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EMPIDONAX

THE “*GNAT MASTER*”

5 EASTERN EMPIDS

PART 1: INTRODUCTION

“I’M GOING TO FIGHT IT, BUT I’LL LET IT LIVE.”

THE AQUATIC LIFE WITH STEVE ZISSOU, WES ANDERSON



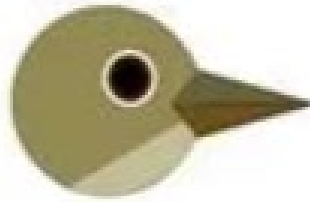
EMPIDS

**“I MUST NOT
FEAR.
FEAR IS THE
LITTLE-DEATH
THAT BRINGS
TOTAL
OBLITERATION!!”**

Least



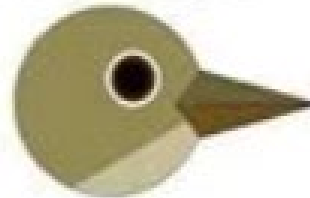
Alder



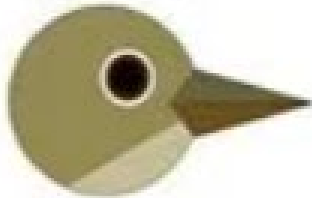
Willow



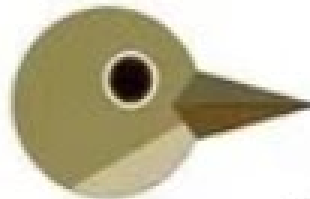
Pacific-slope



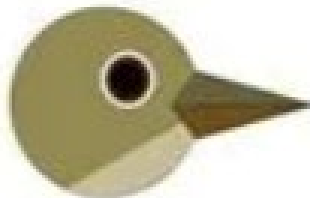
Acadian



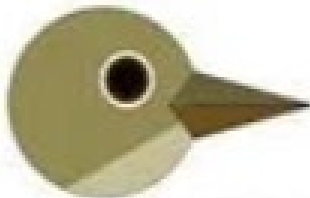
Cordilleran



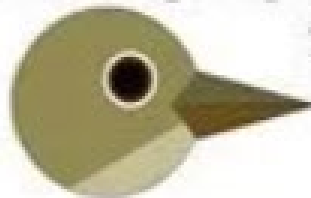
Dusky



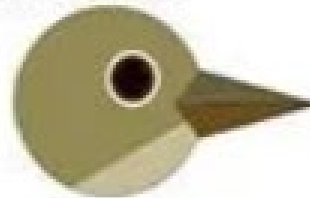
Hammond's



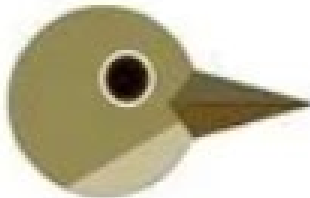
Buff-breasted with
bad backlighting



Heavily oiled leucistia
yellow-bellied



Gray



GOALS

- ▶ Intro to Empids
 - ▶ Structure
 - ▶ Plumage
- ▶ Lots of pictures.
- ▶ Calibrate your eyes.
- ▶ Take home info.
- ▶ “You have to Study Virginia!!!”

THE EMPID CHECKLIST REFERENCES

THE EMPID CHECKLIST

COMPILED FROM THE FOLLOWING SOURCES BY Jeffrey E. Patterson

- 1) *National Geographic Field Guide to the Birds of North America* , (7th Edition)
Alderfer, Jonathan, Dunn, Jon L., 2017.
- 2) *The Sibley Guide to Birds* , Sibley, David Allan, 2000.
- 3) *Pete Dunne's Essential Field Guide Companion: A Comprehensive Resource for Identifying North American Birds* , Dunne, Pete, 2006.
- 4) *Field Guide to Advanced Birding* , Kaufman, Kenn, 2011.
- 5) *Birding in the American West: A Handbook* , Zimmer, Kevin J., 2000.
- 6) *Peterson Reference Guide to Birding by Impression: A Different Approach to Knowing and Identifying Birds* , 2015 Karlson, Kevin T., Rosselet, Dale.
- 7) *Empid Identification Powerpoint* , Lee, Cin-Ty,
<https://static1.squarespace.com/static/54b9bb6fe4b07b4a7d145b55/t/573a7a4960b5e908af3foa48/1463450185977/Empid+identification>.
- 8) *The Cornell Lab of Ornithology Birds of the World* online, The Cornell Lab of Ornithology.

EMPIDS – THE BAD NEWS

- ▶ Subtle field marks !!!
- ▶ Many field marks !!!
- ▶ Plumage is often not diagnostic
- ▶ We don't see many Empids
- ▶ Brief views
- ▶ Most are migrants (except **Acadian**)
- ▶ Songs are diagnostic, but often silent

- 1) Bird at the right time
- 2) Hope for vocalizations
 - a) Record on phone
- 3) Use the Empid Checklist
- 4) Observe as long as possible
 - a) “Blue” field marks
 - b) “Tan” field marks
 - c) “Gray” field marks
- 5) Take photos if possible
- 6) Consult references
- 7) Join the conversation
 - a) Share photos
 - b) Discuss with peers & Experts
 - c) Facebook groups

THE EMPID GAME PLAN

EMPIDONAX CHECKLIST:				
#	ATTRIBUTE			Rank
1	Structure	Wings	Wing proportions (wing length & primary projection)	A
2			Shape of primary tips	
3		Tail	Tail proportions & shape	B
4			Bill size, shape & color(s)	A
5		Head	Head shape & proportion to body	A
6			Crown of head (peak, crest)	
7			Forehead slope	
8		Body	Body shape	A
9	Plumage		Eye-ring	A
10			Wing-bars	
11			Throat color & contrast	B
12			Color of upper parts	B
13			Color of lower parts	B
14	Other		Molt	
15			Habitat/Micro-habitat	
16			Behavior	
17			Song	A'
18			Call	B
19			Migration	
20			Similar species	

EMPIDS, EMPIDS EVERYWHERE,
OH MY!!!!

13 Empids ?????

*“Clearly, if you’re not
confused, then you don’t
understand what’s going on!!!”*

Jack Welch
CEO of GE

Alder

Willow

Cordilleran

Buff-breasted

Western

Yellow-bellied

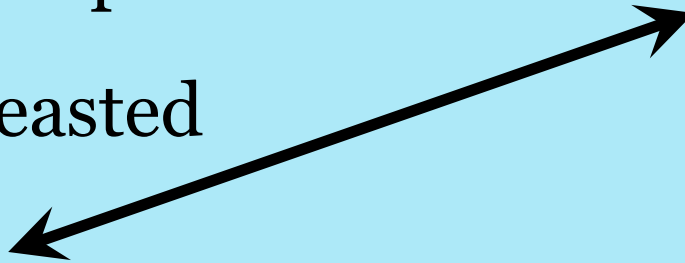
HABIT o WHO?: GET ORGANIZED !!!!

Western Empids

- 1 Hammond's
- 2 Gray
- 3 Dusky
- 4 Cordilleran
- 5 Pacific-slope
- 6 Buff-breasted
- 7 Willow

Eastern Empids

- 1 Least
- 2 Yellow-bellied
- 3 Acadian
- 4 Alder
- 5 Willow



HABIT o WHO?: GET ORGANIZED !!!!

Western Empids

- 1 Hammond's
- 2 Gray
- 3 Dusky

-
- 4 Cordilleran
5 Pacific-slope

6 Buff-breasted

7 Willow

Eastern Empids

- 1 Least
- 2 Yellow-bellied
- 3 Acadian

- 4 Alder
5 Willow

Limited Range
Not an ID Challenge

HABIT o WHO?: GET ORGANIZED !!!!

Western Empids

1 Hammond's

2 Gray

3 Dusky

4 "Western"

~~6 Buff-breasted~~

~~7 Willow~~

Eastern Empids

1 Least

2 Yellow-bellied

3 Acadian

4 "Trails"

ONLY 4 EASTERN EMPIDS (VISUALLY)

▶ Least

Most common by far –
Reference Bird

▶ Yellow-bellied

Don't count on a
yellow belly

▶ Acadian

Breeds in Texas

▶ “Trails”
(Willow/Alder)

Not visually separable

THE EMPID GENUS

5 Eastern Empids

Least
E. minimus
(smallest)

Yellow-bellied
E. flaviventris
(*flāvus* (“yellow”) + *venter* (“belly”))

Acadian
E. virescens
(Growing green or verdant)

“Trails”

Willow
E. traillii
(Thomas S. Traill
Friend of JJ Audubon)

Alder
E. alnorum
(Of the alders)

THE EMPID GENUS

“Western”

Cordilleran

E. occidentalis

(Pertaining to or coming from the West)

Pacific-slope

E. difficilis

(Troublesome, hard)

Hammond's

E. hammondii

(William Alexander Hammond, a military physician. Collected the first specimens)

Buff-breasted

E. fulvifrons

(fulvus ("tawny") + frons ("brow"))

6 Western Empids

Dusky

E. oberholseri

(Harry Church Oberholser
Ornithologist & author of *The Bird Life of Texas*)

Gray

E. wrightii

(Charles Wright (1811 – 1895)
botanist with survey team)

Willow

E. Traillii

(Thomas S. Traill, friend of
JJ Audubon)

THE EMPID GENUS

6 Western Empids

Western
E. difficilis
(Troublesome, hard)

Dusky
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E. wrightii
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E. hammondii
(William Alexander Hammond,
a military physician. Collected
the first specimens)

Buff-breasted
E. fulvifrons
(fulvus ("tawny") + frons
("brow"))

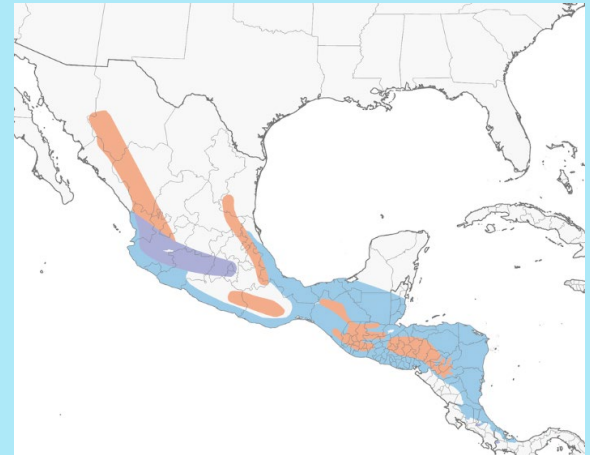
Willow
E. Traillii
(Thomas S. Traill, friend of
JJ Audubon)

EMPIDONAX GENUS: 15 SPECIES

Pine Flycatcher



White-throated Flycatcher

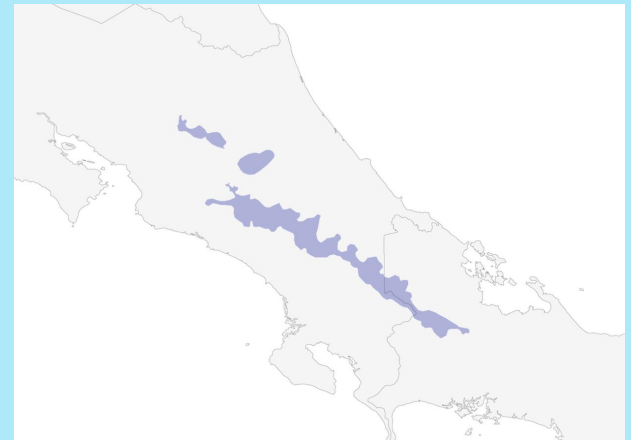


4 Southern Empids

Yellowish flycatcher



Black-capped Flycatcher



QUESTIONS

► How many Eastern Empids?

5

► Name them.

Least, Yellow-bellied, Acadian, Willow, Alder

► How many are visually separable?

4

Least, Yellow-bellied, Acadian, “Trails”

► How many Western Empids?

5 (+ 1)

► Name them.

Gray, Dusky, Hammonds,
Western, Buff-breasted, (Willow)

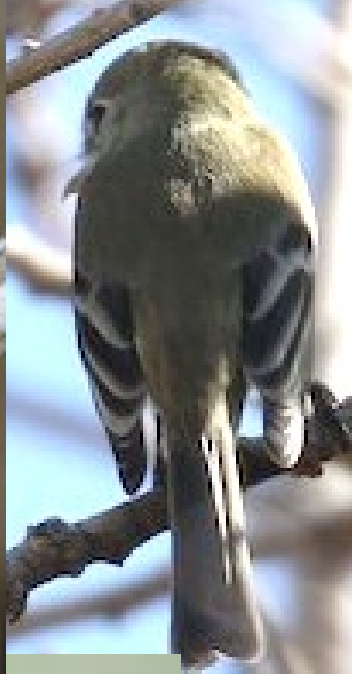
► Which one(s) are **not** identification problems?

Buff-breasted

► How many are visually separable?

5 (+1)

Gray, Dusky, Hammonds,
Western, Buff-breasted, (Willow)



THE GENERIC EMPID

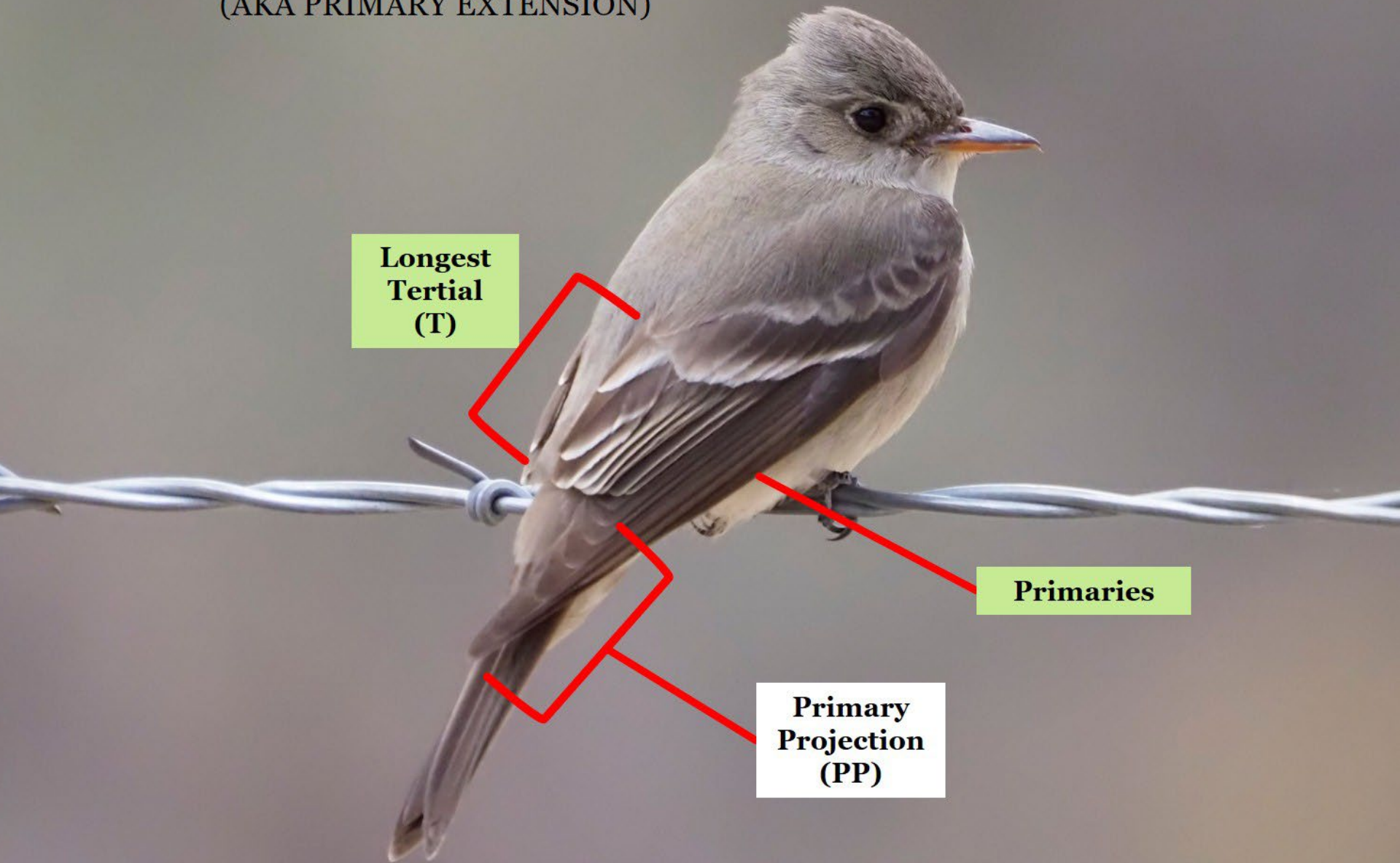
- ▶ Flycatcher bill
- ▶ Eye-ring
- ▶ Wing-bars
- ▶ Greenish, yellowish, grayish, brownish
- ▶ Primary projection – shorter than tertial stack



Photo by Jeffrey E. Patterson

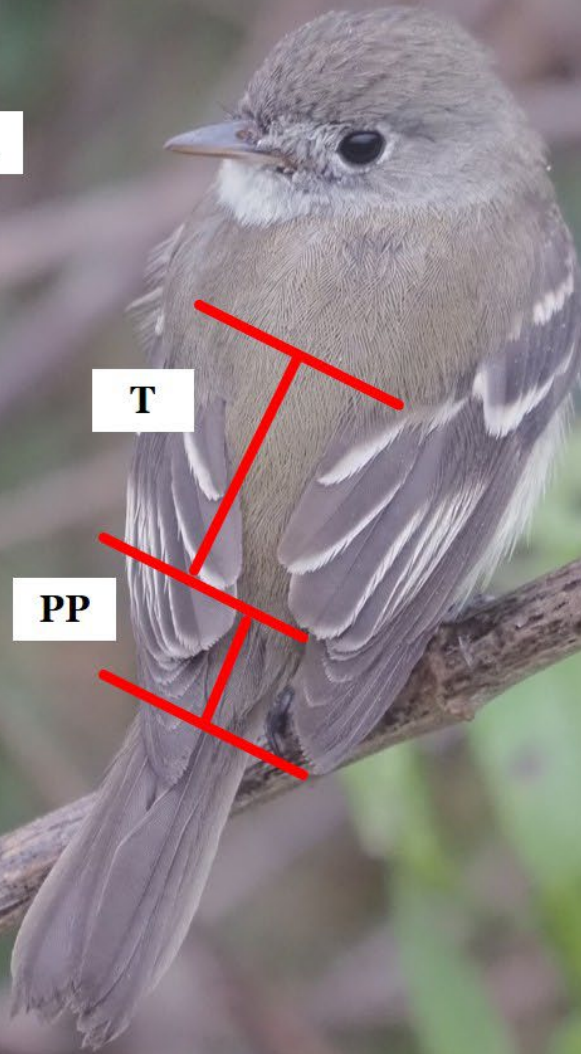
PRIMARY PROJECTION

(AKA PRIMARY EXTENSION)



ASSESSING PRIMARY PROJECTION

A short Primary Projection



EMPID EXERCISE 1:

“BUT FIRST, IS IT AN EMPID?”

- ▶ Following groups of photos, Determine:
Which 1 or more birds are Empids ?

1



Photo by David Nickerson

2



Photo by Brendon Klick

Group A

4



Photo by L. Olsen

3



Photo by David Rooke



Empid



**Ruby-
crowned
Kinglet**

Photo by Brendon Klick

Group A



**Ruby-
crowned
Kinglet**

Photo by L. Olsen



**Empid
3**

Photo by David Rooke

Ruby-crowned Kinglet

- Different structure – big head, cute, no-neck look, compact, small bill
- Different habits – active, flitting, not like a flycatcher
- Different micro habitat – inside vegetation
- Eye-ring and wing bars
- Dark mark below wing-bars
- Eye-ring broken on top





Photo by Sue Barth



Photo by Jason Leifester



Photo by Matt Davis

Group B



Photo by Michael Bolte



Photo by Kalin Ocana



1

Empid

Photo by Sue Barth



2

**Hutton's
Vireo**

Photo by Jason Leifester



3

**Hutton's
Vireo**

Photo by Matt Davis

Group B



5

**Hutton's
Vireo**

Photo by Michael Bolte



4

Empid

Photo by Kalin Ocana



Empid

Photo by Sue Barth

- Different structure – big head, cute, no-neck look, compact, small bill, thicker bill
- Different habits – active, flitting, not like a flycatcher
- Different micro habitat – inside vegetation
- Eye-ring and wing bars
- Pale supraloral
- Eye-ring broken on top

Hutton's Vireo



**Hutton's
Vireo**

Photo by Matt Davis



1

Photo by Michael Warner

Group C



2

Photo by Brad Imhoff



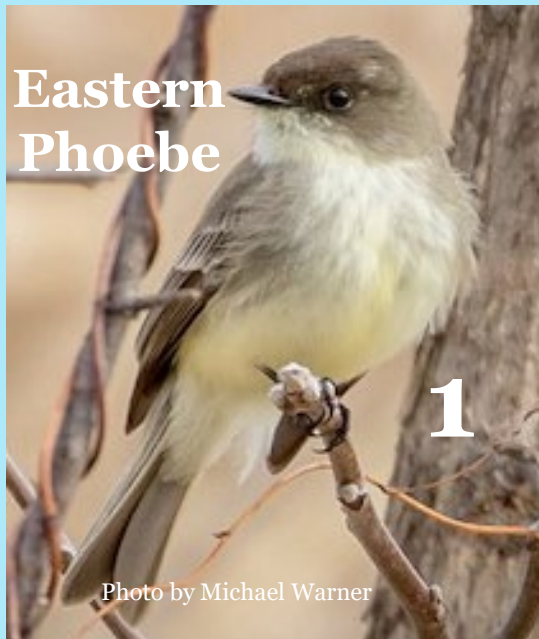
4

Photo by Brendon Klick



3

Photo by David Tonnessen



Group C

Eastern Phoebe

- No wing-bars
- Darkest on head and face
- Yellow wash on undersides
- Flicks tail downward very frequently

Eastern Phoebe (reference species)

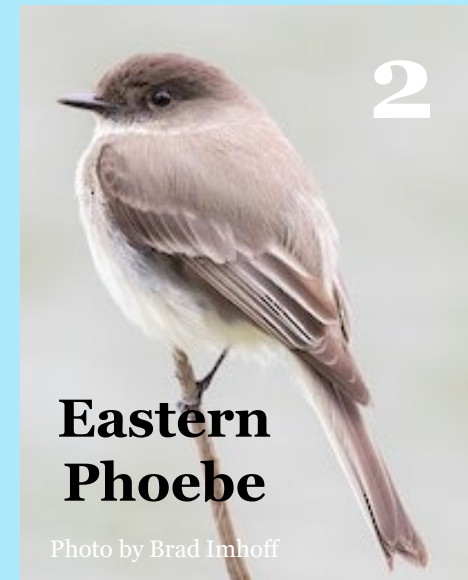




Photo by Tim Lenz

Group D



Photo by Brad Imhoff



Photo by Ryan Shain



Photo by David Hall



Group D

Eastern Phoebe

- No wing-bars
- Darkest on head and face
- Yellow wash on undersides
- Flicks tail downward very frequently



1



Photo by John Reynolds

Group E

2



Photo by Guy Mirgain

4



Photo by
Ryan Sanderson

3



Photo by Ricardo Barrios

Empid

1

Wood Pewee

Photo by John Reynolds

Wood Pewee

- Dark face with hint of an eye ring
- Less distinct wing bars
- Short legs
- Longer wings
- Longer primary extension
- Dusky “vest”
- Undertail coverts smudges
- Relatively tall, upright posture
- Choose prominent high perch, fly & return
- Do not wag tail (all empids wag to some extent)

Wood Pewee

2

Photo by Guy Mirgain

4

Photo by
Ryan Sanderson

Empid

Empid

- Stronger eye ring
- Stronger wing-bars
- Longer legs
- Shorter wings
- Shorter primary extension

Group E

3

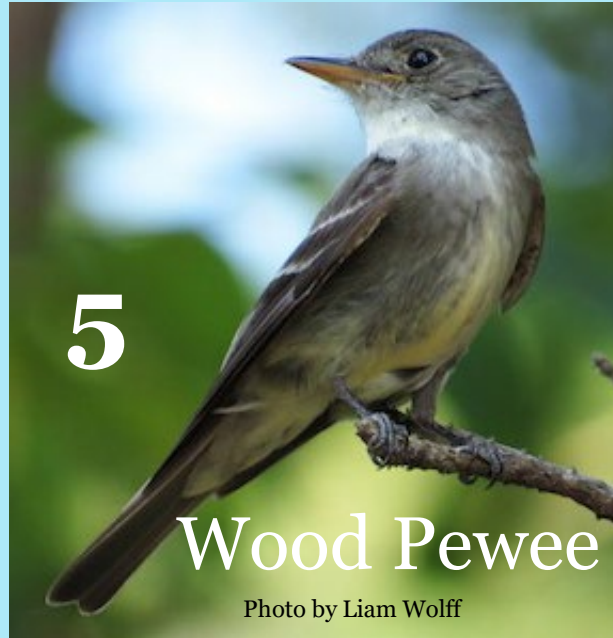
Empid

Photo by Ricardo Barrios



Group F





Group F



BUT FIRST, IS IT AN EMPID?

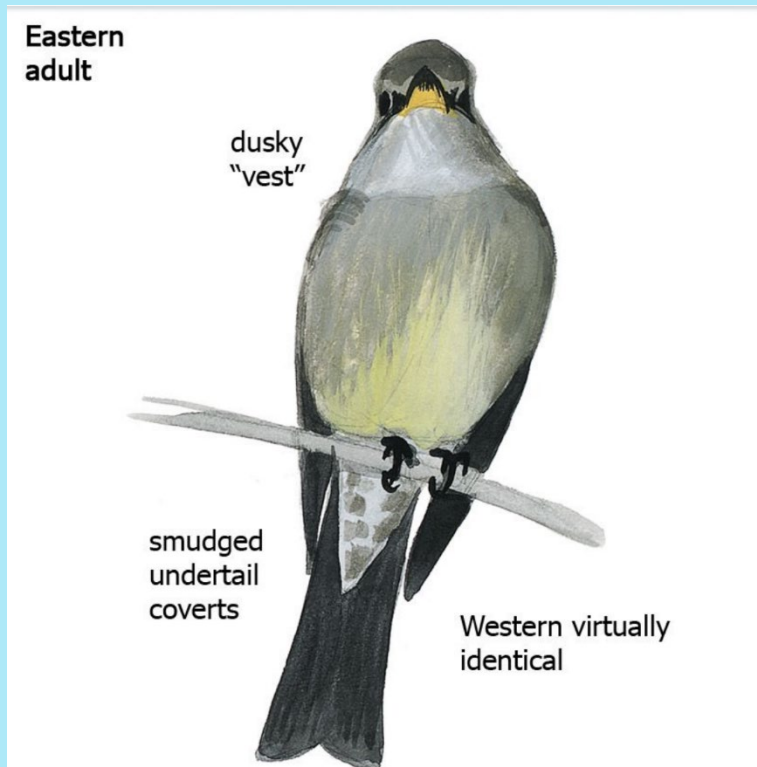
- ▶ Eastern Phoebe
 - ▶ Eastern Wood-pewee
 - ▶ Western Wood-pewee
 - ▶ Tyrannulet
 - ▶ Gray Vireo
 - ▶ Hutton's Vireo
 - ▶ Ruby-crowned Kinglet
 - ▶ Lucy's Warbler
-
- ▶ Which one are we most likely to confuse with an Empid?

PEWEEES

- ▶ More gray (not green, yellow...)
- ▶ Longer wings
- ▶ Longer primary projection
- ▶ Longer, more attenuated look
- ▶ Vested look
- ▶ Smudgy undertail coverts
- ▶ Short legs
- ▶ Dark face
- ▶ Weak partial eye ring
- ▶ High perch, sally forth and return



PEWEEES: GOOD FIELD MARK



Painting by David A. Sibley



Smudgy
undertail
coverts

Photo by Jeffrey E. Patterson

A GOOD FIELD MARK FOR PEWEEES



Photo by Jeffrey E. Patterson

Smudgy
undertail
coverts

IS IT AN EMPID?

Empid



Pewee

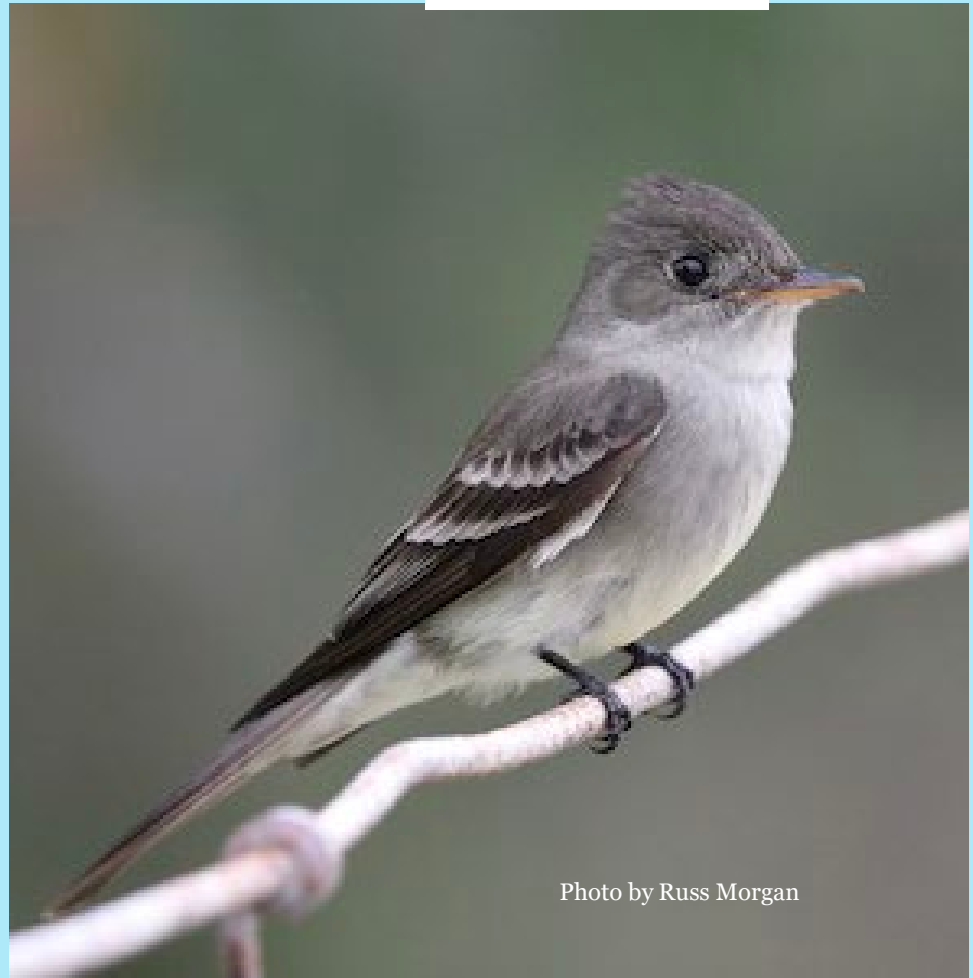


IS IT AN EMPID?

Empid



Pewee



IS IT AN EMPID?

Pewee



Empid



IS IT AN EMPID?

Empid



Pewee



IS IT AN EMPID?

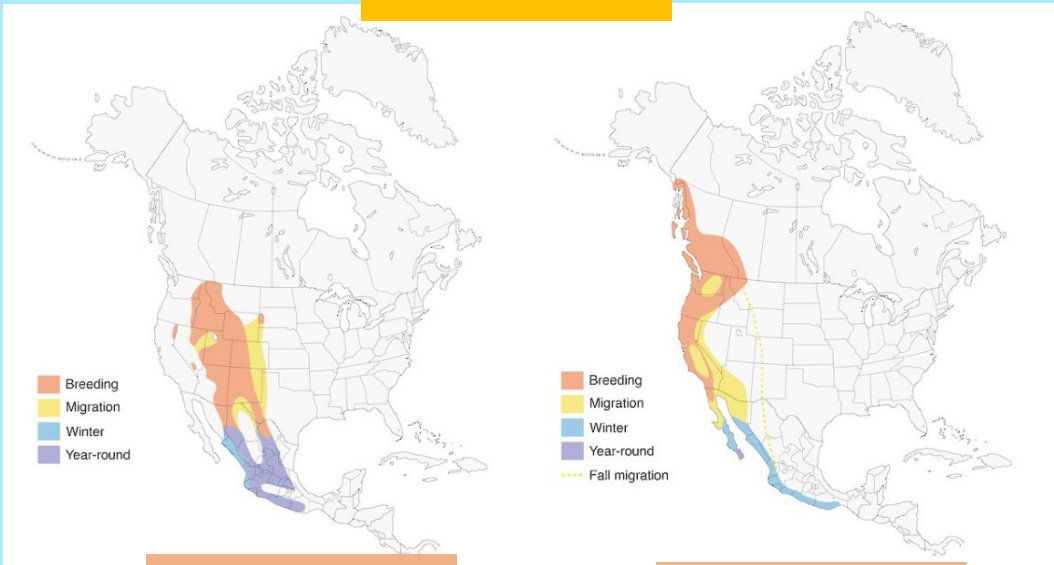
Pewee



Empid

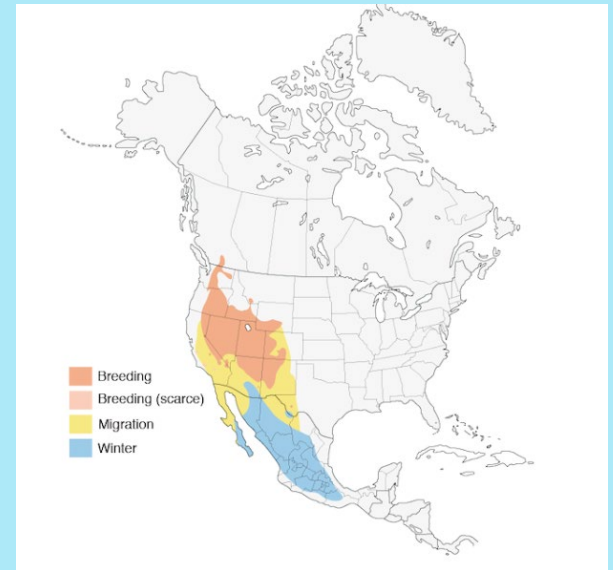


“Western”



Cordilleran

Pacific-slope

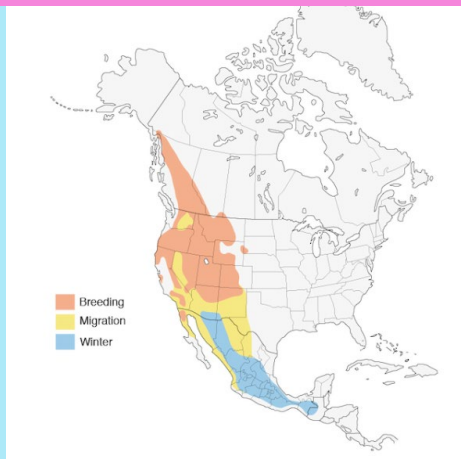


Gray

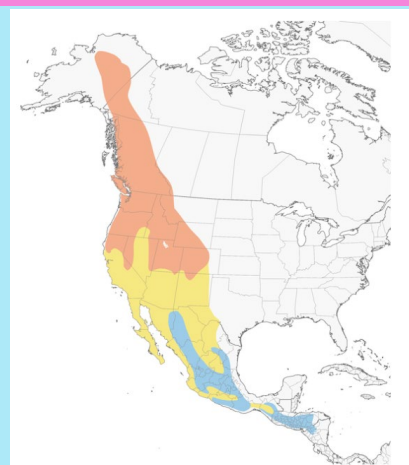
Western Empids



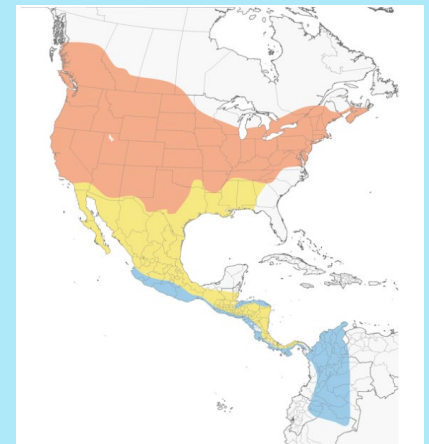
Buff-breasted



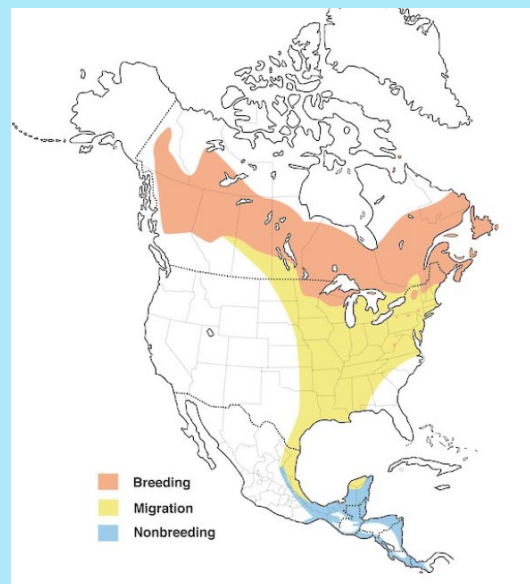
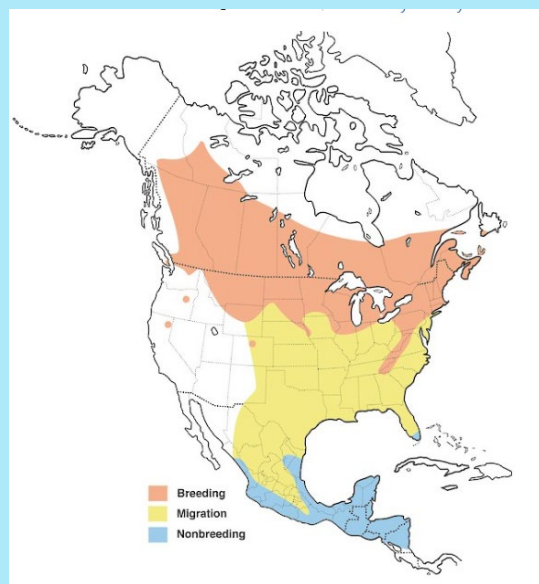
Dusky



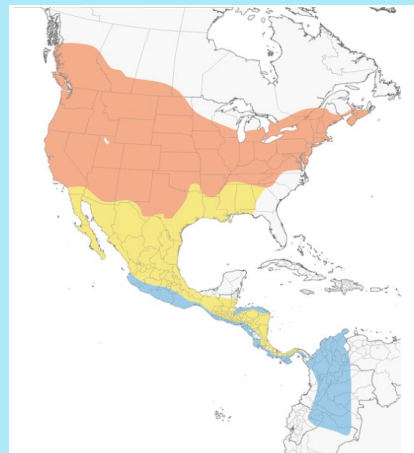
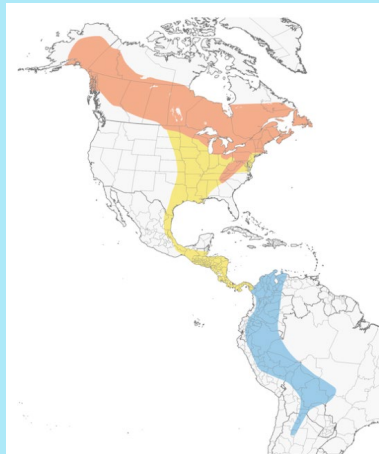
Hammond's



Willow

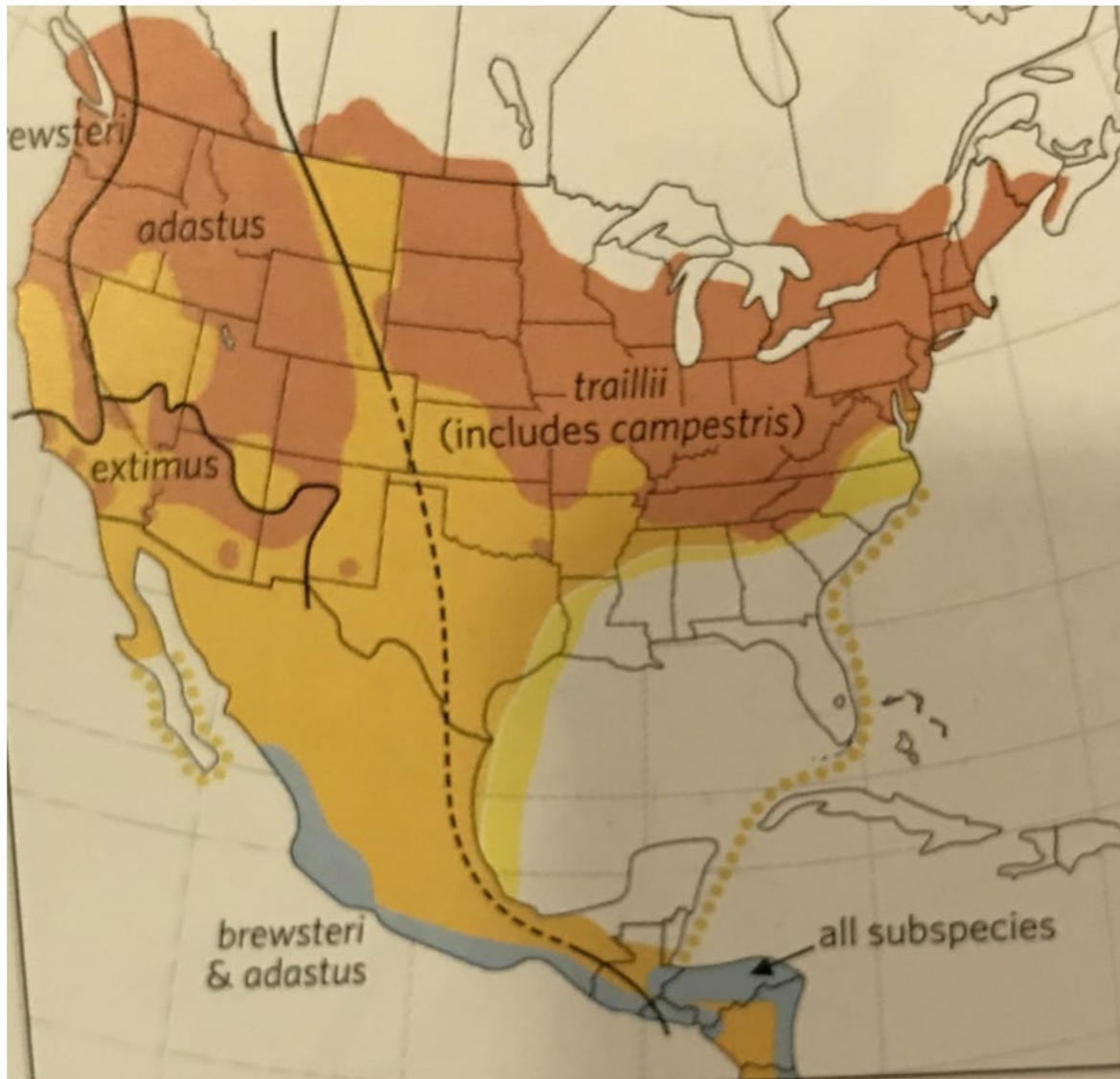


“Trails”



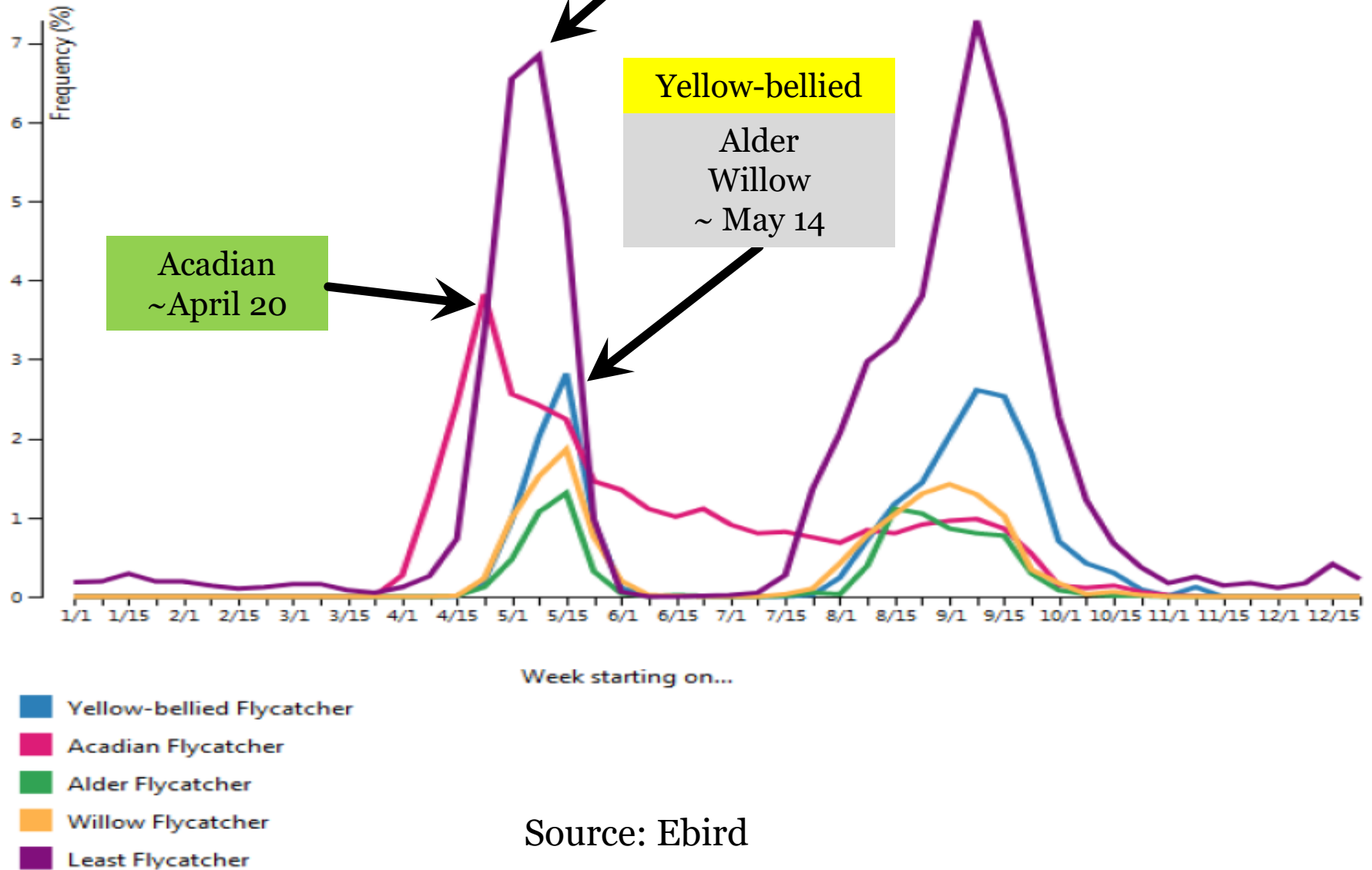
Eastern
Empids

WILLOW SUBSPECIES



Graphic by *National Geographic*
Field Guide to the Birds of NA

SPRING EASTERN EMPID TIMING IN TEXAS



Source: Ebird

HABIT 3

HABITAT & MICRO HABITAT

General Habitat – various woodlands

Least – forest clearings, wood edges, parks, campgrounds, yards

Yellow-bellied – dense, moist woodlands, hedgerows, thickets

Acadian – woodland interiors

Alder – associate with Alder shrubs

Willow – rarely far from willow wetlands

General Micro-habitat

Somewhat secluded perches.

Low in brush.

Interior of trees.

EMPID EXERCISE 2

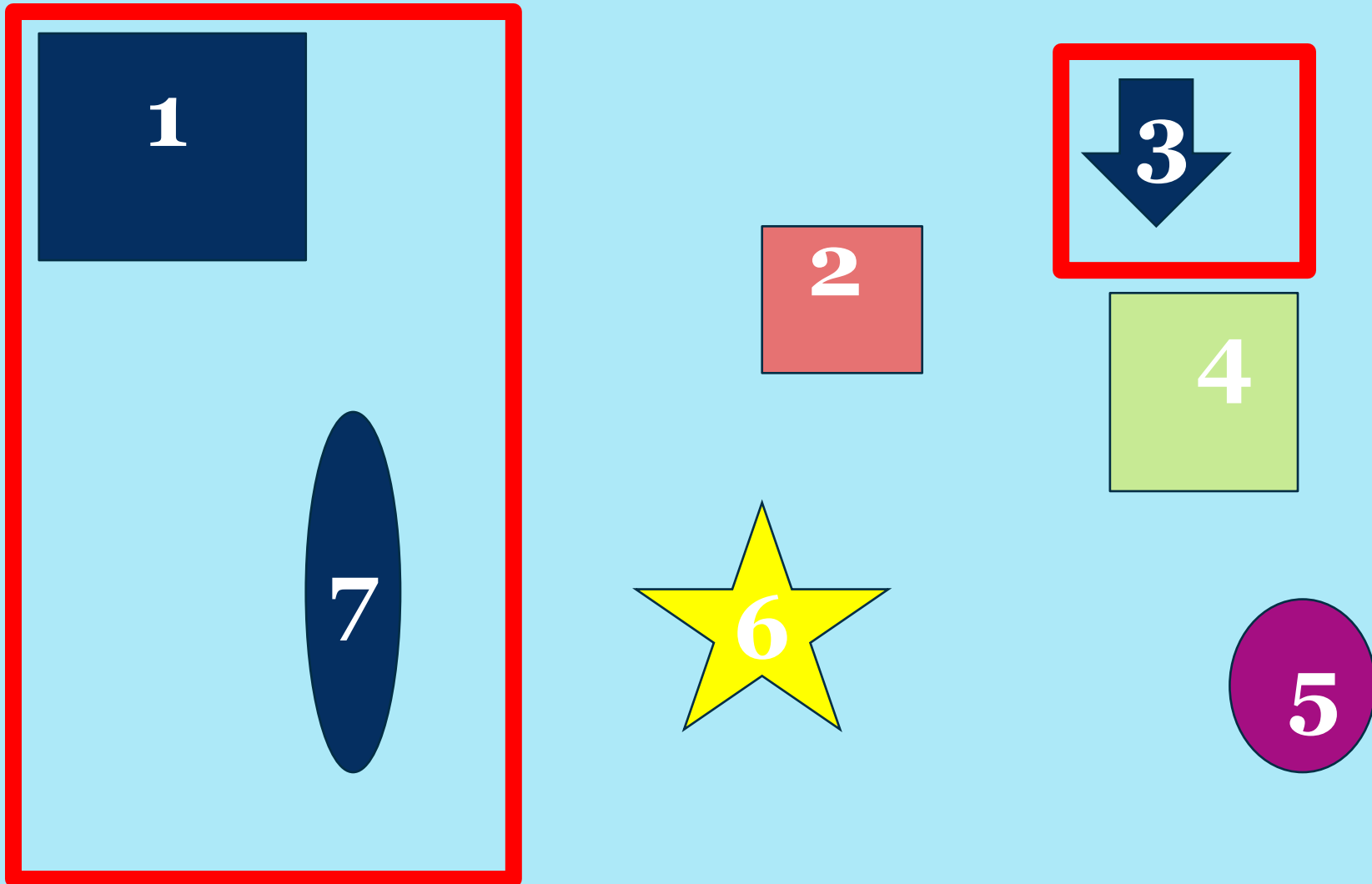
EMPID GROUPINGS

(CALIBRATING THE EYE)

Sort photos of Western
Empids into
1-7 groups

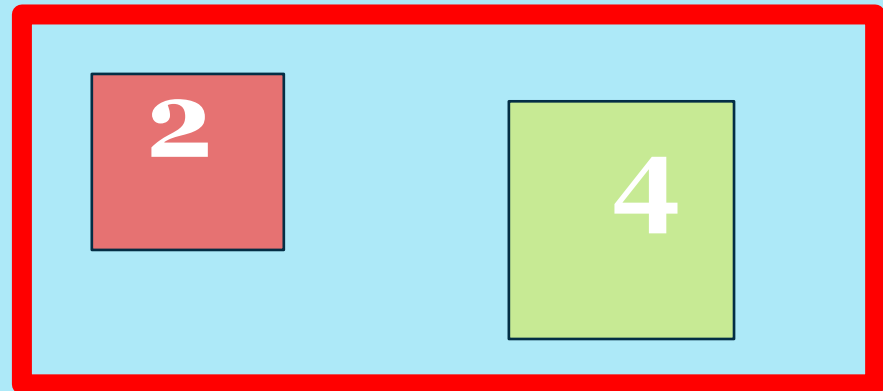
EMPID EXERCISE 2

SEEING EMPID GROUPINGS



EMPID EXERCISE 2

SEEING EMPID GROUPINGS





Sort these
Western
Empids into
1-7 groups





Jeff's Sorting
(4 Groups)





Pacific-slope
"Western"



Hammond's



Buff-breasted



Willow

Jeff's Sorting (4 Groups)



Gray



Cordilleran
"Western"



Dusky



Sort these
Eastern
Empids into
1-5 groups

Eastern
Empids



Jeff's Sorting

Eastern
Empids



Acadian



Least



Willow
"Trails"



Yellow-bellied



Alder
"Trails"

Jeff's Sorting

Eastern
Empids

EMPID FIELD MARK MYTHS

- ▶ Yellow bellies of Yellow-bellied
 - ▶ Varies with season, age, molt
- ▶ Pale lores – all Empids can have pale lores
- ▶ Pale edges to outer tail feathers
- ▶ Wing & tail flicking
 - ▶ All do it to some extent
 - ▶ Exception: Gray Flycatcher –distinctive tail dipping

What do we know about field marks?

THE EMPID CHECKLIST FIELD MARKS (ATTRIBUTES)

EMPIDONAX CHECKLIST:			
#	ATTRIBUTE		
1	Structure	Wings	Wing proportions (wing length & primary projection)
2			Shape of primary tips
3		Tail	Tail proportions & shape
4			Bill size, shape & color(s)
5		Head	Head shape & proportion to body
6			Crown of head (peak, crest)
7			Forehead slope
8		Body	Body shape
9	Plumage	Eye-ring	
10		Wing-bars	
11		Throat color & contrast	
12		Color of upper parts	
13		Color of lower parts	
14		Molt	
15	Other	Habitat/Micro-habitat	
16		Behavior	
17		Song	
18		Call	
19		Migration	
20		Similar species	

- ▶ Not all Field Marks are equal – **Some are more useful than others**
 - ▶ **Observable** – in the field (**some are great in-the-hand**)
 - ▶ **Consistent** – don't vary across individual birds
 - ▶ **Diagnostic** – serve to differentiate between closely related species
 - ▶ Some are **better for one species** than another.

THE EMPID CHECKLIST

FIELD MARKS (ATTRIBUTES)

Green = Diagnostic
(A')

Blue = Very strongly
supporting (A)

Tan = Strongly
supporting (B)

Gray = Supporting

EMPIDONAX CHECKLIST:				
#	ATTRIBUTE			Rank
1	Structure	Wings	Wing proportions (wing length & primary projection)	A
2			Shape of primary tips	
3		Tail	Tail proportions & shape	B
4			Bill size, shape & color(s)	A
5		Head	Head shape & proportion to body	A
6			Crown of head (peak, crest)	
7			Forehead slope	
8	Plumage	Body	Body shape	A
9			Eye-ring	A
10			Wing-bars	
11			Throat color & contrast	B
12			Color of upper parts	B
13			Color of lower parts	B
14			Molt	
15	Other		Habitat/Micro-habitat	
16			Behavior	
17			Song	A'
18			Call	B
19			Migration	
20			Similar species	

THE EMPID CHECKLIST 1

EMPIDONAX CHECKLIST: EASTERN EMPIDS			
#	ATTRIBUTE	LEAST	YELLOW-BELLIED
1 (A)	Wings	Wing proportions (wing length & primary projection) Rather short primary projection. Short wings that barely project to base of tail.	Relatively long wings. Short to moderate primary projection.
2	Shape of primary tips	Distinctly rounded tips and low pointed than Hammond's and some other Empids.	
3 (B)	Tail	Tail proportions & shape Short, narrow tail.	Short narrow tail is constricted at the base rather than parallel sided.
4 (A)	Bill	Bill size, shape & color(s) Intermediate in width. Short-billed. Lower mandible is mostly or entirely orange-yellow, sometimes with an ill-defined dusky tip. Triangular lower mandible.	Rather large for the size of the bird, looking broad at the base and with slightly convex outer edges. Lower mandible entirely orange-yellow.
5 (A)	Head shape & proportion to body	Head often looks proportionately large.	Large, round head. Shorter tail accentuates the front-heavy, big-headed look.
6	Crown of head (peak, crest)	Roundish head.	Crown usually smoothly rounded, only occasionally with slight crested effect.
7	Forehead slope	Steep forehead.	Steep forehead.
8 (A)	Body	Body shape Small and compact with short wings. Round body with thin tail. Looks small even for an Empid.	Small and compact Empid appears large headed and short-tailed. Portly body with a short tail. Somewhat pudgy.
9 (A)	Eye-ring	Bold, complete, but mossy eye-ring. Of uniform width. Often shows a white "kid" or "hardtop" in rear.	Complete, complete and somewhat yellowish, but normally not as strongly defined as Least. Usually of nearly uniform width (slightly thicker posteriorly). Occasional individuals may hint at hardtop shaped eye-ring.
10	Wing-bars	Bold and whitish on fresh adults. Dingy white on worn birds and buffy on juveniles.	Yellowish white wing-bars are very conspicuous. Wings are quite black, contrasting with the green back and setting off the wing-bars and tertial edge in strong contrast. Juveniles often have buffy wing-bars.
11 (B)	Throat color & contrast	Throat is whitish or off white (not bright white), contrasting with the darker face and gray-brown wash across breast.	Low contrast yellow throat. Olive malar blende to yellow-olive throat.
12 (B)	Color of upper parts	Palely uniform brownish gray, usually somewhat darker brown on the forehead and washed with olive on the back. Contrast on wing is usually obvious, with blackish ground color setting off white wing-bar and tertial edge. Wing-panel contrast.	Distinctly greenish and brighter than most other Empids (except some "Wewahs" in spring or freshly molted Acadian in fall). Wings are strongly blackish showing high-contrast with the whitish edged tertials and secondaries and the yellowish white wing bars. Paled fall adults appear brownish-winged or dusky-winged, with less contrast.
13 (B)	Color of lower parts	Gray-brown wash across breast. Flanks, belly and undertail coverts pale yellow to white-ink.	Tends to look fairly uniform in body plumage, not much paler below than above, although wings show strong contrast. The yellow throat is the most distinctive character among eastern empids. This color is really grayish yellow or yellow washed over a pale gray background, and it does not contrast sharply with the sides of the head. Sides of breast usually have a strong greenish olive wash. Most consistently yellow on underparts of any Empid. If worn can be quite pale on the belly. Most birds show a distinct olive wash on breast which continues down the sides.
14	Molt	Complete prebasic molt on the wintering grounds and thus will appear worn and faded by late summer and fall. Fresh and very pale below with narrow wing-bars. Spring pre-adolescent molt that involves body plumage and variable numbers of coverts, so wing-bars often broad and fresh in spring. Molt mostly completed before northward migration, but some young birds may have a faded appearance. Juveniles undergo a partial prebasic molt before leaving the natal territory – thus fresh and brighter in the fall.	Complete or incomplete prebasic molt in fall after arriving on winter grounds. Partial preadult molt in early spring before they start north. In spring they are in fresh plumage with strongly contrasting wing-bar and tertial edges before arriving in N. America. By late summer (before migration south) adults can be so worn and faded that they look mostly gray and white, with narrow wing bars. Juveniles go through an incomplete preadult molt before leaving the nesting grounds, replacing the body plumage and some coverts; they look fresh in fall migration, with the wing-bars appearing rich buff or a mix of yellowish white and buff. Juveniles undergo partial prebasic molt on the natal territory and are thus fresh in late summer and fall. Unlike most empids adults undergo only a partial prebasic molt, and it takes place on the wintering grounds. So adults in late summer and fall will be faded and worn. Another unusual feature is that adult prebasic molt is followed closely by a complete preadult molt in late winter, so adults in spring are in fresh plumage.
15	Habitat/Micro-habitat	Forest edge and clearing. Nothing in mature hardwood trees. Generally avoid being in the open.	Nests in logs, swamps and damp coniferous woods. Usually found in the interior of dense woods, even in migration, so often difficult to observe.
16	Behavior	Active, often changing perches. Lots of flicking of the tail and wings. Often jerking the tail upward and flicking the wings at the same time. Picks tail at times in a quick down-up motion (faster than Gray). Persistent for hanging out just below the canopy.	Active and given to much simultaneous wing and tail flicking. Generally perches fairly low. Likes to forage where it is thick – in the lower portions of conifers and shrubs; in thickets; and in lush edge and openings in dense forests during migration. Favors wetter areas and woodlands of thickets adjacent to water. Hovers frequently to pluck insects and commonly captures prey on the ground. Wing flutters and tail flicks with an abrupt upward jerk. Usually solitary, but in migration may be in mixed flocks.
17 (A)	Song	Emphatic CHIRP or chirp-like, repeated rapidly.	Becomes chirp-like or chirp-like, very similar to least, but lower, buzzy, softer without strong emphasis. Softer, less emphatic than Least and more casually paced.
18 (B)	Call	Sharp whist also sometimes in series. Somewhat harder than the shriller calls of Willow, Gray and Dusky. Has been compared to a distant yellow-rumped warbler. Most vocal empid in migration.	Short, clear rising whistle (usually reminiscent of wood-pewee). Also shorter versions of <i>puce</i> or <i>puce</i> , a sharp, descending <i>quack</i> (migratory); somewhat plaintive, long <i>puce</i> ; a sharp monotone <i>coo</i> .
19	Migration	Circum gulf migrant. Most adults are gone from N. America before September.	Tends to be a late migrant moving through Texas in mid-May. In fall it is an early migrant with many south of the breeding grounds in later August. Circum gulf migrant.
20	Similar species	Most common Empid in the East. Only Willow has a similar whist call. Smaller than Willow, Alder, Acadian. Smaller size, smaller bill, shorter primary extension and more prominent eye-ring. Yellow-bellied is similar in size and shape but usually much stronger green and yellow tones. Some fall Yellow-bellied may have worn to grayish – still have larger bills and different calls. Also less contrast between face and grayish white throat. In the west, closest in appearance with Dusky and Hammond's. Hammond's has a shorter & thinner bill which is typically mostly or entirely dusky. Hammond's has longer primary projection and primaries more pointed at the tip. Hammond's shows more head-back contrast, a stronger "vested" appearance and a grayer throat. Peak call is different. Dusky has longer and thinner bill usually with more extensive dark lower mandible. Also has a short primary extension. Dusky's tail is a bit longer and possibly narrower at the base. Dusky has a longer less compact shape. Least will have a whiter throat and blacker wings that contrast more with the whitish-edged tertials and secondaries. In the east the Least is structurally only similar to the Yellow-bellied, but can be separated by plumage colors. Only Least, Acadian, Yellow-bellied, Cordilleran and Pacific Slope have the head-drop shaped eye-ring. 1/2 inch smaller than Acadian, Willow, Alder; 1/4 inch smaller than Hammond's. Yellow-bellied is larger headed and more portly; Acadian is larger, bigger-billed and more robust; Alder/Willow are lankier and bigger-billed; Hammond's is longer winged and narrower billed.	Slightly larger than Least, smaller than Acadian. Separated from Acadian by yellow rather than whitish throat and smaller bill. Distinguished from Least by voice, structure, low-contrast throat. Least is more often saturated; Acadian more robust, with a longer heavier bill, a more peaked head and a longer tail; Alder/Willow have a more peaked head and are overall grayer. Extremely similar to "Wewahs", but on average is more strongly yellow below and green above. Usually separated by range. The eye-ring is more usually circular (rather than hardtop) and the more blackish wings contrast with the whitish tertials and secondary edges. The tail is slightly shorter than "Wewahs", which accentuates the stubby appearance; the head appears more rounded (not peaked). Approached in general plumage by Acadian, but even bright Acadian should not be as strongly yellowish in the throat. The Acadian is structurally different in overall size, bill size and structure, primary projection and tail structure. When the Acadian does have yellow on the throat, it is usually clear pale yellow, subtly different than the grayish yellow of the Yellow-bellied. Because all Acadians undergo their prebasic molt on the breeding grounds (before migrating south), they will be in fresh plumage with buffy wing-bars when most Yellow-bellied are faded and worn.

THE EMPID CHECKLIST 2

EMPIDONAX CHECKLIST: EASTERN EMPIDS			
#	ATTRIBUTE	ALDER	WILLOW
1 (A)	Wings Wing proportions (wing length & primary projection)	Moderate primary projection.	Moderate primary projection.
2	Shape of primary tips		
3 (B)	Tail Tail proportions & shape	Medium length to longish tail that is broad-based and nearly parallel-sided (not constricted at the base). Looks noticeably broad compared to the tail of smaller Empids.	Moderately long, broad-based and parallel-sided – a sturdy tail. Other Empids have narrow-based tail and slightly to moderately flared along their length.
4 (A)	Bill Bill size, shape & color(s)	Large broad-based bill (most like that of Acadian, but not as broad at the base) which may seem to have a slightly convex edge. Lower mandible frequently entirely dusky-pink or yellow-orange, but it just as frequently may show a dusky tip. Bill usually appears dark from below, despite the yellow lower mandible. Slightly shorter-billed than Eastern Willow.	Wide and may seem to have a slightly convex edge. Lower mandible usually entirely yellowish pink, but sometimes has a small dusky tip.
5 (A)	Head Head shape & proportion to body	Slender head. In combination with the very long bill, the slender head makes this species appear very long-faced.	
6	Crown of head (peak, crest)	Head is sometimes gently rounded, sometimes peaked toward the rear, but always slender. Possibly rounder-headed than Eastern Willow.	Distinct peak on rear crown.
7	Forehead slope	shallow to medium forehead	Relatively flat forehead.
8 (A)	Body Body shape	Large, lanky Empid with a fairly heavy bill and a long-face.	A lanky, plain, brownish, pewee-like Empid. A large Empid. Long body.
9 (A)	Eye-ring	Varies from conspicuous, but narrow, to virtually absent. No kick or tear at the rear. Acadian almost always has a conspicuous and complete eye-ring.	Little or no eye-ring.
10	Wing-bars	Although the wings are very dark, the contrast in the wing pattern may be lessened by the fact that the wing bars and tertial edges are often somewhat dull, so the wings may not look as sharply contrasting as in some other eastern Empids. More well-defined white tertial edges, bolder wing-bars and slightly longer primary projection than western subspecies of Willow.	Off-white and dull. Deep buff on juvenile in fall. Those of adults are faded to grayish white and narrow or obscure in this season. Wing-bars and tertial edges generally whitish, contrasting strongly with blackish wings.
11 (B)	Throat color & contrast	The most consistent plumage character of Alder (and Willow) is the white throat, contrasting noticeably with the face and usually contrasting somewhat with a faint breastband. More contrasting white throat than Acadian.	White throat that contrasts well with the dark sides of the face and breast band.
12 (B)	Color of upper parts	Very dark wings with sharply contrasting tertial edges. Greenish cast on back. Darker head than eastern Willow. In fresh plumage, Alder tends to be strongly washed with olive on the upperparts and has clear gray tones on the face.	Overall drab. Upper parts are distinctly brownish. Eastern birds have a touch of olive on the back that is so subtle it's probably your imagination. Facial expression is plain. Narrow, pale loreal line.
13 (B)	Color of lower parts	Faint grayish wash across the breast. Whittish or slightly yellowish belly.	Pale with a brownish often broken wash on the breast and dirty, white underparts sometimes slightly tinged with yellow.
14	Molt	In fresh plumage during spring migration. Undergo molt on the wintering grounds so by fall migrating adult Alders (and Willows) are in worn plumage. Wing-bars and eye-ring (if any) may be much reduced by wear and the color of their upper parts will be very drab. Juveniles are somewhat fresher in fall, with buff wing-bars, more yellow on the belly and slightly more color on the upper parts.	Undergo molt on the wintering grounds so may appear dingy and worn in late summer.
15	Habitat/Micro-habitat	Brushy habitats near bogs.	Low, brushy habitats, often near water.
16	Behavior	Maneuvers through brush like a frantic warbler. Thrives in low brush and tight vegetative confines (usually within 10 feet of the ground). Tend to be less active. Flick tail & wings less often.	Flies nimbly through low brush, not woodlands. A brush hugging, Empid that hunts low, sometimes in fairly open habitat, but more often in heavy vegetation, including willow thickets, cattails, and phragmites.
17 (A)	Song	Best distinguished by voice. Alder: A falling wheezy <i>wee-oh-oh</i> . Willow: a sneaky <i>fil-lee-ee</i> . Alder's song is usually written as <i>fil-lee-oh</i> , but seldom sounds clearly three syllabled. Might be better written as <i>wee-BEEP</i> . Strongly accented on the second syllable.	Burry "RITZheeu" or "RRRITZheeu", often alternating among these variations. Sometimes merely a strong "wee-oh", rough and low with emphatic rising ending.
18 (B)	Call	Alder: A loud <i>pip</i> . Willow: a liquid <i>wee</i> . Reminiscent of a single note of Olive-sided Flycatcher. Unlike the <i>whit</i> of Willow and other Empids. Reminiscent of the pit-note of Three-toed Woodpecker or the chip of White-throated Sparrow.	A thick, liquid "whit" unlike Alder; averages lower and fuller-sounding than similar calls of other Empids.
19	Migration		
20	Similar species	Slightly longer primary projection than western subspecies of Willow. Fractionally longer-winged and tailed than eastern Willow. Tend toward dull-olive upper parts in fresh plumage, some Alders can be a bit more greenish. Both Alder & Willow in fresh plumage tend to show some contrast between head and nape (darkish) and the upper back (greenish). Willows usually appear darker, and their nape appears paler (often with grayish tones). On average, Willows tend to be a paler olive or a somewhat brownish olive or grayish olive on the upper parts (even in fresh plumage), with a grayish or brown-tinged olive wash across the chest. Alders tend to be a bit darker green on the upper parts and auriculars, with a purer olive wash across the chest. Further distinguished from Acadian by upper parts coloration (Acadian: paler, livelier green on the face and upper parts; "Traill's": darker, drabber olive, brownish olive or grayish olive). Willow lacks prominent eye-ring. Least is browner above, has shorter bill with dark tip to lower mandible. One of the most "pewee-like" Empids. Virtually identical to eastern subspecies of Willow (except by voice). Fractionally longer-winged and tailed than eastern Willow. Alder & Willow are extremely similar in both structural and plumage characteristics, and though minor average differences in morphology exist (and extreme examples of each species can be identified), there is overlap in every character. Silent migrants are best left as "Willow/Alder" or "Traill's sp". Traill's tend to be drabber than Westerns, Yellow-bellied, or Acadian. Traills are closest structurally to Acadian, but they typically show less primary projection and slightly thinner bills. Further distinguished from Acadian vocally.	The extreme similarity between eastern Willows and Alders cannot be stressed enough. Many individuals cannot be identified even in the hand, even by reference to formulas based on careful measurements. With enough experience, eastern birders may be able to say "probably Willow" or "probably Alder" based on visual and then confirm with voice. The relatively dull wing-bars and obscure eye-ring of Willow can make it superficially like a wood-pewee. But pewees have noticeably longer wingtips and narrower bills. Willow subspecies: Traill's in the east. Acadian, heronwater and extreme in the west. Tend toward dull-olive upper parts in fresh plumage, some Alders can be a bit more greenish. Both Alder & Willow in fresh plumage tend to show some contrast between head and nape (darkish) and the upper back (greenish). Willows usually appear darker, and their nape appears paler (often with grayish tones). On average, Willows tend to be a paler olive or a somewhat brownish olive or grayish olive on the upper parts (even in fresh plumage), with a grayish or brown-tinged olive wash across the chest. Alders tend to be a bit darker green on the upper parts and auriculars, with a purer olive wash across the chest. Further distinguished from Acadian by upper parts coloration (Acadian: paler, livelier green on the face and upper parts; Traill's: darker, drabber olive, brownish olive or grayish olive). Alder bill is slightly shorter, eye-ring usually more prominent, back grayer than Willow. Alder has darker head than eastern subspecies of Willow and more well-defined white tertial edges, bolder wing-bars and slightly longer primary projection than western subspecies. Willow lacks prominent eye-ring. Least is browner above, has shorter bill with dark tip to lower mandible and different call.

THE EMPID CHECKLIST 3

EMPIDONAX CHECKLIST: EASTERN EMPIDS					
#	ATTRIBUTE		ACADIAN	PEWEEES	
1 (A)	Structure	Wings	Wing proportions (wing length & primary projection)	Long primary projection. Long-winged.	Longer wings than Empids, often appearing to extend a third of the way down the tail.
2			Shape of primary tips	Sword-like tips.	
3 (R)		Tail	Tail proportions & shape	Medium length tail that is broad at the base and nearly parallel sided. Tail may appear relatively short due to the long primary projection.	Short straight tail.
4 (A)		Bill	Bill size, shape & color(s)	Largest bill on average of any Empid. Long and broad (especially at the base) with slightly convex outer edges. Lower mandible almost always entirely pistilish yellow.	Narrower bill than Willow. Black upper mandible, dull orange lower mandible.
5 (A)	Head		Head shape & proportion to body	Large head.	Large, somewhat shaggy and peaked head.
6			Crown of head (peak, crest)	Forehead and fore part of the crown look flat, often sloping up gradually to a point or corner at the rear edge of crown, but the crown also can look low and smoothly rounded in the rear.	Shaggy and peaked. More distinctly peaked than Empids.
7			Forehead slope	Flat forehead.	
8 (A)	Body		Body shape	A big sturdy Empid (built like a light heavy weight). Solid but well-trimmed body.	Larger than Empids. Smaller than Eastern Phoebe. Sturdier and more angular than Eastern Phoebe. Wide body. Shorter legs than Empids, so often appear to be sitting on feet.
9 (A)			Eye-ring	Narrow, pale yellow eye-ring. The eye is distinctly large and prominent, can be faint on some individuals.	Only a hint of an eye-ring (just a narrow pale area behind the eye). Black eye, set on the pale gray face.
10	Plumage		Wing-bars	The wings show strong contrast, with very blackish ground color setting off the buffy wing-bars and tertial edges.	Adults: obvious white wing-bars. Juveniles: buffy wing-bars. Usually less distinct than most Empids (but the same could be said for many Willow Flycatchers).
11 (R)			Throat color & contrast	Even though the throat is white or grayish it does not contrast sharply with the face because of this pale green malar area, which is one of the most obvious visual marks of the species.	Not so contrastingly white on the throat as Willow Flycatcher.
12 (R)			Color of upper parts	Very green above. Uniformly greenish olive from crown to rump, fades into a slightly paler and brighter green in the malar area of the face. Wings are fairly blackish and show high contrast with the a whitish or yellowish white wing-bars and the whitish edged tertials and secondaries.	Dark (in comparison to Empids). Overall grayish with a slight greenish cast to the back and no distinct contrast between the head and back. Paler on nape. Western averages darker.
13 (R)			Color of lower parts	Underparts show a faint olive wash across upper breast and a faint yellowish wash on the belly and undertail coverts. Pale white lower breast.	Whitish or pale yellow below. Dusky "vest" (heavier than Empids). Grayish "smudges" on undertail coverts.
14			Molt	Molts on breeding ground and migrates south in fresh plumage. By mid-summer adults usually look very whitish below and wing-bars usually have become whitish and very narrow. Unlike other eastern Empids, adults undergo a complete molt before leaving the breeding grounds; thus they will be in fresh plumage in fall migration (with yellow wing-bars and yellow wash on the underparts). But they rapidly depart from N. America as soon as their molt is completed. Juveniles are very distinctive when they first fledge, rich greenish olive above with conspicuous buff tips to many feathers on the crown, nape, back and wing coverts, forming a scaled effect. Their underparts may be lightly washed yellow, and they have rich buff wing-bars. They lose the sooty look in a partial molt before they migrate, but don't replace the wing feather so retain buff wing bars and underparts may be strongly yellow washed, often including the throat.	
15	Other		Habitat/Micro-habitat	Broadleaf trees usually near water or high trees within forests. Generally stays inside forested areas, where it may perch low at times but often perches quite high, near the canopy.	In and along edges of woods.
16			Behavior	A bird of the forest interior — unlike most other Empids. Generally forages amid the leaves of the lower canopy and understory. Also darts out and hovers to pluck prey. Usually does not return to the same perch. Changes perches frequently. Not as active as some of the other Empids. Tends to flick tail and wing less and mostly right after changing perches.	Chooses fairly high conspicuous perches and return to it repeatedly. Do not flick their tails when perched.
17 (A)			Song	Explosive <i>poet-uh!</i> Or <i>poet-uh!</i>	Slow, measured 2-part plaintive lament — a question followed by an answer. A 2 or 3 note question "Pee-whEEP" or "Pee-ur-EEP" ending on a high note, followed by a long pause and then a reply "PEE-ur".
18 (R)			Call	<i>Pee!</i> is noticeably different than the <i>whit!</i> of the Willow or the <i>hop!</i> of the Alder.	
19			Migration		
20		Similar species	In fresh plumage average greener than any other seen Yellow-bellied and "Westerns". (Acadian, Hammond's, Buff-breasted and occasionally Least molt on breeding grounds before migrating south. Thus any Empid seen molting in N. America is probably one of these 3 species; any worn adult seen in fall is likely one of the other species (which molt on the wintering grounds)). Length of bill may be matched or even exceeded by long-billed examples of Gray and "Trail's" in general the Acadian is longer billed than any other Empid. Can be very similar in structure to "Trail's", but usually has longer primary extension. Acadian's face is paler than Willow/Alder and usually contrast much less with the white throat, due to the pale green malar region.		

THE EMPID CHECKLIST 4

SOURCES

EMPID CHECKLIST

COMPILED FROM THE FOLLOWING SOURCES BY Jeffrey E. Patterson

1) *National Geographic Field Guide to the Birds of North America*, (7th Edition)
Alderfer, Jonathan, Dunn, Jon L., 2017.

2) *The Sibley Guide to Birds*, Sibley, David Allan, 2000.

3) *Pete Dunne's Essential Field Guide Companion: A Comprehensive Resource for Identifying North American Birds*,
Dunne, Pete, 2006.

4) *Field Guide to Advanced Birding*, Kaufman, Kenn, 2011.

5) *Birding in the American West: A Handbook*, Zimmer, Kevin J., 2000.

6) *Peterson Reference Guide to Birding by Impression: A Different Approach to Knowing and Identifying Birds*, 2015
Karlson, Kevin T., Rosselet, Dale.

7) *Empid Identification Powerpoint*, Lee, Cin-Ty,
<https://static1.squarespace.com/static/54b9bb6fe4b07b4a7d145b55/t/573a7a4960b5e908af3foa48/1463450185977/Empid+identification.pdf>

20 ATTRIBUTES

EMPIDONAX CHECKLIST:				
#	ATTRIBUTE			Rank
1	Structure	Wings	Wing proportions (wing length & primary projection)	A
2			Shape of primary tips	
3		Tail	Tail proportions & shape	B
4		Bill	Bill size, shape & color(s)	A
5		Head	Head shape & proportion to body	A
6			Crown of head (peak, crest)	
7			Forehead slope	
8		Body	Body shape	A
9	Plumage		Eye-ring	A
10			Wing-bars	
11			Throat color & contrast	B
12			Color of upper parts	B
13			Color of lower parts	B
14			Molt	
15	Other		Habitat/Micro-habitat	
16			Behavior	
17			Song	A'
18			Call	B
19			Migration	
20			Similar species	

Use all 20

Compare to pix & references afterward

It's a comparative approach

But what about that 15 second sighting?

TOP 5

EMPID ID ATTRIBUTES

(FIRST 15 SECONDS OF SIGHTING)

1. Body & head proportions
2. Primary projection
3. Eye ring
4. Bill size
5. Throat color & contrast

Acadain



Photo by Jeffrey E. Patterson

EASTERN EMPIDS: ONE MORE LOOK

Least



Yellow-bellied



Acadian

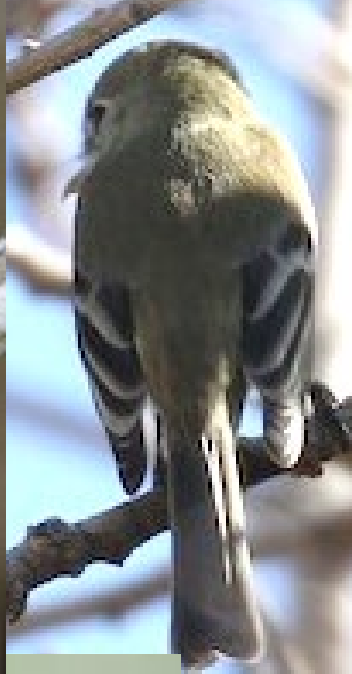


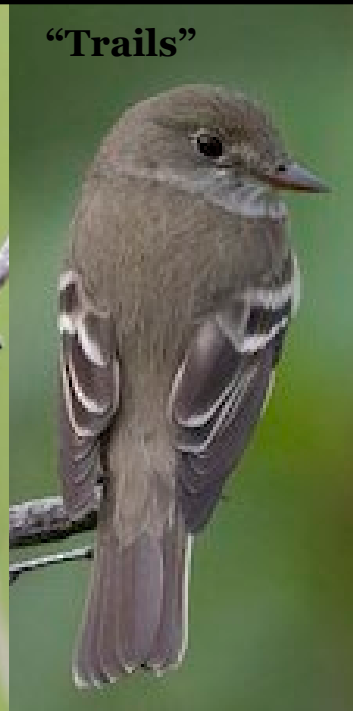
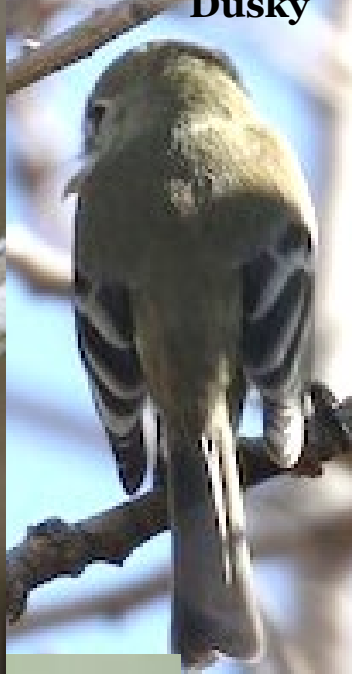
“Trails” (Willow)



“Trails” (Alder)







Hammond's

Yellow-bellied

Least

"Trails"

"Trails"

Western

Western

Dusky

Acadian

Gray