

DINÁMICA ESPACIO-TEMPORAL DE COLIBRÍES (TROCHILIDAE), EN EL CENTRO OESTE DE MEXICO.

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Universidad de Guadalajara
Mayo 2012

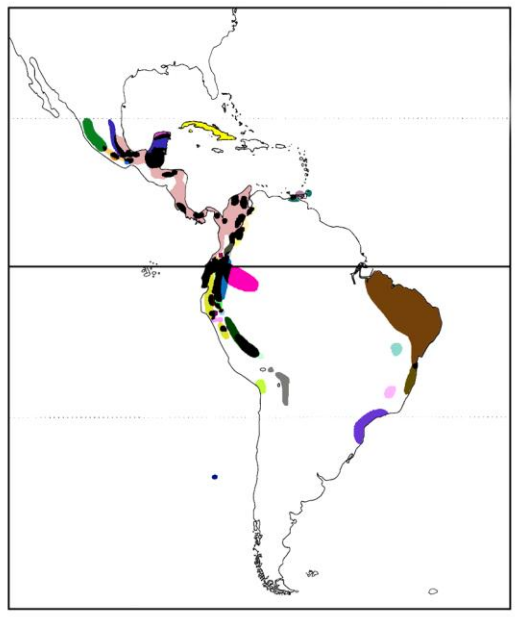


Dr. E. Santana, Dr O. Cardenas, y Dr. LI. Iñiguez

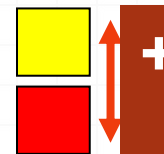


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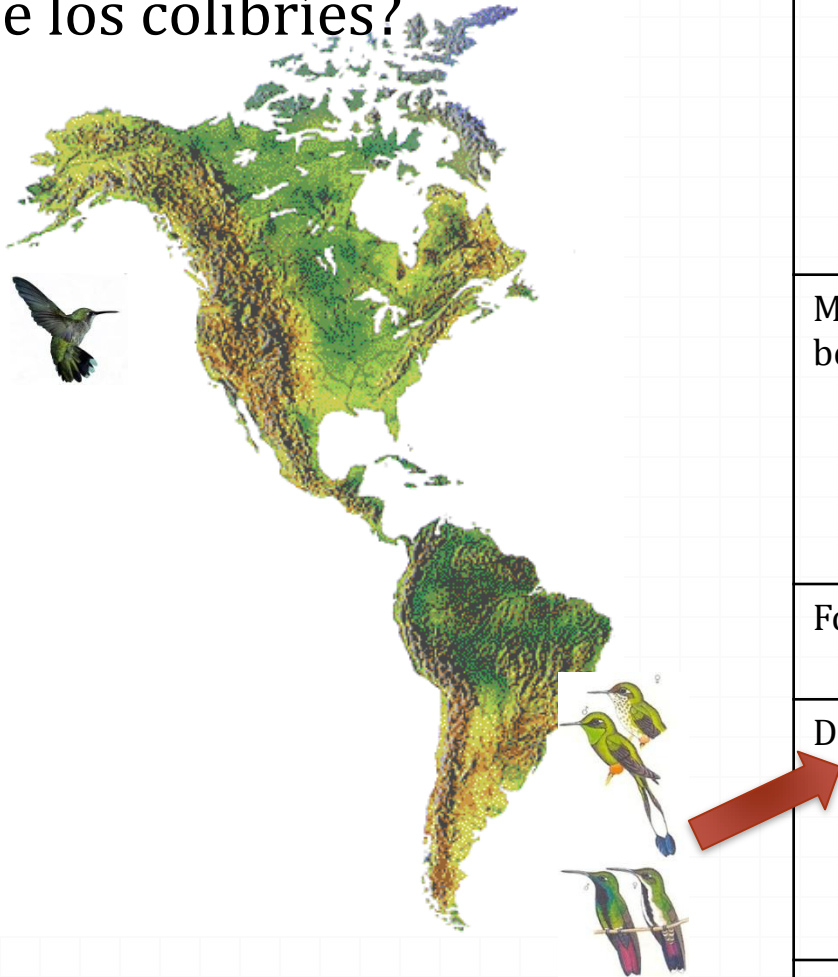
Why to study...?



Pixels with hot spots



¿Que factores influye en la distribución y abundancia de los colibríes?



<http://www.airhighways.com>

Factor	Bibliography
Seasonal resources	Feinsinger 1976, 1978; Carpenter 1987; Arizmedi and Ornelas 1990; Ornelas and Arizmendi 1995; Arizmendi 2001; Schöndube et al., 2003; Schöndube et al., 2005 and Abrahamczyk and Kessler 2010
Morphological-behavioral adaptations	Wolf et al., 1976; DesGranges 1977; Stiles 1979, 1981; DesGranges and Grant 1980; Calder 1987; Rappole and Tipton 1992; Shuchmann 1996; Schondube et al., 2001; Calder 2004;
Foraging strategies	Shuchman 1996; Rodriguez-Gomez 2009
Disturbances	(Contreras-Martínez 1992; Contreras-Martinez and Santana 1993, and Langle 2009).
Weather conditions	Calder and Contreras-Martinez 1993; Rahbek and Graves 2000; Rappole and Schumann 2003; Schondube et al., 2004

Pregunta

- o ¿Cual es el patrón anual espacio temporal de uso de hábitat de 24 especies de colibríes del Centro-oeste de México (COM)?

Objetivos

1. Caracterizar la comunidad de colibríes en el COM.
2. Analizar la distribución espacio-temporal de la comunidad de colibríes en el Oeste de America del Norte (OAN) .



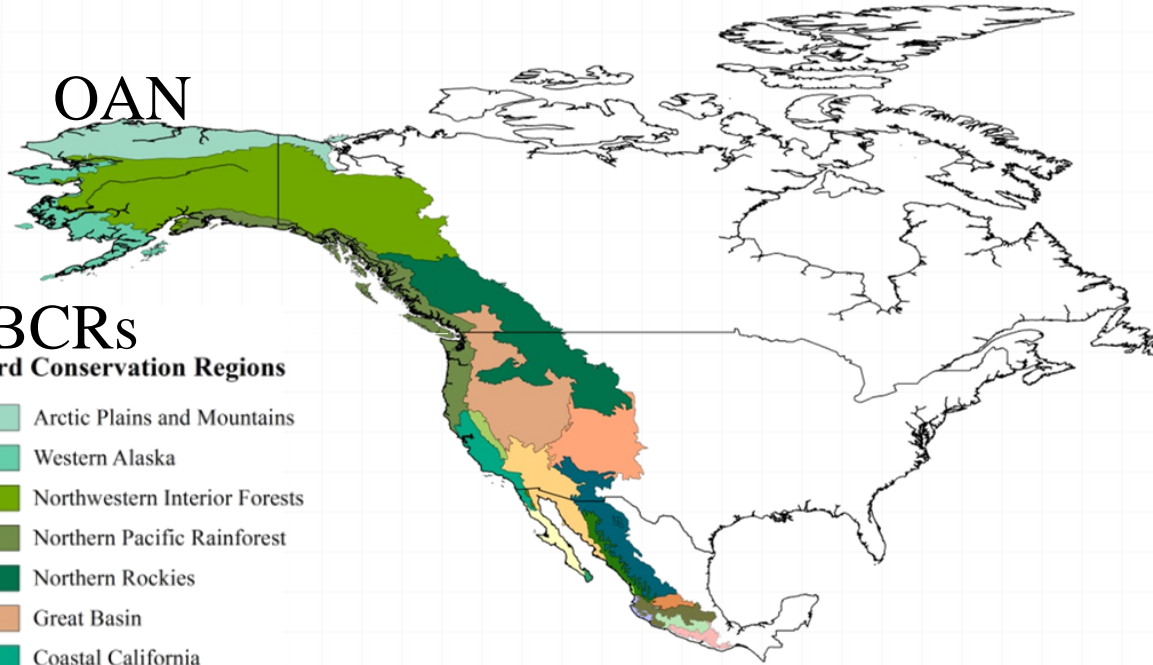
Área de estudio

OAN

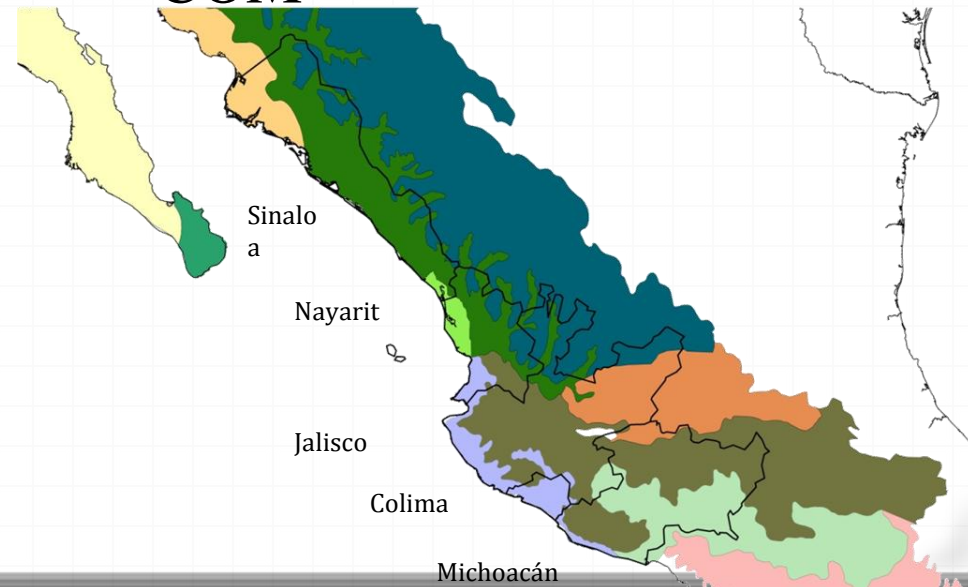
BCRs

Bird Conservation Regions

- Arctic Plains and Mountains
- Western Alaska
- Northwestern Interior Forests
- Northern Pacific Rainforest
- Northern Rockies
- Great Basin
- Coastal California
- Southern Rockies/Colorado Plateau
- Sierra Nevada
- Sonoran and Mojave Deserts
- Baja California Desert
- Baja California Sierras
- Cabo Sierras and Plateau
- Western Sierra Madre
- Southern Mexican Plateau
- Western Coastal Plains, Hills and Canyons
- National Marshes
- Neovolcanic Transverse Belt
- South Pacific Coastal Plains and Hills
- Rio Balsas Basin
- Southern Sierra Madre



COM



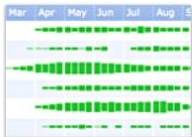
Metodología

- Base de datos de Manantlán 20 años uso de redes
- Base de datos de eBird (2011) de 20 RCA
 - Datos reportados 1900-2011.
- Presencia/ausencia
- Validación de registros
- Análisis espacial-temporal con herramientas de eBird
- Comparación de mapas de Howell y Web (1995) y aves de América del norte en línea (2009)



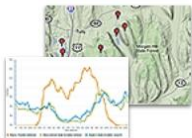
Global Range Maps

Explore interactive range maps for any species around the world



Bar Charts

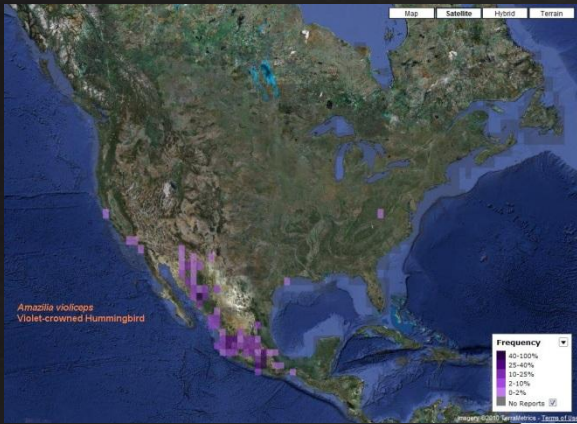
View seasonal patterns of bird occurrence throughout the year for any region



Graphs and Maps

Create graphs or interactive point maps for any location, or seasonal grid maps for the Americas





Resultados



7

Comunidad de colibríes en el centro-oeste de México

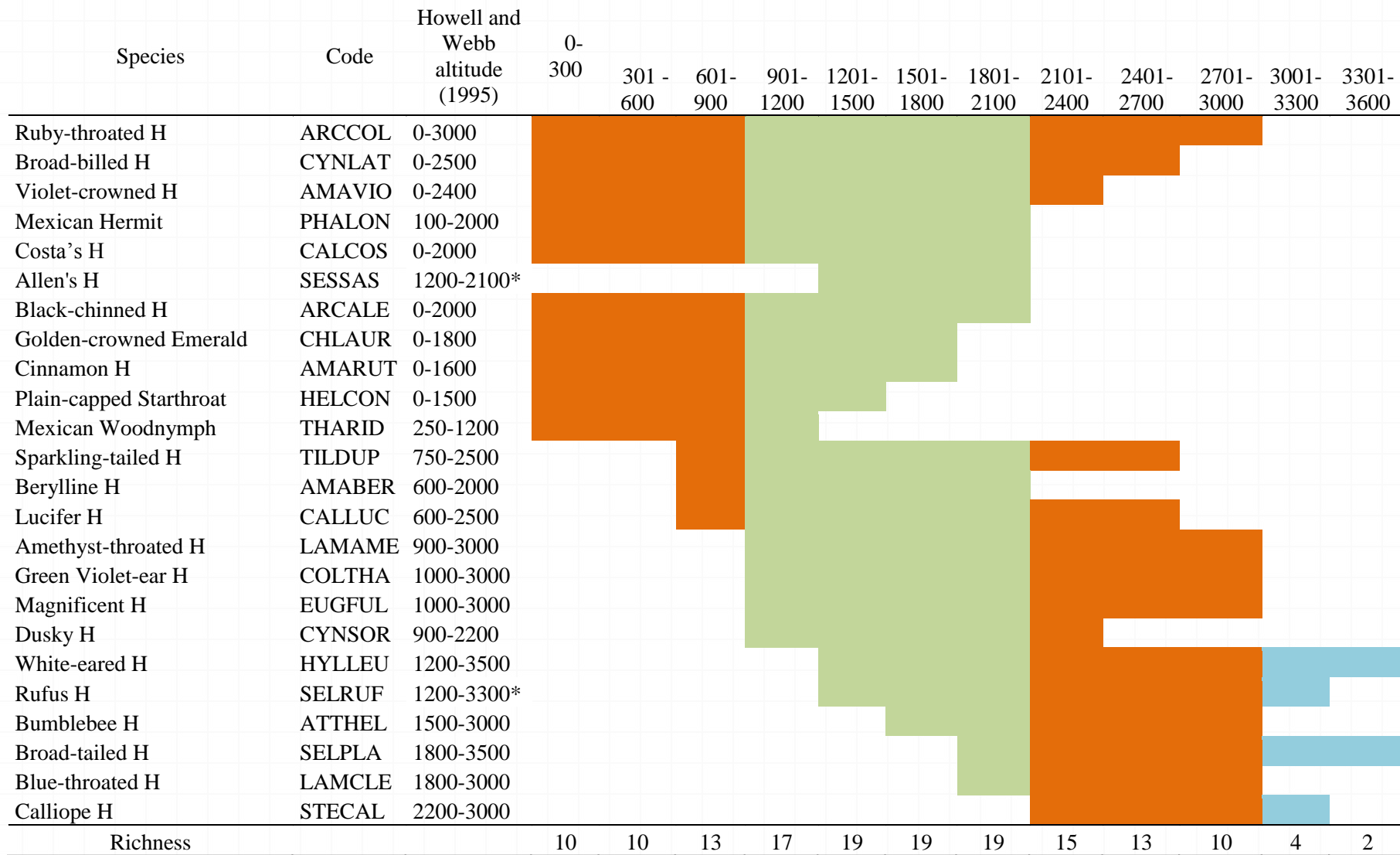
NOMBRE CIENTIFICO	END/NOM	Est. COM
<i>Phaetornis longirostris</i>	W	Rp
<i>Campylopterus hemileucurus</i>		Acc
<i>Colibri thalassinus</i>		Rp
<i>Chlorostilbon auriceps</i>	W	R
<i>Cynanthus sordidus</i>	SW	R
<i>Cynanthus latirostris</i>	SE	Rp
<i>Thalurania ridgwayi</i>	W/Pr	R
<i>Hylocharis leucotis</i>		R
<i>Amazilia beryllina</i>		R
<i>Amazilia rutila</i>		R
<i>Amazilia violiceps</i>	SE	Rp
<i>Lampornis amethystinus</i>		R
<i>Lampornis clemenciae</i>	SE	R
<i>Eugenes fulgens</i>		Rp
<i>Heliomaster constantii</i>		R
<i>Tilmatura dupontii</i>	A	Rp
<i>Calothorax lucifer</i>	SE	RP
<i>Archilochus colubris</i>		VI/T
<i>Archilochus alexandri</i>	ET	VI/T
<i>Calypte costae</i>	ET	VI
<i>Stellula calliope</i>	ET	VI
<i>Athis eloisa</i>	MM	Rp
<i>Selasphorus platycercus</i>	SE	VI/R
<i>Selasphorus rufus</i>	ET	VI/T
<i>Selasphorus sasin</i>	ET	VI/T



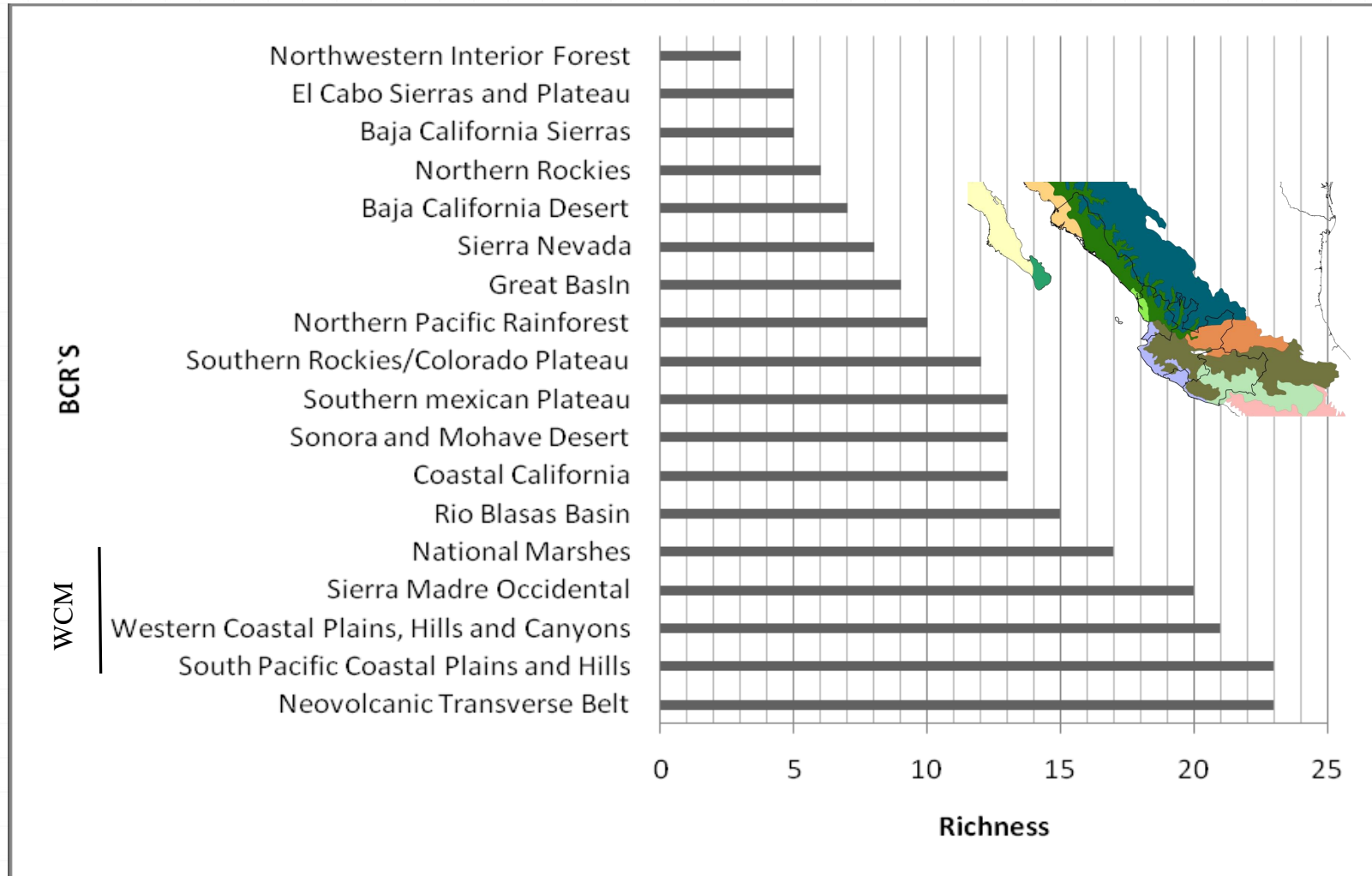
SPECIES	MONTH OBSERVED												BREEDING
	JAN	FEB	MAR	APR	MAY	JUNE	JUL Y	AUG	SEP T	OCT	NOV	DEC	
YEAR-ROUND RESIDENTS													
<i>Lampornis amethystinus</i>	2.74	2.36	3.99	2.26	5.56	8.42	3.6	2.86	2.76	2.55	2.46	1.85	Breeds
<i>Hylocharis leucotis</i>	1.74	1.84	3.17	3.04	5.54	5	1.17	0.63	1.87	1.53	2.32	1.67	Breeds
LOCAL/ALTITUDINAL MIGRANTS (Primarily Winter residents)													
<i>Amazilia beryllina</i>	0.59	0.76	0.72	0.51	4.09	2.61	0.04	0.07	x	0.1	0.48	0.59	Potential
<i>Atthis heloisa</i>	0.28	0.25	0.41	0.31	0.74	0.33	x	0.07	0.25	0.43	0.24	0.54	Breeds
<i>Eugenes fulgens</i>	1.9	0.94	1.33	0.27	0.19	0.1	0.02	x	0.18	0.63	0.48	1.08	Potential
<i>Colibri thalassinus</i>	1.12	0.85	1.13	0.14	x	0.02	x	0	0.64	0.73	0.31	0.59	Breeds
LONG-DISTANCE MIGRANT													
<i>Selasphorus rufus</i>	3.64	1.26	1.43	0.02					0.03	0.36	2.39	3.62	
<i>Stellula calliope</i>	0.47	0.18	0.82	0.08					0.03	0.83	0.31	0.69	
<i>Selasphorus sasin</i>	x	x	x								x	0.1	
<i>Calypte costae</i>	x								0.03			0.08	
<i>Archilochus colubris</i>	0.03									0.07		0.03	
<i>Selasphorus platycercus</i>	1.31	0.38	0.51	0.08					x	0.36	0.48	0.57	Breeds
<i>Archilochus alexandri</i>									0.03	0.13	0.03		Fall transient
LOCAL/ALTITUDINAL SUMMER VISITOR													
<i>Thalurania ridgwayi</i>					0.41	0.62	0.04	0.03		0.07	0.03		
<i>Phaethornis mexicanus</i>			x	0.1	0.25	0.22	0.04		0.03				
<i>Cynanthus latirostris</i>					x	0.1							
<i>Amazilia rutila</i>						0.02	0.02						
<i>Amazilia violiceps</i>			x	0.04		0.05							
WITHOUT CLEAR PATTERN (EDGE LATITUDINAL/LATITUDINAL RANGE)													
<i>Lampornis clemenciae</i>	x	0.02					x	x			x		
<i>Tilmatura dupontii</i>		x		x	0.14	x						0.05	
<i>Calothrorax lucifer</i>						x							
Monthly Effort Net-hours*	3214.7	4453.5	977.5	4901.7	3666.6	4179.9	4949.7	3011.5	3264.1	3014.8	2929.8	3892.7	
Total Effort Net-hours: 42,456.43													

*Nethours refers to the sampling effort during that month for various years pooled from 1995 to 1999. Numbers refer to the number of individuals captured per 100 nethours. X refers to the species being observed during that month either incidentally, or in other studies, that include 12,126 captures of hummingbirds from 1991 to 2010.

Distribución altitudinal en el COM

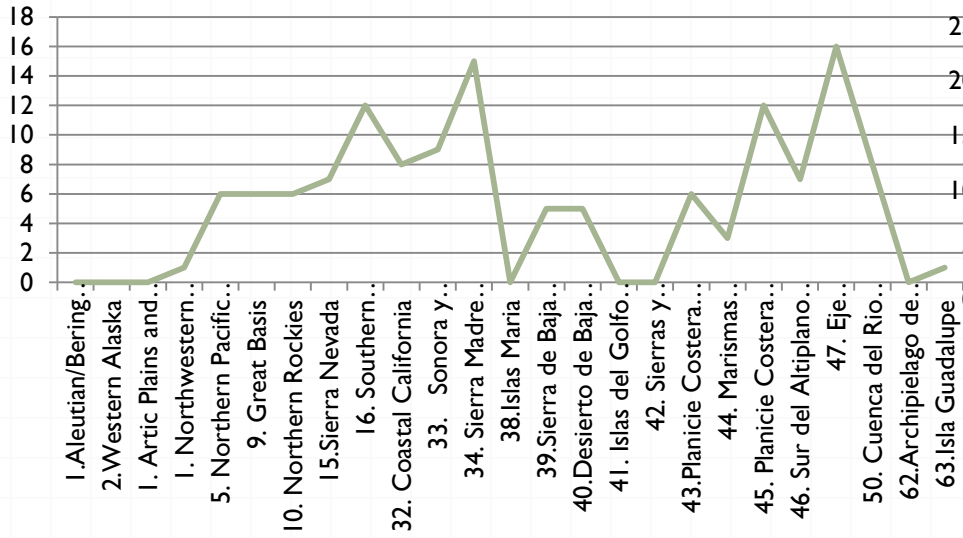


Regiones de Conservación de Aves (BCRs)

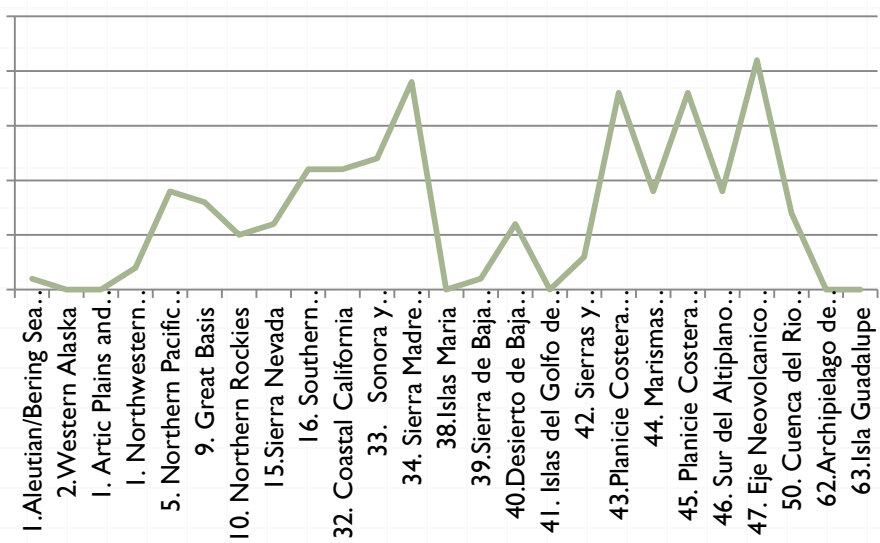


Distribución dinámica de colibríes en el Oeste de América del Norte

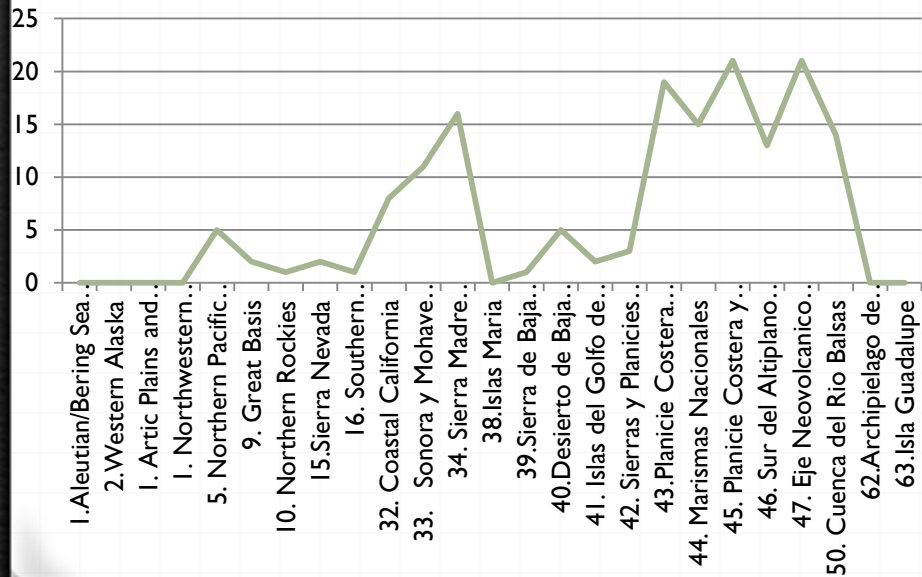
Verano



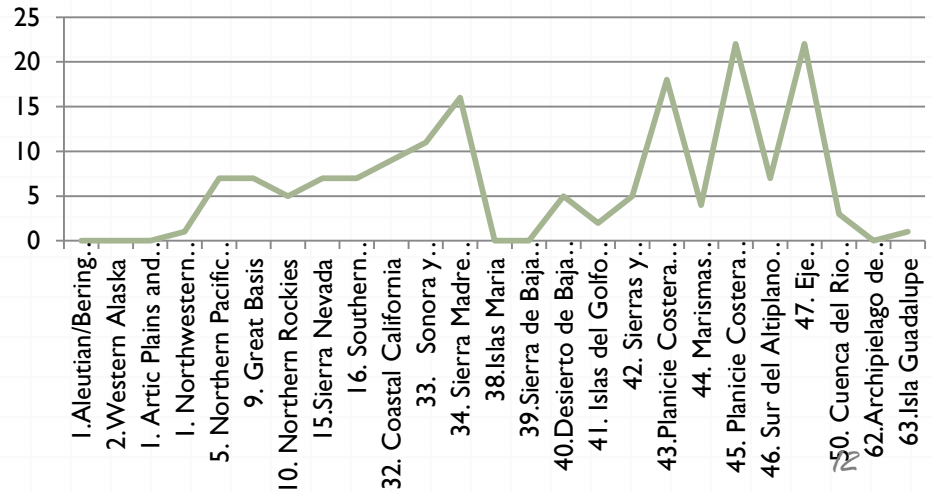
Otoño



Invierno



Primavera



¿Qué tan extensa o local es la distribución?



BCR

Primavera

1-3	4-6	7-9	10-12	13-14
PHLO	CHAU	CYLA	CACO	ARAL
CO TH	HYLE	AMVI	STCA	SERU
CYSO	AMBE	EUFU	SEPL	
HYXA	AMRU		CAAN	
THRI	LACL			
LAAM	HECO			
TIDU	CALU			
ATHE	ARCO			



Verano

PHLO	AMBE	CYLA	ARAL	
CO TH	AMRU	HYLE	CACO	
CHAU	LACL	AMVI	SERU	
CYSO	EUFU	STCA	CAAN	
THRI	HECO	SEPL		
HYXA	CALU			
LAAM	SESA			
ARCO	ATHE			



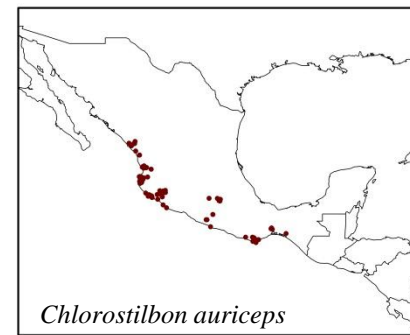
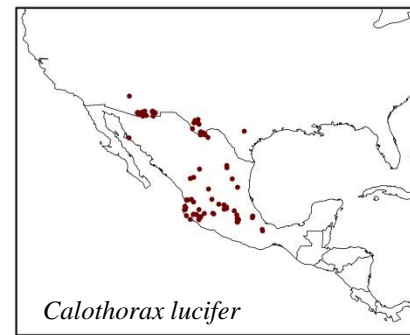
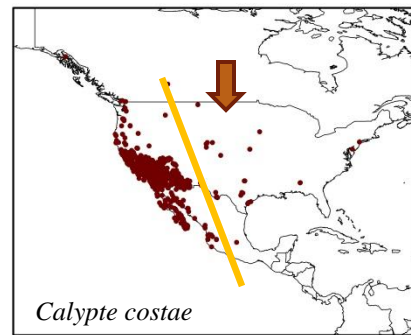
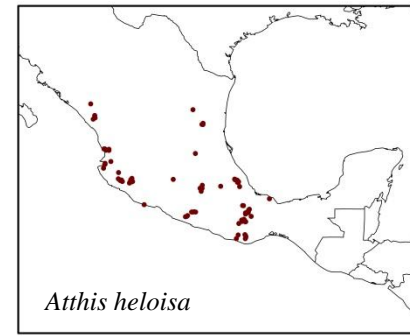
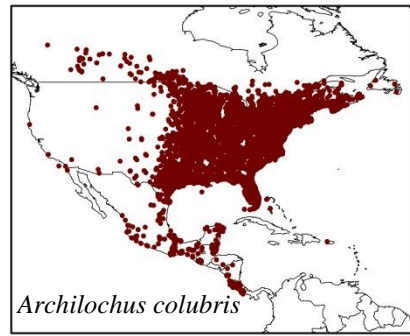
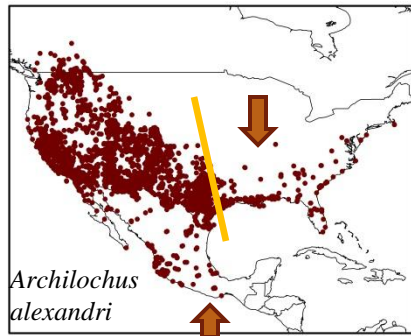
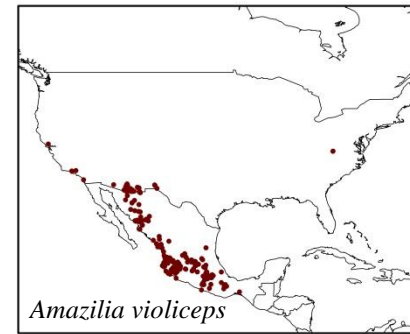
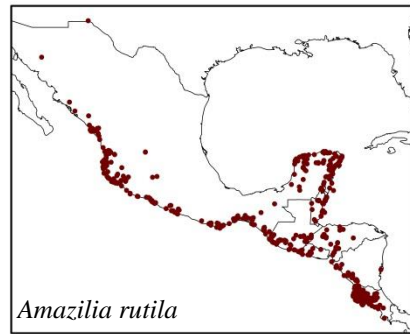
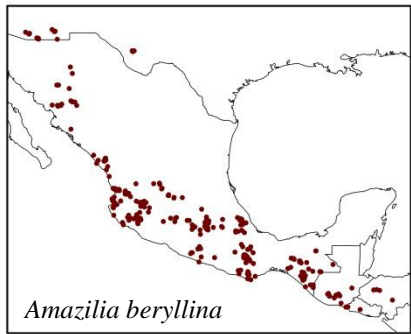
Otoño

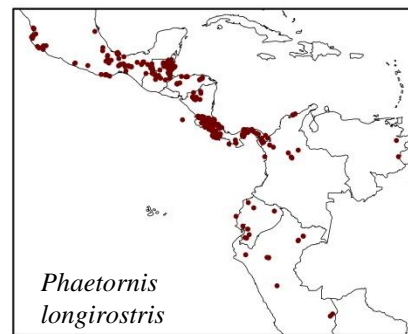
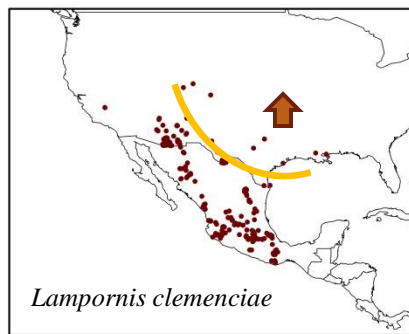
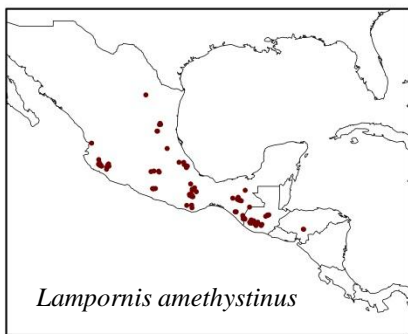
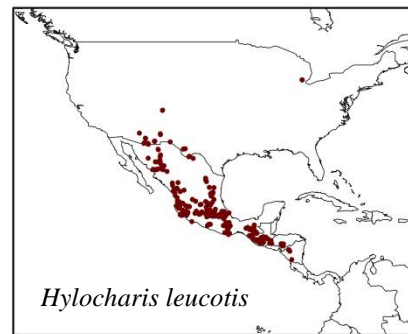
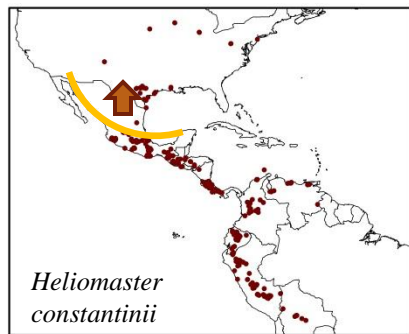
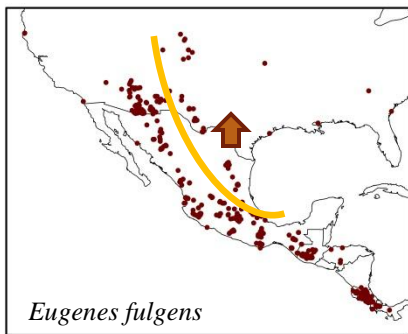
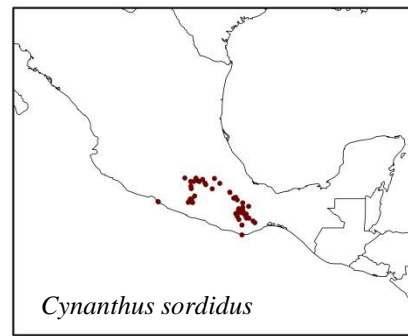
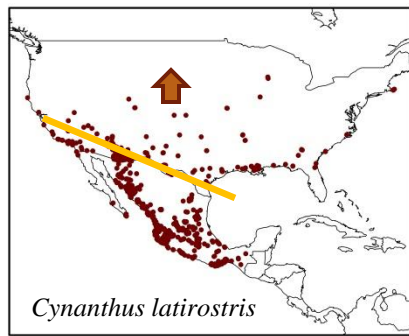
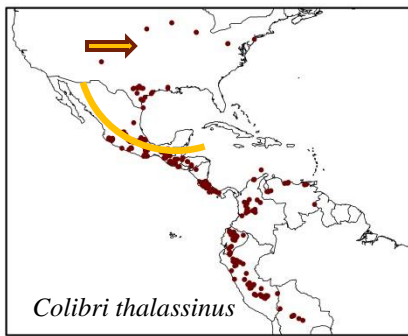
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CYSO	CHAU	AMVI	ARCO	SERU
THRI	HYLE	EUFU	CACO	
HYXA	AMRU	SESA	STCA	
LAAM	LACL		SEPL	
ATHE	HECO		CAAN	
HELO*	CALU			

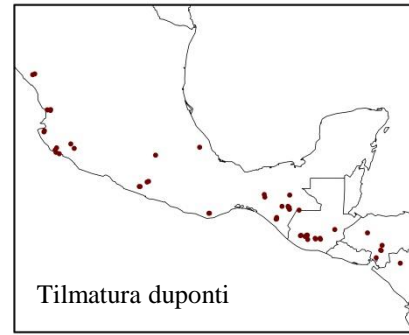
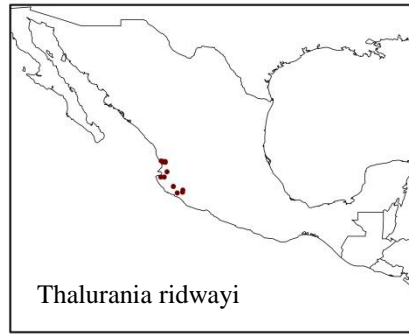
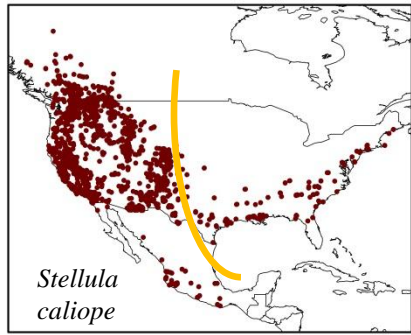
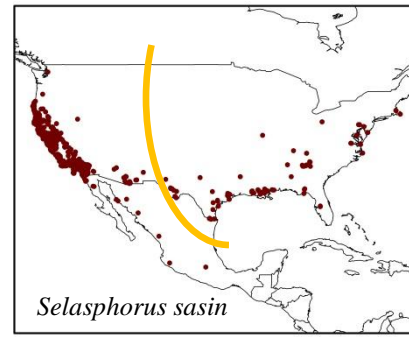
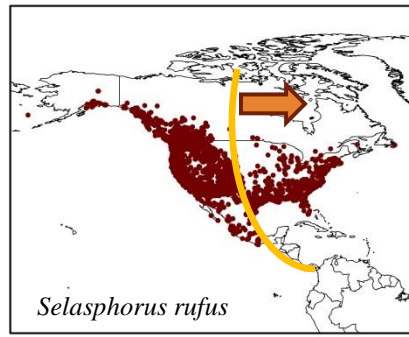
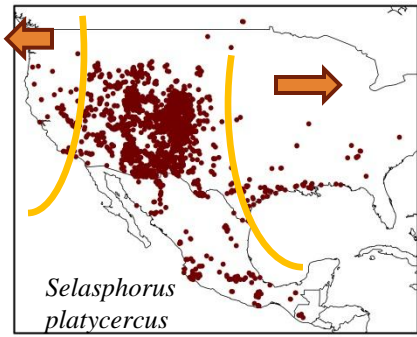
Invierno

PHLO	CO TH	CYLA	ARAL	
CYSO	CHAU	AMBE	CACO	
LAAM	THRI	AMVI	SERU	
TIDU	HYLE	LACL	CAAN	
	HYXA	ARCO		
	AMRU	SEPL		









A white rectangular card with a double-line border is tilted slightly to the right. It is set against a black background. To the left of the card, a bright yellow sticky note is partially visible, overlapping the card's edge. The word "Conclusiones" is printed in a dark red, serif font on the card.

Conclusiones

Estacionalidad

- ▶ **Migratorios de larga distancia:** ARCO, SERU, CACO, STCA y SESA (5)
- ▶ **Migratorios de larga distancias con poblaciones residentes:** SEPL y ARAL (2)
- ▶ **Residentes movimientos locales:** AMRU, AMBE, CHAU, HYLE, CYSO, CYLA, LAAM, HECO y LACL (9)
- ▶ **Residentes periféricos:** PHLO, COTH, THRI, AMVI, EUFU, TIDU, CALU, y ATHE (8)

Especies que muestran registros fuera de su rango natural de distribución

Especies	Norte	Sur	Este	Oeste
AMBE	X			
AMVI	X			
ARAL	X		X	
ARCO		X		X
CACO	X		X	
CALU			X	
COTH	X		X	
CYLA	X	X	X	
EUFUL	X		X	
LACL	X			
SEPL			X	X
SERU			X	
SESAS			X	
STCA			X	
SERU				

▪
AGRADECIMIENTOS

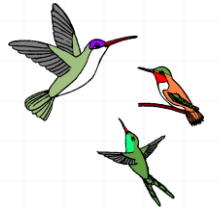
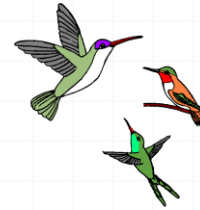
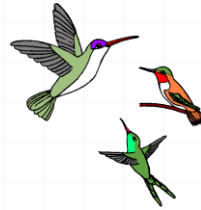
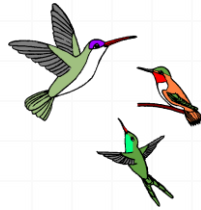
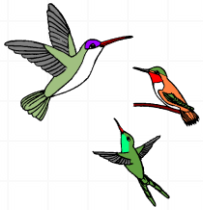
Asesoría

Dra. Anna Pidgeon

Apoyo

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SILVIS LAB, University of Wisconsin-Madison



GRACIAS!!!