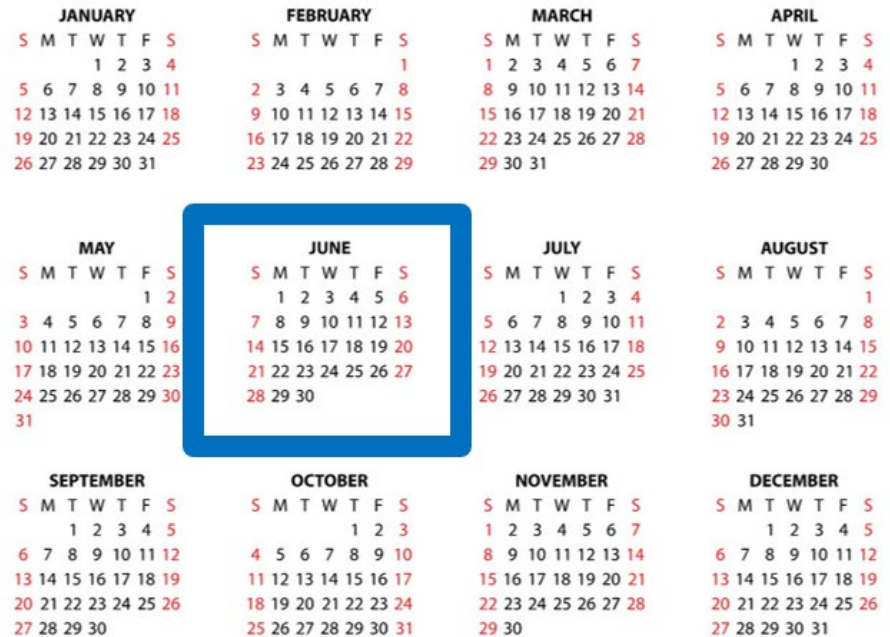
▶ ~~Pacific~~

▶ Rock

▶ ~~Sedge~~

▶ ~~Winter~~

# 2020



Season/Date: Mid-June

# 1,2,3) DISTRIBUTION – DEDUCTIVE REASONING

▶ 10 wrens in North America.

▶ **Bewick's**

▶ **Cactus ??**

▶ **Canyon**

▶ **Carolina**

▶ ~~House~~

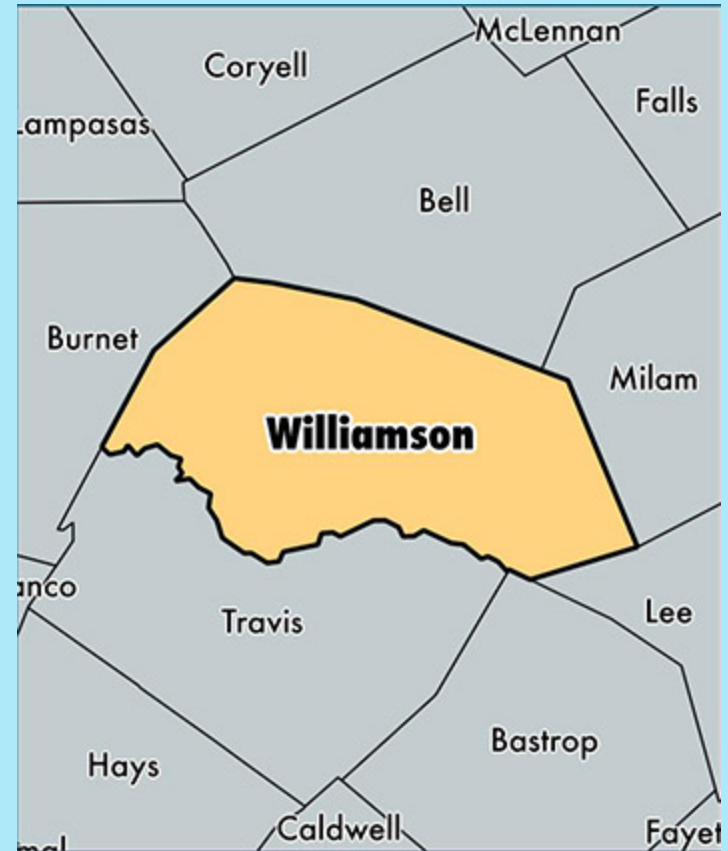
▶ ~~Marsh~~

▶ ~~Pacific~~

▶ **Rock ??**

▶ ~~Sedge~~

▶ ~~Winter~~



Location: Williamson County, Texas

# 1,2,3) DISTRIBUTION – DEDUCTIVE REASONING

▶ 10 wrens in North America.

▶ **Bewick's**

▶ ~~Cactus~~

▶ **Canyon**

▶ **Carolina**

▶ ~~House~~

▶ ~~Marsh~~

▶ ~~Pacific~~

▶ **Rock**

▶ ~~Sedge~~

▶ ~~Winter~~



Habitat: banks of the San Gabriel River

# 1,2,3) DISTRIBUTION – DEDUCTIVE REASONING

▶ 10 wrens in North America.

▶ **Bewick's**

▶ ~~Cactus~~

▶ ~~Canyon~~

▶ **Carolina**

▶ ~~House~~

▶ ~~Marsh~~

▶ ~~Pacific~~

▶ **Rock**

▶ ~~Sedge~~

▶ ~~Winter~~



Habitat/Microhabitat:  
**Flatland** banks of San Gabriel River

1,2,3) DISTRIBUTION – DEDUCTIVE REASONING  
JUNE, WILLIAMSON COUNTY, TEXAS.  
FLATLAND, WOODED BANKS OF SAN GABRIEL RIVER

▶ 10 wrens in North America.

▶ **Bewick's**

▶ ~~Cactus~~

▶ ~~Canyon~~

▶ **Carolina**

▶ ~~House~~

▶ ~~Marsh~~

▶ ~~Pacific~~

▶ ~~Rock~~

▶ ~~Sedge~~

▶ ~~Winter~~



# SEVEN HABITS OF HIGHLY EFFECTIVE BIRDERS

- 1) Where are we? – County, sub-county...
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Distribution !!

4) GISS & Structure – posture, behavior, primary extension . . .

5) Bill & Head – length, shape, thickness, use...

6) Field Marks – plumage, pattern, behavior...

7) Diagnostic Field Marks – differentiate closely related species

Identity !!

## RESULTS IN A DIAGNOSIS !!!

By Jeffrey E. Patterson

**Diagnosis** – ID of the nature of a problem by examination of the symptoms.

# GISS (JIZZ, GESTALT)

**GISS (or jizz) – the overall impression or appearance of a bird garnered from such features as shape, posture, flying style or other habitual movements, size and coloration combined with voice, habitat and location.**

**The concept originated in birding.**

Jizz or giss is the overall impression or appearance of a bird garnered from such features as shape, posture, flying style or other habitual movements, size and coloration combined with voice, habitat and location. The concept originated in birdwatching, but is so useful that it has since been adopted increasingly widely by field biologists in referring to the impression of the general characteristics of other animals. It similarly appears in such fields of observational biology as microscopy. Ecologists and botanists may speak of "habitat jizz" or the jizz of a plant.

Sean Dooley described jizz as "the indefinable quality of a particular species, the 'vibe' it gives off" and notes that although it is "dismissed by many as some kind of birding alchemy, there is some physical basis to the idea of jizz."

Experienced birders can often make reliable identifications in the field at a glance by using jizz. Often jizz is useful for identifying to the family or genus level, rather than the species level, as in: "It definitely had the jizz of a thrush, but I couldn't see what kind."

The term was first used in print in 1922, in Thomas Coward's "Country Diary" column for the Manchester Guardian of 6 December 1921 – the piece was subsequently included in his 1922 book *Bird Haunts and Nature Memories*. He attributed it to "a west-coast Irishman", and explained

If we are walking on the road and see, far ahead, someone whom we recognize, although we can neither distinguish features nor particular clothes, we may be certain that we are not mistaken; there is something in the carriage, the walk, the general appearance which is familiar; it is, in fact, the individual's jizz.

Jeremy Greenwood concludes that the term was further popularized by its use by Miss E.I. Turner, "a popular author", in the journal *Open Air* in 1923.

There is a theory that it comes from the World War II air force acronym GISS for "General Impression of Size and Shape (of an aircraft)", but the use of the term in 1922 precludes that. Another theory claims that jizz is a corruption of gestalt, a German word that roughly means form or shape. Other possibilities include the word gist, or a contraction of just is. These theories were debunked by Jeremy Greenwood and his brother Julian in 2018.

# GISS EXERCISE

# GISS EXERCISE



“Beam me up, Scotty!”

“I need  
ammunition,  
not a ride.”



“Father told me that if I ever met a lady in a dress like yours, I must look her straight in the eyes.”



“Do you think people will still be using napkins in the year 2000, or is this mouth-vacuum thing for real?”



“Thank you.  
Thank you very much.”



“That’s what I do.  
I drink, and I know things.”






“My  
Way!!”







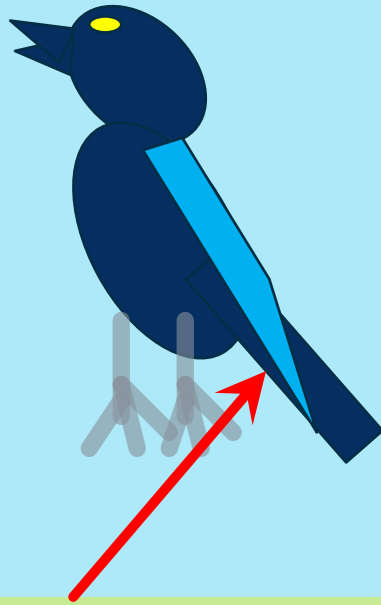
Repeat  
offenders !!!!

“Retire? Who me?”

# GISS VS STRUCTURE

- ▶ On the next slide there are 2 pictures (left & right):
- ▶ **Which bird has the longer tail?**
- ▶ Be quick about it 😊

# GISS VS STRUCTURE



**Structure – Wings are longer**

**GISS – your impression**

# STRUCTURE

- ▶ **Bill**

- ▶ **Length** – compare to head size

- ▶ **Shape**

- ▶ **Tip** – Precise shape of tip, thickness at specific points

- ▶ **Body proportions and shape**

- ▶ Thickness of neck, chest, belly

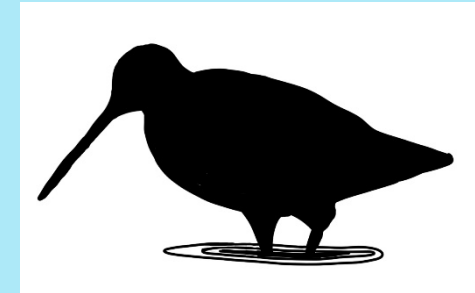
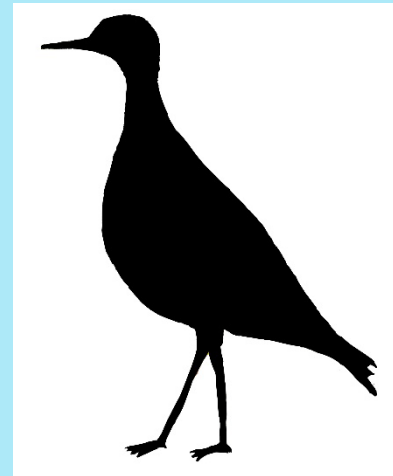
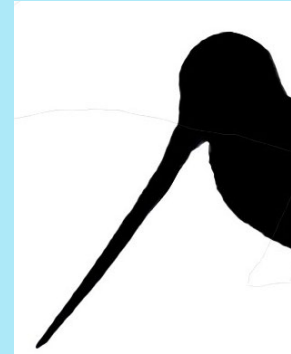
- ▶ **Posture**

- ▶ **Primary extension**

- ▶ **Size of head relative to body**

- ▶ **Forehead** – Angle

- ▶ **Legs** – Length & thickness



# Describing bill length

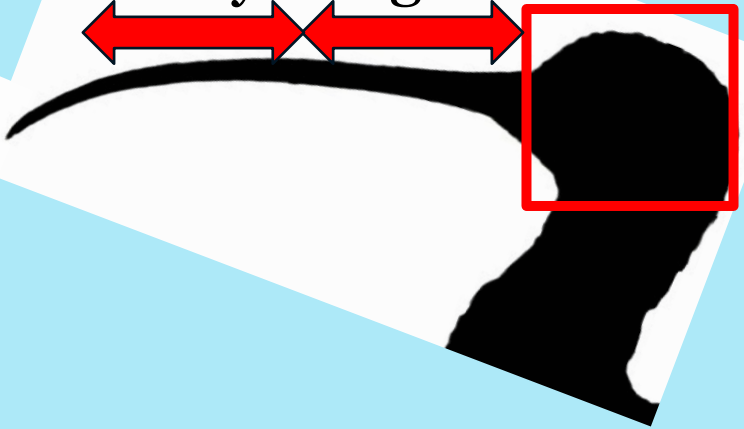
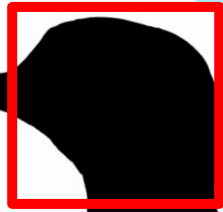
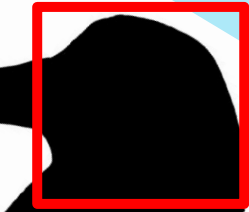
Long



Short



Very Long



# COLOR VS STRUCTURE

- ▶ Generally we are more attuned to **color**.
- ▶ What do you make of this statement ?
- ▶ In this class we're trying to become more attuned to **structure** and **GISS**.

# MODERN BIRDING

- Field guides – the great invention of (primarily) Roger Tory Peterson in the 1930s.
- Mostly plumage-based – “field marks”
- Modern birding – more emphasis on **shape**
- GISS
- Structure
- Relative Size

# STRUCTURE – RELATIVE SIZE

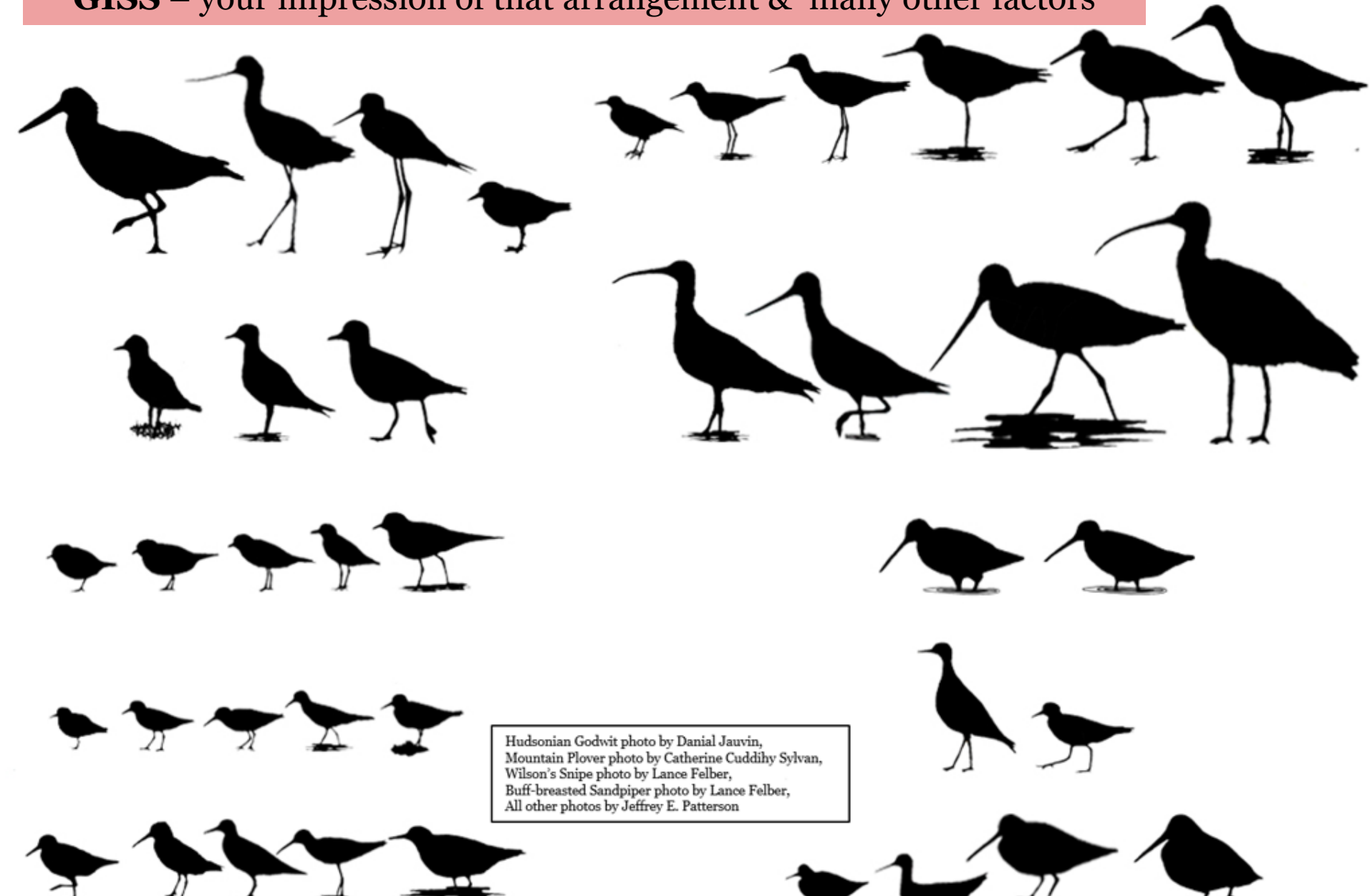


# STRUCTURE – RELATIVE SIZE



# Structure – the arrangement of & relationships between the parts

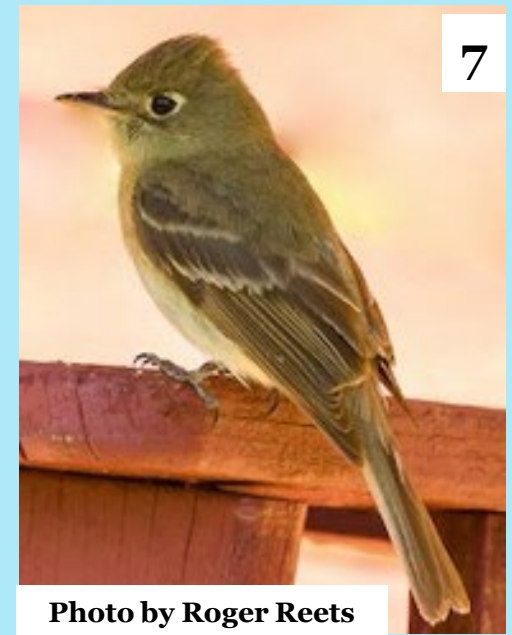
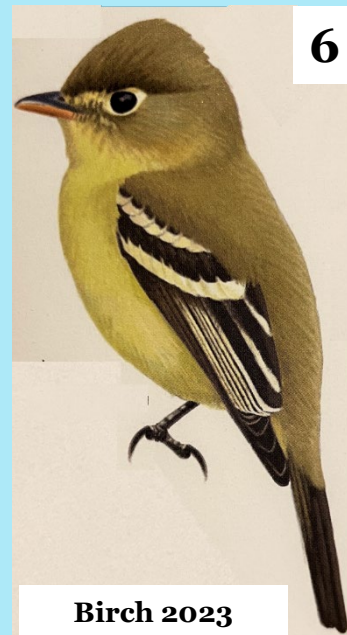
**GISS** – your impression of that arrangement & many other factors



# GISS VS STRUCTURE

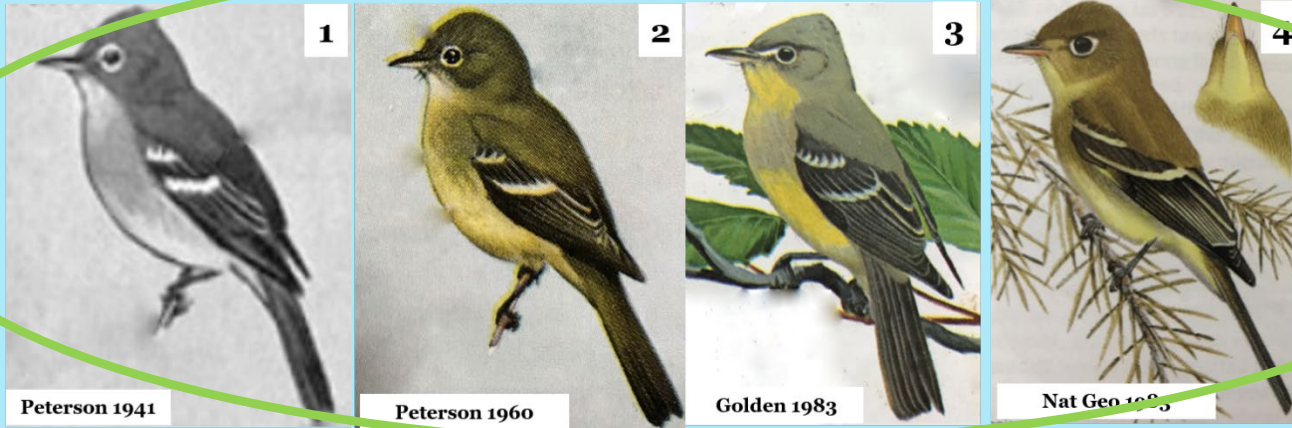
- ▶ On the next slide:
- ▶ **Rapidly form an impression of the first image (on the left).**
- ▶ **Compare it to the second, then the third.....**

# EVOLVING IMPRESSIONS (HABIT 4)

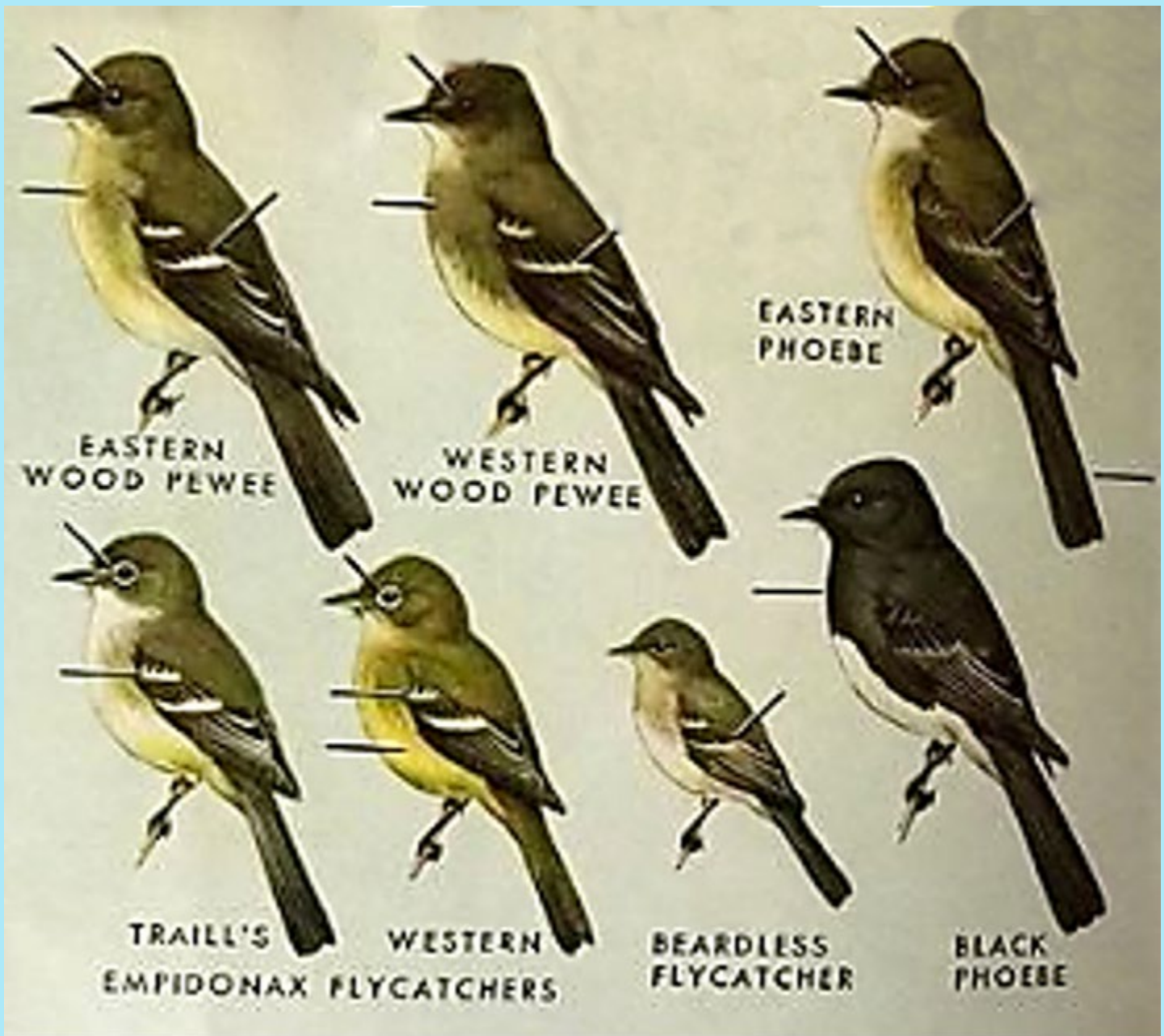


# EVOLVING IMPRESSIONS (HABIT 4)

Key seems to be  
color, pattern  
“field marks”



Key is structure first,  
then other field  
marks  
(e.g. color, pattern)



**Peterson (Texas) 1960**

# MORE ILLUSTRATIONS NUTTING'S FLYCATCHER

Jonathan Alderfer  
*National Geographic FG*



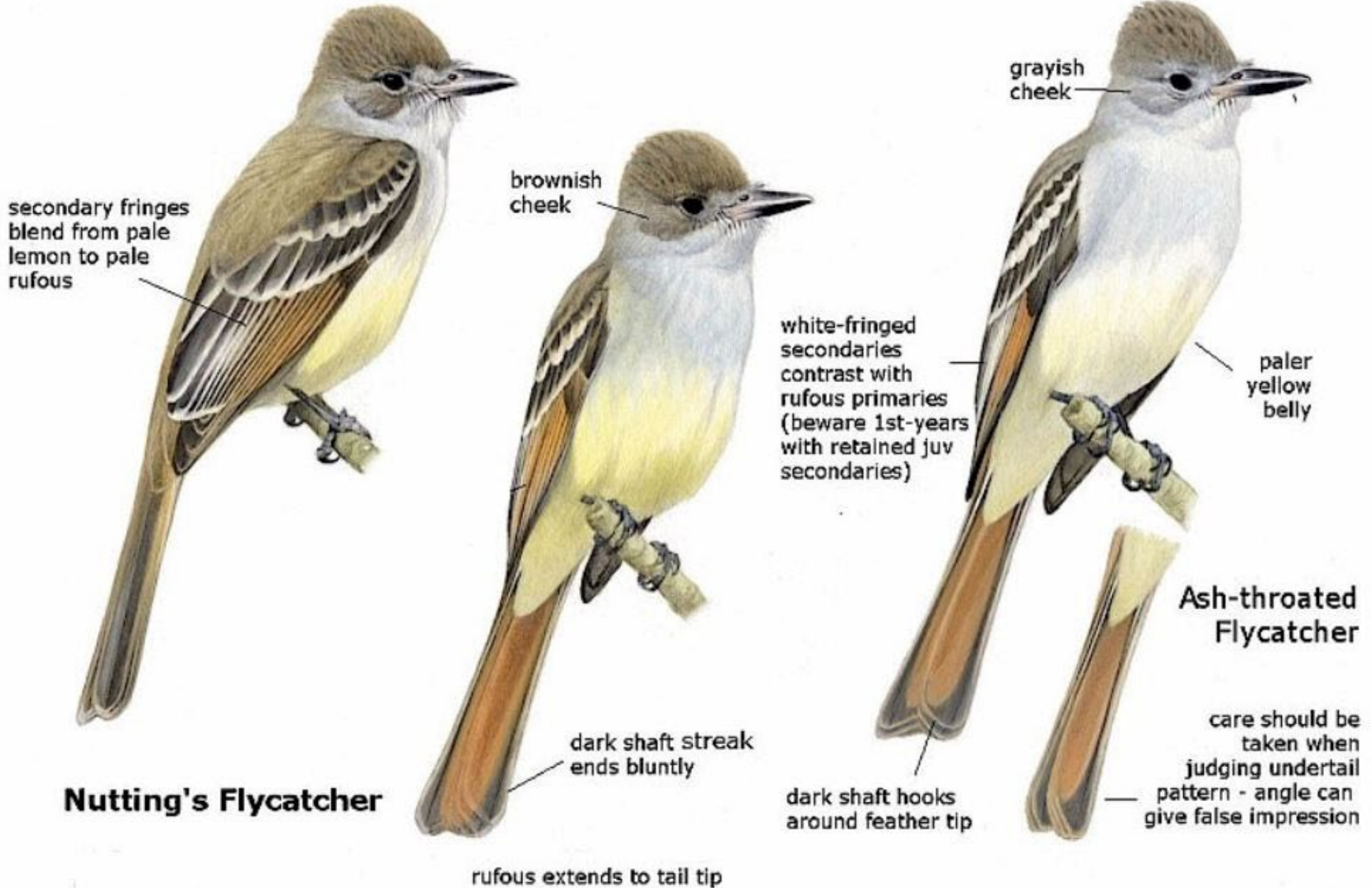
David A. Sibley  
*Sibley Guide*



Ian Lewington  
*Rare Birds of NA*



# MORE BY IAN LEWINGTON



# GISS & STRUCTURE

## ▶ Aspects of GISS & Structure

### ▶ Facial “Expressions”

- ▶ Gulls

- ▶ Sparrows

### ▶ Silhouettes

- ▶ Flycatchers

# FACIAL EXPRESSION (GISS & STRUCTURE)



Photos by Amar Ayash  
Posted to North  
American Gulls,  
Facebook 11/9/19

# BILL & HEAD, GISS & STRUCTURE

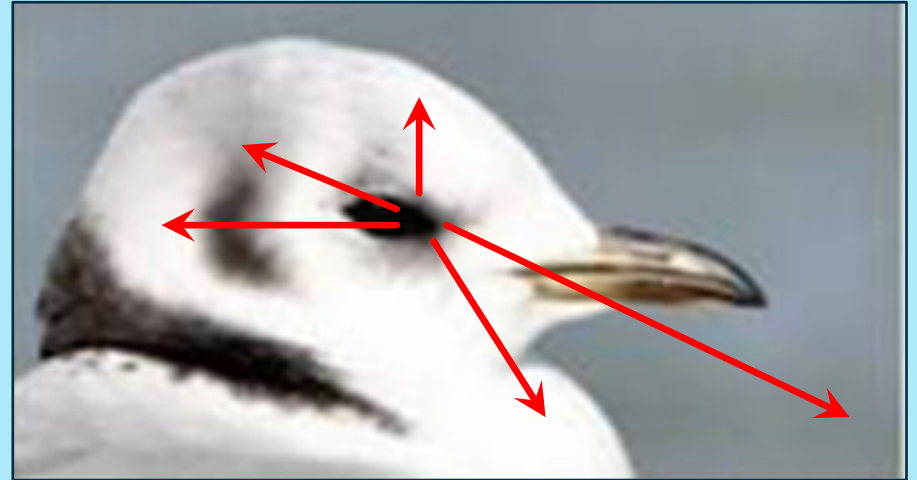
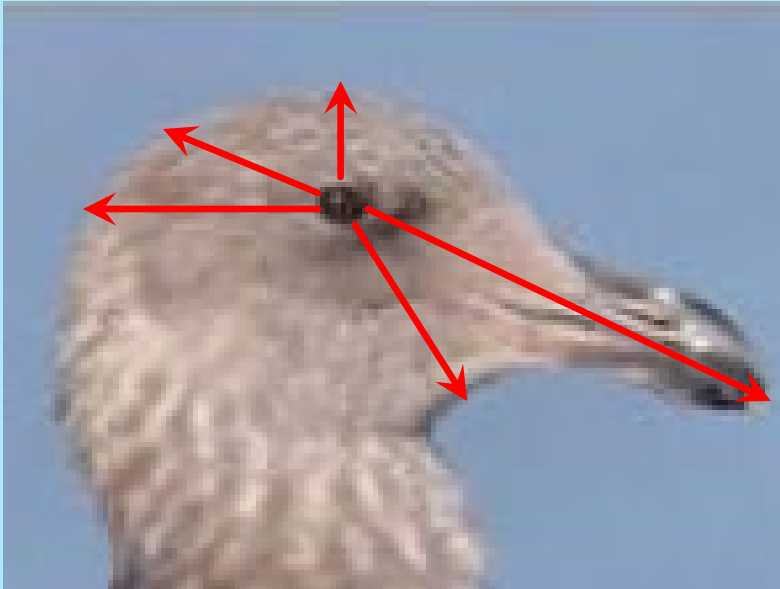


# FACIAL EXPRESSION (GISS VS STRUCTURE)



Photos by Amar Ayash  
Posted to North  
American Gulls,  
Facebook 11/9/19

# Facial Expression (Bill & Head, GISS vs Structure) SEMI-QUANTITATIVE



# FACIAL EXPRESSION (GISS & STRUCTURE)



Iceland



Bonaparte's



Ring-billed



Little



Lesser Black-backed



Laughing



Great Black-backed



Black-legged Kittiwake



Heermann's



Western



Mew



Glaucous-winged



Herring



California



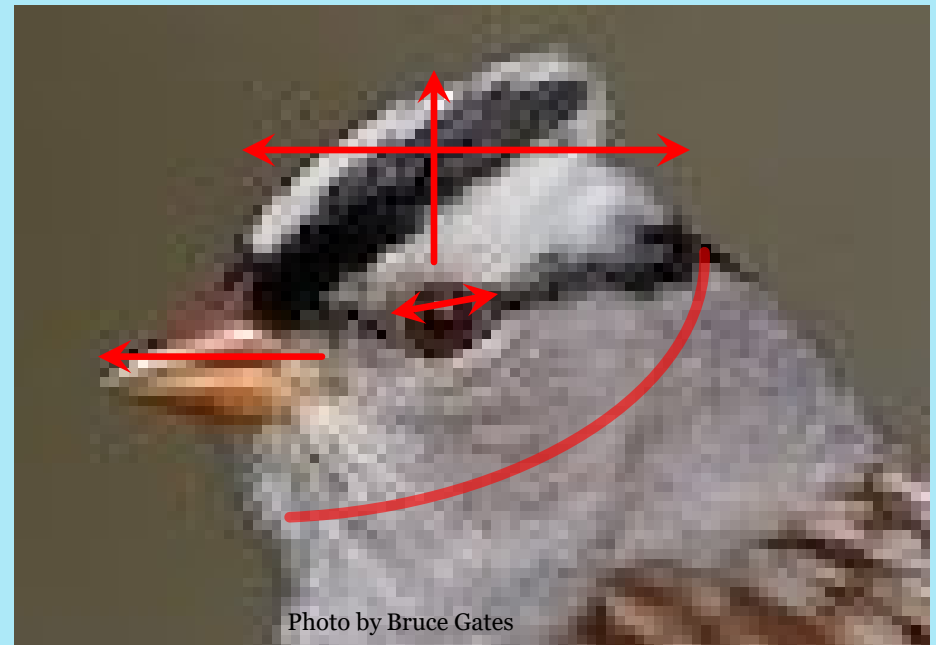
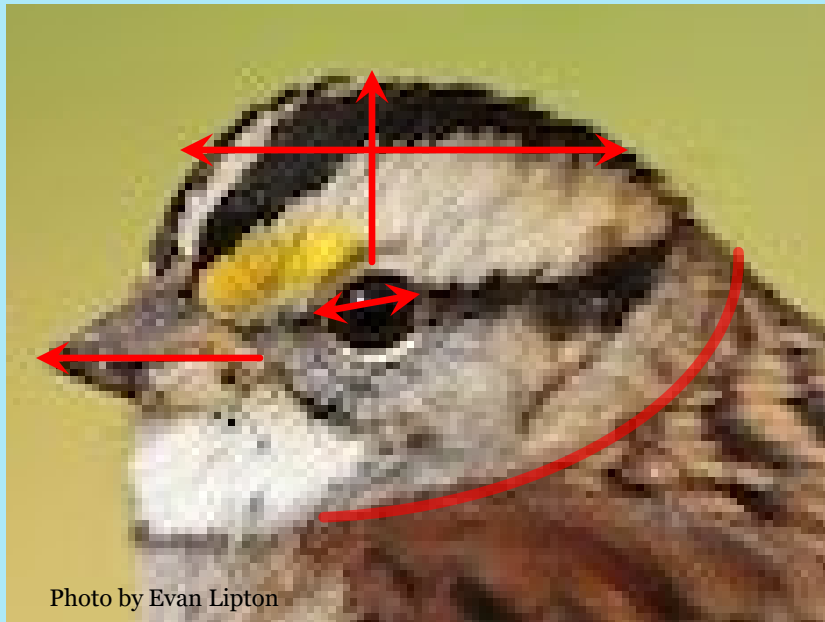
Glaucous

Photos by Amar Ayash  
Posted to North  
American Gulls,  
Facebook 11/9/19

# FACIAL EXPRESSIONS (GISS & STRUCTURE)



# FACIAL EXPRESSIONS (GISS & STRUCTURE) SEMI QUANTITATIVE



# SEVEN HABITS OF HIGHLY EFFECTIVE BIRDERS

- 1) Where are we? – County, sub-county...
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- 4) GISS & Structure – posture, behavior, primary extension ...
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- 6) Field Marks – plumage, pattern, behavior...
- 7) Diagnostic Field Marks – differentiate closely related species

Distribution !!

Identity !!

**RESULTS IN A DIAGNOSIS !!!**

By Jeffrey E. Patterson

The Bill & Head are very often a key point in species ID.

# IT'S THE BILL, BABY !!!

- ▶ Made up of skeleton + fingernail like cover
- ▶ Constant growth
- ▶ Some are somewhat prehensile

# IT'S THE BILL, BABY !!!

- ▶ One of their few tools (along with feet)
- ▶ Uses
  - ▶ Preening
  - ▶ Courtship
  - ▶ Prey
  - ▶ Plant food
  - ▶ Nest building
  - ▶ Communication (songs & calls)
  - ▶ Courtship
  - ▶ Care of Young
  - ▶ Defense

▶ Generalist – Jays, gulls, blackbirds, orioles...

▶ Specialists

▶ Carnivorous – Raptors

▶ Granivorous – Seed eaters (sturdy, triangular, powerful)

▶ Frugivorous – Parrots

▶ Insectivorous –

▶ Gleaners

▶ Probers/Chisel-ers (ground, wood)

▶ Flying insect eaters (on the wing, from perches)

▶ Waders

▶ Piscivorous –

▶ Spear fishers

▶ Snatchers

▶ Filter Feeders

▶ Nectarivorous

▶ Swimmers

▶ Surface

▶ Underwater

# THE VARIETY OF BILLS

Graphic by Audubon Magazine



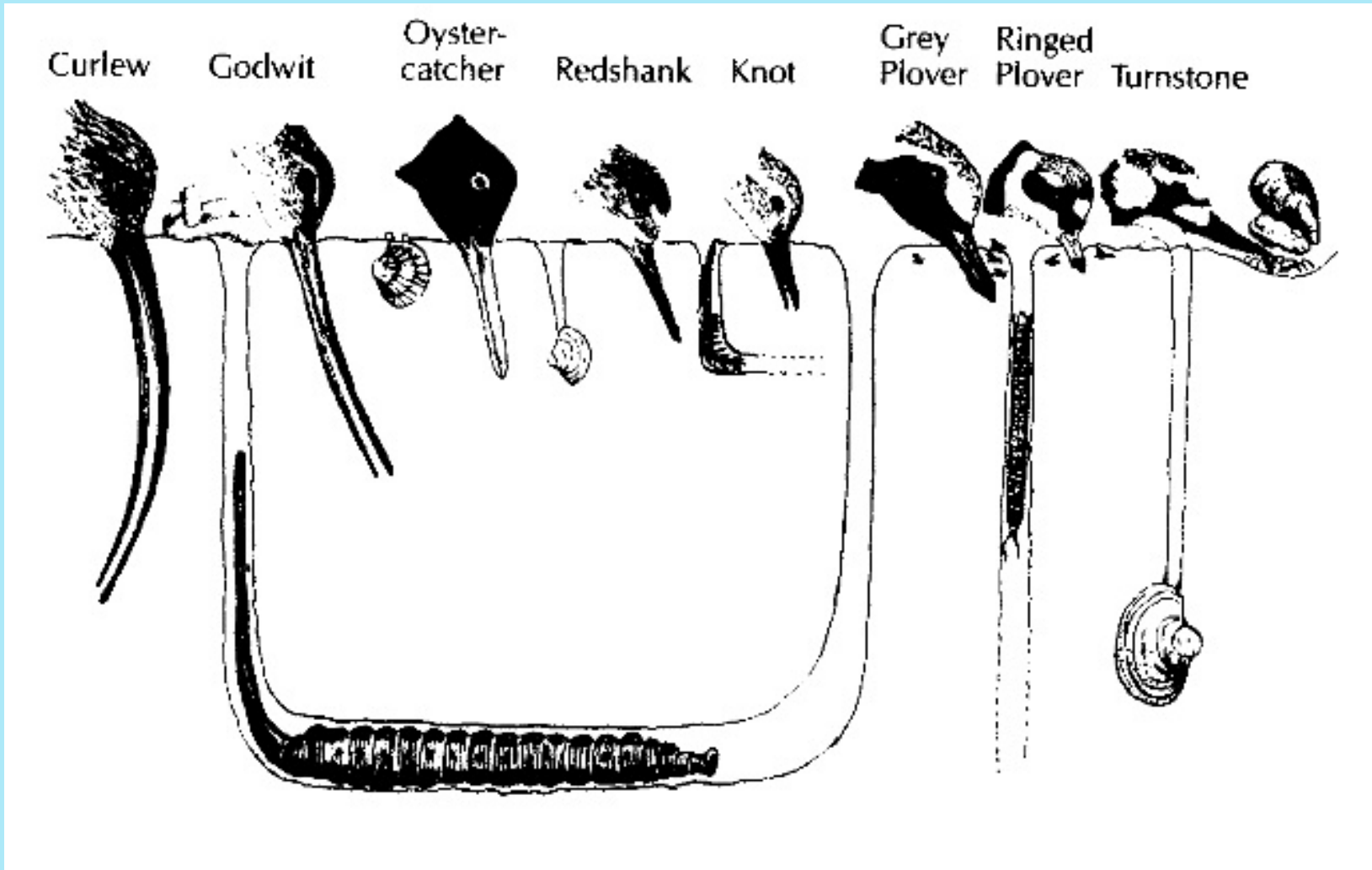
## THE NO-COMPETE CLAUSE

- ▶ Different bills = less competition within the same **habitat**.

OR

- ▶ Different bills = specialization within adjacent **microhabitats**.
- ▶ E.g. Seed-eating species.
- ▶ E.g. Plovers & sandpipers

# THE NO-COMPETE CLAUSE SANDPIPERS & PLOVERS



# FREQUENTLY ENCOUNTERED PASSERINE BILLS

## Seed-eaters



Photo by Scot Martin



Photo by David Hollie

## Gleaners

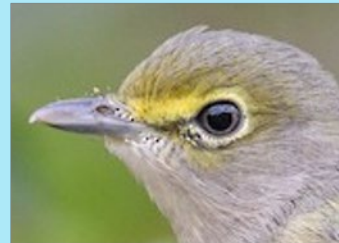


Photo by Martina Nordstrand



Photo by Tom Johnson

## Generalists



Photo by Harlan Stewart



Photo by Paul Poronto

## Flycatchers

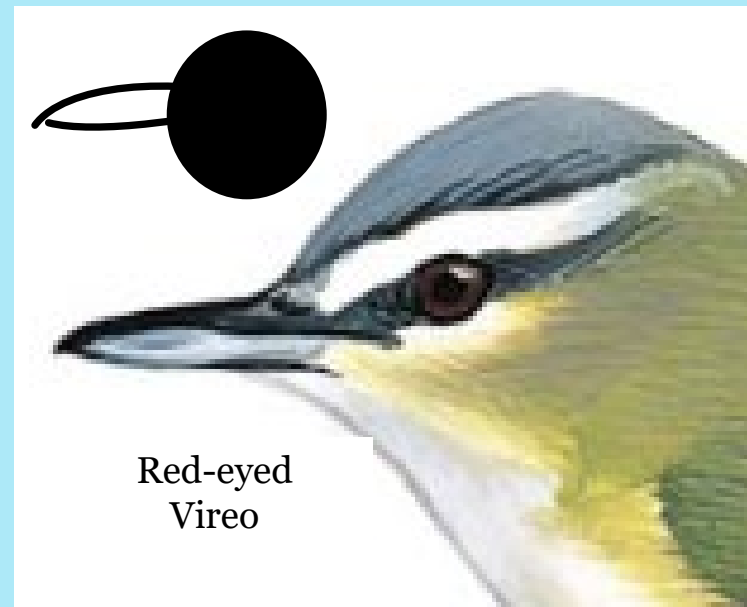
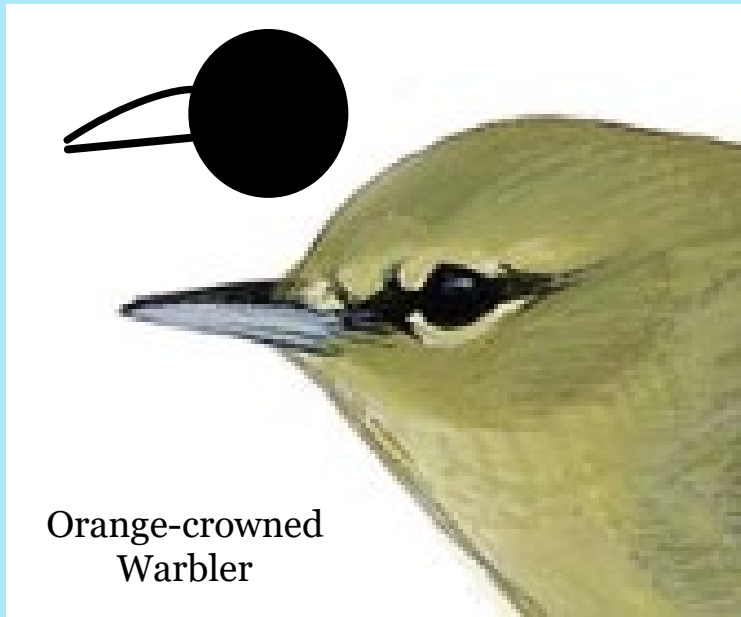


Photo by Francis Canto Jr.

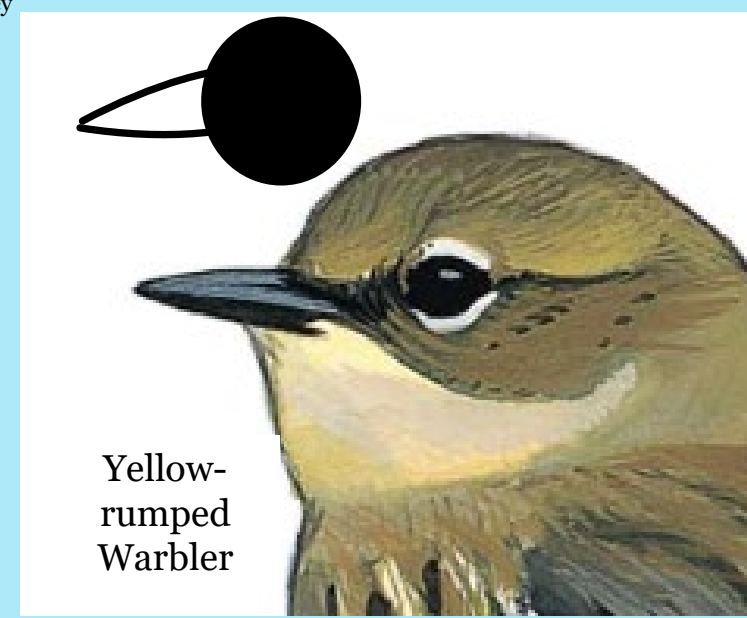
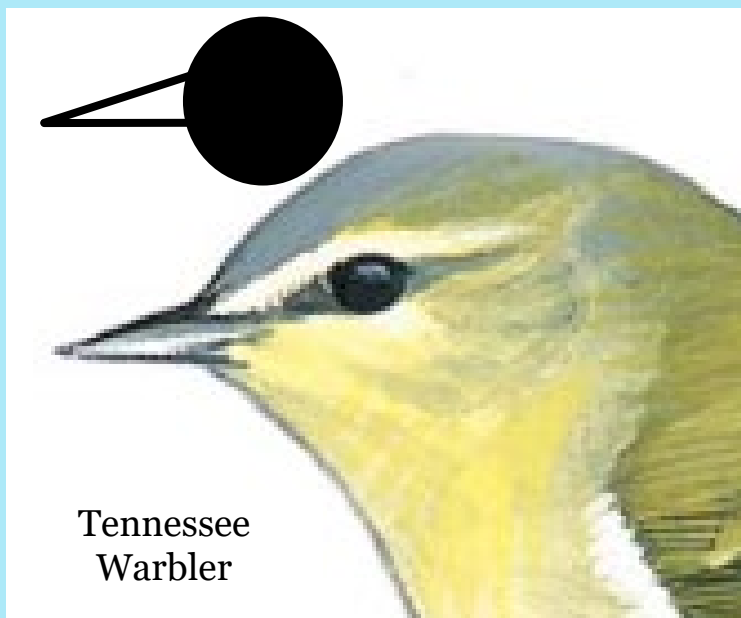


Photo by Garrett Vyn

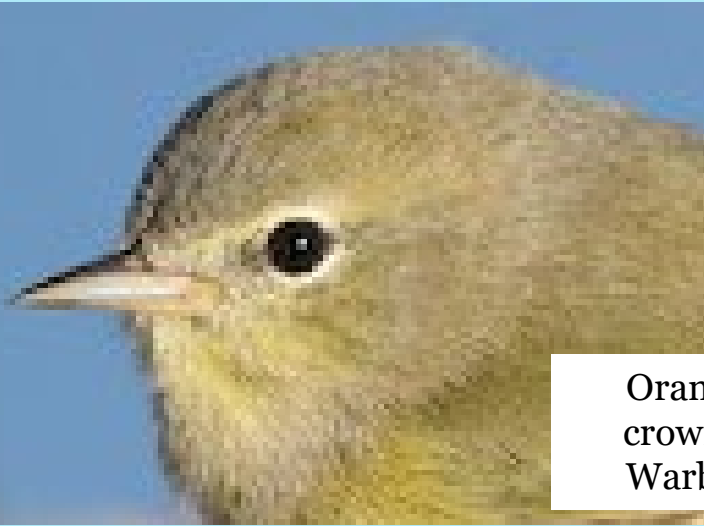
# VERY SPECIFIC PASSERINE BILLS



All paintings by David A. Sibley

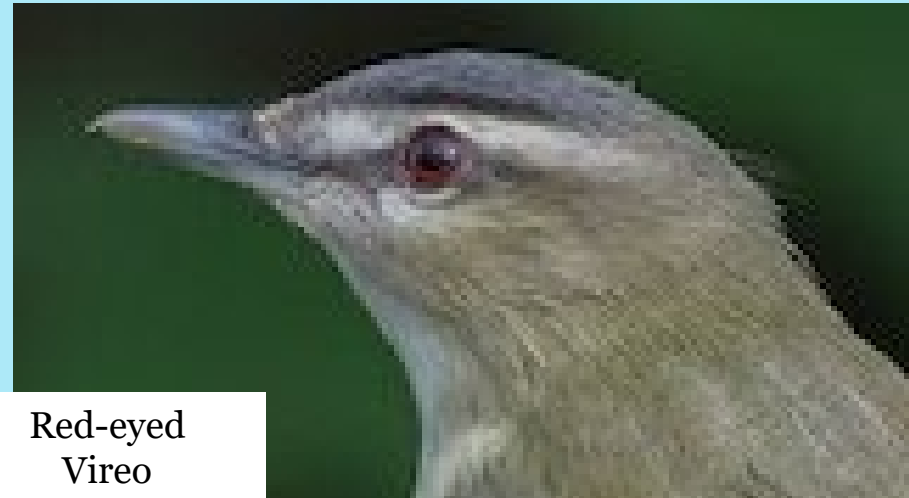


# MORE PASSERINE BILLS (3 WARBLERS, 1 VIREO)



Orange-crowned  
Warbler

Photo by Darren Clarke



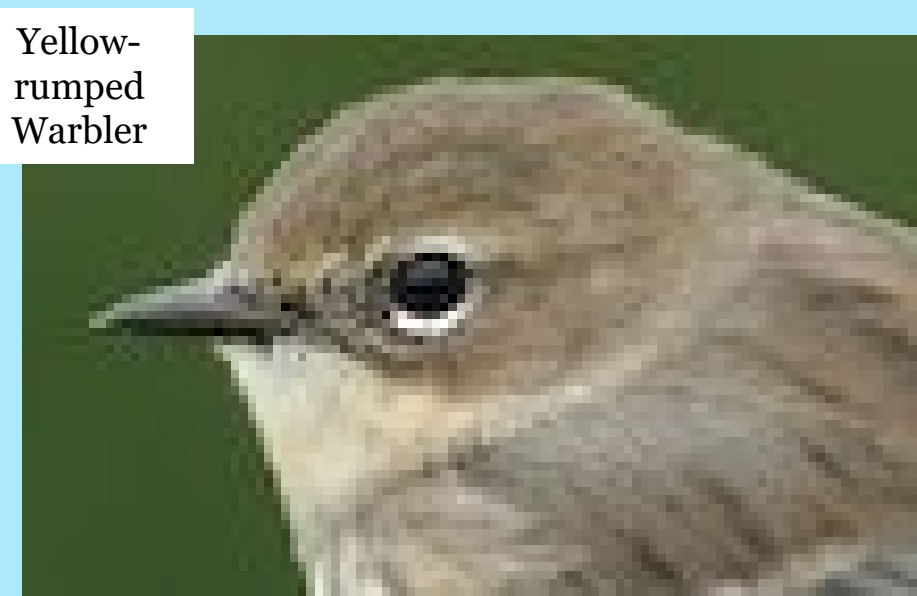
Red-eyed  
Vireo

Photo by Kyle Blaney



Tennessee  
Warbler

Photo by Ian Davies



Yellow-rumped  
Warbler

Photo by Luke Seitz

# SEVEN HABITS OF HIGHLY EFFECTIVE BIRDERS

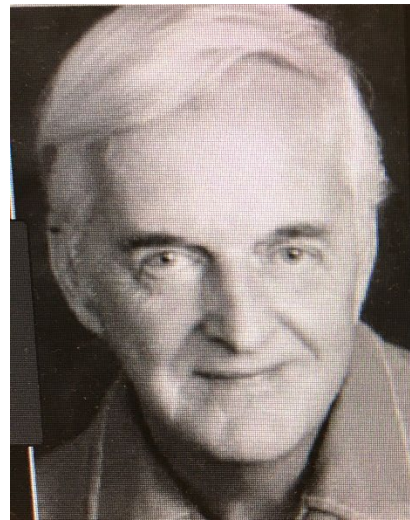
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Distribution !!

Identity !!

**RESULTS IN A DIAGNOSIS !!!**

By Jeffrey E. Patterson



I consider myself to have been the bridge between the shotgun and the binoculars in bird watching. Before I came along, the primary way to observe birds was to shoot them and stuff them.

— Roger Tory Peterson —

AZ QUOTES

# FIELD MARKS

▶ **All things we use to ID a bird are field marks.**

▶ Not all Field Marks are equal – Some work better than others

▶ **Observable** – in the field (some are great in-the-hand)

▶ **Consistent** – don't vary across individual birds

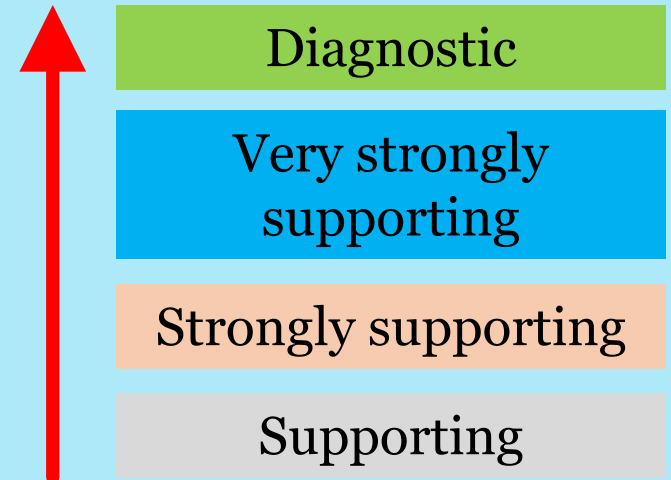
▶ **Diagnostic** – serve to differentiate between species

▶ **Hierarchy of Usefulness**

▶ **WARNING WILL ROBINSON !!!!**

▶ Field marks are like fast food

▶ Everybody's got a favorite !!!



# **NOT ALL FIELD MARKS ARE EQUAL!!!**

- ▶ Most field marks can fail:
  - ▶ Absent
  - ▶ Variable
  - ▶ Aberrant
  - ▶ Un-observable (obscured, bad light, odd posture...)
- ▶ Some work for 1 species, but not another

# TYPES OF FIELD MARKS

- ▶ Many types of field marks
  - ▶ **Color** – plumage
  - ▶ **Pattern** – plumage (feather groups or individual feathers)
  - ▶ **Structure**
  - ▶ **GISS**
  - ▶ **Facial “expression”**
  - ▶ **Behavior**
  - ▶ **Flight style**
  - ▶ **Vocalizations**

## 6) CATEGORIES OF FIELD MARKS

- ▶ **Relative** Field Marks
- ▶ **Comparative** Field Marks
- ▶ **Proportional** Field Marks
- ▶ **Contrast** as Field Mark
- ▶ **Demarcation** as Field Mark

# RELATIVE FIELD MARKS

more reddish

more purplely



House Finch



Purple Finch

- Subjective,
- May be difficult to convey
- Requires experience

# COMPARATIVE FIELD MARKS

- Direct comparison
- Firmer ground
- Have to be lucky



Photo by TJ Adams

# PROPORTIONAL FIELD MARKS

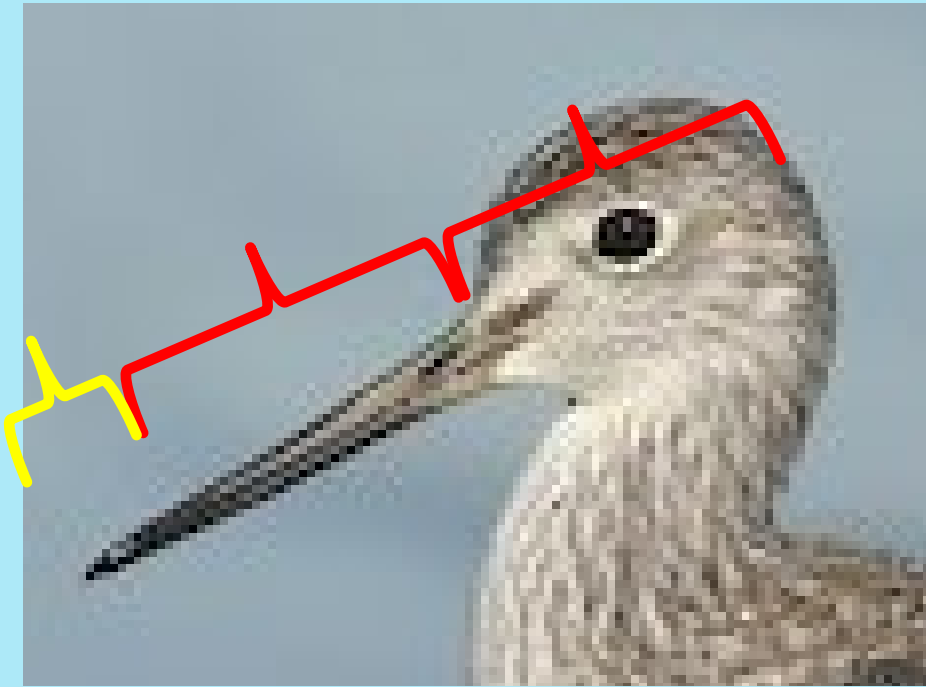


Photo by Graham Montgomery

## Greater Yellowlegs



Photo by Don Danko

## Lesser Yellowlegs

- Comparison always available

# PROPORTIONAL FIELD MARKS

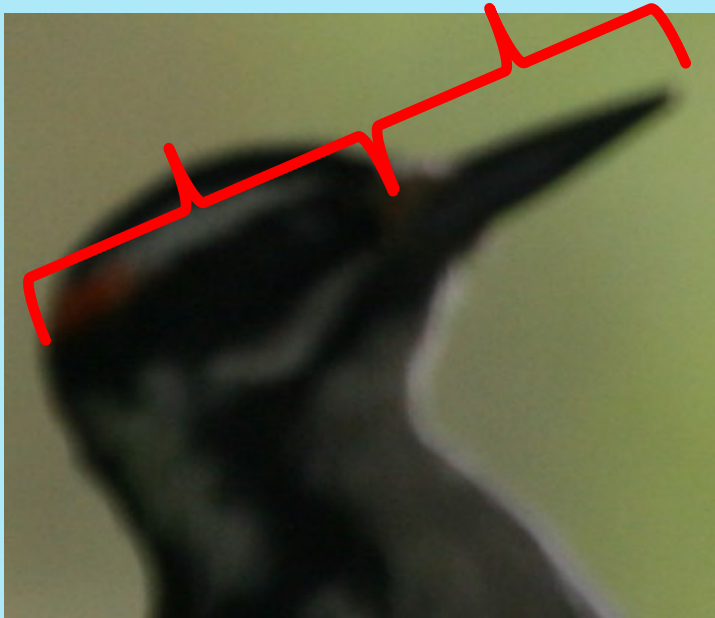


Photo by Jeffrey E Patterson

## Hairy Woodpecker

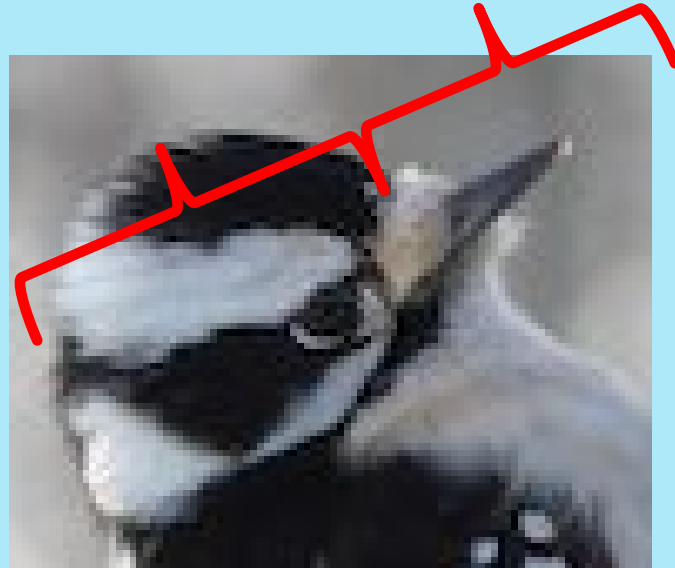


Photo by Kathy Webb

## Downy Woodpecker

# CONTRAST

***Contrast***  
is a field mark !!!!

High Contrast



Low Contrast

# ANY COMBINATION OF CONTRAST & DEMARCATION

		<b>CONTRAST</b>	
		High	Low
<b>DEMARCATION</b>	Abrupt	X	X
	Diffuse	X	X

		CONTRAST	
		High	Low
DEMARCATIION	Abrupt	X	X
	Diffuse	X	X

# CONTRAST & DEMARCATIION

		CONTRAST	
		High	Low
DEMARCATIION	Abrupt	X	X
	Diffuse	X	X



High Contrast  
Diffuse Demarcation



Low Contrast  
Diffuse Demarcation

		CONTRAST	
		High	Low
DEMARCATIION	Abrupt	X	X
	Diffuse	X	X

# CONTRAST & DEMARCATIION

		CONTRAST	
		High	Low
DEMARCATIION	Abrupt	X	X
	Diffuse	X	X



High Contrast  
Abrupt Demarcation



Low Contrast  
Diffuse Demarcation

# BEHAVIOR AS FIELD MARK



Photo by Matt Brady

# EXERCISE: BEHAVIOR AS FIELD MARK



Flock of small flying birds in suburbs. Longish tail. Not-rapid, slightly-undulating flight.

How many clues was that?

1. Small (GISS)
2. Slightly-undulating (flight GISS)
3. Loosely Flocking (behavior)
4. When (now)
5. Where (here)
6. Suburbs (habitat)
7. Top of tree (micro-habitat)
8. Longish tail (structure)
9. Perching (passerine)



## House Finch

Could they be .....?

1. Warblers?
2. Goldfinches?
3. Orioles?
4. Blackbirds?
5. Waxwings?
6. Vireos?
7. House finch?

# EXERCISE: BEHAVIOR AS FIELD MARK

Small yellowish  
bird,  
sits conspicuously  
on a twig,  
for a few minutes



## Goldfinch

# EXERCISE: BEHAVIOR AS FIELD MARK



Small yellow bird  
flitting nervously  
through  
vegetation.

Warbler

# FLIGHT GISS AS FIELD MARK

- ▶ Discuss in later class

# VOCALIZATIONS AS FIELD MARKS

- ▶ Very useful in ID – frequently diagnostic
- ▶ Songs vs Calls
- ▶ Flight calls, contact calls...
- ▶ Related species tend to sound similar
- ▶ Notes form phrases
- ▶ Phrases and pauses form songs
- ▶ One song is separated from another song by a relatively long pause

# SEVEN HABITS OF HIGHLY EFFECTIVE BIRDERS

- 1) Where are we? – County, sub-county...
- 2) When are we? – Season, month, 1/2 month...
- 3) Where is he? – Habitat, micro-habitat...
- 4) GISS & Structure – posture, behavior, primary extension ...
- 5) Bill & Head – length, shape, thickness, use...
- 6) Field Marks – plumage, pattern, behavior...
- 7) Diagnostic Field Marks – differentiate closely related species

Distribution !!

Identity !!

**RESULTS IN A DIAGNOSIS !!!**

# DIAGNOSTIC FIELD MARKS

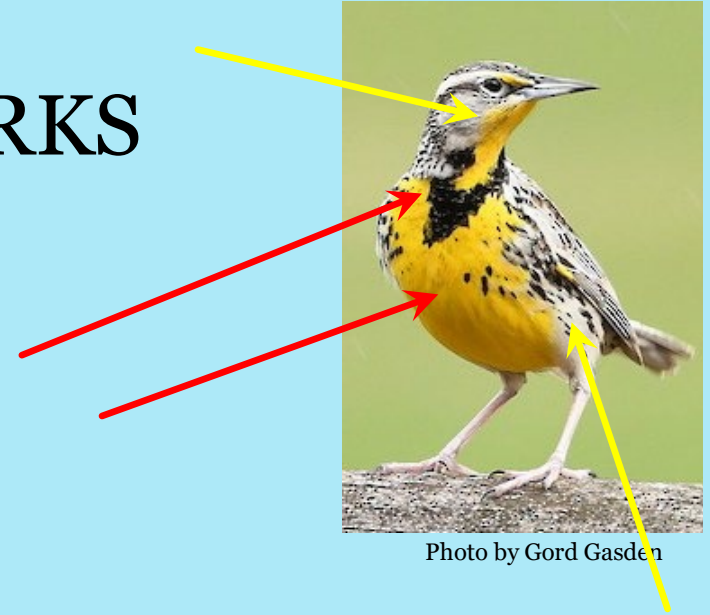
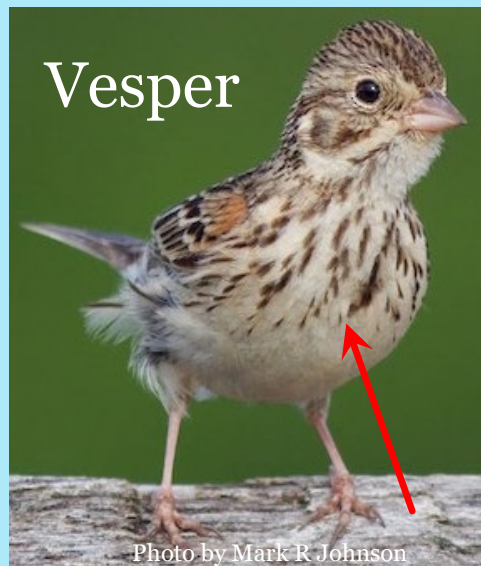
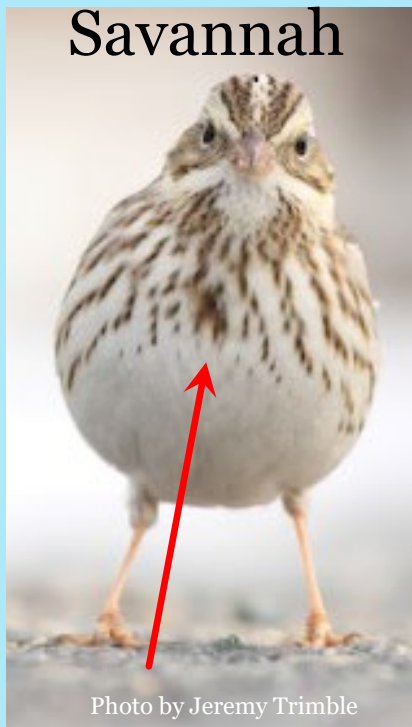


Photo by Gord Gasden

- ▶ **Observable** – in the field
- ▶ **Consistent** – across individual birds
- ▶ **Diagnostic**– serves to reliably and consistently differentiate between closely related species.
- ▶ Sometimes a single field mark can be diagnostic.

# DIAGNOSTIC FIELD MARKS



# DIAGNOSTIC FIELD MARKS

Song



Photo by Patrick Maurice

Savannah

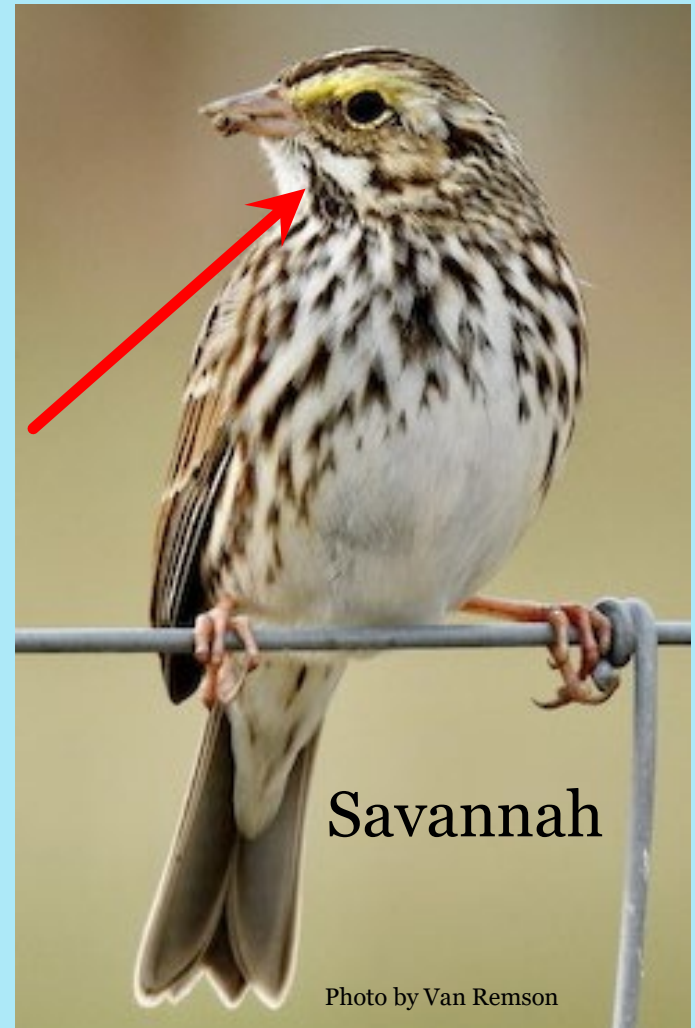


Photo by Van Remson

# SUMMARY

- **BIRDING IS OBSERVING**
  - Practice observing
  - See details
- **Look at the bird**, not the book
- Keep watching after ID
- Use the 7 Habits
- Learn
  - Distribution
  - Structure/GISS
  - Anatomy (feather topology)
  - Vocalizations
  - Habitats & Micro-habitats
  - Behavior
- Get a patch of your own
  - Bird alone
  - Make a diagnosis
    - *“Eschew Field Mark Cronyism”*
  - Be prepared for mistakes
    - Mistake = chance to learn!!!
  - Best thing that can happen?
    - You see something unknown !!
    - You are about to learn
  - OR
    - You found a rare bird
  - The best advice?
    - Go Bird.....
    - GO BIRD.....
    - REPEAT !!!