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# EMPIDONAX THE “GNAT MASTER”

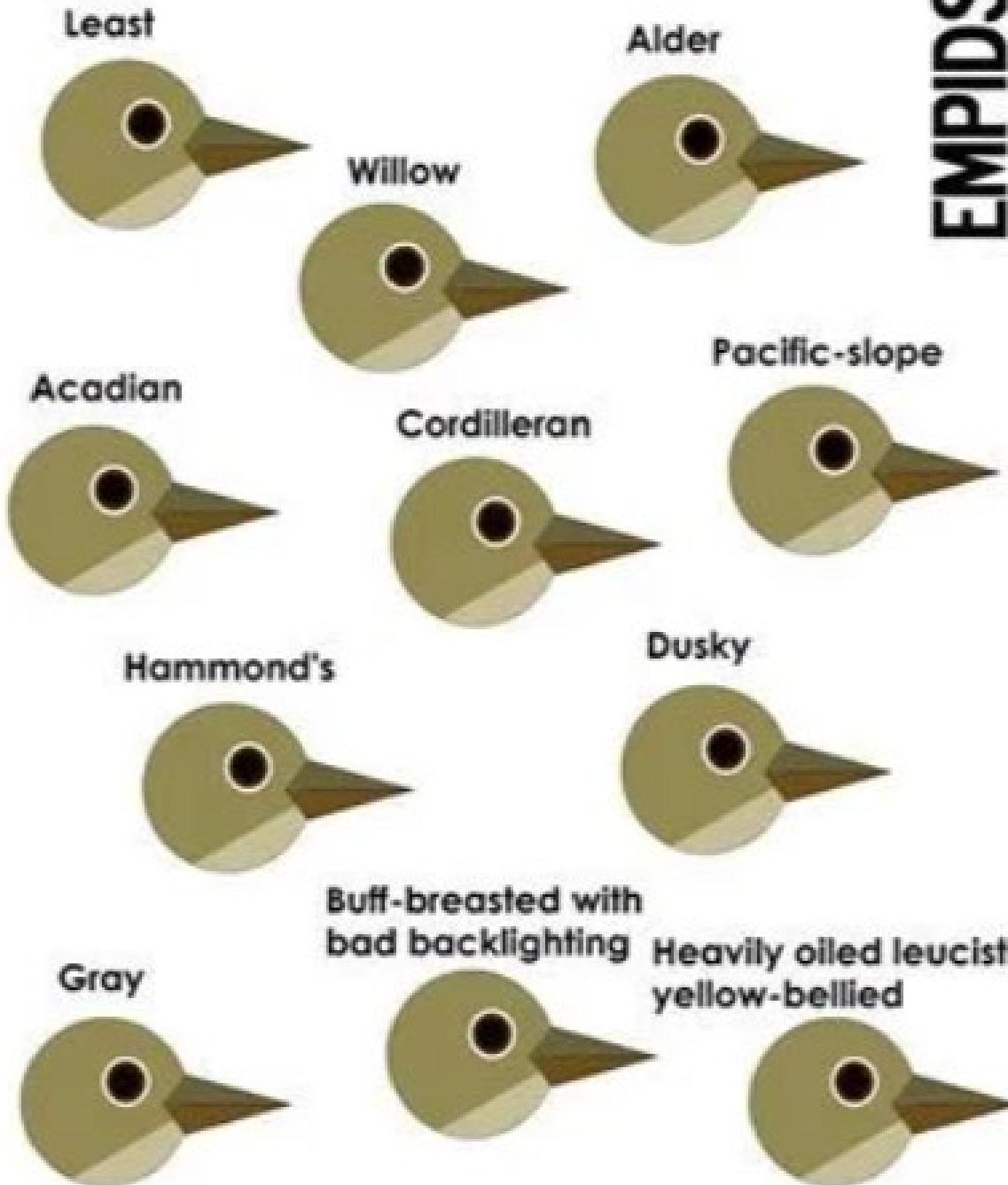
## 5 EASTERN EMPIDS PART 1: INTRODUCTION

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

*THE AQUATIC LIFE WITH STEVE ZISSOU, WES ANDERSON*



# EMPIIDS



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

# 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.

# EMPIIDS – 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)
2			Shape of primary tips
3		Tail	Tail proportions & shape
4		Bill	Bill size, shape & color(s)
5		Head	Head shape & proportion to body
6		Head	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

EMPIIDS, EMPIIDS EVERYWHERE,  
OH MY!!!!

## 13 Empids ???

*Tr... e*  
“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

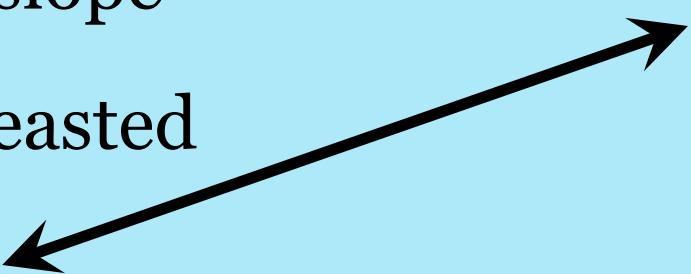
1 Least

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

“Western”

“Trails”

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
- Yellow-bellied
- Acadian
- “Trails”  
(Willow/Alder)

Most common by far –  
**Reference Bird**

Don’t count on a  
yellow belly

Breeds in Texas

Not visually separable

# THE EMPID GENUS

Least

***E. minimus***  
(smallest)

Yellow-bellied  
***E. flaviventris***

(*flavus* (“yellow”) + *venter* (“belly”))

## 5 Eastern Empids

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. hammondi***

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

# 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)

Buff-breasted

***E. fulvifrons***

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

Willow

***E. Traillii***

(Thomas S. Traill, friend of  
JJ Audubon)

# THE EMPID GENUS

## 6 Western Empids

Western

***E. difficilis***

(Troublesome, hard)

Hammond's  
***E. hammondi***

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

Willow  
***E. Traillii***

(Thomas S. Traill, friend of  
JJ Audubon)

# EMPIDONAX GENUS: 15 SPECIES

Pine Flycatcher



White-throated Flycatcher

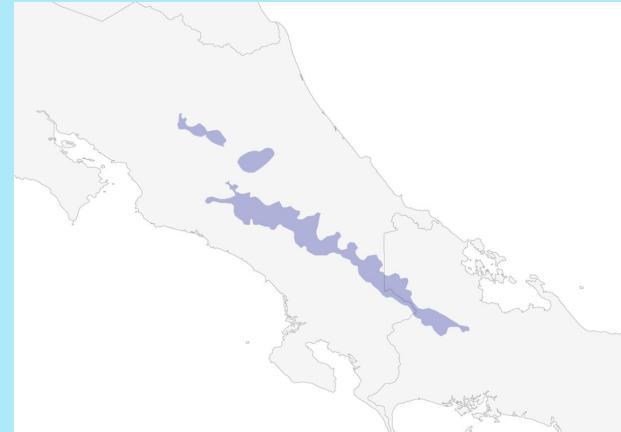


4  
Southern  
Empids

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

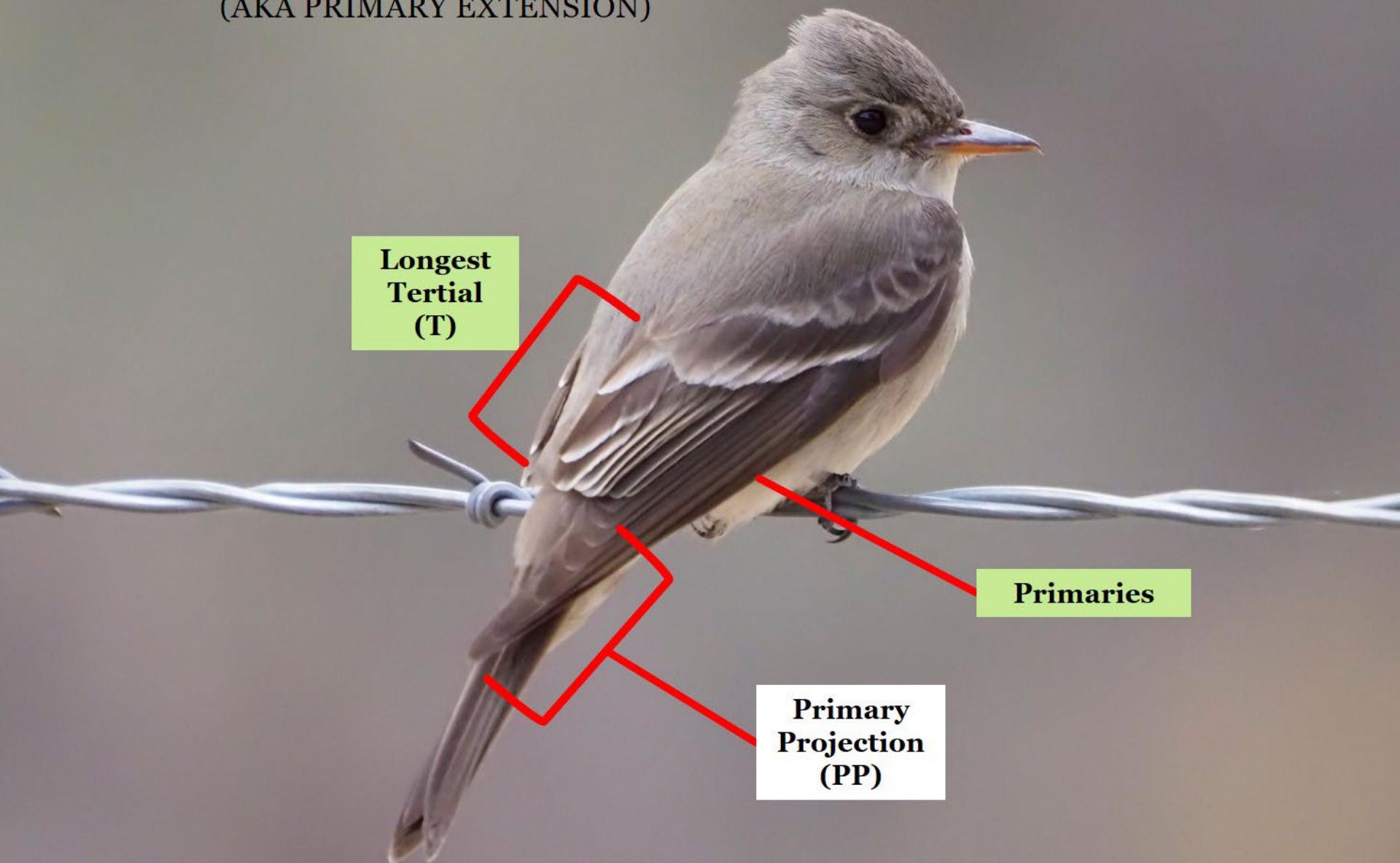
- ▶ Flycatcher bill
- ▶ Eye-ring
- ▶ Wing-bars
- ▶ Greenish, yellowish, grayish, brownish
- ▶ Primary projection – shorter than tertial stack



Photo by Jeffrey E. Patterson

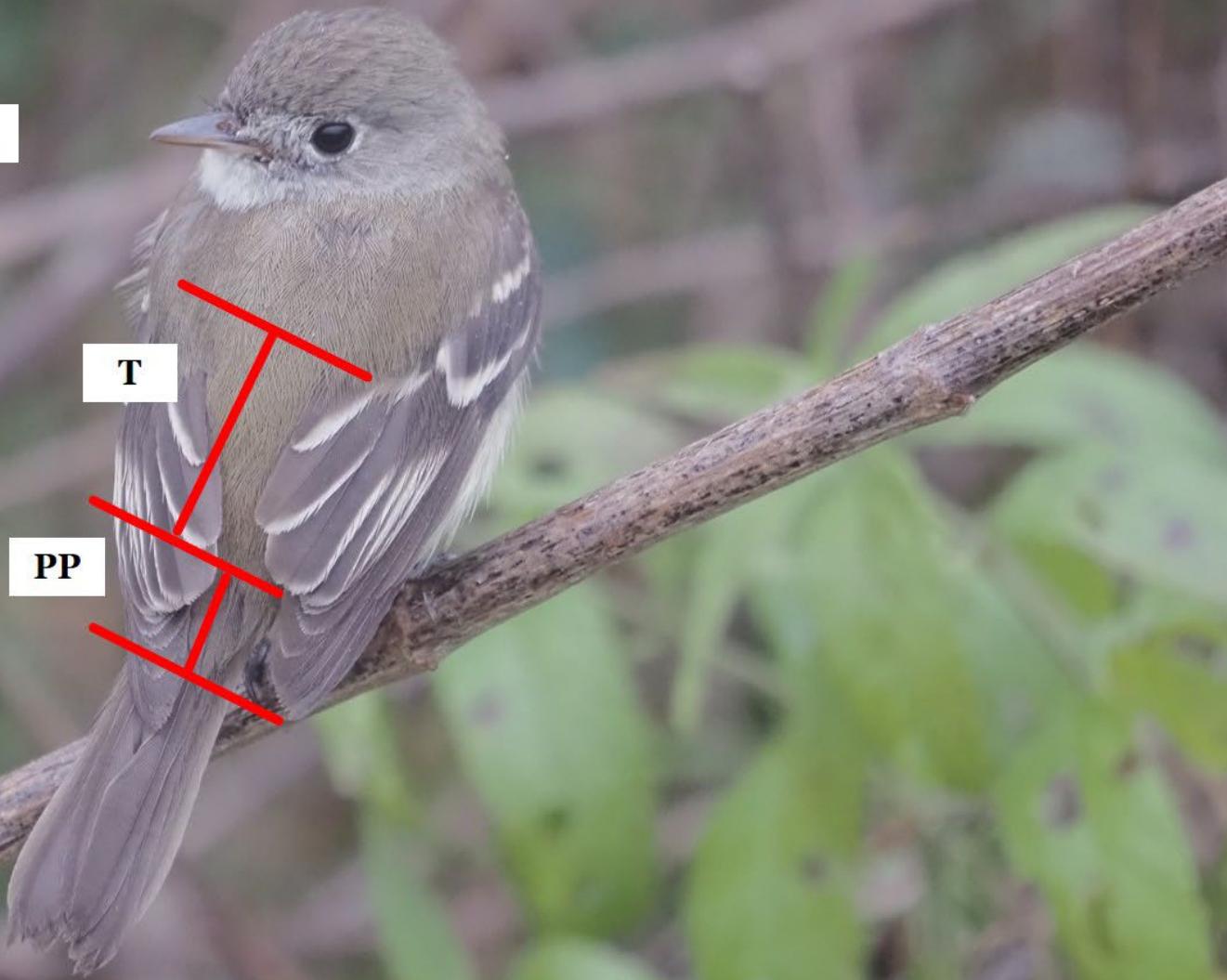
# PRIMARY PROJECTION

(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 ?**



# Group A





Empid



Ruby-crowned Kinglet

## Group A



Photo by L. Olsen



Photo by David Rooke

A close-up photograph of a Ruby-crowned Kinglet perched on a thin, light-colored branch. The bird has a small, compact body with a large, round head. Its plumage is primarily olive-green on the back and wings, with a white patch on the wing and a dark patch below the wing-bars. A prominent white patch is visible on the tail. The belly is white. A small red patch is visible on the top of its head. The bird is facing left.

# 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





## Group B





## Group B





Photo by Sue Barth

**Empid**

- 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



Photo by Matt Davis

**Hutton's  
Vireo**



Photo by Michael Warner

# Group C



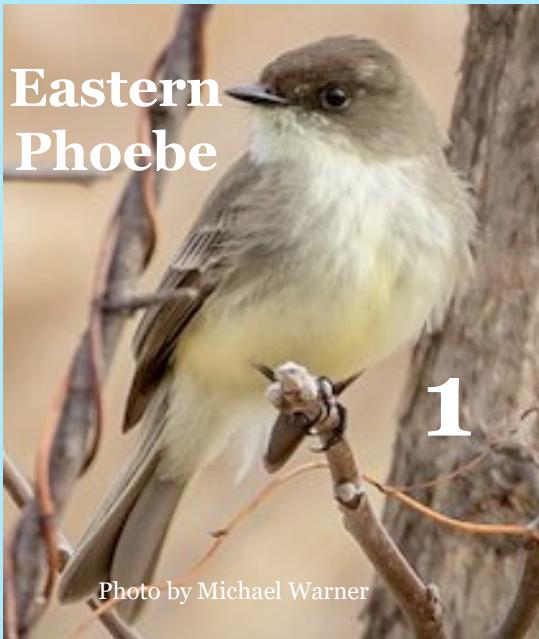
Photo by Brad Imhoff



Photo by Brendon Klick



Photo by David Tonnessen

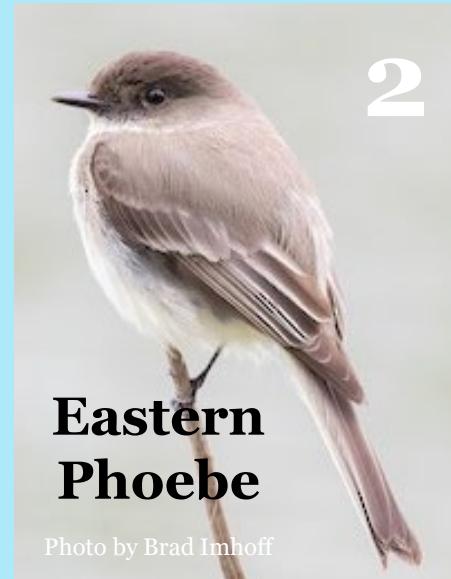


Eastern Phoebe  
(reference species)

## Group C

### Eastern Phoebe

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





## Group D





## Group D



### Eastern Phoebe

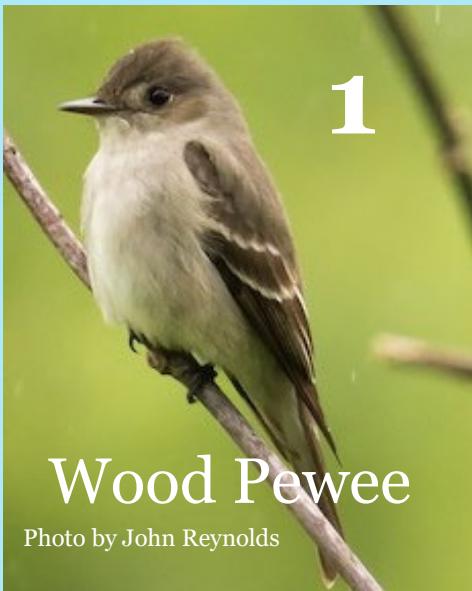
- No wing-bars
- Darkest on head and face
- Yellow wash on undersides
- Flicks tail downward very frequently



A photograph of a Least Flycatcher perched on a thin branch. The bird has a light-colored belly and dark wing bars. **1**  
Photo by John Reynolds

## Group E

A photograph of a Western Flycatcher perched on a branch with white lichen. The bird has a greyish back and dark wing bars. **2**  
Photo by Guy MirgainA photograph of a Least Flycatcher perched on a branch. The bird has a light-colored belly and dark wing bars. **4**  
Photo by Ryan SandersonA photograph of a Western Flycatcher perched on a branch. The bird has a greyish back and dark wing bars. **3**  
Photo by Ricardo Barrios



Wood Pewee

Photo by John Reynolds

## Empid

1

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



Photo by  
Ryan Sanderson

Empid

Empid

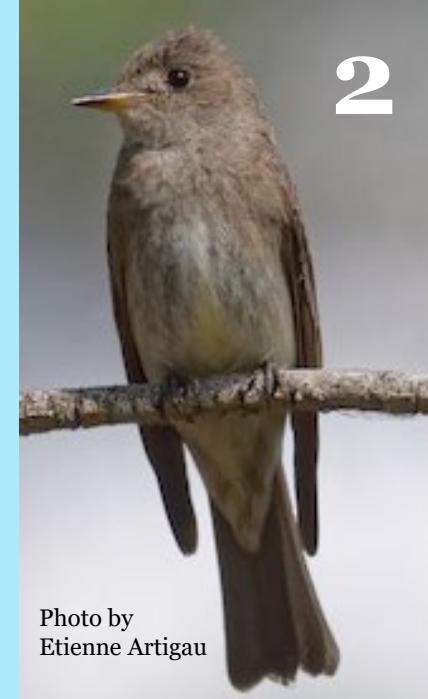
- Stronger eye ring
- Stronger wing-bars
- Longer legs
- Shorter wings
- Shorter primary extension

Group E



Empid

Photo by Ricardo Barrios



## Group F



**Empid**

**1**



Photo by Jeff Dyck

**Wood Pewee**

**2**

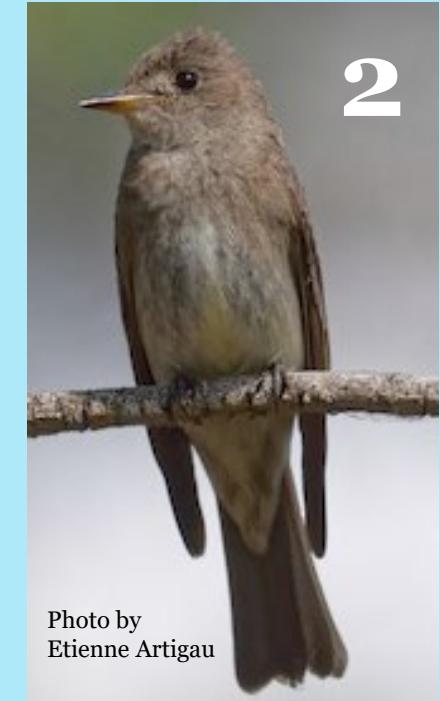


Photo by  
Etienne Artigau

**Wood Pewee**

Photo by Liam Wolff

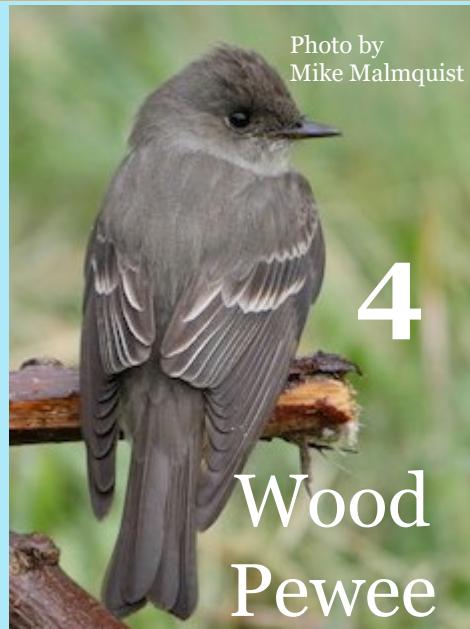


Photo by  
Mike Malmquist

**Wood  
Pewee**

**Group F**

**3**



Photo by Simon Best

**Empid**

# BUT FIRST, IS IT AN EMPID?

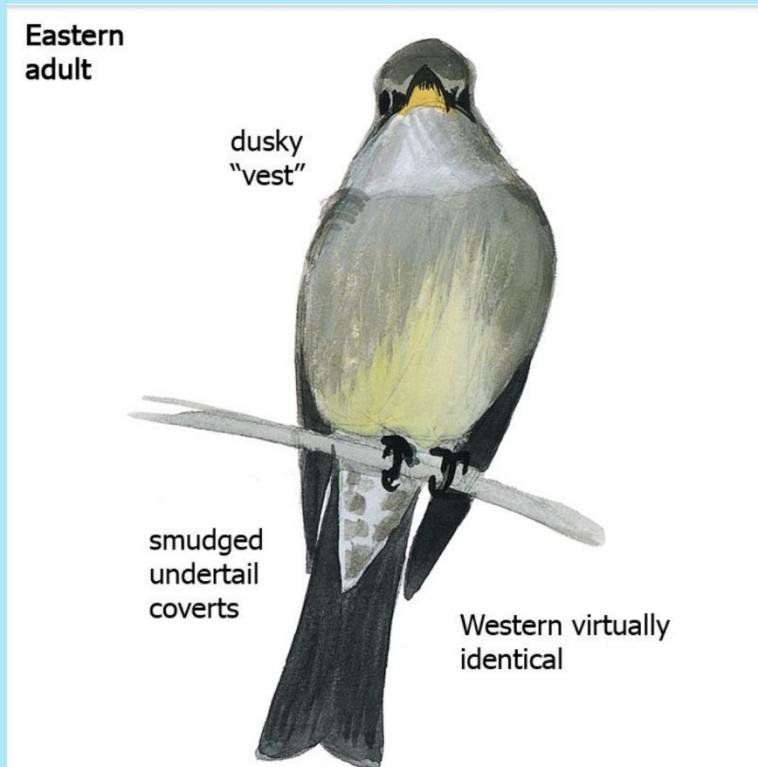
- ▶ Eastern Phoebe
- ▶ Eastern Wood-pewee
- ▶ Western Wood-pewee
- ▶ Tyrannulet
- ▶ Gray Vireo
- ▶ Hutton's Vireo
- ▶ Ruby-crowned Kinglet
- ▶ Lucy's Warbler
- ▶ Which one are we most likely to confuse with an Empid?

# PEWEES

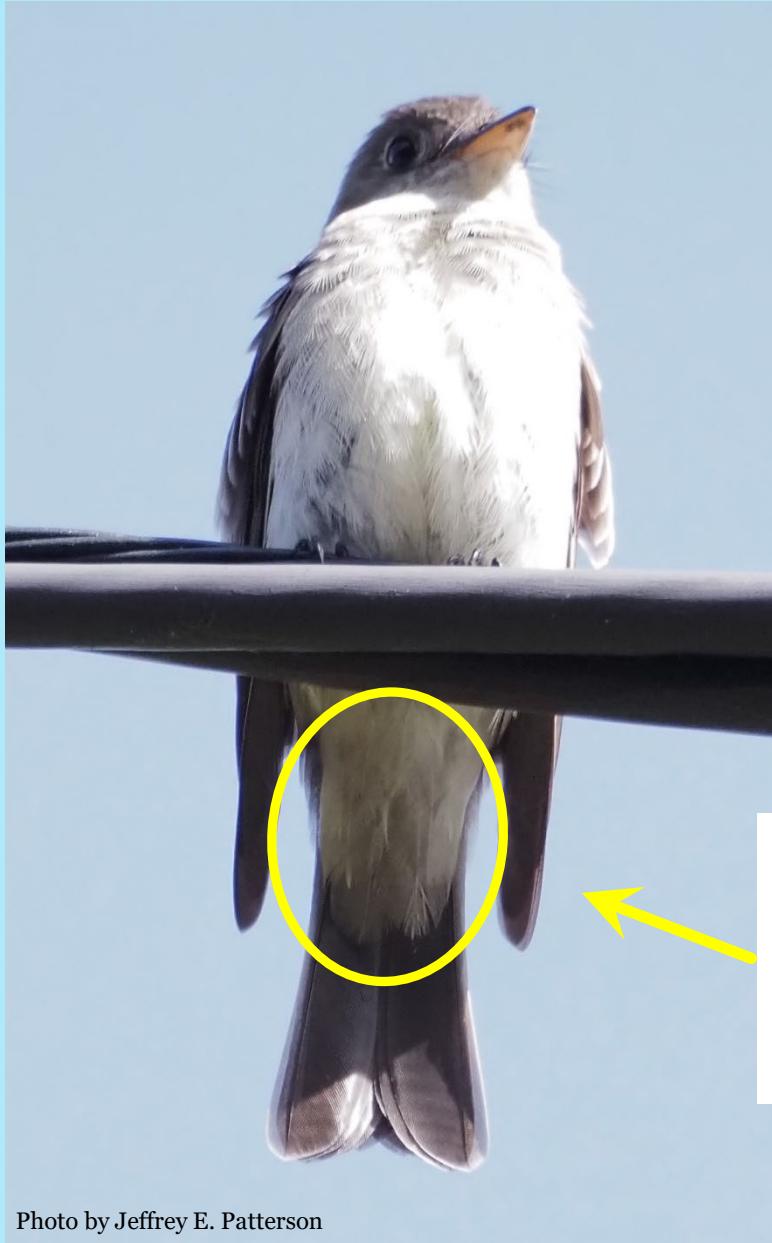
- ▶ More gray (not green, yellow...)
- ▶ Longer wings
- ▶ Longer primary projection
- ▶ Longer, more attenuated look
- ▶ Vestled look
- ▶ Smudgy undertail coverts
- ▶ Short legs
- ▶ Dark face
- ▶ Weak partial eye ring
- ▶ High perch, sally forth and return



# PEWEES: GOOD FIELD MARK



Painting by David A. Sibley



# A GOOD FIELD MARK FOR PEWEES



Photo by Jeffrey E. Patterson

Smudgy  
undertail  
coverts

# IS IT AN EMPID?

Empid



Photo by Matt Mason

Pewee



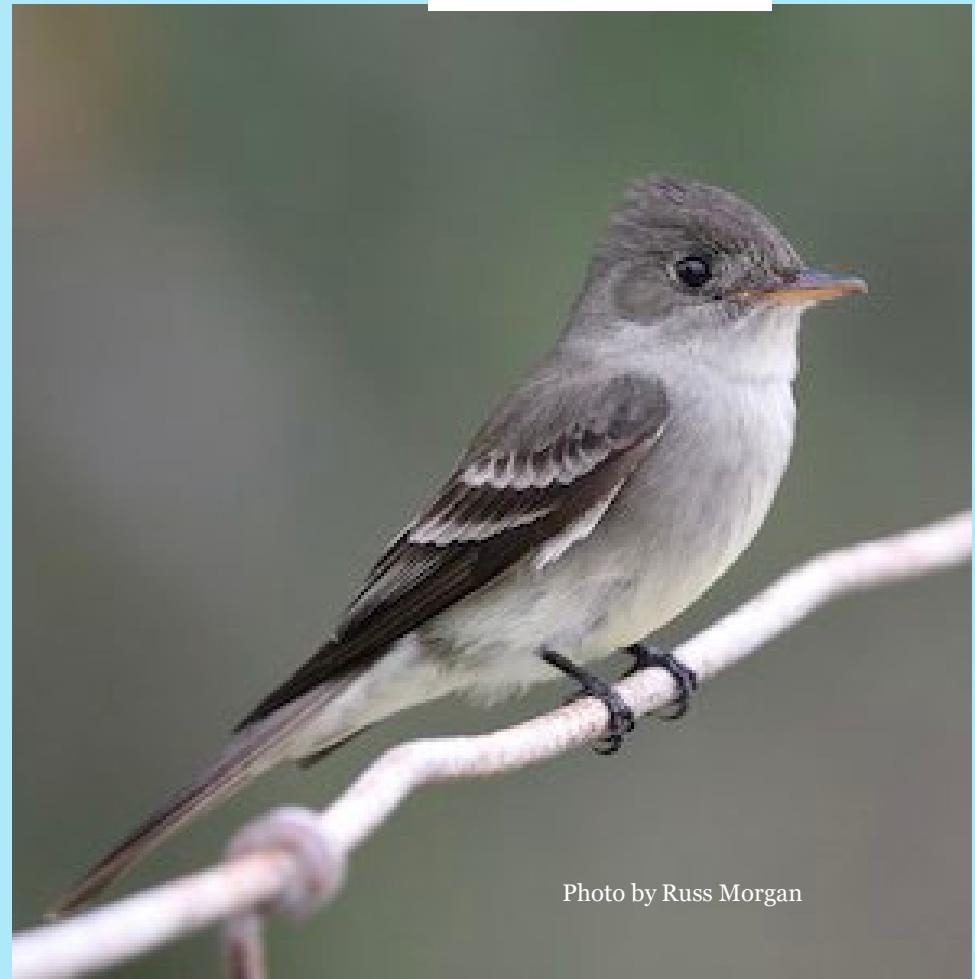
Photo by Russ Morgan

# IS IT AN EMPID?

Empid



Pewee



# IS IT AN EMPID?

Pewee



Empid



Photo by Guy Mirgain

Photo by John Reynolds

# IS IT AN EMPID?

Empid



Photo by Ryan Sanderson

Pewee

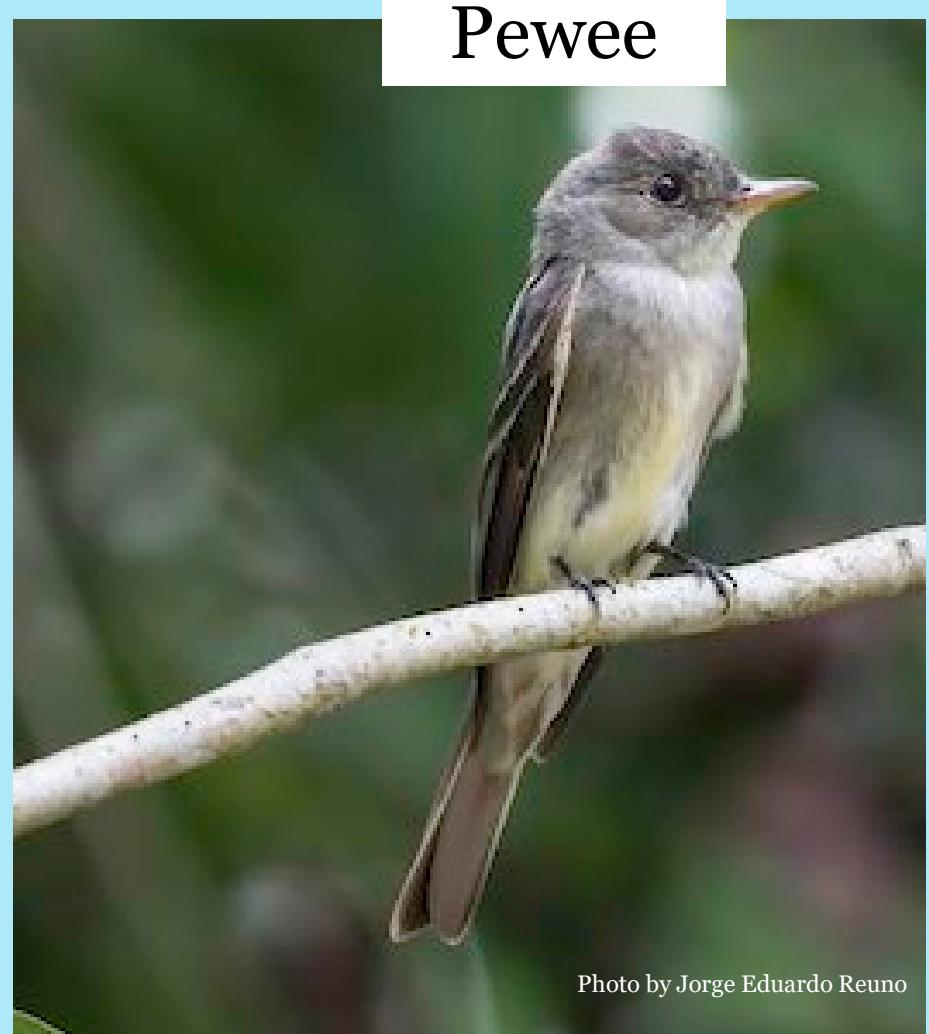


Photo by Jorge Eduardo Reuno

# IS IT AN EMPID?

Pewee



Empid



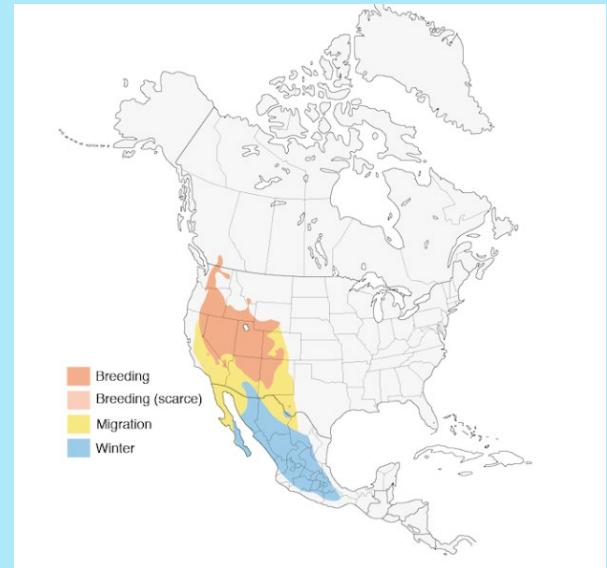
## “Western”



Cordilleran



Pacific-slope

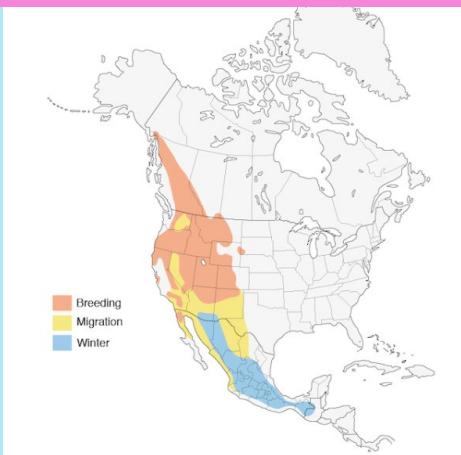


Gray

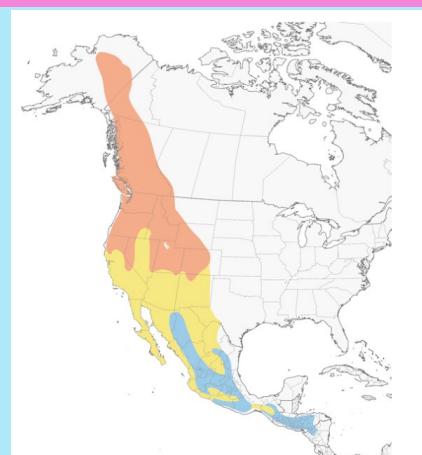
# Western Empids



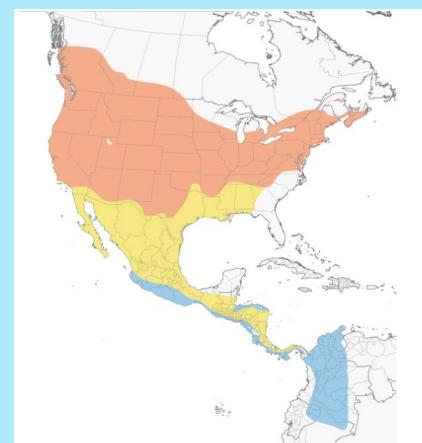
Buff-breasted



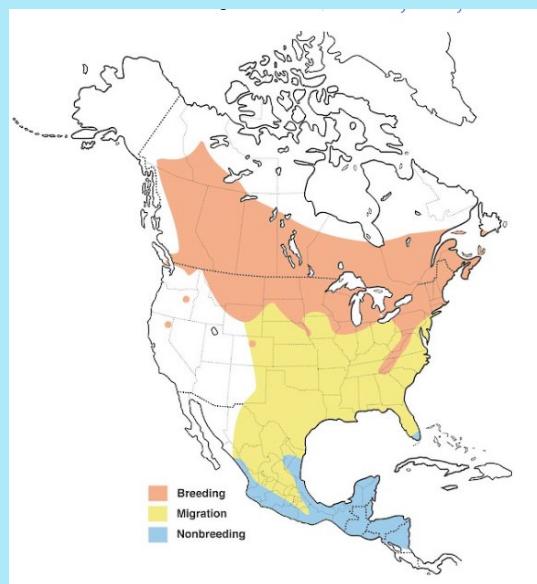
Dusky



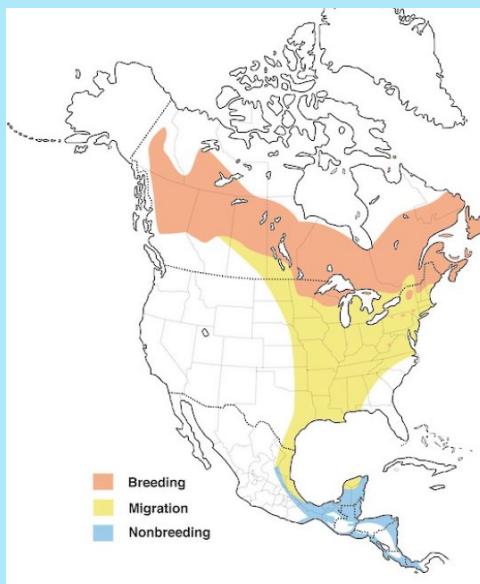
Hammond's



Willow



Least

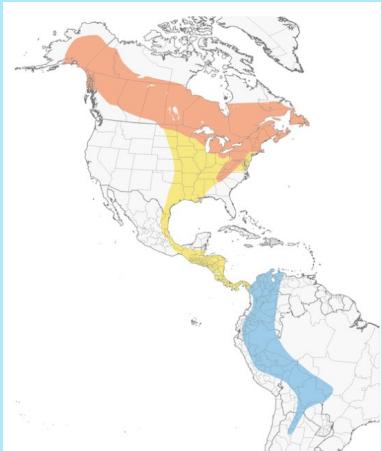


Yellow-bellied

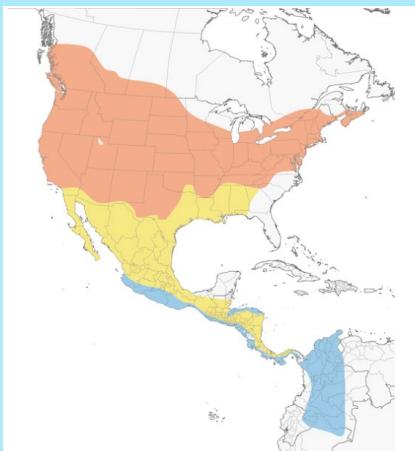


Acadian

“Trails”



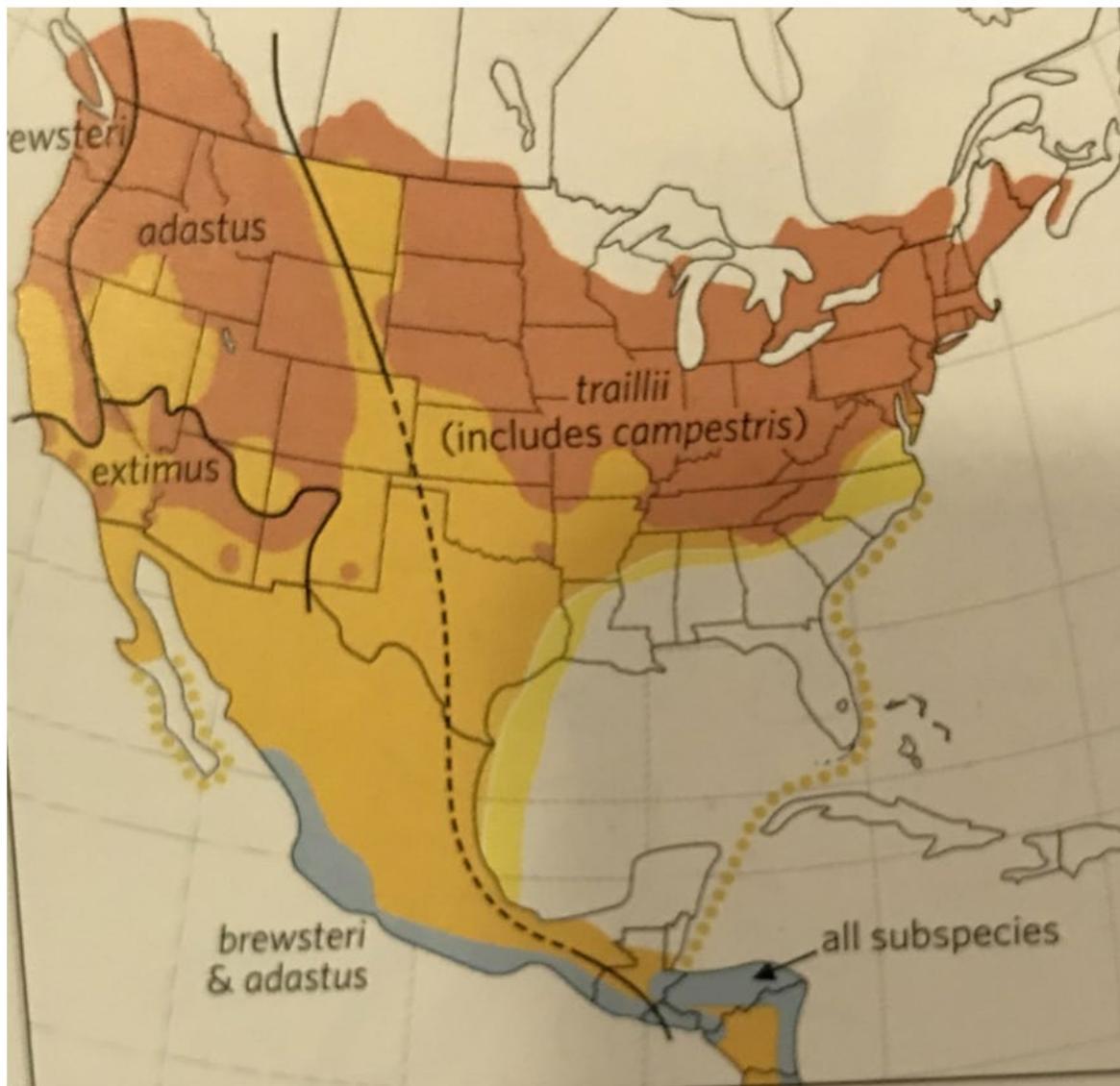
Alder



Willow

Eastern  
Empids

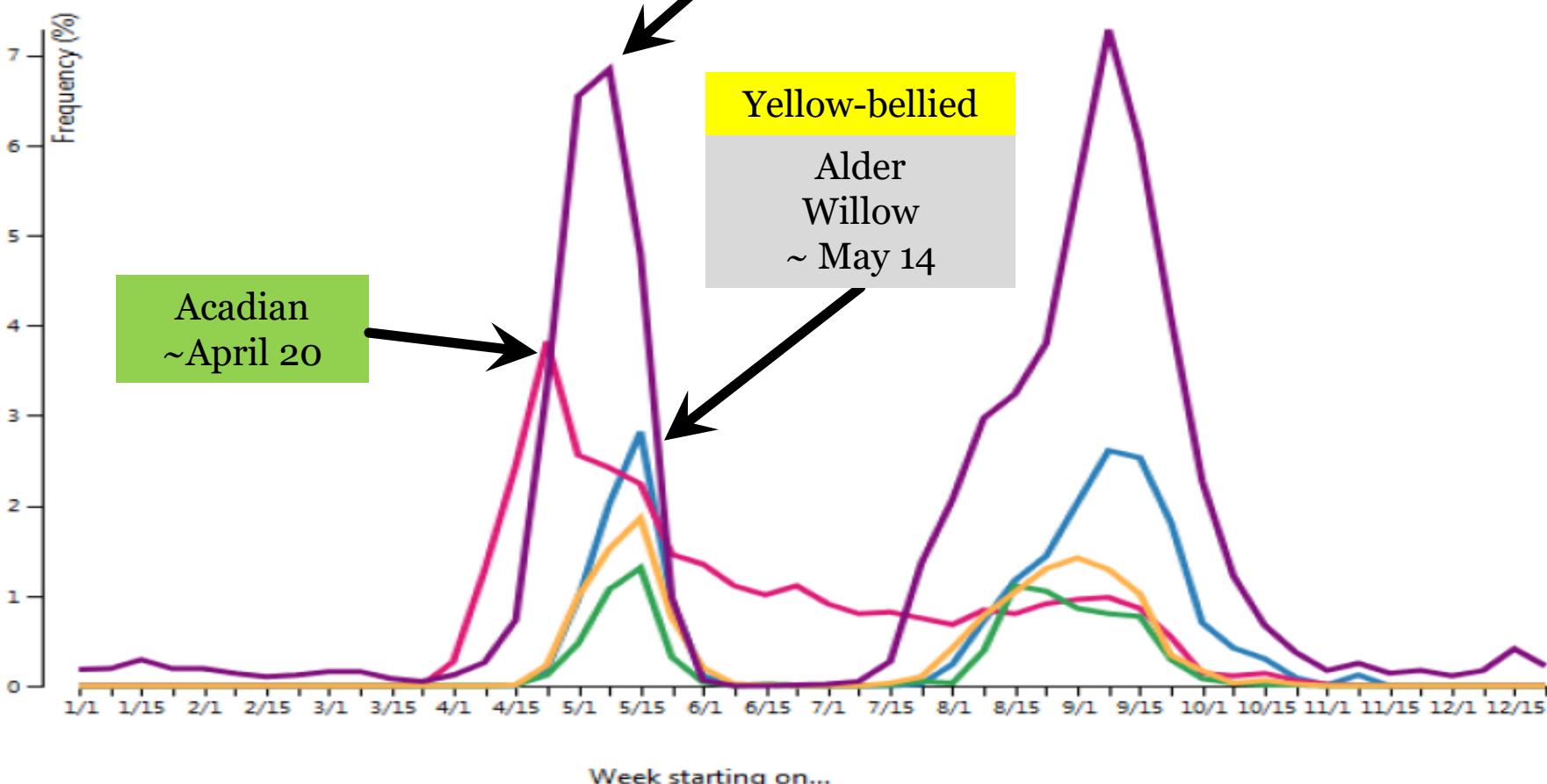
# WILLOW SUBSPECIES



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

# SPRING EASTERN EMPID TIMING IN TEXAS

Least  
~May 5



- Yellow-bellied Flycatcher
- Acadian Flycatcher
- Alder Flycatcher
- Willow Flycatcher
- Least Flycatcher

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

1

2

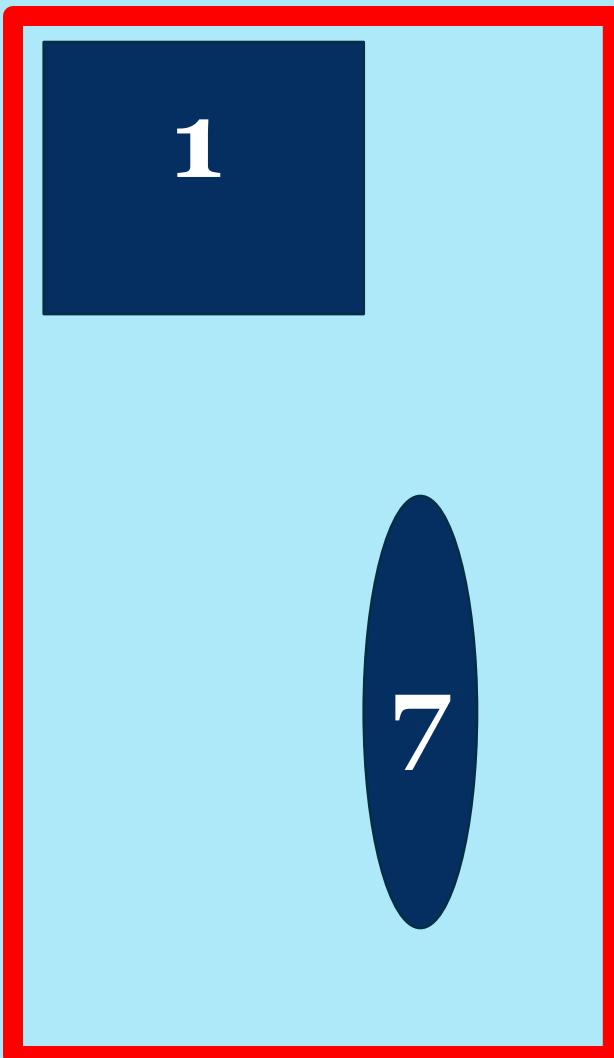
3

4

7

6

5



# EMPID EXERCISE 2

## SEEING EMPID GROUPINGS

1

3

2

4

7

6

5



1



2



3



7

Sort these  
Western  
Empids into  
1-7 groups



5



4

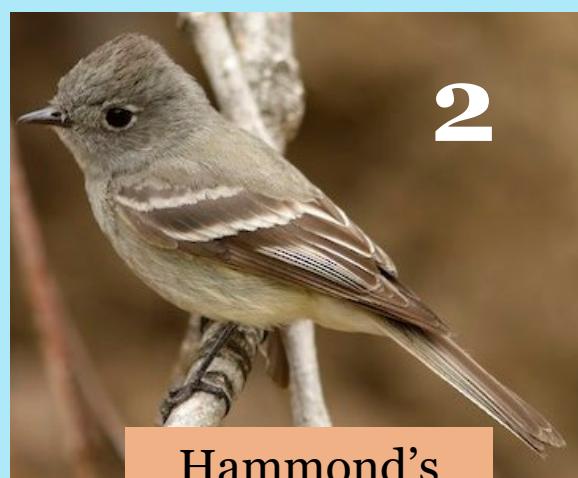


6



Jeff's Sorting  
(4 Groups)





## Jeff's Sorting (4 Groups)





Sort these  
Eastern  
Empids into  
1-5 groups

Eastern  
Empids



Jeff's Sorting

Eastern  
Empids



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					
	Structure	Wings	Bill	Tail	Head	Body
1		Wing proportions (wing length & primary projection)				
2		Shape of primary tips				
3			Tail proportions & shape			
4				Bill size, shape & color(s)		
5					Head shape & proportion to body	
6					Crown of head (peak, crest)	
7					Forehead slope	
8						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:			Rank
#	ATTRIBUTE		
1	Wing proportions (wing length & primary projection)		A
2	Shape of primary tips		
3	Tail proportions & shape		B
4	Bill size, shape & color(s)		A
5	Head shape & proportion to body		A
6	Crown of head (peak, crest)		
7	Forehead slope		
8	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	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	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 less pointed than Hammond's and some other Empids.	
3 (B)	Tail	Tail proportions & shape	Short, narrow tail.	
4 (A)		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.	
5 (A)	Head	Head shape & proportion to body	Head often looks proportionately large.	
6		Crown of head (peak, crest)	Roundish head.	
7	Body	Forehead slope	Sloped forehead.	
8 (A)		Body shape	Small and compact with short wings. Round body with thin tail. Looks small even for an Empid.	
9 (A)	Plumage	Eye-ring	Bold, complete, but messy eye-ring. Of uniform width. Often shows a white "kick" or "backdrop" in rear.	
10		Wing-bars	Bold and whitish on fresh adults. Dingy white on worn birds and buffy on juveniles.	
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.	
12 (B)		Color of upper parts	Pretty 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-bars and tertial edges. Wing-panel contrast.	
13 (B)		Color of lower parts	Gray-brown wash across breast. Flanks, belly and undertail coverts pale yellow to white-ish.	
14		Molt	Complete prebasic molt on the wintering grounds and thus will appear worn and faded by late summer and fall. Drab and very pale below with narrow wing-bars. Spring pre-alternate molt that involves body plumage and variable numbers of coverts, as wing-bars often broad and fresh in spring. Molt mostly completed before northeast migration, but some young birds may have a disheveled appearance. Juvenile undergo a partial prebasic molt before leaving the natal territory – thus fresh and brighter in the fall.	
15		Habitat/Micro-habitat	Nest in edges and clearing. Nesting in mature hardwood trees. Generally avoid being in the open.	
16	Behavior		Nests in hogs, swamps and damp coniferous woods. Usually found in the interior of dense woods, even in migration, so often difficult to observe.	
17 (A)		Song	Emphatic CHII-beek or chee-beek, repeated rapidly.	
18 (B)		Call	Sharp whit also sometimes in series. Somewhat harder than the similar calls of Willow, Gray and Dusky. Has been compared to a distant yellow-rumped warbler. Most vocal empid in migration.	
19		Migration	Circum gulf migrant. Most adults are gone from N. America before September.	
20	Other	Similar species	Most common Empid in the East. Only Willow has a similar whit call. Smaller than Willow, Alder, Acadia. 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, and a larger "kick" or "backdrop" at the rear of the eye-ring. Dusky has a longer and thicker bill compared with more ornate dark lower mandible. Dusky's tail is a bit longer and is possibly narrower at the base. Dusky has a longer and less compact shape. Least will have a whiter throat and blander 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, Acadia, Yellow-bellied, Cordilleran and Pacific Slope have the back-drop shaped eye-ring. 1/2 inch smaller than Acadia. Willow, Alder; 1/4 inch smaller than Hammond's. Yellow-bellied is larger headed and more portly; Acadia 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 Acadia. Separated from Acadia by yellow rather than whitish throat and smaller bill. Distinguished from Least by voice, structure, low-contrast throat. Least is more stiff-featured; Acadia 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 gaudier. Extremely similar to "Western", but on average is more yellow below and green above. Usually separated by range. The eye-ring is more usually circular (rather than back-drop) and the more blackish wings contrast with the whitish tertials and secondary edges. The tail is a bit shorter than "Western", which accentuates the stubby appearance; the head appears more rounded (not peaked). Appressed in general plumage by Acadia, but even bright Acadias should not be as strongly yellowish in the throat. The Acadia is structurally different in overall size, bill size and structure, primary projection and tail structure. When the Acadia does have yellow on the throat, it is usually clear pale yellow, subtly different than the grayish yellow of the Yellow-bellied. Because all Acadias 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. Hammond's is longer winged and narrower-billed.

# THE EMPID CHECKLIST 2

EMPIDONAX CHECKLIST: EASTERN EMPIDS				
#	ATTRIBUTE	ALDER	WILLOW	
1 (A)	Wings	Wing proportions (wing length & primary projection) Shape of primary tips	Moderately primary projection. Moderately primary projection.	
2				
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 tails of smaller Empids.	
4 (A)	Bill	Bill size, shape & color(s)	Large broad-based bill (most like that of Alderine, but not as broad at the base) which may seem to have a slightly convex edge. Lower mandible frequently entirely fleshy-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.	
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	Head	Crown of head (peak, crest)	Head is sometimes gently rounded, sometimes peaked toward the rear, but always slender. Possibly rounder-headed than Eastern Willow.	
7	Head	Forehead slope	Shallow to medium forehead	
8 (A)	Body	Body shape	Large, lanky Empid with a fairly heavy bill and a long-face.	
9 (A)		Eye-ring	Varies from conspicuous, but narrow, to virtually absent. No kick or bar at the rear. Alderine almost always has a conspicuous and complete 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 edgings 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.	
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 than Western than Alderine.	
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.	
13 (B)	Plumage	Color of lower parts	Paint grayish wash across the breast. Whitish or slightly yellowish belly.	
14		Molt	In fresh plumage during spring migration. Undergo molt on the wintering grounds so by fall migrating adult Alders (and Willow) are in worn plumage. Wingbars 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.	
15		Habitat/Micro-habitat	Brushy habitats near bogs.	
16		Behavior	Maintains 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.	
17 (A)		Song	Best distinguished by voice. Alders a falling wheety "wee-oo-oo". Willow a sneaky "tsu-tsu". Alder's song is usually written as "tsu-tsu-oo", but seldom sounds clearly three syllabled. Might be better written as <i>tsuu-HUUU</i> . Strongly accented on the second syllable.	
18 (B)		Call	Alders: A loud "tsu". Willow: a liquid "tsu-tsu". Reminiscent of a single note of Olive-sided Flycatcher. Unlike the trill of Willow and other Empids. Reminiscent of the pit-note of Three-toed Woodpecker or the chip of White-throated Sparrow.	
19		Migration		
20	Other	Similar species	Slightly longer primary projection than western subspecies of Willow. Functionally 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 brownish-tinged olive wash across the chest. Alders tend to be a bit darker green on the upper parts and nape, with a purer olive wash across the chest. Further distinguished from Alderine by upper parts coloration (Alderine is darker, more olive green on the head and upper parts; "Tsu's" darker, darker olive, brownish olive or grayish olive). Willow lacks prominent eye-ring. Looks like a smaller version of Willow (except by voice). Functionally 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 "Trill's sp.". Trills tend to be drabber than Westerns, Yellow-bellied, or Acadains. Trills are closest structurally to Acadain, but they typically show less primary projection and slightly thinner bills. Further distinguished from Acadain vocally.	The extreme similarity between eastern Willow and Alder cannot be stressed enough. Many individuals cannot be distinguished 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-warbler, but warves have noticeably longer wing-bars and narrower bills. Willow especially Trills in the east. Acadain, however, and extremes 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). Willow usually appears darker, and their nape appears paler (often with grayish tones). On average, Willow 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 brownish-tinged olive wash across the chest. Alders tend to be a bit darker green on the upper parts and nape, with a purer olive wash across the chest. Further distinguished from Willow by upper parts coloration (Acadian: paler, olive green on the face and upper parts; Trills: darker, darker olive, brownish olive or grayish olive). Alder bill is slightly shorter, eye-ring usually more prominent, back grayer than Willow. Alder had 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 brownish above, has shorter bill with dark tip to lower mandible and different call.

# THE EMPID CHECKLIST 3

EMPIDONAX CHECKLIST: EASTERN EMPIDS			
#	ATTRIBUTE	ACADIAN	PEWEES
1 (A)	Wing	Wing proportions (wing length & primary projection) Long primary projection. Long-winged. Shape of primary tips Sword-like tips.	Longer wings than Empids, often appearing to extend a third of the way down the tail.
2			
3 (D)	Tail	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 pinkish yellow.	Narrower bill than Willow. Black upper mandible, dull orange lower mandible.
5 (A)	Structure		
6	Head	Head shape & proportion to body Large head.	Large, somewhat shaggy and peaked head.
7		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.
8 (A)	Body	Forehead slope Flat forehead.	
9 (A)		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.
10			
11 (D)	Plumage	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.
12 (D)		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).
13 (D)		Throat color & contrast Even though the <u>throat</u> is white or whitish it does not contrast sharply with the face because of this <u>pale green malar area</u> , which is one of the most obvious visual marks of the species.	Not so contrastingly white on the throat as Willow Flycatcher.
14 (D)		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 <u>a</u> 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.
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16			
17 (A)		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 "rust" (darker than Empids). Grayish "strudges" on undertail coverts.
18 (D)			
19			
20	Other	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 scaled 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.	
21		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.
22			
23			
24 (A)		Behavior A bird of the forest interior – unlike most other Empids. Generally forages amid the leaves of the lower canopy and understorey. Also darts out and hover 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.	Choose fairly high conspicuous perches and return to it repeatedly. Do not flick their tails when perched.
25 (D)			
26			
27 (A)		Song Explosive post-wait! Or post-exp!	Slow, measured 2-part pluvialis lament – a question followed by an answer. A 2 or 3 note question "Pee-whiteEE?" or "Pee-ur-EE?" ending on a high note, followed by a long pause and then a reply "PEE-exp!"
28 (D)		Call Post! is noticeably different than the whirr of the Willow or the kip of the Alder.	
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# THE EMPID CHECKLIST 4

## SOURCES

### EMPID CHECKLIST

COMPILED FROM THE FOLLOWING SOURCES BY Jeffrey E. Patterson

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# 20 ATTRIBUTES

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





