

# Holiday Beach Migration Observatory

## Holiday Beach Hawk Tower





# Holiday Beach Migration Observatory



## **An Introduction to Holiday Beach Migration Observatory (HBMO) and to Hawk Migration Association of North America (HMANA)**

### **In the Beginning (Big Bang) and Then Some**

**Hawk Mt. and Cape May pre-WWII Counts**

**Early Day 1950s casual counts at Malden Centre**

**Broad-wing flights in Northeast U.S.**

**New England Hawk Watch (renamed Northeast Hawk Watch in 1991)**

**1974 - 300 hawk watchers gathered in Syracuse, NY.**

**Conventioneer established HMANA as a volunteer, non-profit organization  
of field birders, research scientists, banders and conservationists.**



# Holiday Beach Migration Observatory



## Holiday Beach Beginnings

**Counts in school yard east of Amherstburg at Malden Centre**

**Detroit Audubon Society made sporadic visits in September in late 1950s**

**An informal volunteer count began 1971-1976 at Malden Centre**

**It relocated south in 1977 to the Holiday Beach Provincial Park western most parking area near Big Creek Marsh.**

**The Provincial Park no longer exists and the area is leased and maintained by the Essex Region Conservation Authority (ERCA).**

**Volunteer counters used this ground site until 1985-86 when a 40 foot three-tiered wooden observation tower was donated by Detroit Edison.**

**The “Hawk Tower” has been the site for the hawk count since that time and is an important landmark for the surrounding community.**



# Holiday Beach Migration Observatory



## Holiday Beach Data

All hawk and weather data was entered on a special form developed by HMANA called the “green sheet.”

The collection of a watch sites “green sheets” were sent and housed in a filing cabinet in a university in Pennsylvania.

Attempts had been made to use the Internet to report daily hawk data. A difficult task.

University of Arizona had some birding email lists (LISTSERV). HBMO convinced them to give us (hawk watch community) one to use.

BIRDHAWK was born in late 1997 and 2012 HMANA took ownership.

October 1999 Jason Sodergren visited the Hawk Tower at Holiday Beach. Through many conversations on the need to **computerize** the HBMO’s data, Jason developed a model electronic database entry system, known as HawkCount, that could store the hourly data on servers and send a daily report to BIRDHAWK subscribers.



# Holiday Beach Migration Observatory



## HBMO and HMANA

**In 2000, HBMO authorized that HawkCount was to be given to HMANA to maintain for all of HMANA's hawk watches. Sites are now able to create near real-time data entry of hawk counts and make them instantly available, along with earlier historical data.**

**Data for more than 200 hawk watches in North America are now entered and available on HawkCount.org.**

**Hawk data is possessed by the individual hawk watches not HMANA.**

**Researchers and governmental agencies may request to use individual site data by connecting with HMANA's Data Release Request page and completing the Data Release Form (<http://www.hmana.org/data-policies/data-release-form/>).**

**HBMO became a more formalized organization with governing bylaws, standardized count protocols including standardized hourly count data sheets, an electronic database to store the count data and became a Canadian Charity in 2012.**

# Holiday Beach Migration Observatory

DATE: Day Month Year   1 9 LOCATION:  LOC CODE 16  BAND STA.  LEADER:

TIME (Standard)	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	Address
MAX. VISIBILITY <sup>30</sup>																Address
AIR TEMP. °C <sup>14</sup>																
SKY CODE <sup>44</sup>																
WIND SPEED CODE <sup>28</sup>																
WIND FROM <sup>14</sup>																
ALT. FLIGHT CODE <sup>28</sup>																
FLIGHT DIR. <sup>14</sup>																
NO. OBSERVERS <sup>14</sup>																
MINUTES OBSERV. <sup>45</sup>																
	<sup>16</sup> 5-6	<sup>17</sup> 6-7	<sup>22</sup> 7-8	<sup>25</sup> 8-9	<sup>28</sup> 9-10	<sup>32</sup> 10-11	<sup>36</sup> 11-12	<sup>40</sup> 12-1	<sup>44</sup> 1-2	<sup>48</sup> 2-3	<sup>52</sup> 3-4	<sup>56</sup> 4-5	<sup>60</sup> 5-6	<sup>64</sup> 6-7	<sup>68</sup> 7-8	
BLACK VULTURE <sup>20</sup>																BV
TURKEY VULT. <sup>21</sup>																TV
OSPREY <sup>77</sup>																OS
AM. S.T. KITE <sup>32</sup>																SK
BL. SH. KITE <sup>31</sup>																BK
MISS. KITE <sup>34</sup>																MK
BALD EAGLE <sup>72</sup>																BE
NO. HARRIER <sup>75</sup>																NH
SHARPSHINNED <sup>42</sup>																SS
COOPER'S HAWK <sup>43</sup>																CH
NO. GOSHAWK <sup>41</sup>																NG
RED-SHOULDERED <sup>52</sup>																RS
BROAD-WINGED <sup>53</sup>																BW
SWAINSON'S <sup>54</sup>																SW
RED-TAILED <sup>51</sup>																RT
FERRUGINOUS <sup>58</sup>																FH
ROUGH-LEGGED <sup>58</sup>																RL
GOLDEN EAGLE <sup>71</sup>																GE
AM. KESTREL <sup>87</sup>																AK
MERLIN <sup>85</sup>																ML
PEREGRINE <sup>83</sup>																PG
PRAIRE FALCON <sup>89</sup>																PR
Unid. VULTURE <sup>10</sup>																UV
Unid. ACCIPITER <sup>40</sup>																UA
Unid. BUTEO <sup>50</sup>																UB
Unid. EAGLE <sup>70</sup>																UE
Unid. FALCON <sup>80</sup>																UF
Unid. RAPTOR <sup>90</sup>																UU
OTHER RAPTOR																OO
Total Hawks <sup>14</sup>																TH

COMMENT

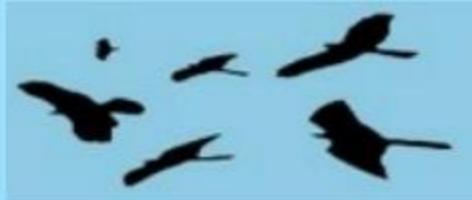
*The Hawk Migration Association of North America*

See instruction sheet for weather codes and metric equivalents. If code instructions or any data are unavailable or insufficient, omit that information. Send filled-out form to the appropriate HMANA regional editor or to HMANA, P.O. Box 3482 Rivermont Station, Lynchburg, VA 24503.

The infamous HMANA “Green Sheets”



Holiday Beach Migration Observatory



**HMANA HawkCount Goodies**

# Holiday Beach Migration Observatory



**HawkCount**

September was Fund-raising Month  
*HawkCount Now and Forever*  
Thanks and Results

*[Sponsor this page]*

**[Main]**

Login

Find a Hawkwatch

**Data Summaries**

Monthly | Daily

Account Request

New Site Request

About...

Sponsors/Donors

## Welcome to HawkCount:

Count data and site profiles for over 300 North American Hawkwatch sites



Find hawkwatch sites by country, state or province;  
view hawkwatch profiles, maps, data and more.

**Get Started...**



**INTERNATIONAL HAWK MIGRATION WEEK:** September 16 to 24, 2017

Total Raptors Counted: **457639**

Sites reporting: **113**

HMANA



- Act fast! One opening remains for the Panama Raptor Migration Tour, Oct 28-Nov 4, 2017. Email [brown@hmana.org](mailto:brown@hmana.org) for details.
- Explore NH and VT hawk watch sites during beautiful peak foliage. Sign up for [Northern New England HMANA Meet-Up Weekend](#), Oct 13-15, 2017.
- Explore Scotland: [Highlands and Hebrides Tour](#), May 4-17, 2018



Crested Caracara, photo by Linda Rockwell

[\[Click to hide\]](#)

**Today's Hawkwatch Results: Nov 08, 2017 (40 Reports)**

**HawkCount: Opening Page for HawkCount**



# Holiday Beach Migration Observatory

<b>Canada</b>		<b>Mexico</b>		
Alberta British Columbia Manitoba New Brunswick Ontario Quebec		Veracruz		
<b>Belize</b>	<b>Panama</b>	<b>Colombia</b>		
Toledo District	Panama	Cundinamarca		
<b>United States</b>				
Alabama	Alaska	Arizona	Arkansas	California
Colorado	Connecticut	Delaware	Florida	Idaho
Illinois	Iowa	Maine	Maryland	Massachusetts
Michigan	Minnesota	Montana	Nevada	New Hampshire
New Jersey	New Mexico	New York	North Carolina	Oregon
Pennsylvania	South Carolina	Tennessee	Texas	Utah
Vermont	Virginia	Washington	West Virginia	Wisconsin
Wyoming				
<b>North America - All Sites</b>				

## HawkCount: North America Sites - All Major Places

# Holiday Beach Migration Observatory

[\[Click to hide\]](#)

## Today's Hawkwatch Results: Nov 08, 2017 (40 Reports)

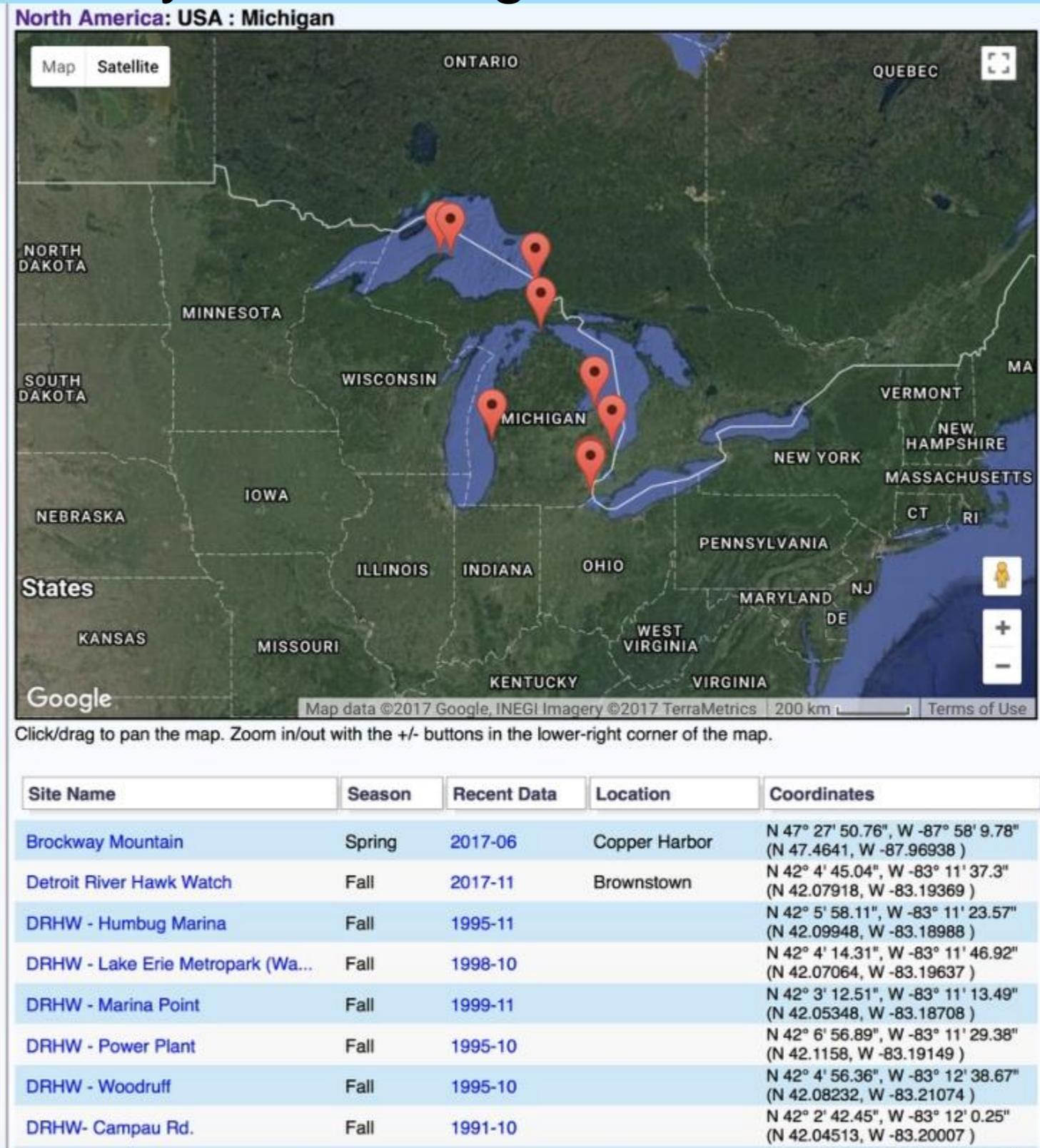
Site	Count	Site	Count
Allegheny Front (PA)	279	Mount Peter (NY)	54
Ashland Nature Center (DE)	420	<i>Pack Monadnock Raptor Migration Observa... (NH)</i>	125
Bake Oven Knob (PA)	53	Putney Mountain VT (VT)	50
<i>Belize Raptor Watch ()</i>	156	Quaker Ridge (CT)	673
<i>Bridger Mountains (MT)</i>	14	Rose Tree Park (PA)	328
Cape Henlopen Hawk Watch (DE)	6	Scott's Mountain (NJ)	149
Cape May (NJ)	474	Second Mountain (PA)	6
Carter Hill Observatory (NH)	34	Semaphore Hill (Canopy Tower) ()	71
Cerro Ancon ()	38757	State Line Hawkwatch (NJ)	276
Chestnut Ridge (NY)	440	Stone Mt., Pa. (PA)	53
Clarry Hill (ME)	100	Sunrise Mountain (NJ)	66
Cromwell Valley Park (MD)	176	<i>Veracruz River of Raptors Cardel, MX (VL)</i>	5434
Franklin Mt. (NY)	36	<i>Veracruz River of Raptors Chichicastle, MX (VL)</i>	1317
Freedom Area Hawk Watch (PA)	8	Waggoner's Gap (PA)	208
Greene Valley Forest Preserve (IL)	30	Washington Valley Hawkwatch (NJ)	96
Hawk Cliff Hawkwatch (ON)	45		
Hawk Mountain Sanctuary (PA)	77		
<i>Hawk Ridge (MN)</i>	306		
High Park (ON)	14		
Hitchcock Nature Center (IA)	6		
Illinois Beach State Park (IL)	12		
Jacks Mountain (PA)	36		
Kiptopeke Hawkwatch (VA)	7		
Lighthouse Point (CT)	427		
Mohonk Preserve (NY)	172		

[\[Click to hide\]](#)

## Yesterday's Hawkwatch Results: Nov 07, 2017 (58 Reports)

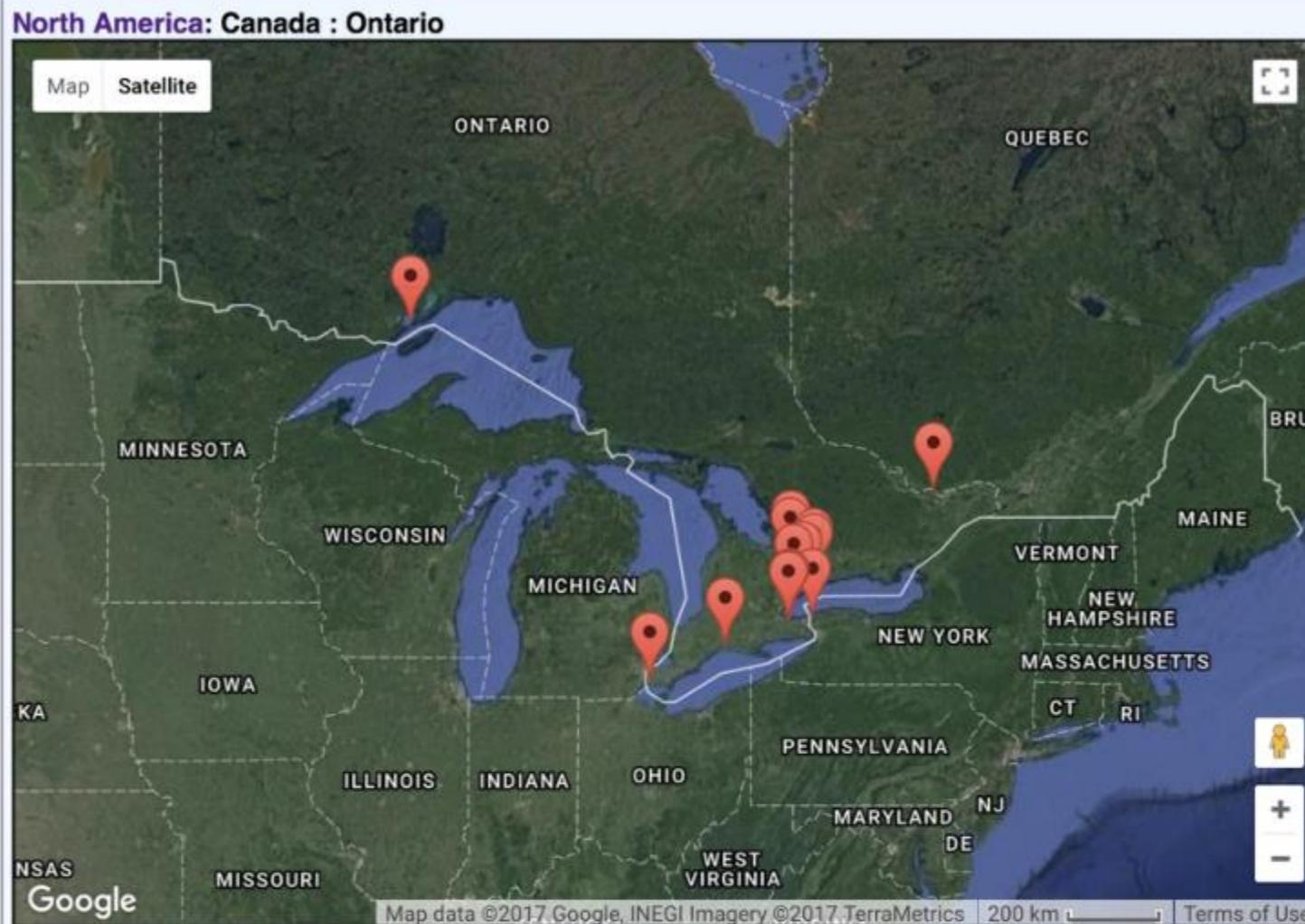
**HawkCount: Today's Counts on Opening HC Page.**

# Holiday Beach Migration Observatory



HawkCount: Michigan count site from 'Find a site' map.

# Holiday Beach Migration Observatory



Click/drag to pan the map. Zoom in/out with the +/- buttons in the lower-right corner of the map.

Site Name	Season	Recent Data	Location	Coordinates
Beamer Backup		1990-05		
Cranberry Marsh	Fall	2017-10	Whitby	N 43° 50' 24.9", W -78° 57' 57.7" (N 43.84025, W -78.96603)
Greenland Road Hawkwatch	Spring		Ottawa	N 45° 26' 45.9", W -76° 0' 12.4" (N 45.44608, W -76.00344)
Grimsby, ON - Air Park	Spring	2006-04	Grassie	N 43° 9' 15", W -79° 36' 12" (N 43.15417, W -79.60333)
Grimsby, ON - Beamer Conservat...	Spring	2017-08	Grimsby	N 43° 11' 18", W -79° 34' 24" (N 43.18833, W -79.57333)
Grimsby, ON - Grimsby East	Spring	2011-05	Grimsby	N 43° 11' 22", W -79° 1' 5" (N 43.18944, W -79.01806)
Grimsby, ON - Miscellaneous Si...	Spring	2009-03	Grimsby	N 43° 12' 0", W -79° 34' 0" (N 43.2, W -79.56667)
Hawk Cliff Hawkwatch	Fall	2017-11	Port Stanley	N 42° 39' 51.6", W -81° 10' 12.4" (N 42.66433, W -81.17011)

**HawkCount: Ontario count site from 'Find a site' map.**

# Holiday Beach Migration Observatory

## Hawkwatch Site Profile

### Holiday Beach Conservation Area

Amherstburg, Ontario, Canada

N 42° 1' 59.4", W -83° 2' 43.8"  
(N 42.03317, W -83.0455 )

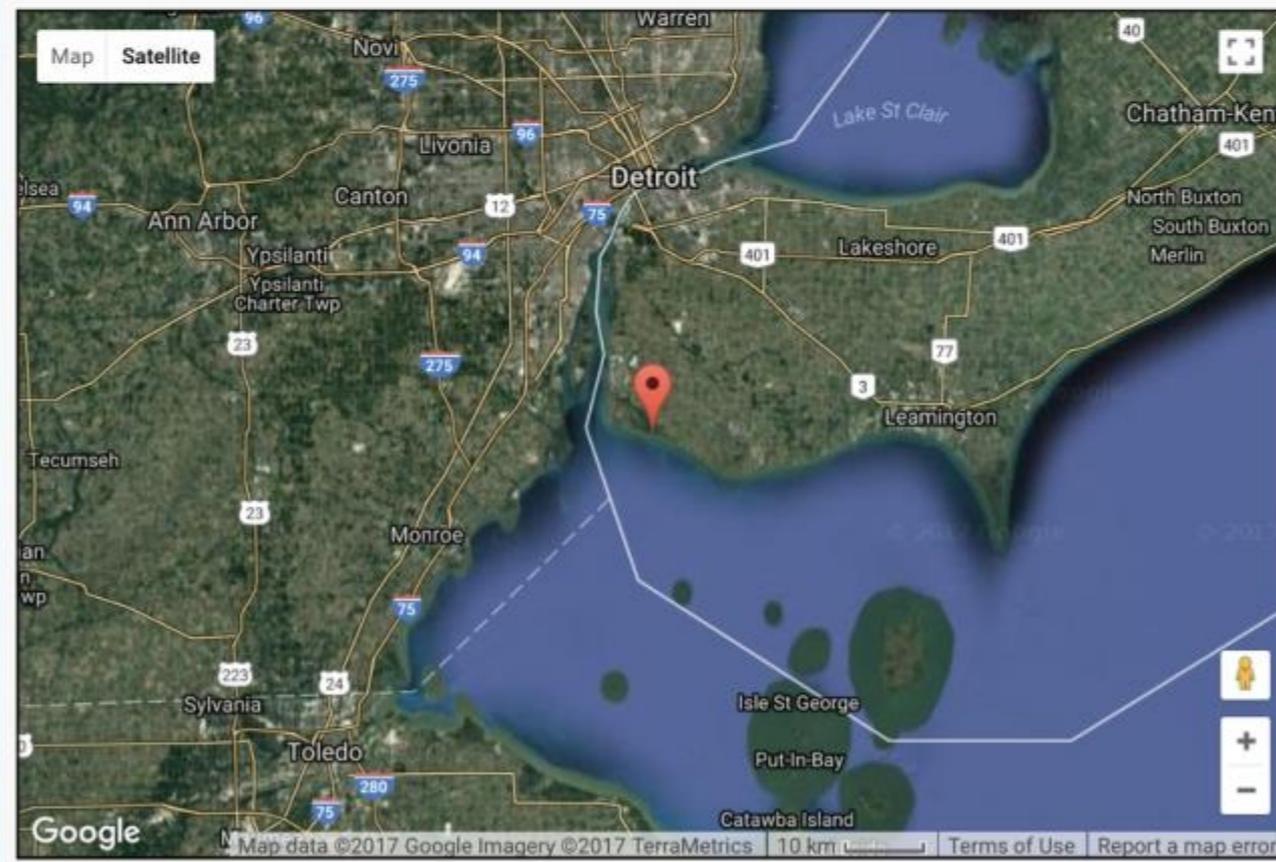
<http://hbmo.ca/>

[Latest count data]



General Data Inventory Migration Timing RPI Analysis

### Map



**HawkCount: Introduction to Site Profile Page.**

# Holiday Beach Migration Observatory

## Holiday Beach Conservation Area

N 42° 1' 59.4", W -83° 2' 43.8"  
(N 42.03317, W -83.0455)

<http://hbmo.ca/>

[Latest count data]



Amherstburg, Ontario, Canada

- General
- Data Inventory
- Migration Timing
- RPI Analysis

### Migratory Raptors Observed at Holiday Beach Conservation Area

Species	Season Counts	Max. Counts	Daily Timing (Average <span style="color: green;">spring</span> / <span style="color: orange;">fall</span> weekly counts)
<b>Turkey Vulture</b> <i>(Cathartes aura)</i>	Average: 19606 Max: 51147 (2015) Min: 486 (1975)	20032 (Oct 09, 2005) 10264 (Oct 04, 2010) 9647 (Oct 17, 2017)	
<b>Osprey</b> <i>(Pandion haliaetus)</i>	Average: 98 Max: 204 (2011) Min: 21 (1975)	27 (Sep 21, 1987) 24 (Sep 09, 1978) 24 (Sep 18, 1987)	
<b>Bald Eagle</b> <i>(Haliaeetus leucocephalus)</i>	Average: 87 Max: 395 (2013) Min: 1 (1974)	35 (Oct 08, 2016) 33 (Sep 15, 2011) 31 (Sep 11, 2016)	
<b>Northern Harrier</b> <i>(Circus hudsonius)</i>	Average: 775 Max: 1616 (1993) Min: 189 (1974)	258 (Oct 31, 1993) 155 (Nov 18, 1986) 142 (Oct 20, 1985)	

HawkCount: Site Profile page Migration Timing



# Holiday Beach Migration Observatory

**Month Summary: Oct, 2017**

		Turkey Vulture	Osprey	Bald Eagle	Northern Harrier	Sharp-shinned Hawk	Cooper's Hawk	Northern Goshawk	Red-shouldered Hawk	Broad-winged Hawk	Red-tailed Hawk	Rough-legged Hawk	Golden Eagle	American Kestrel	Merlin	Peregrine Falcon	Unknown Accipiter	Unknown Buteo	Unknown Eagle	Unknown Falcon	Unknown Raptor	Short-eared Owl	Swainson's Hawk	
Date	Obs Hrs	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UA	UB	UE	UF	UR	SE	SW	TOTAL
2017-10-01	7	572	1	1	12	27	7			8	14			7	1	1								651
2017-10-02	7.5	695			6	75	1		1	6	9	1		2				1						797
2017-10-03	7.75	205			2	25	2							1										235
2017-10-04	8	158	1			11										7								177
2017-10-05	9	388	1	1	1	29	2		1		5	1	1	2		1								433
2017-10-06	5			1	3	2								1										7
2017-10-07	7.75	222	1		1	29	4							3	1	14								275
2017-10-08	7.75	400	1	1	4	59	5		1		4			11		2								488
2017-10-09	8	1017	2	5	21	152	4		1	3	31			15	1	1		1					1	1255
2017-10-10	9.75	2121	5	10	34	447	15		5	9	108			121	3	3			1					2881
2017-10-11	5	766			20	283	6		6	1	4			275	7		1					1		1370
2017-10-12	6	202			13	188	2		1					75	6	2								489
2017-10-13	8	2225	3	3	17	98	1		3		12			6	1	1								2370
2017-10-15	6	395	2	2		3					1					1								404
2017-10-16	8.5	7444	1	11	15	84	3		26	1	65	2	1	14	2	1	2	4				1		7677
Date	Obs Hrs	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UA	UB	UE	UF	UR	SE	SW	TOTAL
2017-10-17	8	9647		2	15	134	7		2		20			41	3	1		1						9873
2017-10-18	8	3582			14	72	3		4	1	22	1		5		1		2						3707
2017-10-19	8	1916			16	129	7		2	1	43	1		9								2		2126
2017-10-20	7	1307		6	11	49	2		4		36		2	2	1							3		1423
2017-10-21	6.5	104			6	22	2		1		16			2										153
2017-10-22	6	159	1		8	51				2	11			4										236
2017-10-23	2					1	1																	2
2017-10-24	5.5	185			1	3					1			1	1									192
2017-10-25	6.75	513			6	74	3		3		31			7		1								638
2017-10-26	8.75	4106		8	13	106	14		28		191	3	4	15				1				1		4490
2017-10-27	8	1533		2	3	65	2				11	1		7	8	2								1634
2017-10-28	6.5	906		2	8	20	3		1		17	3	2	3	1	1								967
2017-10-29	6	776		4	6	92	11		22		61		1	8	1	1	1	1						985
2017-10-30	6.5	2377		1	2	30	1				11	2			1	1								2426
2017-10-31	8	1348		4	6	67	14	1	16		109	2	1	2										1570
<b>Total:</b> Oct 2017	<b>212.5</b> hours	45269	19	64	264	2427	122	1	128	32	833	17	12	639	38	42	4	11	0	0	7	1	1	<b>49931</b>
<b>Total:</b> Fall 2017	<b>409.75</b> hours	55251	77	213	471	5312	242	4	649	5365	2957	35	70	1371	73	57	6	19	0	0	9	1	2	<b>72184</b>

**HawkCount: Monthly count page.**

# Holiday Beach Migration Observatory

Day Summary: Nov 03, 2017

Day's Raptor Counts	TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UA	UB	UE	UF	UR	SE	SW	Total
	3340	1	22	18	326	17	3	227	0	387	7	11	2	0	1	1	2	0	0	0	0	0	4365

**Observation Start Time** 07:30:00

**Observation End Time** 16:00:00

**Official Counter** Sean Jenniskens

**Observers** Dan Lumm, Dave Martin, Ian Woodfield, Jim McCoy, Kory Renaud, Linda Wladarski, Michael Williamson, Ryan Sokolowski

**Weather** A good north wind along with moderate cloud cover made for an excellent day!

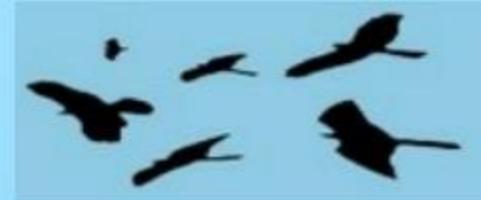
**Observation Notes** Stellar day on the tower today! 4365 Raptors counted total, 3340 being Turkey Vultures. An excellent count of many/most species. One of the local Osprey finally left today! 22 Bald Eagles!! 326 Sharpies!! 3 Northern Goshawks (excellent, super close looks!)!!!! 227 Red-shoulders!! 387 Red-tails (104 in the last hour)!! 7 Roughies (5 were dark morph)!! AND 11 Golden Eagles!!! A super busy and awesome day!!

**Non-Raptor Notes** Little time was spent on non-raptors as the hawks kept us busy the whole day! Th putative Eurasian x American Wigeon hybrid was seen again today; many people got on it. 7800 American Crows were counted, but this is well under-counted. Thousands of blackbirds migrated over today as well. Full eBird checklist viewable here: <http://ebird.org/ebird/view/checklist/S40292512?share=true> Another Monarch seen today!

**Visitors** Lots up on the tower today! Most happy with the flight they saw! Many got amazing looks at a young Goshawk right over the tower, and several got good looks at Goldens and Roughies!

**Forecast** East and southeast winds with rain in the afternoon.

**HawkCount: View clicking on date in Month view.**



# Holiday Beach Migration Observatory

## Count Details: Nov 07, 2017

<b>Date: 2017-11-07</b>		
<b>Hour Beginning: 08:15, Ending: 09:00</b>		
<b>Wind Speed</b> 2: 6-11 km/h (4-7 mph)	<b>Wind Direction</b> N	<b>Visibility</b> 29 (km)
<b>Cloud Cover</b> 60 (%)	<b>Temperature</b> 4.3 (C)	<b>Humidity</b> 58 (%)
<b>Air Pressure</b> 30.28 (in Hg)	<b>Flight Direction</b> W	<b>Flight Height</b> 1: Eye level to 30m
<b>Dragonflies: minutes counted</b>	<b>Dragonflies: Dragonflies counted</b>	<b>Dragonflies: flight altitude</b>
<b>Dragonflies: flight direction</b>	<b>Dragonflies: species seen</b>	
<b>Official Counter</b> Sean Jenniskens	<b>Precipitation</b> 0: None	<b>Duration</b> 45 minutes

Hour Counts																						
TV	OS	BE	NH	SS	CH	NG	RS	BW	RT	RL	GE	AK	ML	PG	UA	UB	UE	UF	UR	SE	SW	
				Unknown 2																		
Unknown 2				Adult 1			Adult 1			Dark Coloration 2												
<b>Total</b>	<b>2</b>			<b>Total</b>	<b>3</b>		<b>Total</b>	<b>1</b>		<b>Total</b>	<b>2</b>											

<b>Date: 2017-11-07</b>		
<b>Hour Beginning: 09:00, Ending: 10:00</b>		
<b>Wind Speed</b> 2: 6-11 km/h (4-7 mph)	<b>Wind Direction</b> N	<b>Visibility</b> 29 (km)
<b>Cloud Cover</b>	<b>Temperature</b>	<b>Humidity</b>

**HawkCount: Hourly data recorded as seen after clicking on date in Month view**



Holiday Beach Migration Observatory



# **HMANA HawkCount Data Entry by Daily Counter**

# Holiday Beach Migration Observatory

[Back to Main](#)

[Back to Date...](#)

## Data Entry

### Step 1:

Enter

[Day's Comments]

### Step 2:

Enter Period Counts

Period:

[\[07:30a-08:00a\]](#)

[\[08:00a-09:00a\]](#)

[\[09:00a-10:00a\]](#)

[\[10:00a-11:00a\]](#)

[\[11:00a-12:00p\]](#)

[\[12:00p-01:00p\]](#)

[\[01:00p-02:00p\]](#)

[\[02:00p-03:00p\]](#)

[\[03:00p-04:00p\]](#)

### Step 3:

[Review Data](#)

### Step 4:

[Submit Reports](#)

### Step 5:

[Print Summary](#)

[ABORT/DELETE](#)

[this day's entry](#)

[Help](#)

[Logout](#)

Please complete the daily summary fields below.

**These fields are intended for general comments;  
your actual count data will be entered later during Step 2.**

Click on the **Save Data** button at the bottom of this form when your entry is complete.

## Editing data for SITE: Holiday Beach Conservation Area, DATE: 2017-11-03

No count conducted during this day

**Start Time** (am) 7 30 (EST)

**End Time** (pm) 4 00 (EST)

Count Period:Hourly

### Weather Summary

A good north wind along with moderate cloud cover made for an excellent day!

### Observations (Raptor related)

Stellar day on the tower today! 4365 Raptors counted total, 3340 being Turkey Vultures. An excellent count of many/most species. One of the local Osprey finally left today! 22 Bald Eagles!! 326 Sharpies!! 3 Northern Goshawks (excellent, super close looks!)!!!! 227 Red-shoulders!! 387 Red-tails (104 in the last hour)!! 7 Roughies (5 were dark morph)!! AND 11 Golden Eagles!!! A super busy and awesome day!!

### Observations (Other)

Little time was spent on non-raptors as the hawks kept us busy the whole day! Th putative Eurasian x American Wigeon hybrid was seen again today; many people got on it. 7800 American Crows were counted, but this is well under-counted. Thousands of blackbirds migrated over today as well. Full eBird checklist viewable here: <http://ebird.org/ebird/view/checklist/S40292512?share=true> Another Monarch seen today!

**HawkCount: Daily Summary of Events**



# Holiday Beach Migration Observatory

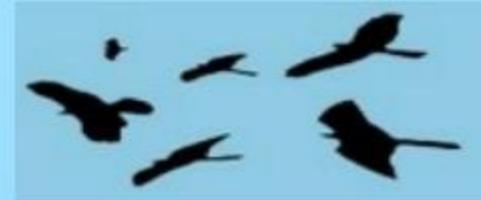
## Holiday Beach Conservation Area: Count Data Entry

Nov 03, 2017 [Period: 10:00a to 11:00a EST ]

Please complete the period detail fields below.  
Click on the **Save This Period's Data** button at the bottom of this form when your entry is complete.

### Period Weather Conditions

<b>Wind Speed</b>	<input type="text" value="3: 12-19 km/h (8-12 mph)"/>	<input type="checkbox"/> Unknown
<b>Wind Dir</b>	<input type="text" value="NNW"/>	<input type="checkbox"/> Unknown
<b>Temperature</b>	<input type="text" value="10"/> (C)	<input type="checkbox"/> Unknown
<b>Humidity</b>	<input type="text" value="79"/> (%)	<input type="checkbox"/> Unknown
<b>Baro.Pressure</b>	<input type="text" value="30.26"/> (in Hg)	<input type="checkbox"/> Unknown
<b>Cloud Cover</b>	<input type="text" value="30"/> (%)	<input type="checkbox"/> Unknown
<b>Visibility</b>	<input type="text" value="15"/> (km)	<input type="checkbox"/> Unknown
<b>Precipitation</b>	<input type="text" value="1: Haze or Fog"/>	<input type="checkbox"/> Unknown
<b>Flight dir</b>	<input type="text" value="W"/>	<input type="checkbox"/> Unknown
<b>Height of flight</b>	<input type="text" value="7: Variable"/>	<input type="checkbox"/> Unknown



# Holiday Beach Migration Observatory

## Period Observer Details

### Official Counter

Sean Jenniskens ▾

### Duration

60 min

No count conducted during this period

### Qualified Observers

#### Observer 1

Ryan Sokolowski ▾

60 min

New Observer:

#### Observer 2

Jim McCoy ▾

60 min

New Observer:

#### Observer 3

Michael Williamson ▾

60 min

New Observer:

#### Observer 4

Dan Lumm ▾

60 min

New Observer:

**OR**

Number of Observers

### Hour Notes

Sub GE @11:35 local  
Imm GE @11:46 local

# Holiday Beach Migration Observatory

## Period Raptor Count Totals

<b>TV</b> Turkey Vulture	Unknown	Adult	Immature		
	469				
<b>OS</b> Osprey	All				
	1				
<b>BE</b> Bald Eagle	Unknown	Adult	Immature		
<b>NH</b> Northern Harrier	Unknown	Male	Female	Immature	Female or Immature
<b>SS</b> Sharp-shinned Hawk	Unknown	Adult	Immature		
	60				
<b>CH</b> Cooper's Hawk	Unknown	Adult	Immature		
	2		1		
<b>NG</b> Northern Goshawk	Unknown	Adult	Immature		
<b>RS</b> Red-shouldered Hawk	Unknown	Adult	Immature		
	44	29	6		
<b>BW</b> Broad-winged Hawk	Unknown	Adult	Immature		
<b>RT</b> Red-tailed Hawk	Unknown	Adult	Immature		
	47	5	3		
<b>RL</b> Rough-legged Hawk	Unknown	Light Coloration	Dark Coloration		
<b>GE</b> Golden Eagle	Unknown	Adult	Subadult	Immature	
			1	1	
<b>AK</b> American Kestrel	Unknown	Male	Female		
	1				
<b>MI</b>	Unknown	Male	Female		

**HawkCount: Hourly Raptor numbers**

# Holiday Beach Migration Observatory

Plaintext EMAIL:

Holiday Beach Conservation Area  
Amherstburg, Ontario, Canada  
Daily Raptor Counts: Nov 03, 2017

Species	Day's Count	Month Total	Season Total
Turkey Vulture	3340	4004	52124
Osprey	1	1	77
Bald Eagle	22	25	181
Northern Harrier	18	23	447
Sharp-shinned Hawk	326	345	5200
Cooper's Hawk	17	18	201
Northern Goshawk	3	3	4
Red-shouldered Hawk	227	228	361
Broad-winged Hawk	0	0	5365
Red-tailed Hawk	387	393	1372
Rough-legged Hawk	7	8	25
Golden Eagle	11	12	24
American Kestrel	2	2	1369
Merlin	0	1	71
Peregrine Falcon	1	2	54
Unknown Accipiter	1	1	5
Unknown Buteo	2	2	19
Unknown Eagle	0	0	0
Unknown Falcon	0	0	0
Unknown Raptor	0	0	9
Short-eared Owl	0	0	1
Swainson's Hawk	0	0	2
<b>Total:</b>	<b>4365</b>	<b>5068</b>	<b>66911</b>

Observation start time: 07:30:00  
Observation end time: 16:00:00  
Total observation time: 8.5 hours

Official Counter: Sean Jenniskens

Observers: Dan Lumm, Dave Martin, Ian Woodfield, Jim McCoy,  
Kory Renaud, Linda Wladarski, Michael Williamson,  
Ryan Sokolowski

HawkCount: Plaintext Email to BirdHawk.

# Holiday Beach Migration Observatory

HTML EMAIL:

Holiday Beach Conservation Area  
Amherstburg, Ontario, Canada

Daily Raptor Counts: Nov 03, 2017			
Species	Day's Count	Month Total	Season Total
Turkey Vulture	3340	4004	52124
Osprey	1	1	77
Bald Eagle	22	25	181
Northern Harrier	18	23	447
Sharp-shinned Hawk	326	345	5200
Cooper's Hawk	17	18	201
Northern Goshawk	3	3	4
Red-shouldered Hawk	227	228	361
Broad-winged Hawk	0	0	5365
Red-tailed Hawk	387	393	1372
Rough-legged Hawk	7	8	25
Golden Eagle	11	12	24
American Kestrel	2	2	1369
Merlin	0	1	71
Peregrine Falcon	1	2	54
Unknown Accipiter	1	1	5
Unknown Buteo	2	2	19
Unknown Eagle	0	0	0
Unknown Falcon	0	0	0
Unknown Raptor	0	0	9
Short-eared Owl	0	0	1
Swainson's Hawk	0	0	2
<b>Total:</b>	<b>4365</b>	<b>5068</b>	<b>66911</b>

Observation start time: 07:30:00

Observation end time: 16:00:00

Total observation time: 8.5 hours

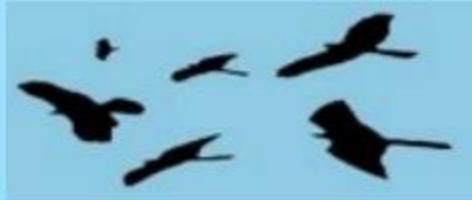
Official Counter: Sean Jenniskens

Observers: Dan Lumm, Dave Martin, Ian Woodfield, Jim McCoy, Kory Renaud, Linda Wladarski, Michael Williamson, Ryan Sokolowski

HawkCount: HTML Email to BirdHawk.



# Holiday Beach Migration Observatory



The data you have entered for 2017-11-03 will be sent to:

- Private Holiday Beach Conservation Area List  
(jason@taiga.com cradley@cogeco.ca hbmo-reports@hbmo.org ...)  
(REPORT ALREADY SENT on 2017-11-03 )
- Other Mailing Lists  
(birdalert@ontbirds.ca birders@great-lakes.net ...)  
(REPORT ALREADY SENT on 2017-11-03 )
- BIRDHAWK mailing list  
(REPORT ALREADY SENT on 2017-11-03 )
- eBird (Experimental) [eBird account: **HolidayBeachMO**]  
(ALREADY SUBMITTED TO EBIRD)
- Include site description in email reports
- Include directions to site in email reports

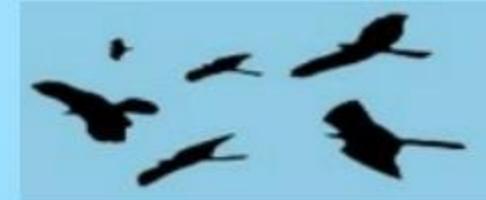
**Email report subject:**

Holiday Beach Conservation Area (03 Nov 2017) 4365 Raptors

Finish Submission and Send Reports

**HawkCount: Where is Data to be sent?**

# Holiday Beach Migration Observatory



## HawkCount: HTML Summary of hawks

passing Cerro Ancon 653 ft (199 m) above

Panama City, Panama.



From: reports@hawkcount.org  
 To: birdhawk@hmana.org  
 Subject: [BIRDHAWK] Cerro Ancon (08 Nov 2017) 38757 Rap  
 Date: Nov 8, 2017 8:36 PM

Cerro Ancon  
 Panama City, Panama, Panama

### Daily Raptor Counts: Nov 08, 2017

Species	Day's Count	Month Total	Season Total
Turkey Vulture	36305	568361	1417380
Osprey	1	11	60
Swallow-tailed Kite	0	0	1
White-tailed Kite	0	0	0
Mississippi Kite	4	14	1265
Hook-billed Kite	0	0	0
Plumbeous Kite	0	0	0
Northern Harrier	0	0	0
Sharp-shinned Hawk	0	0	0
Cooper's Hawk	0	0	0
Gray Hawk	0	0	0
Common Black Hawk	0	0	0
Harris's Hawk	0	0	0
Red-shouldered Hawk	0	0	0
Broad-winged Hawk	1037	9582	230712
Swainson's Hawk	1409	33164	194186
Zone-tailed Hawk	0	0	0
Red-tailed Hawk	0	0	0
Roadside Hawk	0	0	0
American Kestrel	0	0	0
Merlin	0	0	2
Peregrine Falcon	1	4	55
Unknown Accipiter	0	0	0
Unknown Buteo	0	0	69
Unknown Falcon	0	0	0
Unknown Eagle	0	0	0
Unknown Raptor	0	525	15186
<b>Total:</b>	<b>38757</b>	<b>611661</b>	<b>1858916</b>



# Holiday Beach Migration Observatory



## **HBMO Goodies**

# Holiday Beach Migration Observatory

## Holiday Beach Migration Observatory

*Dedicated to the study and long-term monitoring of migratory birds*



**Home**

About

Festival of Hawks

Visit Us

Membership

Raptor Counts

Publications

Education

Support

Connect



Holiday Beach Migration Observatory (HBMO) is a Registered Charitable volunteer organization dedicated to the study and monitoring of migratory birds. Activities focus on migration of raptors (diurnal birds of prey), passerines (songbirds) and other species passing through southwestern Ontario in the vicinity of Holiday Beach Conservation Area. [Learn more!](#)

Search

**DONATE TODAY!**

Help to support HBMO with a charitable donation today!

**Donate**

**Our Website**

**HBMO.CA**

**hbmo.ca**

# Holiday Beach Migration Observatory

## RAPTOR ALMANAC - CALENDAR HBMO 2017

2017 Fall Raptor Migration Almanac for Holiday Beach Migration Observatory: Amherstburg, Ontario, Canada. Our 44<sup>th</sup> Hawkwatch Season.  
 Welcome to the Holiday Beach Conservation Area Hawk Tower and Holiday Beach Migration Observatory's Hawkwatch 2017  
 Purchase Annual Park Pass from ERCA: 519-776-5209

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Hawk Festival weekends 9-10 and 16-17 will be run by HBMO and ERCA. The Hawk Festival 23-24 will be run by HBMO. All open 9 AM to 3 PM. Food and drink will be for sale during each Festival. See <a href="http://hbmo.ca">hbmo.ca</a> for schedule.						
Welcome to Holiday Beach Conservation Area. Bring binoculars, camera, notebook, pen, hat, food, water, lawn chair, bird guides, money, and sunscreen. Dress for the weather - hat, layers and good footwear.						
3 94-OS-8 94-SS-191 94-BW-58 94-AK-101 12-BV-1*	4 94-SS-202 92-AK-56 For festival details: <a href="http://hbmo.ca">hbmo.ca</a>	5 90-OS-12 Hawk Festivals are open 9am to 3pm. Come early and often.	6 91-BE-4 94-SS-293 98-AK-486 91-AK-454	7 94-AK-232 Food, drink, and birding items are for sale at Festivals.	September 1 07-OS-18 For festival details: <a href="http://hbmo.ca">hbmo.ca</a>	2 85-NH-53 87-NH-92 94-AK-94
10 9am-3pm Hawk Festival 95-BW-4,350 85-AK-286 91-ML-4	11 06-BE-18 11-BE-14 91-OS-21	12 13-SW-2 85-SS-1,394 85-BW-32,484 89-AK-400	13 89-OS-20 88-SS-1,597 91-NH-111 96-SW-1	14 88-SS-2,130 88-AK-373	15 07-OS-21 09-OS-18 07-BE-12 09-BE-14 06-SW-1 09-ML-11 84-BW-95,499*	16 9am-3pm Hawk Festival 93-NH-103 93-SW-2 99-SS-1,441 13-SW-3* 86-BW-28,566 14-BW-1 92-BW-28,777
17 9am-3pm Hawk Festival 93-OS-17 89-OS-18 11-SW-1 90-NH-17 89-NH-132 86-BE-23 99-SS-1,819 90-BW-44,717 98-BW-42,649 99-BW-32,442 91-AK-694 94-AK-832	18 87-OS-24 14-BE-24 94-NH-69 89-SS-1,736 93-BW-61,408 76-AK-327	19 94-NH-181 84-BW-43,173 96-BW-53,273 02-ML-9	20 10-BE-17 84-SS-1,424 88-SW-1 95-ML-16 97-AK-838 92-ML-12 14-ML-13	21 87-OS-27* 89-BE-18 83-AK-725 02-ML-13	22 87-SS-1,387 On 9-23-1992 all 15 regular raptor species were recorded this date, a rare single day.	23 9am-3pm Hawk Festival 12-BE-18 16-BE-15 01-ML-7 95-NH-48 08-NH-40 95-PG-4 87-SS-1,435 12-BW-3,857 91-SS-1 95-SS-1
23 9am-3pm Hawk Festival 90-BW-8,950 09-RS-5 91-ML-8 11-ML-3 12-ML-5	25 93-BW-6,062 89-ML-3 13-MK-1*	26 06-PG-14	27 86-OS-10 83-SS-1,206 98-ML-12 98-PG-13	28 01-BW-26,928 91-SW-1	29 87-NH-118 97-GE-42 11-PG-11	30 95-PG-10
October 1 06-11-SW-1 86-AK-1,059 11-AK-2,472* 96-ML-12 95-PG-18	2 11-SS-1,823 03-SW-1 96-PG-11 07-PG-11	3 95-NH-45 87-CH-289* 07-PG-19*	4 13-TV-10,284 88-SW-1 13-GY-1* 94-ML-12 02-PG-15	5 06-TV-5,544	6 86-CH-188 83-PG-11	7 88-TV-1,540 91-AK-522
8 90-AK-688 91-AK-672 16-BE-35*	9 05-TV-20,032* 86-CH-210	10 09-ML-11	11 89-TV-5,750 14-TV-7,782 84-CH-110	12 90-SW-1	13 09-TV-6,788 91-CH-144 09-SW-2*	14 09-TV-6,332
15 99-CH-123 99-RS-257 95-AK-711	16 93-NH-87 95-ML-11 95-PG-19	17 88-TV-5,384 89-AK-1,198 01-SS-2,407*	18 91-CH-107 91-RS-403* 87-SS-258 91-RT-962	19 82-TV-1,902 93-SW-1	20 06-TV-7,212 85-NH-142 89-CH-148 83-RS-283 85-RS-344	21 90-GE-35
22 14-TV-7,976 90-CH-117 84-NG-9	23 03-TV-5,261 83-CH-106	24 87-TV-5,516 78-RS-430*	25 93-NG-11 90-RS-321 99-RT-1,662	26 89-CH-114 92-GE-12	27 1-SW-1 88-GE-24	28 91-NG-7 95-GE-21
29 87-RS-288 89-RT-1,485 83-RL-35 88-GE-11 90-GE-13	30 86-NG-8 93-RS-271 10-ML-15 91-RT-5,219	31 91-BV-1* 93-NH-258* 90 & 93-NG-7 94-RS-253 93-RS-308	November 1 93-NG-13 93-RT-1,493 08-GE-50*	2 10-RT-1,418 89-GE-18	3 Please Donate to our Program Fund	4 95-RT-1,685
5 11-BV-1* 77-RL-73* 95-NG-7 95-RT-951	6 87-NG-7 87-RL-47 87-RL-38	7 96-GE-28	8 87-NG-13 97-RT-1,836	9 89-RT-1,418 89-GE-18	10 91-NG-28* 91-GY-1* 87-RL-40 91-GE-24 94-GE-21	11 91-NG-9 87-RT-1,481 94-RT-3,002*
12 89-RT-1,591 90-RL-37	13 90-RL-27	14 95-RL-44 94-GE-19	15 95-RL-44 94-GE-19	16 82-RL-43	17 94-RT-52	18 86-NH-155 87-RT-2,033 97-GE-18
19 95-RS-88 84-RL-22	20 84-RT-1,363	21 89-RT-685 89-GE-7	22 89-NH-77 89-RS-148 89-RL-48	23 89-RT-422 88-RT-583	24 89-RT-763	25 89-RT-763
26 89-RT-223 87-RL-20 14-GE-6 89-GE-7	27 88-RT-158	28 95-RS-74 95-RT-333 85-RL-27	29 95-RS-34 95-GE-3	30 89-RS-6 89-RT-68 93-RT-79 Count May End	Be a part of our future. Become a member; join today!	

### Raptor Codes and Their Names

AK American Kestrel	GE Golden Eagle	NH Northern Harrier	RT Red-tailed Hawk
BE Bald Eagle	GY Gyrfalcon	OS Osprey	SS Sharp-shinned Hawk
BV Black Vulture	ML Merlin	PG Peregrine Falcon	SW Swainson's Hawk
BW Broad-winged Hawk	MK Mississippi Kite	RL Rough-legged Hawk	TV Turkey Vulture
CH Cooper's Hawk	NG Northern Goshawk	RS Red-shouldered Hawk	

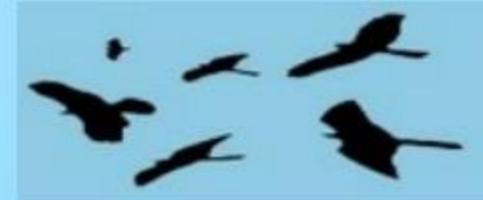
© 2017

Holiday Beach  
 2017 Raptor  
 Almanac - Calendar  
 Download @ [hbmo.ca](http://hbmo.ca)

# Holiday Beach Migration Observatory

Non-Raptor Almanac - Calendar 2017						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
<i>Please Donate to our Program Fund</i>	Welcome to Holiday Beach.	Purchase an Annual Park Pass from ERCA: 519-776-5209	Join HBMO! Become a member! hbmo.ca	August 1, 2009-PW0-1 Become a member of HBMOA, Hawk Migration Association of North America: hbmoa.org	1 September	2 Look for Monarch Butterfly
3 14-GREG-25 14-EAWP-1	4 93-RTHU-243 14-BCNH-3 14-PUMA-1 15-CEW-534	5 91-BWTE-1,431 88-CHSW-130 14-NRWS-31	6 86-RTHU-103 14-BARS-2 14-CLSW-8	7 14-SAND-5 14-SBDO-3 14-YBFL-1 14-BARS-34 14-BAWW-1	8 14-BAWW-1 14-EAKI-1	9 Hawk Festival
10 Hawk Festival 86-BCBO-110 14-COYE-4	11 Hawk Festival 14-SNEG-4 14-SWTH-3 14-GCTH-2	12 91-CCLO-5 14-AMRE-5 14-CSWA-2 14-BTWS-2	13 86-RTHU-304 87-RTHU-604*	14 14-TRSW-300 14-WODU-10 14-TEWA-3 14-BOBO-2	15 14-RBGR-1	16 Hawk Festival 14-GBHE-75 14-PESA-21
17 Hawk Festival 14-RODO-6 14-RHWO-1 14-MCWA-1	18 Hawk Festival 14-CATE-5 14-CONE-6	19 86-EAME-26 14-CCFL-1	20 14-NAWA-4	21 93-COTE-3,290 14-CHSW-36	22 14-COME-8 14-BKFW-1	23 Hawk Festival 09-RHWO-5 14-BGGR-3 14-SPSA-2 14-PAWA-3
24 Hawk Festival 09-CEW-786 09-High count 21 warbler NPI	25 89-CAEG-45 86-DCCO-30 14-NOFL-10	26 86-BLJA-49,280 91-BLJA-59,650 09-YTVI-1 14-BKBW-2	27 14-CCGA-5 14-BLJA-21,690	28 89-AMGO-4,572 01-BLJA-264,410*	29 14-RBGR-1 14-SPSA-2	30 89-BLJA-51,470 93-BLJA-67,000 09-ATER-60*
1 October	2 91-GRYE-18	3	4 92-HUGO-1	5 91-STSA-11 09-BLJA-152,750 09-AMGO-4,530	6 09-BBSA-1 14-RHWO-1	7 14-KILL-50 14-BTGW-5 14-OCWA-1 14-WWA-3
8 95-AMGO-4,548 09-AMGO-5,330 91-NSWO-74 (total)	9 14-EABL-6 15-TUSW-4 first sighting	10 09-RTHU-1 (late) 15-BLJA-35,690	11 89-PISI-4,293 09-AMAV-1 09-LEBI-1 (late) 14-GHOW-1 14-BOCH-6 14-PISI-301	12 09-AMAV-1	13 09-OCWA-3 14-AMRO-237	14 89-PUPI-1,654 09-AMAV-2 14-MJUS-64 14-HETH-2 15-PISI-76
15 09-AMAV-2 14-RBGR-270 14-AMGO-793	16 09-SACR-6 14-RCKI-12 14-PROR-16 09-AMAV-2	17 91-PUPI-163 14-PROR-16 14-FISP-1	18 09-AMAV-2 14-NOPJ-20 14-WTSP-10 14-WCSP-15	19 14-RUBL-80	20 14-LEYE-2 14-SWSP-3	21 91-OCWA-1 14-LESC-1
22 86-CEWA-10,866 09-HOLA-2,040 14-AMCR-25,360	23 93-TUTI-4 14-RBNU-2 91-FRDU-1 15-AMCR-11,080 09-BBFL-264	24 89-AMRD-451 92-AMRD-44,000 01-CORA-1*	25 14-AMCO-258 14-RBNU-2 14-GADW-400 14-ABDU-40 14-BWTE-6 14-REDH-12	26 89-AMCR-46,712 09-CHSW-30	27 09-DICK-1 14-DEJU-7	28 91-EABL-425 91-KLL-122 91-HOLA-547 14-RWBL-3,590
29 09-CONE-1 (late) 14-NSHR-1	30 91-SEOW-3 90-NOMO-1 14-DEJU-7	31 93-COLO-15 14-RBWO-2 14-WBNU-2	1 November	2 89-COLO-14 14-NSHO-12	3 87-KILL-90 14-RBME-147 14-COLO-2	4 14-COLO-2 14-HAWO-1
5 92-RBME-195,000*	6 14-MOWA-1	7 <i>Please Donate to our Program Fund</i>	8 87-BOGU-6,888* 14-COLO-2 14-BUFF-4	9 89-SAGU-1 92-SNBU-250 14-MALL-420 14-HOLA-134	10 91-ABDU-1,000 14-COLO-2 14-HEGU-20 14-PUPI-40	11 86-TUSW-872 09-TEWA-1 14-GBBG-2
12	13 92-CEWA-2,000 14-SNGO-19 14-CORE-120	14 91-LALO-222 89-AMAV-1	15 14-YSSA-1 15-FRDU-1	16 89-DCCO-1 (late)	17 86-RUBL-635	18 86-LALO-198 86-SEOW-5 14-HOME-13 14-BOGU-10
19 87-PISI-85 09-NRWS-1 (late) 14-WISN-1	20 14-AMWO-2	21 14-TUSW-335	22 93-RNPH-1	23 86-SACR-61 14-SRELL-60 14-HOFI-12	24 91-HEGU-500 14-ATSP-6 91-BOGU-1,855* 14-GRCA-1	25 89-GBBG-53
26 89-CORE-23 93-GBBG-35	27 14-HAWO-1 14-AMPI-48	28 92-AMCO-1	29 14-COGO-1 15-SACR-75	30 End of Count Season 15-SACR-13	Be a part of our future. Become a member; join today!	
Non-Raptor Codes and Their Names						
ABDU Am. Black Duck	CAEG Cattie Egret	GADW Gadwall	MOWA Mourning Warbler	RTLO Red-throated Loon		
AMAV Am. Avocet	CAGO Canada Goose	FRGU Franklin's Gull	MUSW Mute Swan	RUBL Rusty Blackbird		
AMCO Am. Coot	CANV Canvasback	GBBG G. Black-backed Gull	NAWA Nashville Warbler	RUDU Ruddy Duck		
AMCR Am. Crow	CATE Caspian Tern	GBHE Great Blue Heron	NOCA N. Cardinal	RWBL Red-winged Blackbird		
AMGO Am. Goldfinch	CAWA Canada Warbler	GCFL G. Crested Flycatcher	NOFL N. Flicker	SACR Sandhill Crane		
AMPI Am. Pipit	CAWR Carolina Wren	GCKI G.-crowned Kinglet	NOMO N. Mockingbird	SAGU Sabine's Gull		
AMRE Am. Redstart	CEDW Cedar Waxwing	GCTH Gray-cheek' Thrush	NOPI N. Pintail	SAND Sanderling		
AMRO Am. Robin	CHSP Chipping Sparrow	GLIB Glossy Ibis	NRWS N. R.-winged Swallow	SBDO Short-billed Dowitcher		
AMWI Am. Wigeon	CHSW Chimney Swift	GHOW Great Horned Owl	NSHO N. Shoveler	SEOW Short-eared Owl		
AMWO Am. Woodcock	CLSW Cliff Swallow	GRCA Gray Catbird	NSHR N. Shrike	SNBU Snow Bunting		
ATSP Am. Tree Sparrow	COGA Common Gallinule	GREG Great Egret	NSWO N. Saw-whet Owl	SNEG Snowy Egret		
AWPE Am. White Pelican	COGO Common Goldeneye	GRHE Green Heron	OCWA Orange-crowned War	SNGO Snow Goose		
ATBR Atlantic Brant	COGR Common Grackle	GRSC Greater Scaup	PAWA Palm Warbler	SORA Sora		
BANS Bank Swallow	COLO Common Loon	GRYE Greater Yellowlegs	PBGR Pied-billed Grebe	SOSP Song Sparrow		
BARS Barn Swallow	COME Common Merganser	GWTE Green-winged Teal	PESA Pectoral Sandpiper	SPSA Spotted Sandpiper		
BAWW Bk-&-white Warbler	CONI Common Nighthawk	HAWO Hairy Woodpecker	PISI Pine Siskin	STSA Stilt Sandpiper		
BBPL Black-Bellied Plover	CORA Common Raven	HEGU Herring Gull	PIWA Pine Warbler	SWSP Swamp Sparrow		
BBSA Buff-breast Sandpiper	CORE Common Redpoll	HETH Hermit Thrush	PIWO Pileated Woodpecker	SWTH Swainson's Thrush		
BCCH Bk-capped Chickadee	COTE Common Tern	HOFI House Finch	PUPI Purple Finch	TEWA Tennessee Warbler		
BCNH Bk-crown N-Heron	COYE Common Yellowthroat	HOGH Horned Grebe	PUGA Purple Gallinule	TRSW Tree Swallow		
BEKI Belted Kingfisher	CSWA Chestnut-sided War	HOLA Horned Lark	PUMA Purple Martin	TRSW Trumpeter Swan		
BGGN Blu-gray Gnatcatcher	DCCO Dobl-crest' Cormorant	HOME Hooded Merganser	RBGR R.-breasted Grosbeak	TUSW Tundra Swan		
BHCO B.-headed Cowbird	DEJU Dark-eyed Junco	HOWR House Wren	RBGU Ring-billed Gull	TUTI Tufted Titmouse		
BKBW Blackburnian Warbler	DICK Dickcissel	HUGO Hudsonian Godwit	RBME Red-breasted Merg.	WAVI Warbling Vireo		
BKPW Blackpoll Warbler	DOWO Downy Woodpecker	INBU Indigo Bunting	RBNU Red-breast Nuthatch	WBNU Wh.-breast Nuthatch		
BLJA Blue Jay	EABL E. Bluebird	KILL Killdeer	RBWO Red-bellied Woodpk	WCSP White-crowned Spw		
BOBO Bobolink	EAKI E. Kingbird	LALO Lapland Longspur	RCKI Ruby-crowned Kinglet	WISN Wilson's Snipe		
BOGU Bonaparte's Gull	EAPH E. Phoebe	LEBI Least Bittern	REDH Redhead	WIIWA Wilson's Warbler		
BPWA "BayPoli" Warbler	EAME E. Meadowlark	LEFL Least Flycatcher	REVI Red-eyed Vireo	WODU Wood Duck		
BRCR Brown Creeper	EAWP E. Wood-Pewee	LESC Lesser Scaup	RHWO Red-headed Woodpk	WTSP White-throated Spw		
BTBW Bk-throated Blue War	EWPP E. Whip-poor-will	LEYE Lesser Yellowlegs	RNDU Ring-necked Duck	YBFL Yel-bellied Flycatcher		
BTGW Bk-throated Green War	EUST European Starling	MALL Mallard	RNPH Ring-necked Pheasant	YBSA Yel-bellied Sapsucker		
BUFF Bufflehead	FISP Field Sparrow	MAWA Magnolia Warbler	RODO Rock Pigeon	YRWA Yel-rumped Warbler		
BWTE Blue-winged Teal	FOTE Forster's Tern	MODO Mourning Dove	RTHU Ruby-throat' Humbird	YTVI Yellow-throated Vireo		

Holiday Beach  
2017 Non-Raptor  
Almanac - Calendar  
Download @ hbmo.ca



# Holiday Beach Migration Observatory

**September**

**October**

**November**

**Timing of Fall  
Raptor Migration  
at Holiday Beach**

Species	Seasonal Counts		Year	Maximum Daily Count and Date		Timing <small>(Average fall weekly counts)</small>
	Average	Maximum		Count	Date	
Black Vulture <b>BV</b> <i>Coragyps atratus</i>	Average	1		1	October 31, 1991	Aug Sep Oct Nov Dec
	Maximum	1	2011	1	November 5, 2011	
	Minimum	1	1991	1	September 3, 2012	
Mississippi Kite <b>MK</b> <i>Ictinia mississippiensis</i>	Average	1		1	September 25, 2013	Aug Sep Oct Nov Dec
	Maximum	1	2010	1	September 8, 2010	
	Minimum	1	2013			
Osprey <b>OS</b> <i>Pandion haliaetus</i>	Average	98		27	September 21, 1987	Aug Sep Oct Nov Dec
	Maximum	204	2011	24	September 9, 1978	
	Minimum	21	1975	24	September 18, 1987	
Merlin <b>ML</b> <i>Falco columbarius</i>	Average	63		16	September 20, 2005	Aug Sep Oct Nov Dec
	Maximum	137	2011	16	September 10, 2016	
	Minimum	2	1975	15	October 30, 2010	
Bald Eagle <b>BE</b> <i>Haliaeetus leucocephalus</i>	Average	87		35	October 8, 2016	Aug Sep Oct Nov Dec
	Maximum	395	2013	33	September 15, 2011	
	Minimum	1	1974	31	September 11, 2016	
Swainson's Hawk <b>SW</b> <i>Buteo swainsoni</i>	Average	2		3	September 16, 2013	Aug Sep Oct Nov Dec
	Maximum	7	2013	2	September 12, 2013	
	Minimum	1	2001	2	October 13, 2009	
Sharp-shinned Hawk <b>SS</b> <i>Accipiter striatus</i>	Average	11,641		2,407	October 17, 2001	Aug Sep Oct Nov Dec
	Maximum	18,175	1987	2,130	September 14, 1988	
	Minimum	3,533	2008	2,124	September 15, 1981	
Broad-winged Hawk <b>BW</b> <i>Buteo platypterus</i>	Average	32,993		95,499	September 15, 1984	Aug Sep Oct Nov Dec
	Maximum	110,271	1984	63,400	September 18, 1993	
	Minimum	4,887	2002	53,273	September 19, 1996	
American Kestrel <b>AK</b> <i>Falco sparverius</i>	Average	2,651		2,472	October 1, 2011	Aug Sep Oct Nov Dec
	Maximum	5,644	1989	1,105	October 17, 1989	
	Minimum	597	2008	1,059	October 1, 1986	
Peregrine Falcon <b>PG</b> <i>Falco peregrinus</i>	Average	42		19	October 3, 2007	Aug Sep Oct Nov Dec
	Maximum	114	2006	18	October 1, 1995	
	Minimum	4	1974	15	October 4, 2002	
Cooper's Hawk <b>CH</b> <i>Accipiter cooperii</i>	Average	557		289	October 3, 1987	Aug Sep Oct Nov Dec
	Maximum	1,082	1991	227	October 18, 1979	
	Minimum	49	1975	210	October 9, 1986	
Gyr Falcon <b>GY</b> <i>Falco rusticolus</i>	Average	1		1	October 4, 2013	Aug Sep Oct Nov Dec
	Maximum	1	1991	1	November 10, 1991	
	Minimum	1	2013			
Turkey Vulture <b>TV</b> <i>Cathartes aura</i>	Average	19,606		20,032	October 9, 2005	Aug Sep Oct Nov Dec
	Maximum	51,147	2015	10,264	October 4, 2010	
	Minimum	486	1975	7,976	October 22, 2014	
Red-shouldered Hawk <b>RS</b> <i>Buteo lineatus</i>	Average	742		430	October 17, 1978	Aug Sep Oct Nov Dec
	Maximum	1,667	1993	403	October 18, 1991	
	Minimum	59	1975	364	October 20, 1985	
Northern Harrier <b>NH</b> <i>Circus cyaneus</i>	Average	775		258	October 31, 1993	Aug Sep Oct Nov Dec
	Maximum	1,616	1993	155	November 18, 1986	
	Minimum	189	1974	142	October 20, 1985	
Golden Eagle <b>GE</b> <i>Aquila chrysaetos</i>	Average	59		50	November 1, 2008	Aug Sep Oct Nov Dec
	Maximum	134	1999	35	October 21, 2000	
	Minimum	5	1976	34	October 27, 1999	
Rough-legged Hawk <b>RL</b> <i>Buteo lagopus</i>	Average	93		73	November 5, 1977	Aug Sep Oct Nov Dec
	Maximum	308	1977	71	October 23, 1978	
	Minimum	6	1974	70	October 27, 1991	
Northern Goshawk <b>NG</b> <i>Accipiter gentilis</i>	Average	27		28	November 10, 1991	Aug Sep Oct Nov Dec
	Maximum	77	1991	15	November 1, 1993	
	Minimum	4	2015	13	November 8, 1997	
Red-tailed Hawk <b>RT</b> <i>Buteo jamaicensis</i>	Average	5,503		3,002	November 11, 1994	Aug Sep Oct Nov Dec
	Maximum	10,987	1995	2,724	November 10, 1980	
	Minimum	830	1974	2,033	November 18, 2007	

# Holiday Beach Migration Observatory

## Eastern Migrant Raptor Flight Guide

The material contained in this document has been gathered from personal observations, conversations with fellow hawk watchers, and the published sources listed on page two. This document may be copied for hawk identification usage. I hope this is a useful tool for identification.

Page 1 Robert (Bob) C. Pettit © June 2017 redkaot@earthlink.net		Body	Tail	Wing	Head	Underparts	Flight	Behavior
Accipiter	<b>Sharp-shinned Hawk</b>  Shrugging, Straight, Social Snappy, Soiled, Social	Narrow, stubby. Equal to length of tail. A flying mallet of wings and tail.	Tip usually squared. Terminal band is narrow, soiled, not white and hard to see.  <b>Straight Sharpie</b> <b>Soiled Sharpie</b>	Short, broad and very round at the tip. The leading edge has the wrist projecting or pushing forward. The trailing edge shows an "S" curve.	Appears to be pulled back since wings are pushed forward.  <b>Shrugging Sharpie</b>	<b>Immature:</b> Chest and belly have thick noodle-like streaking. Looks dirty at distance. <b>Adult:</b> Rusty barring on chest and belly.	Flapping and gliding is hurried and snappy. Too rapid to count. In a glide tends to hold tail up above head.  <b>Snappy Sharpie</b>	Travels in 1's, 2's or up to 8 in a group. Feisty, agitator, intimidator.  <b>Social Sharpie</b>
	<b>Cooper's Hawk</b>  Crossing, Curved, Companionless Casual, Crisp, Companionless	Large version of Sharpie. Body appears shorter than tail. A flying cross.	Long with tip usually rounded. Terminal band is broad white and easy to see.  <b>Curved Cooper's</b> <b>Crisp Cooper's</b>	The wing is rather long and straight-edged with little or no bend at the wrist.	Large and heavy. Protrudes forward of the wing, as a turtle's extended head so eye is well forward.  <b>Crossing Cooper's</b>	<b>Immature:</b> Only the chest has thick noodle-like streaking. Looks white or clean at distance. <b>Adult:</b> Rusty barring on chest.	Countable flapping gliding with flaps are stiff. Moth-like. In a glide tends to hold head up above land.  <b>Casual Cooper's</b>	<b>Solitary</b> birds usually not traveling in pairs or groups. Soars high with other raptors with fully extended wings.  <b>Companionless Cooper's</b>
	<b>Northern Goshawk</b>  Buteo-like, Tubular Eye line visible	<b>Buteo size and shape.</b> Tubular. Cylindrical.	Broad and wedge-shaped. Appearing like an extension of the body.	Leading edge almost straight. Trailing edge like Sharpie's 'S' curve.	Fist-shaped, large, broad <b>Eye line visible.</b> <b>Adult:</b> Black eye patches.	<b>Immature:</b> Heavy noodle-like streaking on breast to base of tail. <b>Adult:</b> Pale gray barring	Wing beat is heavy, deep, labored like a buteo. A flying tube.	An accipiter that looks like a buteo. <b>Beware of immature Red-shoulder Hawk</b>
Falcon	<b>American Kestrel</b>   "flying banana"	Killdeer-sized. Dainty and delicate looking. Strong back curving of the wings and tuck of the head gives a flying banana look. Female slightly but not noticeably larger than male.	<b>Male:</b> Bright rufous tail with a broad, dark band near the tip. <b>Female:</b> Reddish brown, overlaid with dark, broken barring. No dark tip.	Soft curving wing, swept back; sickle-shaped; like a "flying banana". <b>Male:</b> Blue above. Line of white dots on trailing edge termed "necklace." <b>Female:</b> Reddish above. Necklace of buffy dots.	A vertical slash-marks on both sides of the face look like a <b>mustache</b> and <b>sideburn</b>	<b>Adult:</b> Very pale. Lightly streaked and spotted, especially on the sides. <b>Immature:</b> Similar to adult, with more heavy streaking below.	Light, lively, fluttery, wandering. Accipiter-like quality. On calm days flight behavior similar to Sharpie's flap-flap-glide. Glides more often than Merlin and Peregrine. Battered about by moderate winds.	Travels in 1's, 3's, 4's or up to 8-10 in a loose group. Eats dragonflies while flying. In a strong wind, it bounces like a cork on the water.
	<b>Merlin</b>   Point-to-point flight Solitary	Athletic, slender, and powerful. <b>Male:</b> Larger than Kestrel. Bright metallic blue above. <b>Female and Imm:</b> Large pigeon. Chocolate falcon.	<b>Male:</b> Dark blue tail shows several pencil-thin, blue-gray bands. <b>Female:</b> Dark brown tail shows many pencil-thin buffy bands.	Longer and broader than Kestrel. Broad isosceles triangle-shaped with sharply pointed tips.	Mustache mark is faint, blurred, ambiguous, vague, and imprecise.	Fine to heavy streaking. <b>Male:</b> Finely streaked below. <b>Female:</b> Heavy streaking below with contrasting white throat and buffy under tail coverts.	<b>Point-to-point flight</b> is consistent & direct. Doesn't wander nor is altered by wind speed. Wing beats are quick & continuous with short strokes. Power in down-stroke. 'Pigeon' flight.	Its demeanor may be irritating, galling, and bothersome. Usually <b>solitary</b> .
	<b>Peregrine Falcon</b>   Extremely long-winged Wing beat like C. Loon	Medium-to-large with wide range between sexes. Heavy and broad. <b>Adult:</b> Blue-gray above. <b>Immature:</b> Brown back.	Fairly long- and broad-tailed falcon. When fully spread it forms a semicircle that nearly touches the trailing edge of the wing.	<b>Extremely long-winged</b> falcon. Wide base triangle-shape. In soaring bird, they resemble tapered candles.	<b>All individuals</b> have a bold, distinct mustache mark. <b>Immature:</b> Blood crown and nape.	<b>Adult:</b> Heavily barred below, with a gleaming white chest and throat. <b>Immature:</b> Heavily streaked, with a buff-colored chest and throat.	Wing beat is fluid, rhythmic, elastic, and whip-like. <b>Similar to a Common Loon's wing attitude.</b>	Solitary in migration. Confused with the <b>Northern Harrier</b> that has longer wings and tail.
Osprey	<b>Osprey</b>  Black & white showy plumage Distinctive gull-shape	<b>Adults and immatures:</b> Similar in appearance; with distinctive <b>black and white patterned plumage</b> and distinctive <b>gull-shape</b> .	<b>Adult:</b> Lack a narrow white border on the tip of the tail. <b>Immature:</b> Have a narrow white border on the tip of the tail.	<b>Adult:</b> Long & gull-shaped with darker mottling on the underwing. <b>Immature:</b> Long & gull-shaped with thin white trailing edge border.	Dark eye stripe separates the white crown from the white throat.	Body and wing linings are creamy white. Flight feathers are uniformly dark.	Soars on long and lanky crooked wings. Wings bend up above horizontal axis and then downward at wrist. Beat is stiff, arthritic.	Looks like a gull. Uses thermals and updrafts.
Harrier	<b>Northern Harrier</b>   Proportionately longest tail of all N. American raptors.	Long, lean, lanky, medium size. White rump patch. <b>Male:</b> Silver gray above, white below. <b>Female:</b> Tawny above buffy with brown streaks on sides below. <b>Immature:</b> Chocolate-rust above. Orange to cinnamon below. No streaking.	Long and narrow. <b>Proportionately longest tail of all North American raptors.</b>	Long and narrow. Bold dihedral. Attitude may be pointed (falcon) or blunt (buteo). <b>Male:</b> Underwing shows inky-black tips and trailing edge.	<b>Immature:</b> Head is dark; appearing hooded. <b>Male:</b> Black head.	<b>Male:</b> White. <b>Female:</b> Buff with brown streaks on sides. <b>Immature:</b> Cinnamon, to mahogany, or rust-colored.	Rocks unsteadily in a wind, buffeted like a ship on a wave. Wing beat loping and regular, emphatic snap to downward stroke. <b>Best Clue: unique cadence.</b>	Migrate alone, in pairs, or groups of 3's and 5's. Flight path is usually single file.
Vulture	<b>Turkey Vulture</b>   Bold dihedral (Not a raptor.)	Uniformly dark black. Sexes similar.	Broad, usually not spread.	<b>Bold dihedral.</b> Long, broad, plank-like, deeply slotted tips. Flight feathers silver with underwing coverts and leading edge black.	Diminutive, Lilliputian, minute, minuscule, tiny! <b>Adult:</b> Red with yellow bill. <b>Immature:</b> Dull gray with gray bill.	Two-toned. Uniformly dark black but flight feathers are silvery.	Long tail and no head. Rocks in flight like a tightrope walker.	Gregarious. Rarely flaps. Singles confused with Golden Eagle.

## Eastern Migrant Raptor Flight Guide

Front page. Download at HBMO.CA

# Holiday Beach Migration Observatory

## Eastern Migrant Raptor Flight Guide

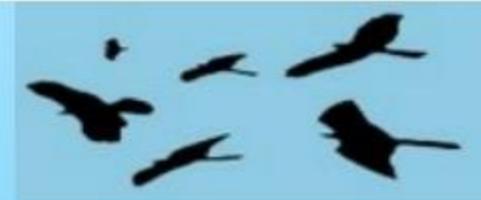
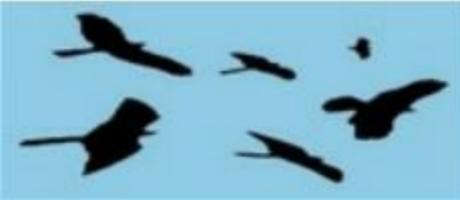
The material contained in this document has been gathered from personal observations, conversations with fellow hawk watchers, and the published sources listed on page two. This document may be copied for hawk identification usage. I hope this is a useful tool for identification.

Page 2 Robert (Bob) C. Pettit © June 2017  
redknot@earthlink.net

		Body	Tail	Wing	Head	Underparts	Flight	Behavior
Eagle	 <p><b>Bald Eagle</b> Large head Wings flat</p>	Immense size in all age classes. <b>Adult:</b> Dark, almost black. <b>1<sup>st</sup> year:</b> Chocolate, almost black, speckled with dirty white; mottling varies and is age related. <b>2<sup>nd</sup> &amp; 3<sup>rd</sup>:</b> Large areas of white mottling are present on the belly and some it located on the back.	Important field mark; white to dark.	In soar, uniformly wide — slab-like; held at right angle and straight out. <b>Adult:</b> Dark, almost black. <b>Immature:</b> Speckled with dirty white; mottling varies and is age related.	Head and bill are massive. <b>Adult:</b> White. <b>Imm:</b> Dark. ↔ <b>BE Wing continued</b> <b>1<sup>st</sup> year:</b> White limited to underwing linings. It appears as broad white line at leading edge area. Wing pits white. <b>2<sup>nd</sup> &amp; 3<sup>rd</sup>:</b> Underwing patches generously white.	Great variation. <b>Adult:</b> Dark. <b>Other ages:</b> Various amounts of white on belly, wings, and tail	Steady, stately, deliberate, even-keeled, and not stiff. Beat is slow, robust, deeply arched, and high on upstroke.	Flap continuously. Or never flapping.
	 <p><b>Golden Eagle</b> Small head, Slight dihedral</p>	Large and dark, similar in appearance and shape to <b>Immature</b> Bald Eagle. <b>Adult:</b> Dark brown. <b>Immature:</b> Dark.	White at base of tail. <b>Adult:</b> Trace of white feathering may be present at the base of the tail. <b>Immature:</b> White tail broadly edged with a dark terminal band.	Long, broad slab-like wing similar to Bald Eagle. <b>Adult:</b> Lack white wing patches. <b>Immature:</b> Brilliant white patches on the wings large and obvious.	Head and bill are small. Crown and nape blond or pale gold in all plumages.	Uniformly dark except for flight feathers and tail.	Wing beat slow and ponderous. Shallower wing beat than the deep arcing beat of a Bald Eagle. Like slow, gliding, and distant single Turkey Vulture.	Flies singly or in groups of two's or three's.
Buteo	 <p><b>Red-tailed Hawk</b> Patagium, Muscular wing</p>	<b>Adult and Immature:</b> Similar in plumage — brown to gray-brown above and light below, with varying amounts of speckling and streaking. They do differ in tail color.	<b>Adult:</b> Has a red tail that is gotten during the second year. <b>Immature:</b> Have finely barred brown tails that show white at the base.	<b>Best Clue: Patagium</b> Patagium on leading edge is near the body. Found only in the Red-tailed (all plumages). Soars with tip flexed forward. Underwing "comma" at the wrist.	Brown to gray-brown. ↔ <b>RT Wing continued</b> Typical buteo type that appears enlarged and robust.	Very white below. A distinct bellyband is present on most birds.	May hover-hunt and is capable of kiting.	The Red-tailed Hawk will be a reference for identifying other buteos. This bird is the large hawk of the highway roadside.
	 <p><b>Red-shouldered Hawk</b> Crescent "stained-glass window" at primaries base</p>	Compared to Red-tailed in flight, it appears slimmer, sleeker, and cylindrical. <b>Adult:</b> Body chestnut. <b>Immature:</b> Body not chestnut and brown above.	Boldly striped with black and white broad bands. Tail sub-terminal band isn't noticeably different from the other bands. Long in <b>imm</b> ; short for <b>adults</b> .	Long, narrow, and clean-edged; lacks the bulging of the Red-tailed. Leading edge is straight; trailing edge curves gently ( <b>adults</b> ) or not at all ( <b>immatures</b> ). Crescent-shaped "stained-glass window" is located near the base of the primaries.	Nothing special to note. ↔ <b>RS Wing continued</b> <b>Adult:</b> Underwings chestnut. Flight feathers boldly striped with black and white.	<b>Adult:</b> Chestnut. <b>Immature:</b> Cream-colored below with heavy streaking on the chest.	In full soar, entire wing projections forward, as though it were stretching forward with open arms. Beat is quicker than a Red-tailed but stiff as though the bird was swatting the air with cupped wings.	It thinks it's an accipiter. General appearance is that of a buteo trying to mimic an accipiter.
	 <p><b>Broad-winged Hawk</b> Small, chunky, Crow-sized. Use thermals for travel.</p>	Small, chunky, stubby, and Crow-sized. <b>Immature:</b> Brown above.	<b>Adult:</b> Broad black and white tail bands. May open very wide and seeming to be short. When closed, it's very long and narrow; unbuteo like. Sub-terminal band on the tail is darker and wider than the other bands on the tail.	Underwings of both <b>immatures</b> and (especially) <b>adults</b> are very clean and white. The broad, dark outer border extending from wing tip back along the trailing edge accents this. The look is a white picture and black frame.	Nothing special to note.	<b>Adult:</b> Barring on chest. <b>Immature:</b> Creamy below with heavy streaking on the face, throat, sides, and belly (suggesting a band).	<b>Soar:</b> wings are short and broad and are held horizontally and flat at almost a perfect 180°. <b>Glide:</b> Wing leading edge is curved & trailing edge is straight like blade of a paring knife.	Depend more on thermals than most hawks. In the East, a large flock of buteos intuitively means Broad-winged.
	 <p><b>Rough-legged Hawk</b> Large, lanky, slender buteo. Boldly patterned with two color forms</p>	Large, lanky, slender buteo. It's boldly patterned, setting the bird apart from most buteos. Several different plumages occur, relating to age and sex, but these are conspicuous. Light morph dark morph birds occur	<b>Light morph:</b> Upper surface is white except for a broad, dark band at the tip. <b>Dark morph:</b> Show almost no white on the tail, and some have none. Some show an obvious broad dark sub-terminal band.	Juts up sharply from the body forming pronounced dihedral then flattens out at the wrist. Hunched-shoulder posture is only seen in the Rough-legged. <b>Light morph:</b> Light with some streaking. <b>Dark morph:</b> Black underwing linings.	<b>Light morph:</b> Creamy or tawny crown and nape (usually over-streaked with brown). <b>Dark morph:</b> Black.	<b>Light morph: Adult:</b> Are heavily streaked on the chest, making the bellyband less obvious. <b>Immature:</b> Largely unstreaked and very pale below. Note the carpal patch, dark belly, and dark tail band. <b>Dark morph:</b> Silvery flight feathers and undertail.	Wing beat is steady, unhurried, methodical, and deeply arched. Flapping doesn't frequently happen in a series, as with other buteos, but if the bird does fly in a series of pumps and glides, there are more pumps to the glide.	Readily use own power for flight. They are the least hesitant buteo in crossing open water. Flight seems effortless; done with a sense of purpose and grace
	 <p><b>Swainson's Hawk</b></p>	Glides with modified dihedral. Gliding wings appear falcon-like. Dark and Light morph occur.	Clark, W. S., and B. Wheeler 1987 Dunne, P., D. Sibley, and C. Sutton 2012 Dunne, P., D. Keller, R. Kocheberger 1984 Lignori J., 2005 Wheeler, B., and B. Clark 1999 Wheeler, B. 2003	<i>Hawks: A Field Guide to the Hawks of North America</i> Peterson Field Guide Series. Houghton Mifflin <i>Hawks in flight: Flight identification of North American migrant raptors 2<sup>nd</sup> Ed</i> Houghton Mifflin. <i>Hawk Watch: A Guide for Beginners</i> New Jersey Audubon Society. <i>Hawks From Every Angle: How to Identify Raptors in Flight</i> 2011 <i>Hawks at a Distance</i> Princeton University Press. <i>A Photographic Guide to North American Raptors</i> (Paperback) Academic Press <i>The Wheeler Guides: Raptors of Eastern North America and Raptors of Western North America</i> Princeton University Press.				

## Eastern Migrant Raptor Flight Guide

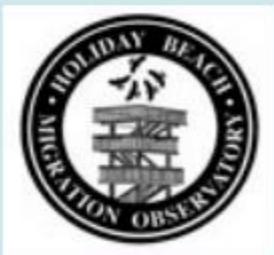
Back page. Download at HBMO.CA



# Learning Eastern Hawk Flight Identification

- ☑ Line drawings were modified by Bob Pettit from material developed by Paul Carrier in 2009 for Hawk Migration Association of North America, (HMANA).
- ☑ Silhouettes were developed by Bob Pettit from these modified drawings.
- ☑ Photographs are by Bob Pettit unless otherwise noted by Allen Chartier, Steve Dixon, Tim Jarrold, Olga Klekner, Larry Ludwicki, Dan Lumm, and Claude Radley.

**Holiday Beach  
Migration Observatory**



**Essex Region  
Conservation Authority**



*Presentation by Bob Pettit  
redknot@earthlink.net*

**Holiday Beach  
Conservation Area**

**THE HAWK TOWER AT HOLIDAY BEACH**

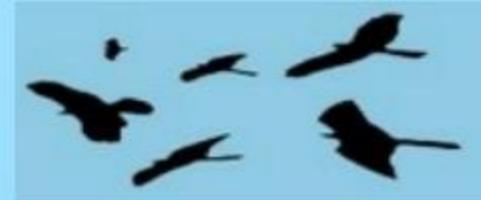


# Holiday Beach Migration Observatory

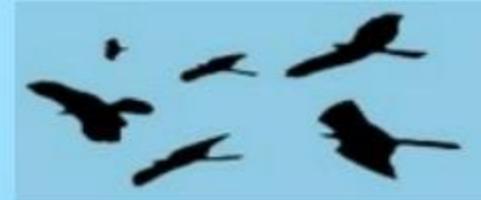
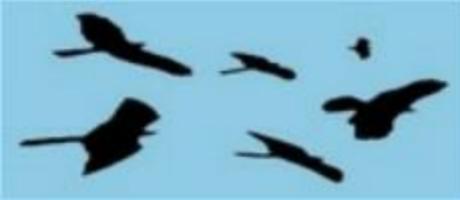
<b>Year</b>	<b>Month</b>	<b>Day</b>	<b>Hour Start</b>	<b>Hour End</b>	07:00 AM 700 08:00 AM 800 09:00 AM 900 10:00 AM 1000 11:00 AM 1100 12:00 PM 1200 01:00 PM 1300 02:00 PM 1400 03:00 PM 1500 04:00 PM 1600	<b>Official Counter-Coordinator (Print Large)</b> <i>Sign Coordinator Box on reverse side too.</i>	
2017					Round to nearest Quarter Hour EST		
<b>Period Weather Conditions</b>							<b>Site Coordinator is responsible for:</b> <ul style="list-style-type: none"> <li>- Record weather data on the hour</li> <li>- Completing both sides of this form</li> <li>- Delegating duties to observer-counters</li> <li>- Being helpful to visitors</li> <li>- Having visitors sign data sheet</li> <li>- Being safe, being alert, being dependable.</li> <li>- Making rational decisions.</li> <li>- Entering data into HawkCount.org ASAP</li> </ul>
<b>Wind Speed</b> Use Code @ Rt.	<input type="text"/>	<b>Wind Direction</b> Direction Coming. VAR: Variable U: Unknown	<input type="text"/>	<b>Temperature</b> Degrees Celsius	<input type="text"/>	<b>Humidity</b> Percentage	
<b>Baro. Pressure</b> Inches Hg	<input type="text"/>	<b>Cloud Cover</b> Percentage	<input type="text"/>	<b>Visibility</b> Estimate Distance Kilometers	<input type="text"/>	<b>Precipitation</b> Use Code @ Rt.	<input type="text"/>
<b>Flight Direction</b> Direction Going (Variable enter V,LE)	<input type="text"/>	<b>Code Flight Height</b>	<input type="text"/>	<b>Height of Flight</b> Majority of flight above Ground Level Use Code @ Rt.	<input type="text"/>	<b>Visitors: (Print Name and email)</b> <input style="width: 100%; height: 100%;" type="text"/>	
<b>Code mph</b> <b>kmph</b>		<b>Code Precipitation</b>		<b>Code Flight Height</b>		<b>Qualified Observers (Print)</b> List all times to nearest 15 minute block if less than one hour.	
0	0	0	0	0	0	1. 2. 3. 4.	
1	01-03	01-05	1	1	1	<b>Hourly Raptor Report Form</b> <b>Weather, Observer, and Flight Data</b> <b>Holiday Beach Migration Observatory</b> <b>Holiday Beach Conservation Area</b> Amherstburg, Ontario, Canada Tower Site Hawk Watch	
2	04-07	06-11	2	2	2	<b>Comments, Sponsors, Special Observations</b> <input style="width: 100%; height: 100%;" type="text"/>	
3	08-12	12-19	3	3	3		
4	13-18	20-28	4	4	4		
5	19-24	29-38	5	5	5		
6	25-31	39-49	6	6	6	Estimate visibility distant using suggested landmarks: Lake Erie Beach...S.....0.20km Highway Bridge at Big Creek...NNW.....4.82km Tower (Boblo Island)...NW.....8.85km Point Mouillee Banana Dike...SW.....12.87km Red-White Stacks (Trenton Edison)...WNW...15.00km Radio Tower (Flashing light)...N.....16.25km Stack (Monroe Edison)...SSW.....28.90km	
7	32-38	50-61	7	7	7	0 None 1 Fog or Haze 2 Drizzle 3 Rain 4 Thunderstorm 5 Snow 6 Wind Driven Dust, Sand or Snow	
8	39-46	62-74	8	8	8	0. Below eye level (Below Tower) 1..Eye level to 30m. (100ft.) 2..Easily seen with unaided eye 3..At limit of unaided vision 4..Visible in 10x binoculars 5..At limit of 10x binoculars 6..Scope needed >10x 7..Variable U Unknown	
9	47-+	75-+	9	9	9		
U	Unknown	U	U	U	U		



Holiday Beach Migration Observatory



# Hawk Identification and Population Trends



# Holiday Beach Migration Observatory

## *Hawk Feeding Groups*

Accipiters



Short wings, long tail for woodland prey.

Falcons



Pointed wings for speed in open spaces for prey.

Eagles



Large wings, capture ground and water prey. Also scavengers.

Buteos



Broad-shaped wings for soaring or perching on high to inspect fields for prey.

Turkey



On dihedral wings feeds on carrion.

Vultures



On long flexible wings feeds on fish.

Osprey

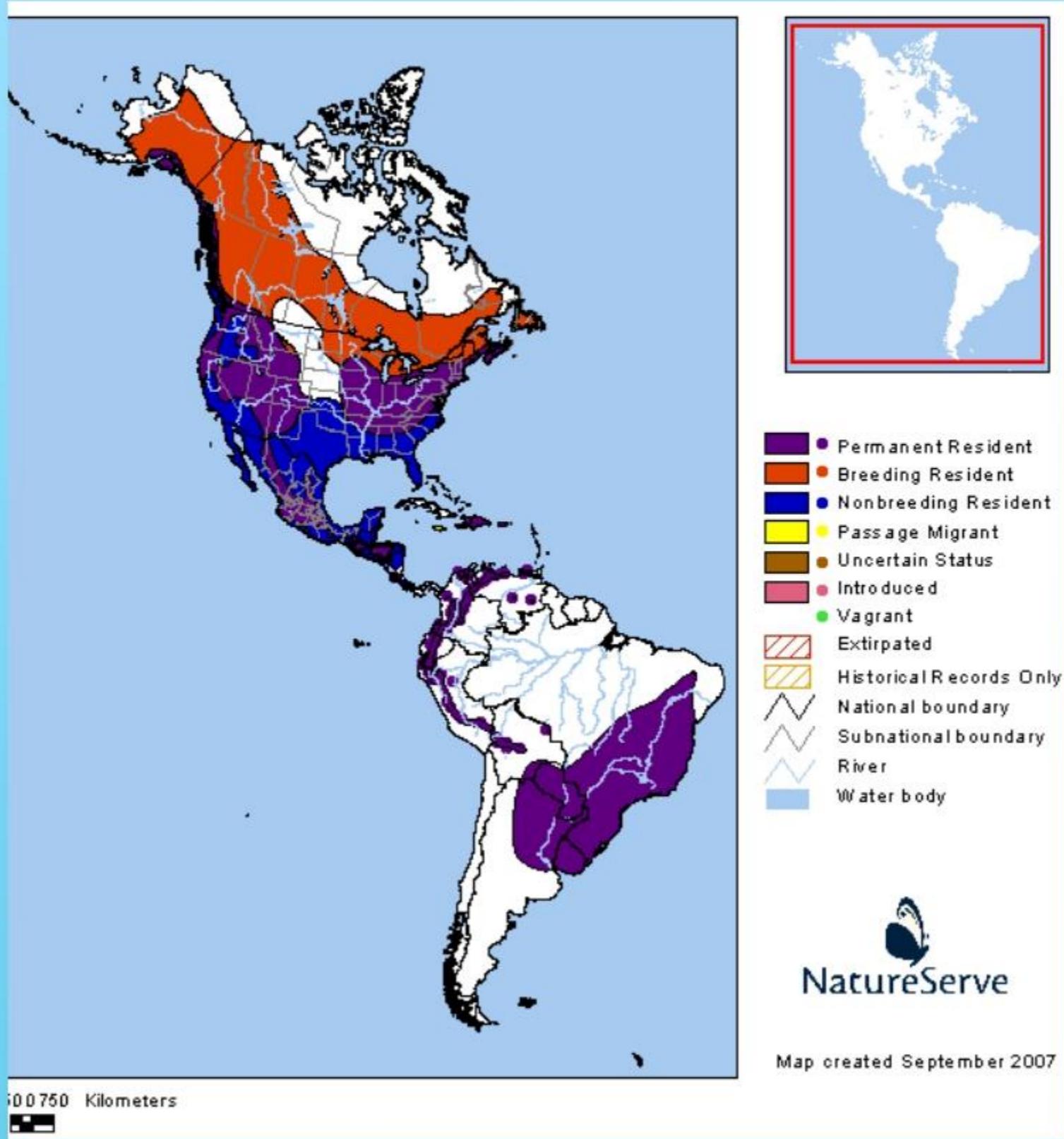
Northern



Gleaning on dihedral wings low over field and marsh for prey.

Harrier

# Holiday Beach Migration Observatory

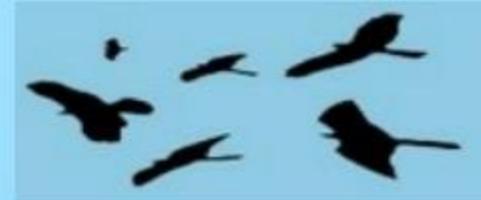


## Sharp-shinned Hawk





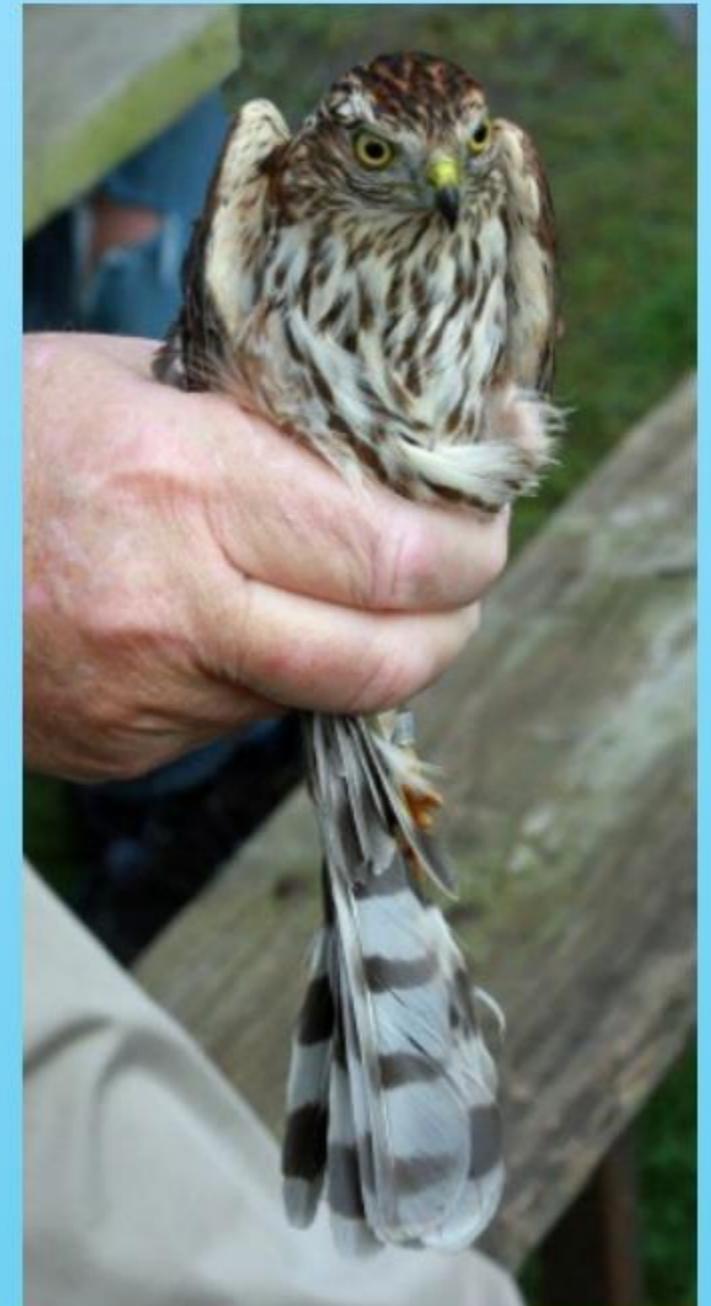
# Holiday Beach Migration Observatory



**White tip to square tail.**



**After Hatched Year (AHY) bird. Note orange eyes.**



**Hatch Year (HY) bird. Vertical streaking and yellow eyes.**

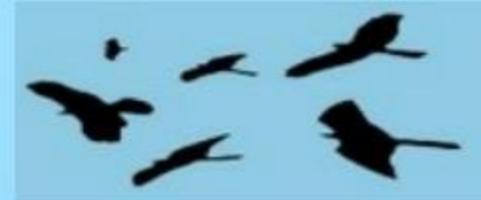


# Holiday Beach Migration Observatory

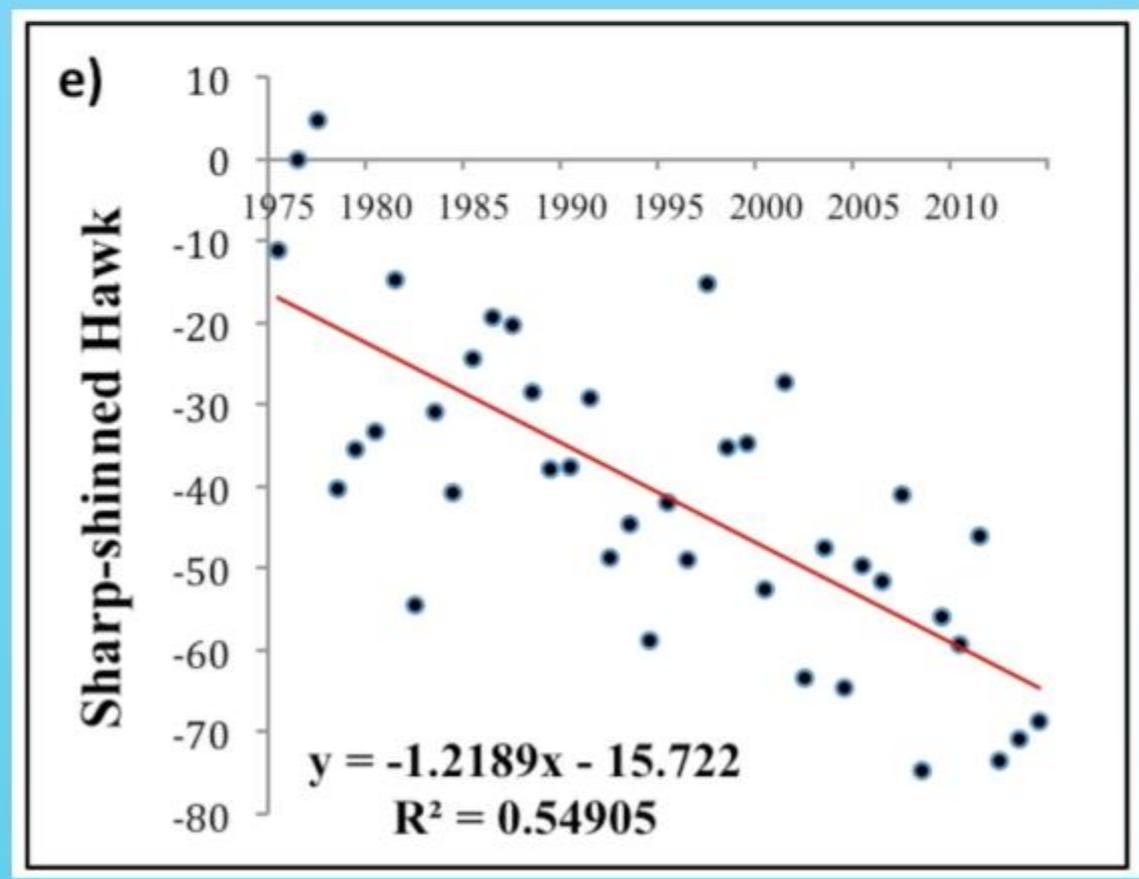
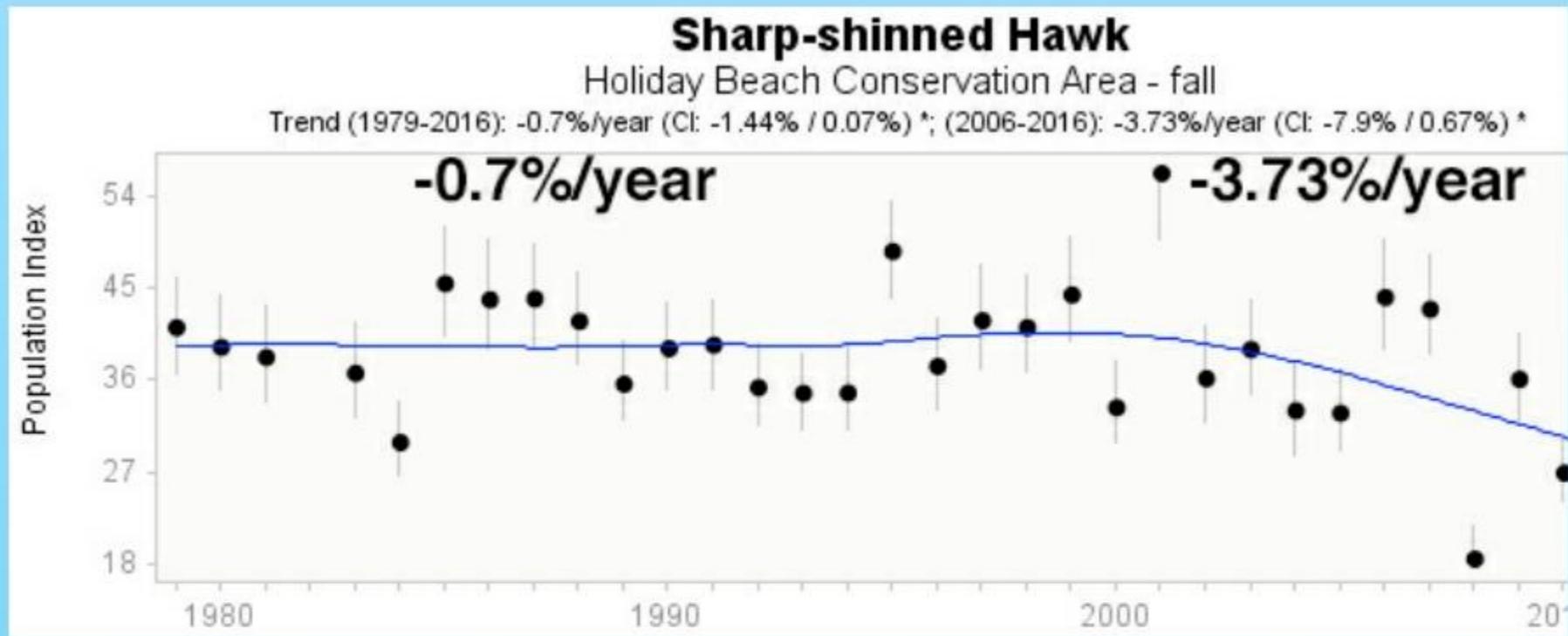


**Adult Sharp-shinned Hawk**





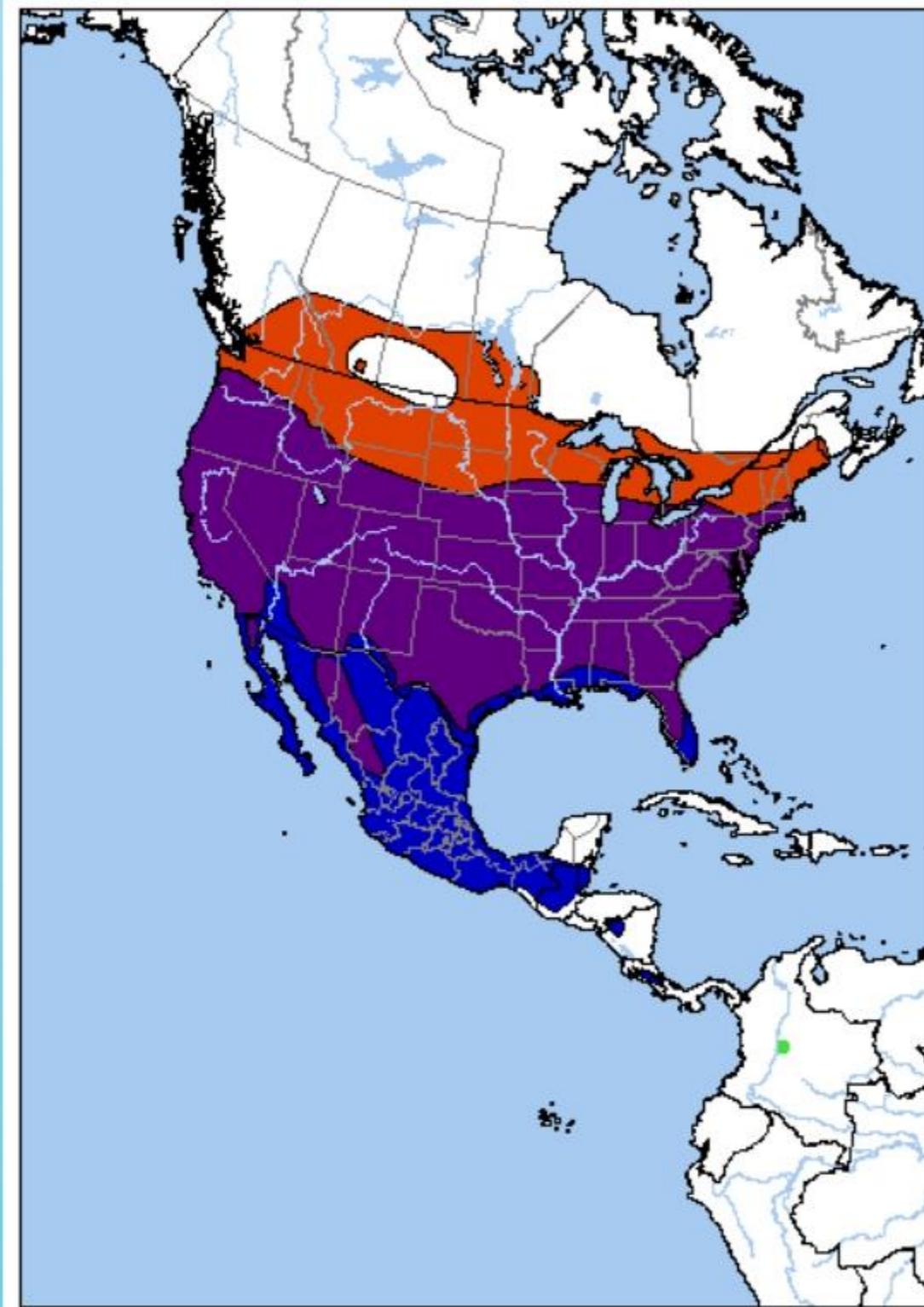
# Holiday Beach Migration Observatory



**-1.22%/year**

Sharp-shinned Hawks  
 observed/hour  
*strong to moderate decrease*  
 -1.22% each year.

# Holiday Beach Migration Observatory

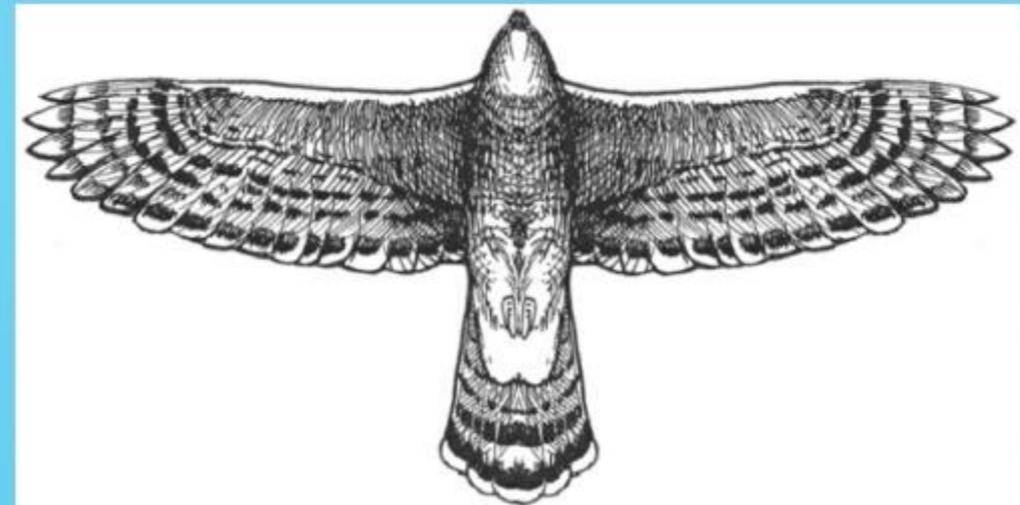


- Permanent Resident
- Breeding Resident
- Nonbreeding Resident
- Passage Migrant
- Uncertain Status
- Introduced
- Vagrant
- Extirpated
- Historical Records Only
- National boundary
- Subnational boundary
- River
- Water body



Map created September 2007

## Cooper's Hawk



# Holiday Beach Migration Observatory



Gliding HY bird

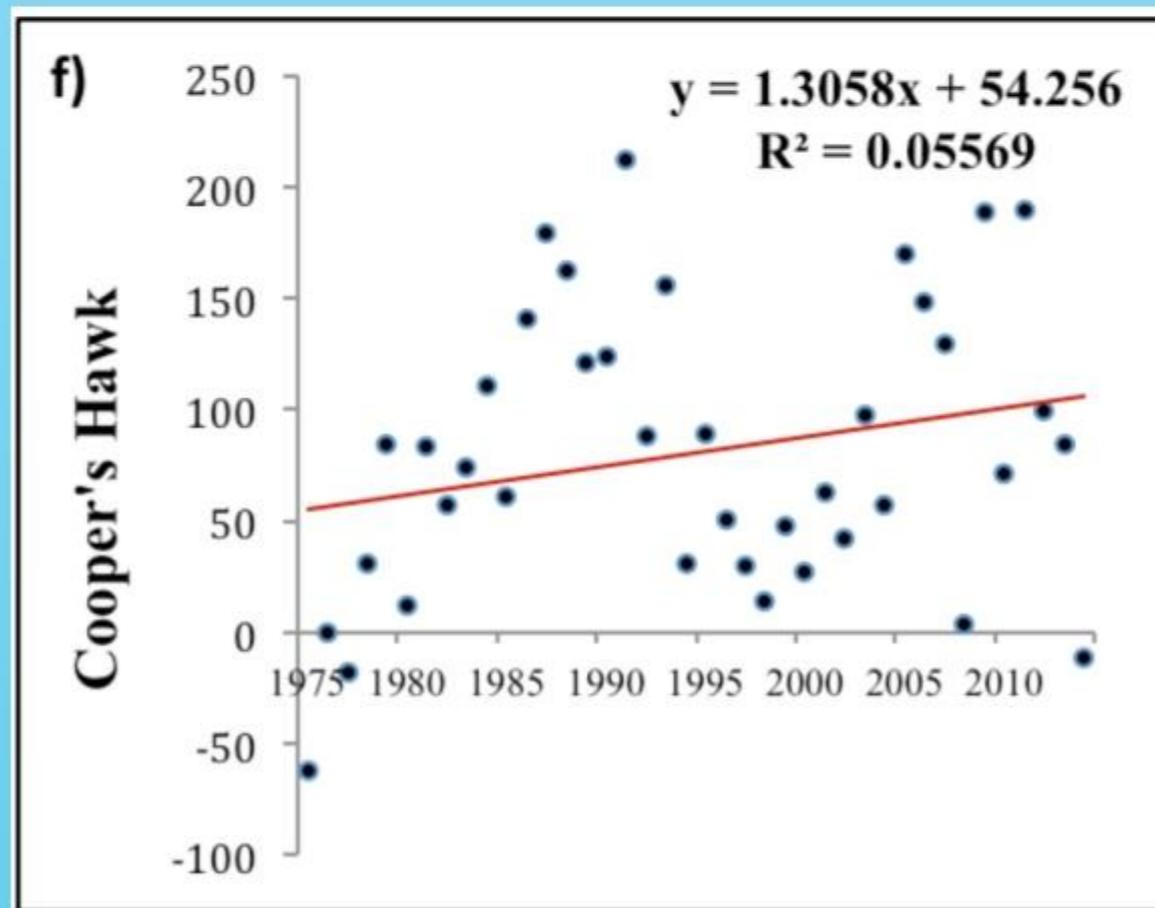
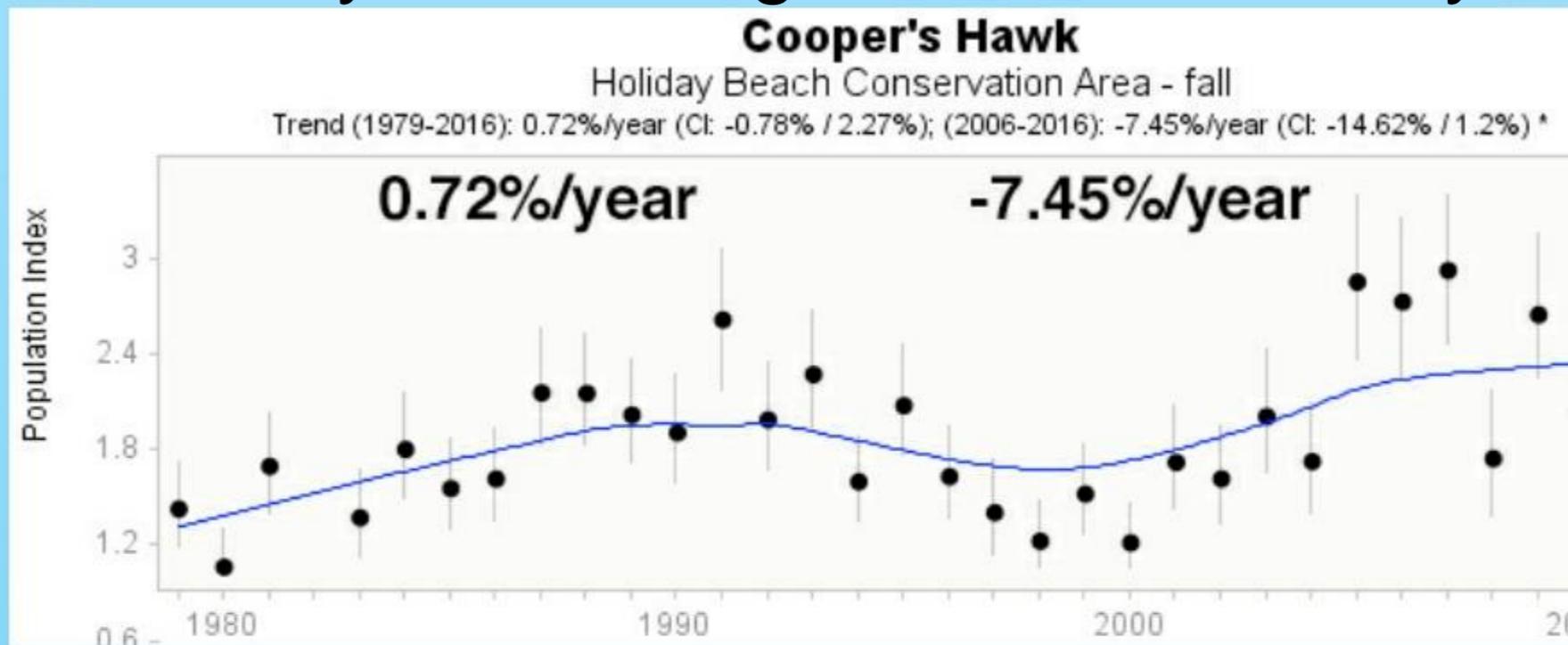


Note curved white tipped tail and wing in a cross. (HY)



Eye color change.

# Holiday Beach Migration Observatory

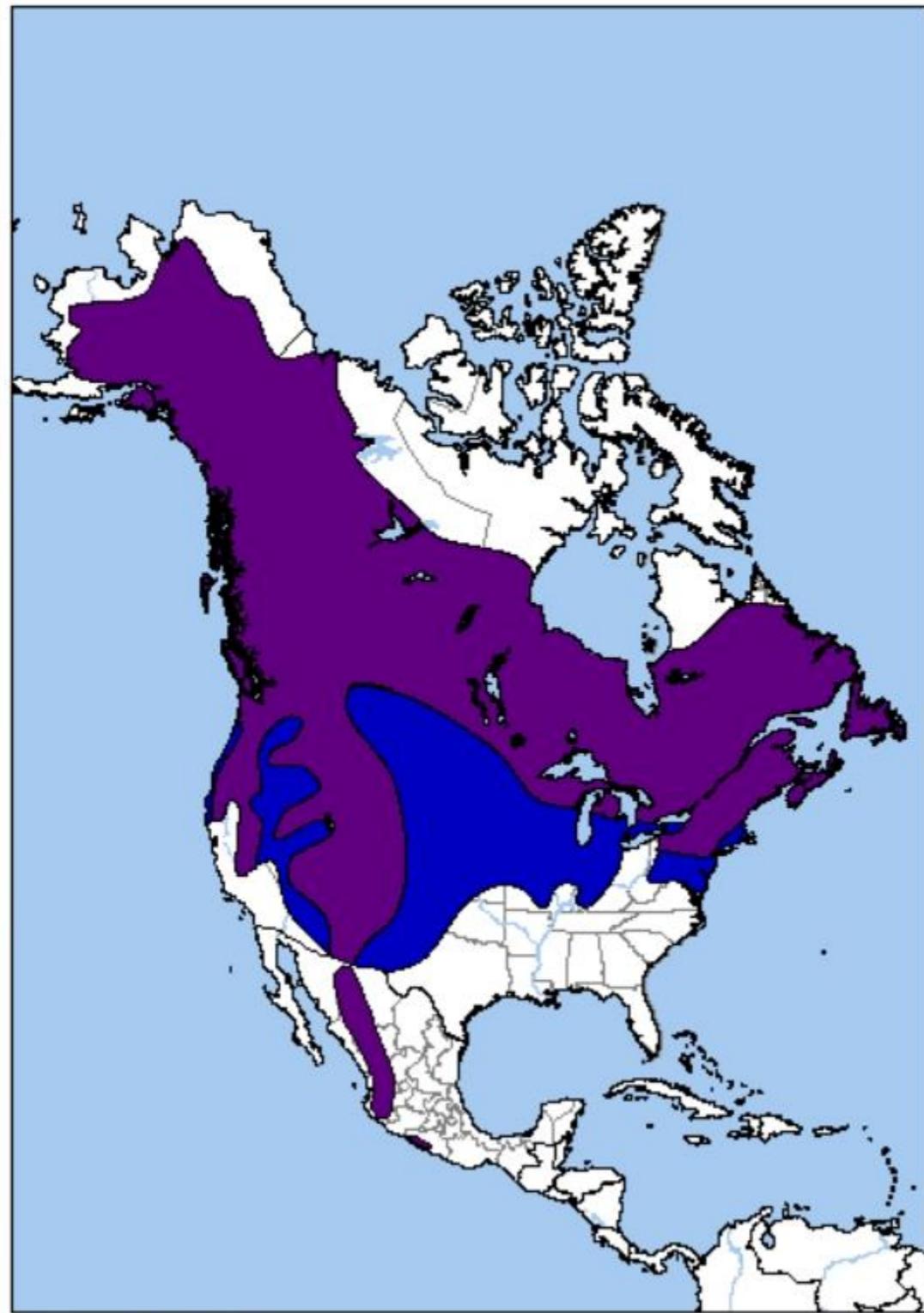


**1.31%/year**

Cooper's Hawks  
observed/hour  
*not a significant change*  
1.31% each year.

# Holiday Beach Migration Observatory

## Northern Goshawk



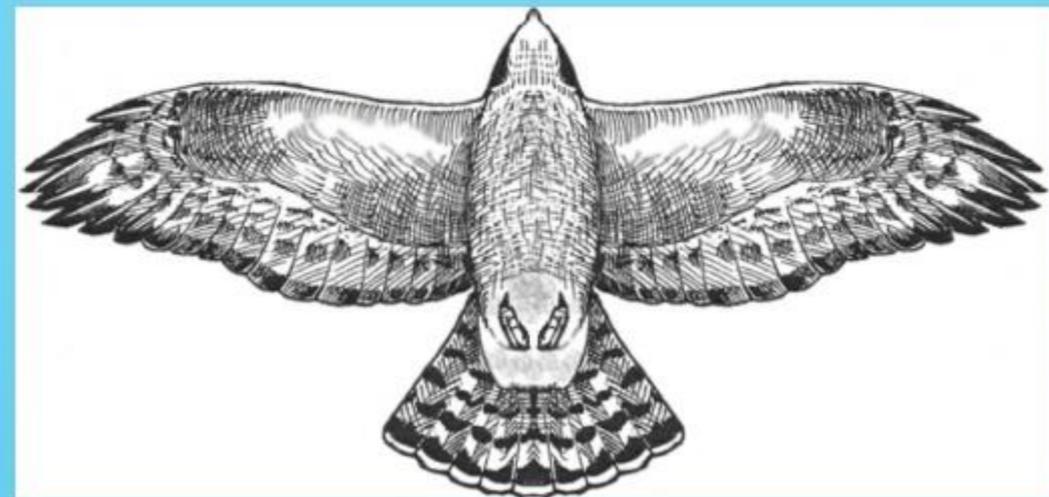
- Permanent Resident
- Breeding Resident
- Nonbreeding Resident
- Passage Migrant
- Uncertain Status
- Introduced
- Vagrant
- Extirpated/Extinct
- Historical
- National boundary
- Subnational boundary
- River
- Water body



NatureServe

Map created September 2007

750 0 750 Kilometers



# Holiday Beach Migration Observatory

## HY Brown Streaked



## Adult Gray plumage



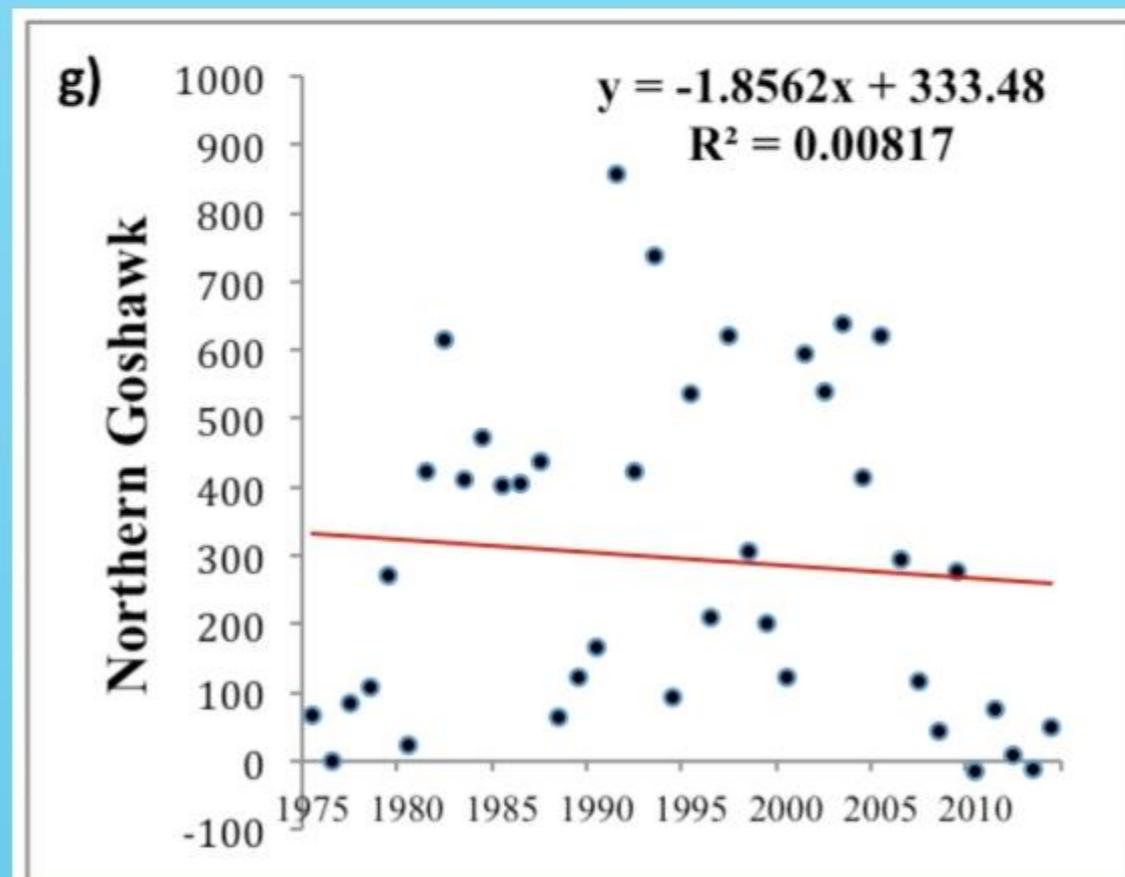
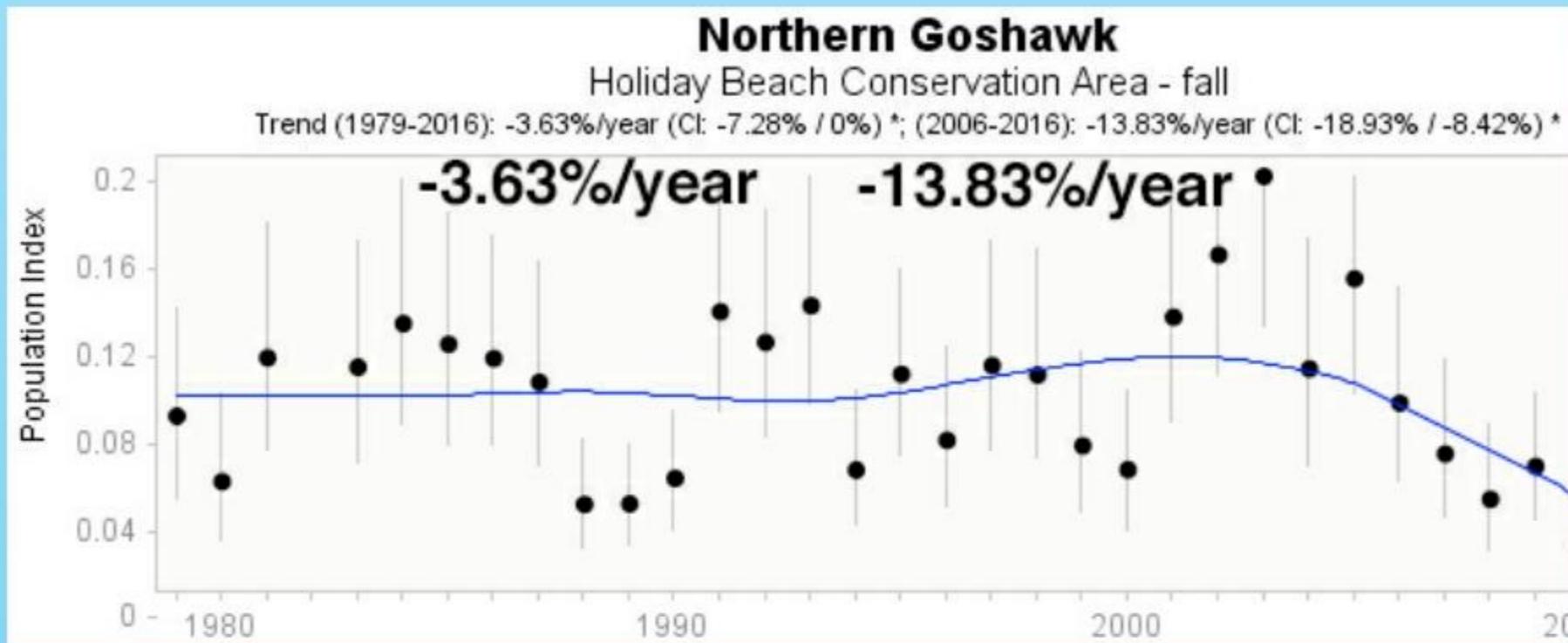
**AHY Eye is  
Orange-Yellow**



**Superciliary line  
is visible in  
all plumages.**



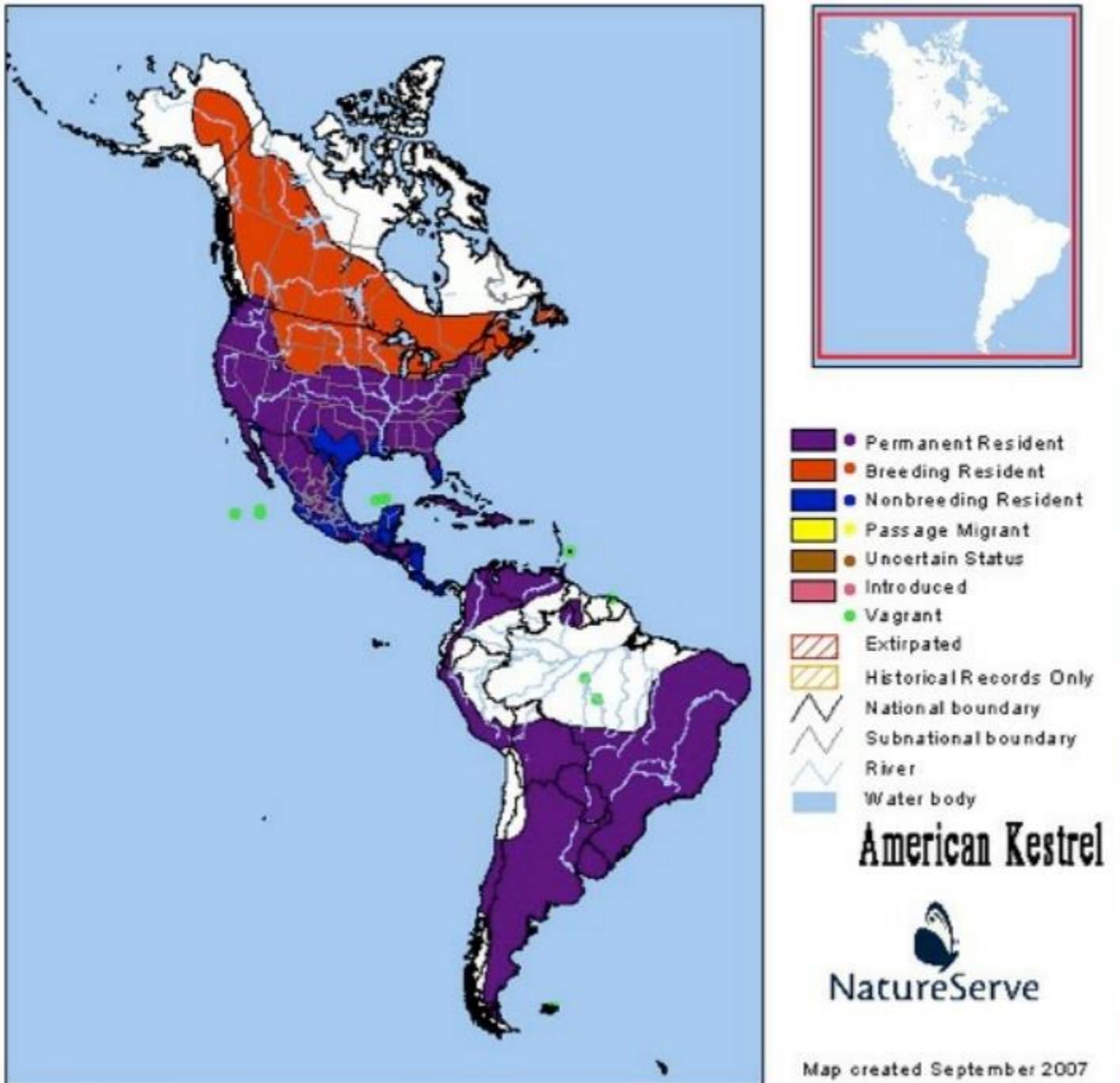
# Holiday Beach Migration Observatory



**-1.86%/year**

Northern Goshawks  
observed/hour  
*not a significant change*  
-1.86% each year.

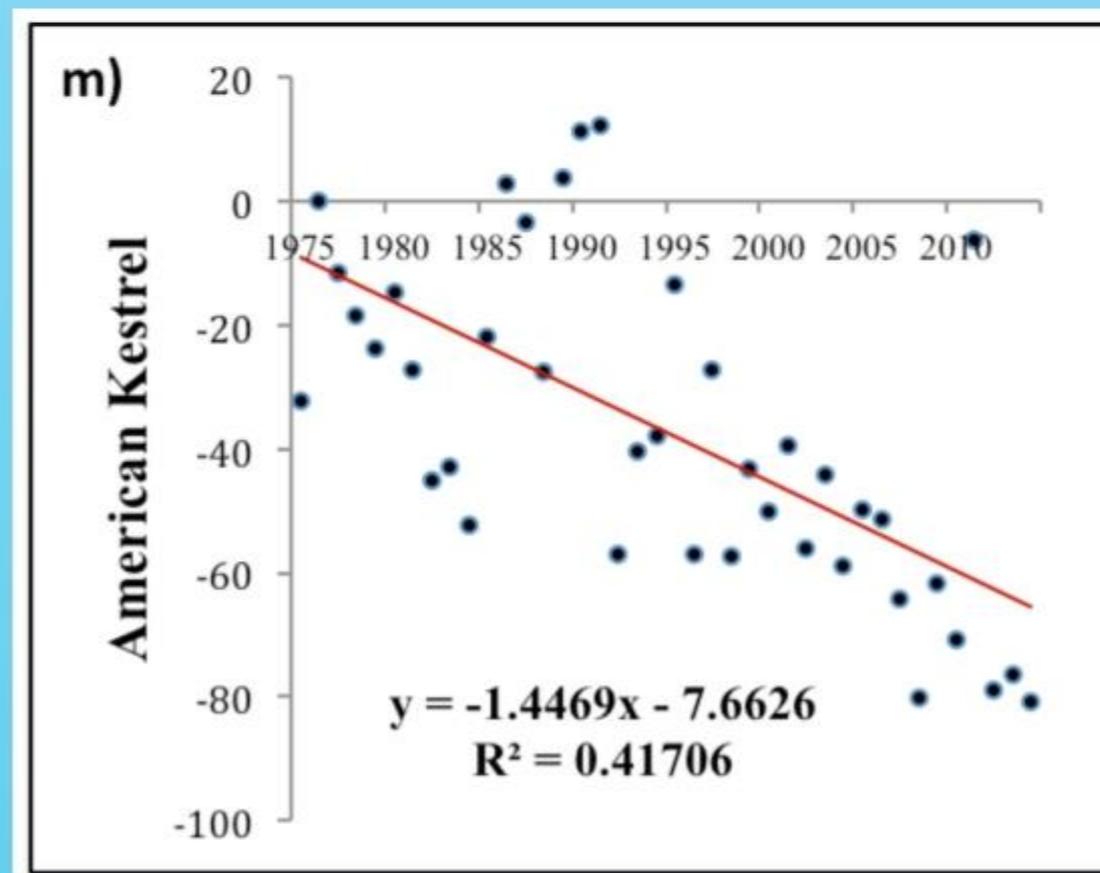
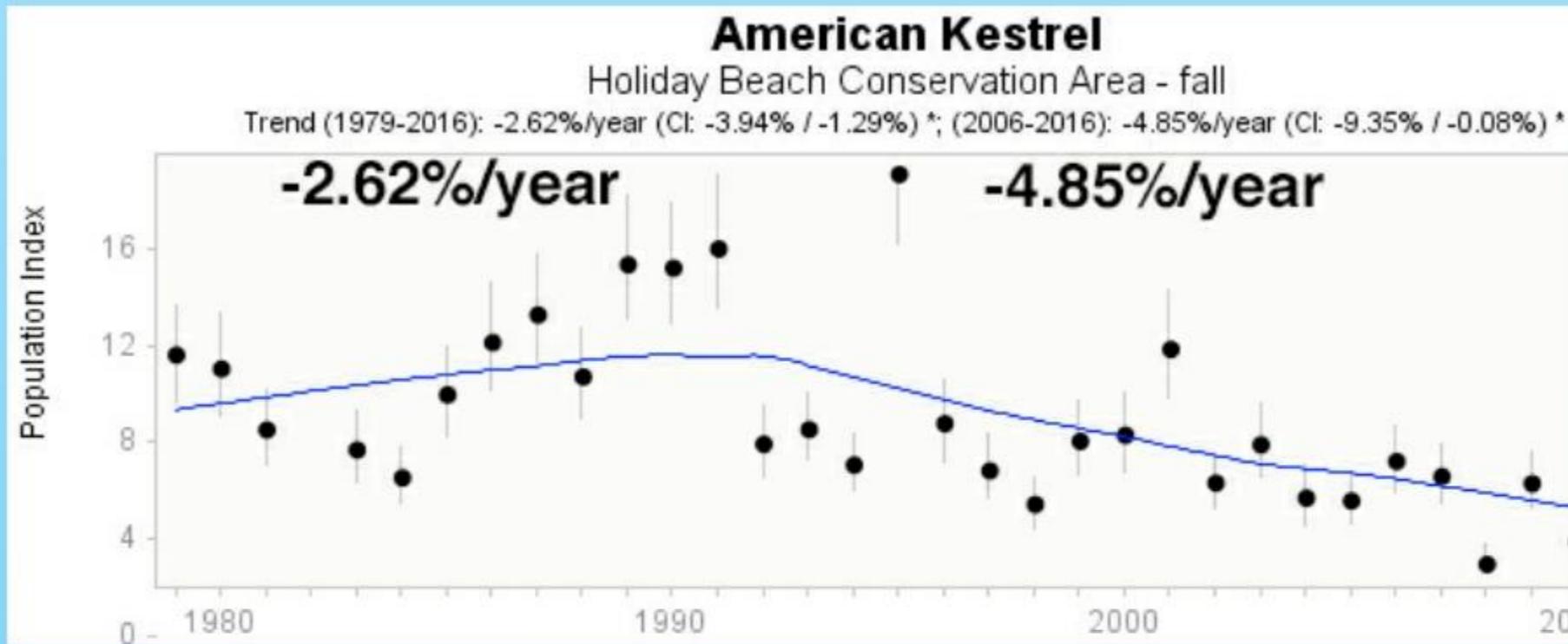
# Holiday Beach Migration Observatory



## American Kestrel



# Holiday Beach Migration Observatory

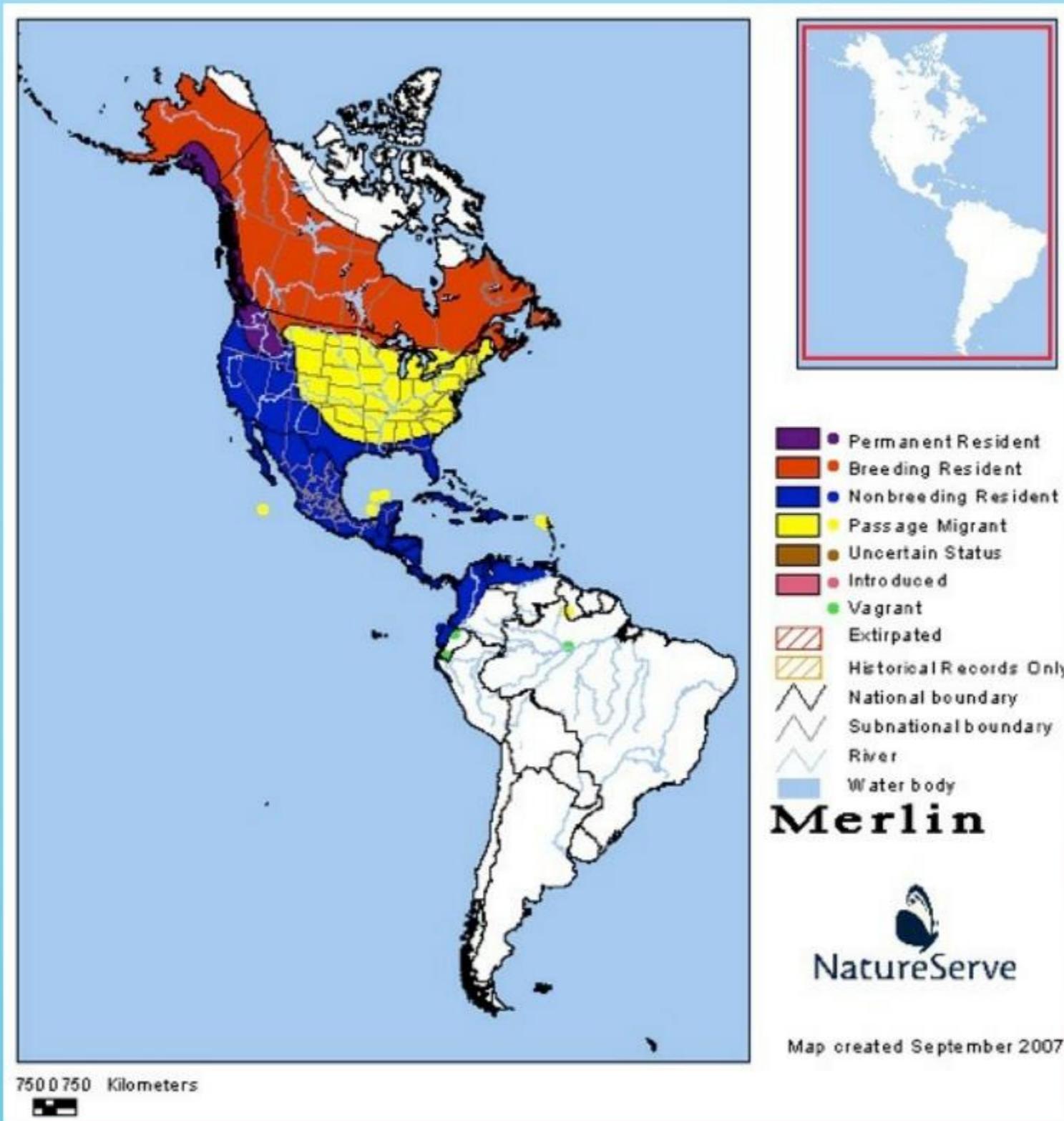


**-1.45%/year**

**American Kestrels  
observed/hour  
*strong to moderate***

***decrease*  
1.45% each year.**

# Holiday Beach Migration Observatory



## Merlin



# Holiday Beach Migration Observatory



**Merlin compared with Sharp-shinned Hawk Male.**

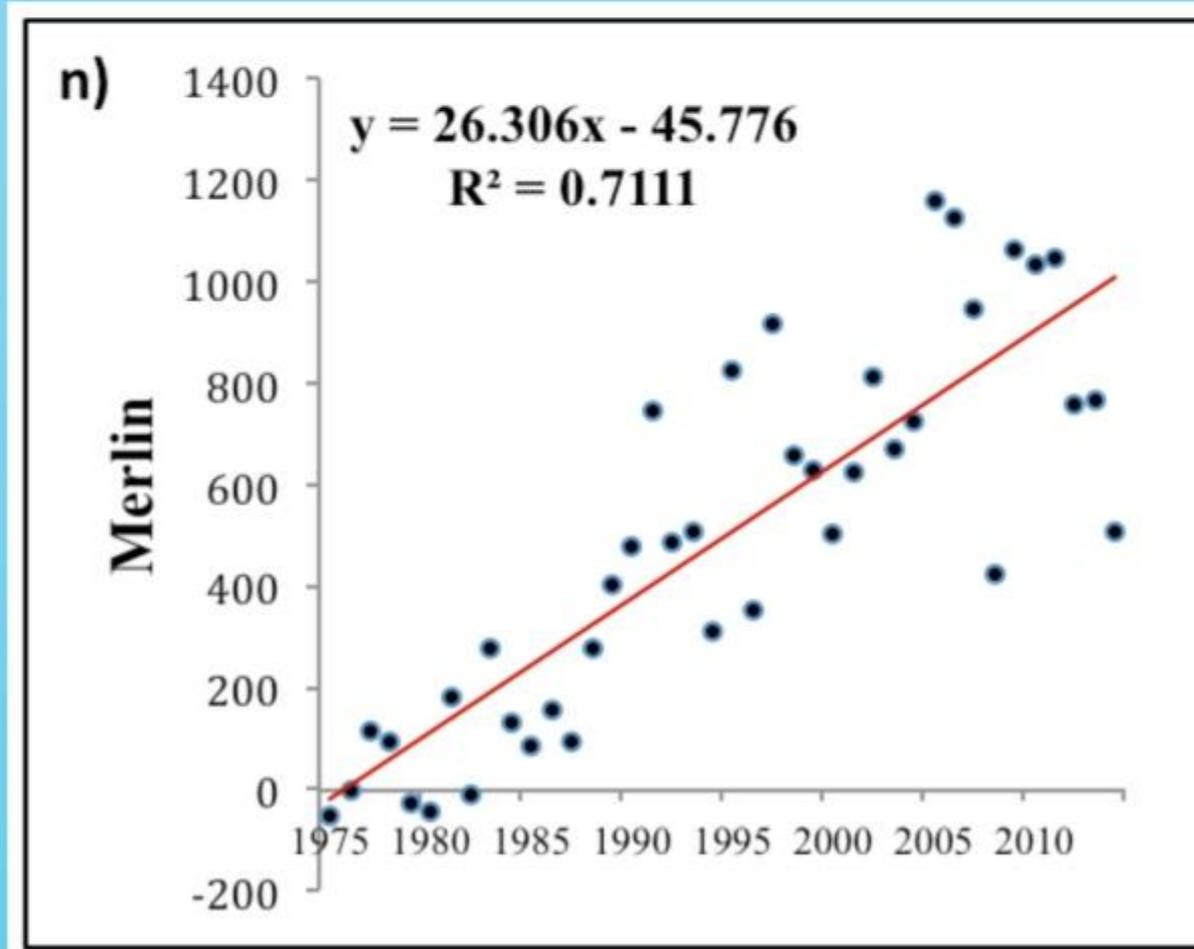
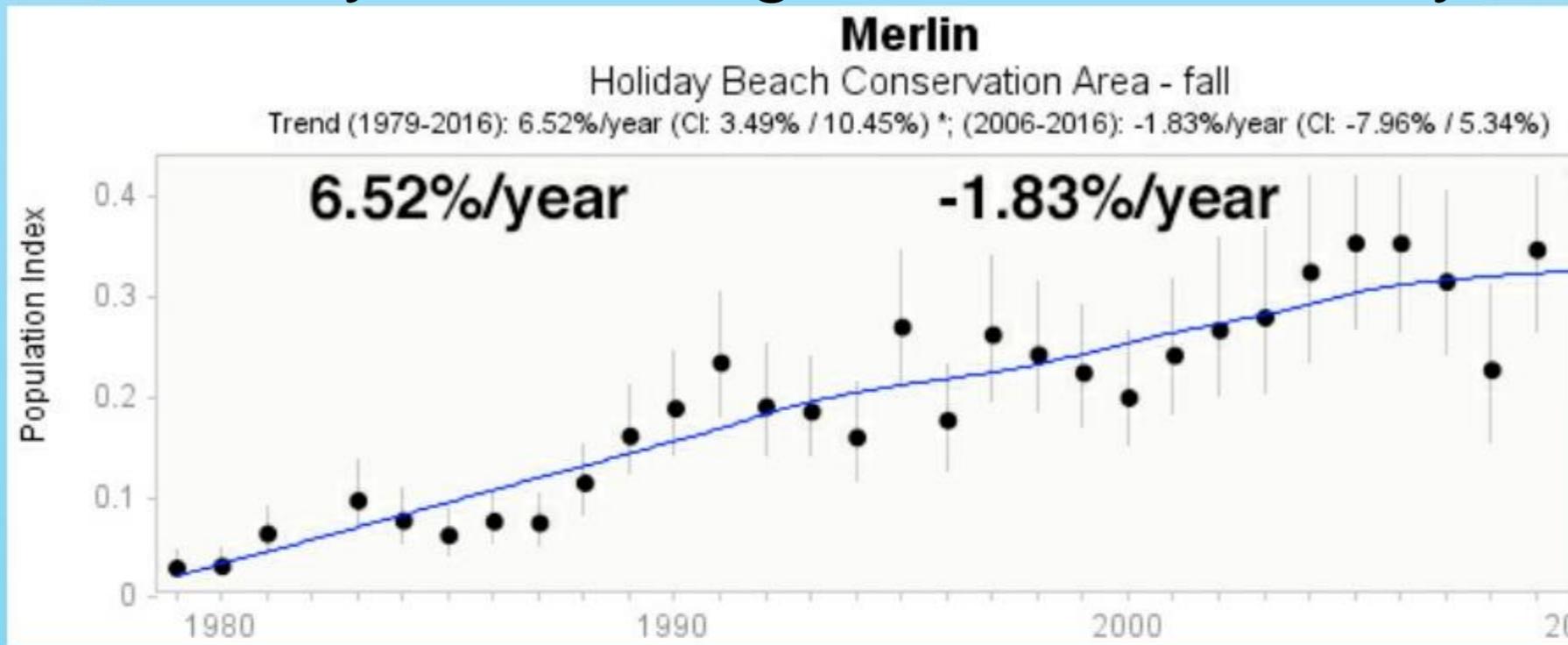


**Light bands in tail.**



**Adoption of HY Merlin.**

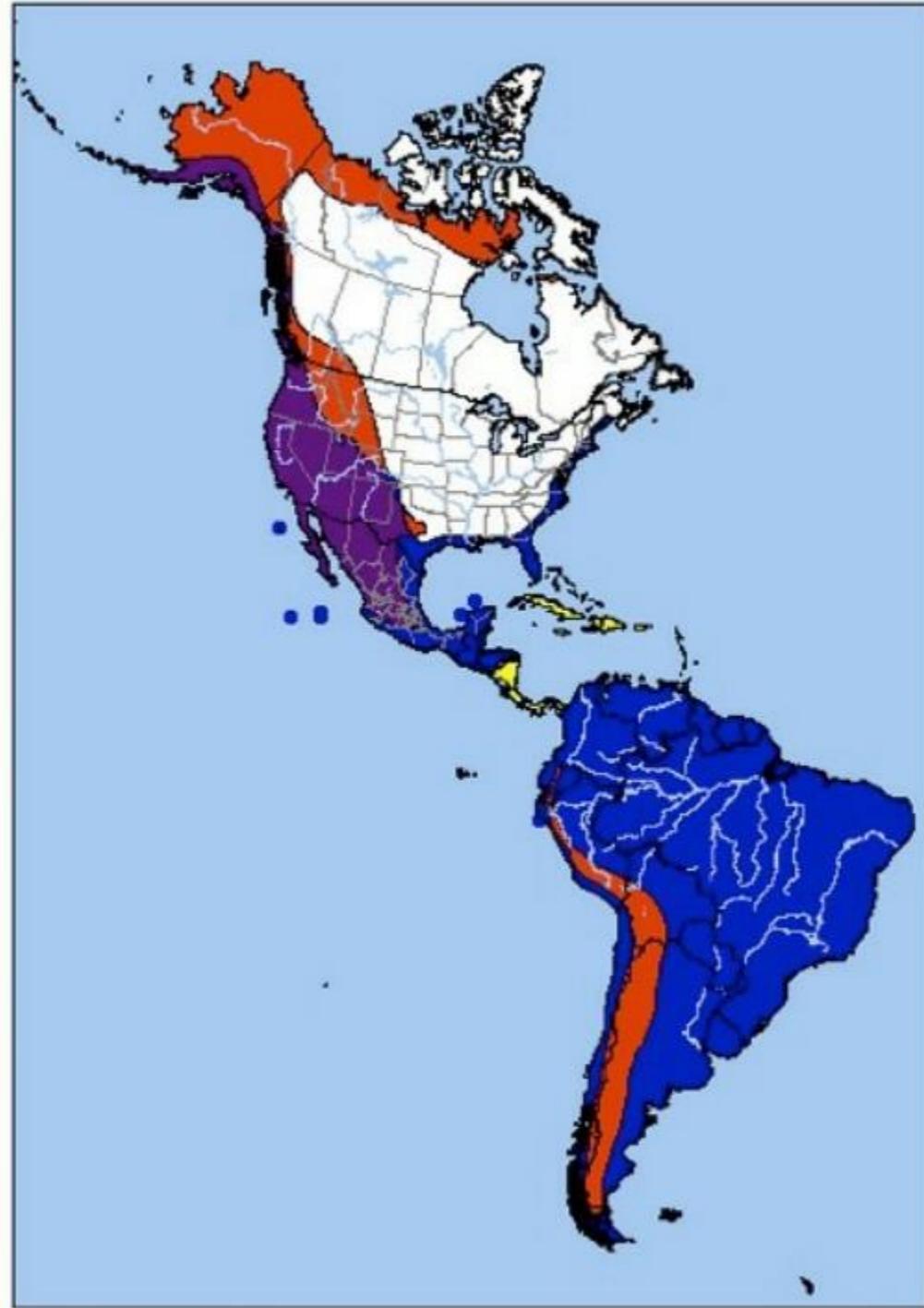
# Holiday Beach Migration Observatory



**26.31%/year**

**Merlins  
observed/hour  
*strong increase*  
26.31% each year.**

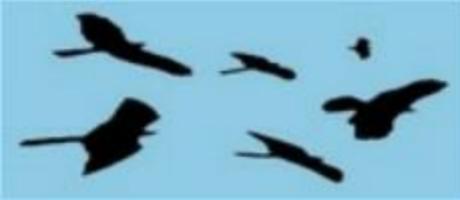
# Holiday Beach Migration Observatory



## Peregrine Falcon



# Holiday Beach Migration Observatory



**Bold  
distinct  
mustache.**

**Vertical streaking  
means HY bird.**



# Holiday Beach Migration Observatory



# Holiday Beach Migration Observatory



# Holiday Beach Migration Observatory



# Holiday Beach Migration Observatory



# Holiday Beach Migration Observatory



# Holiday Beach Migration Observatory



# Holiday Beach Migration Observatory



# Holiday Beach Migration Observatory



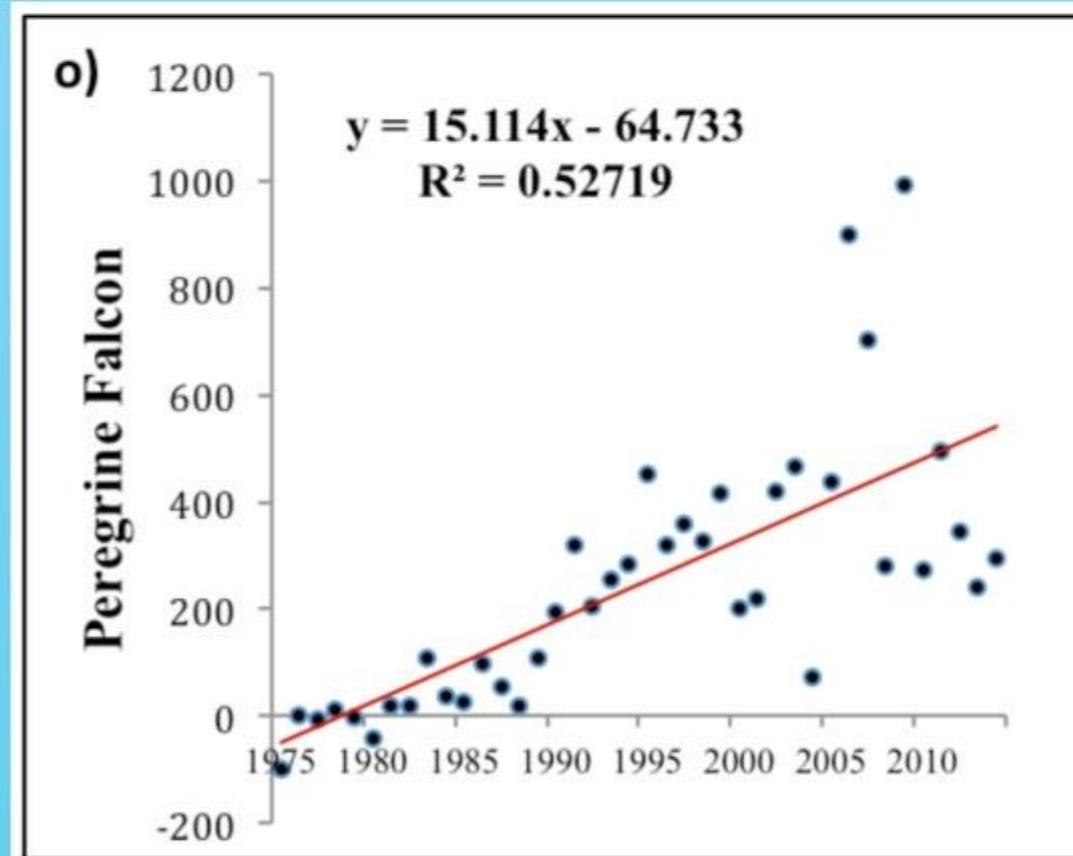
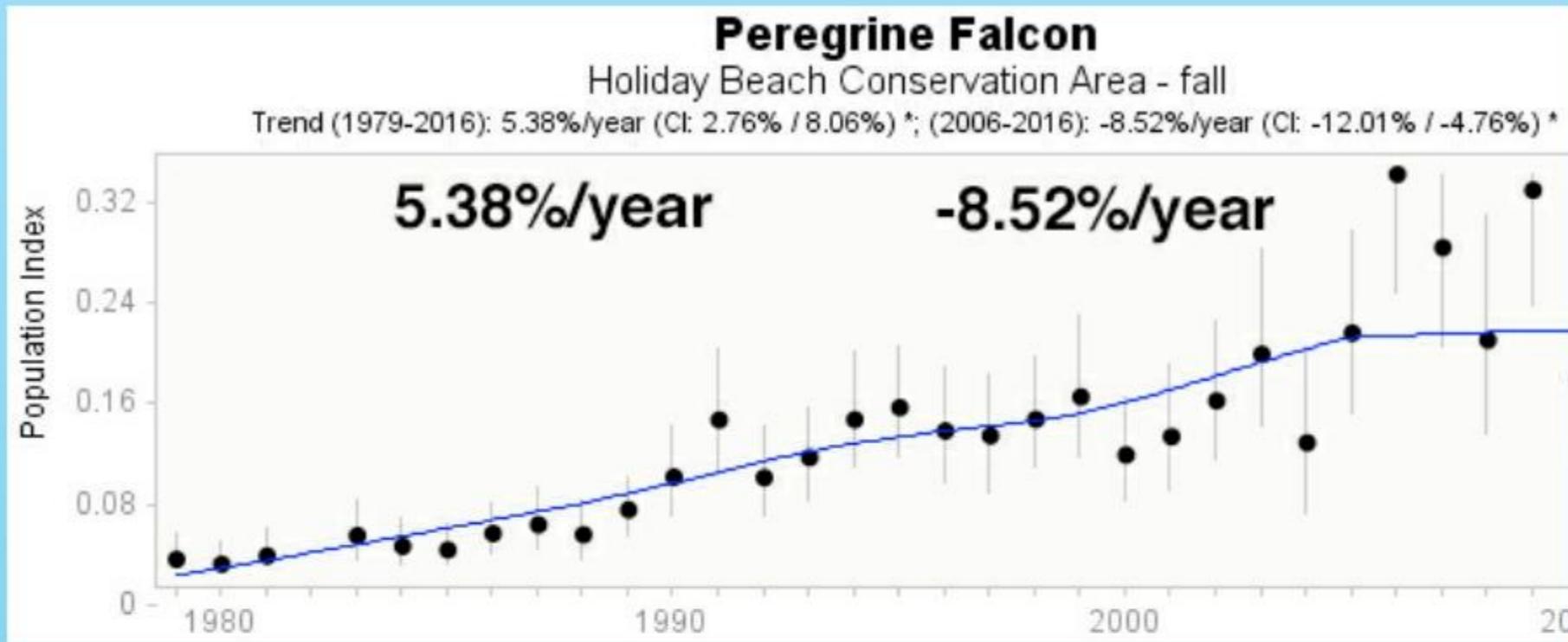
# Holiday Beach Migration Observatory



# Holiday Beach Migration Observatory



# Holiday Beach Migration Observatory

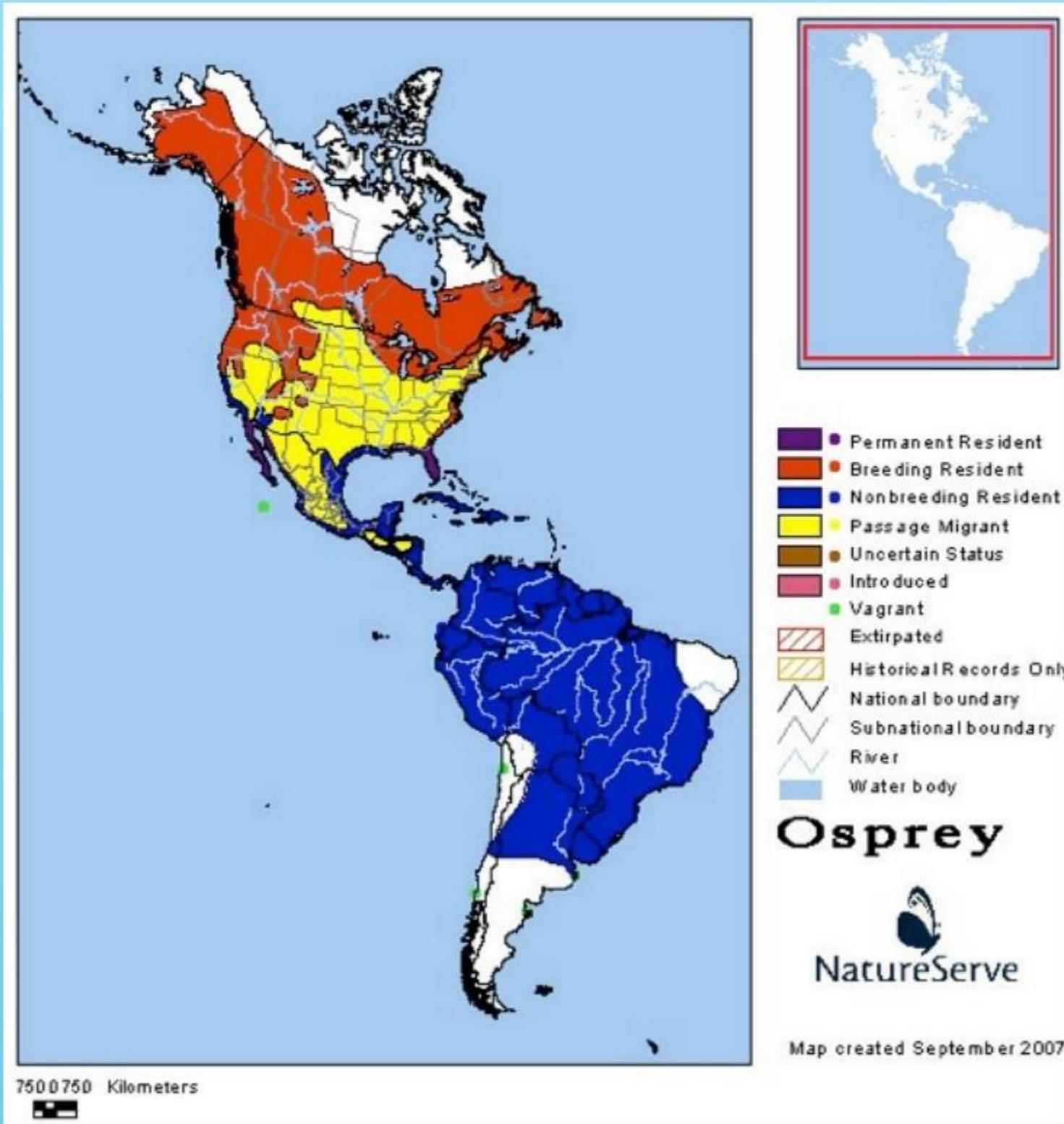


**15.11%/year**

**Peregrine Falcons  
observed/hour  
*strong increase*  
15.11% each year.**

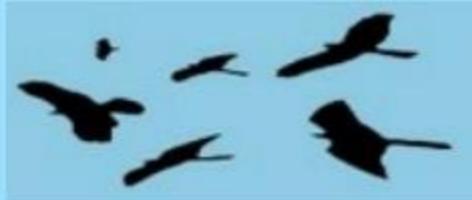
# Holiday Beach Migration Observatory

## Osprey



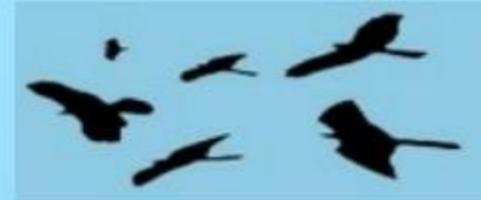


# Holiday Beach Migration Observatory





Holiday Beach Migration Observatory



Note **White** Tip to Tail Feathers  
Indicating Hatch Year (HY) Bird

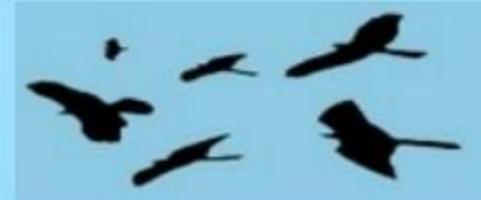




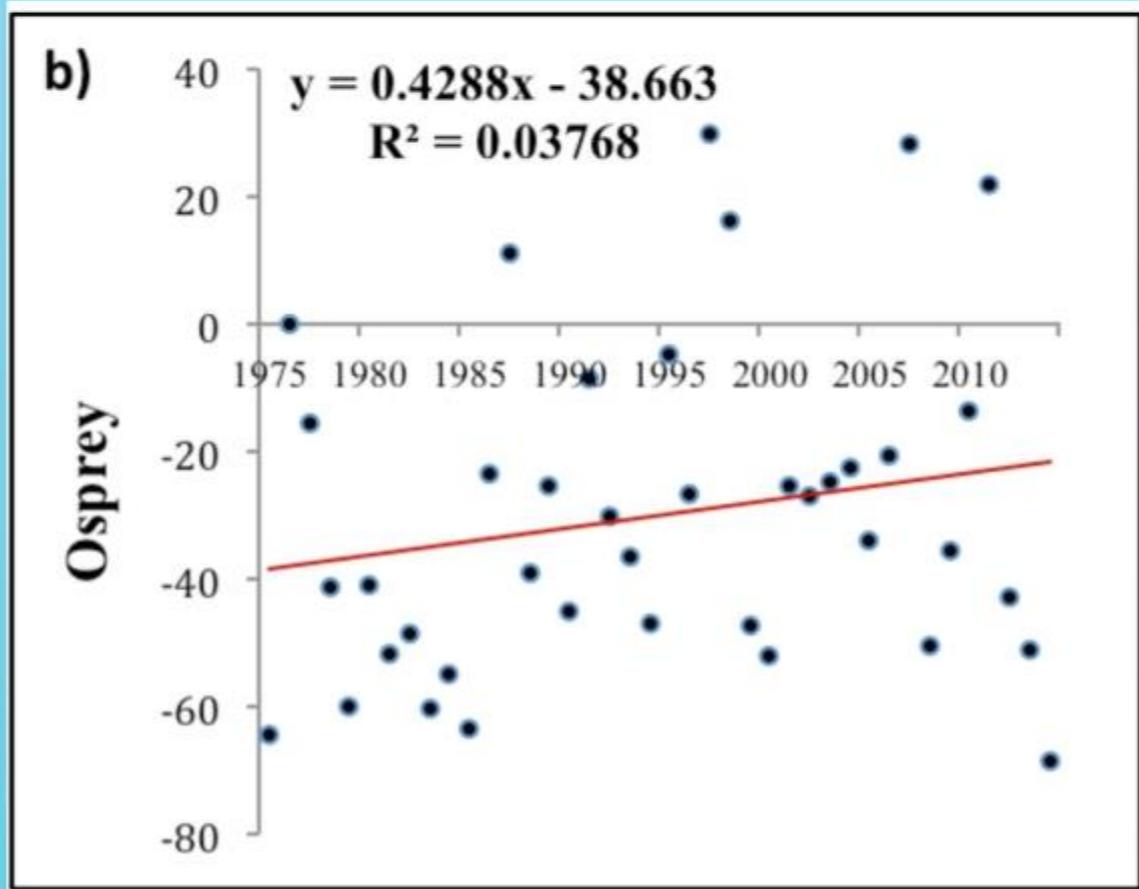
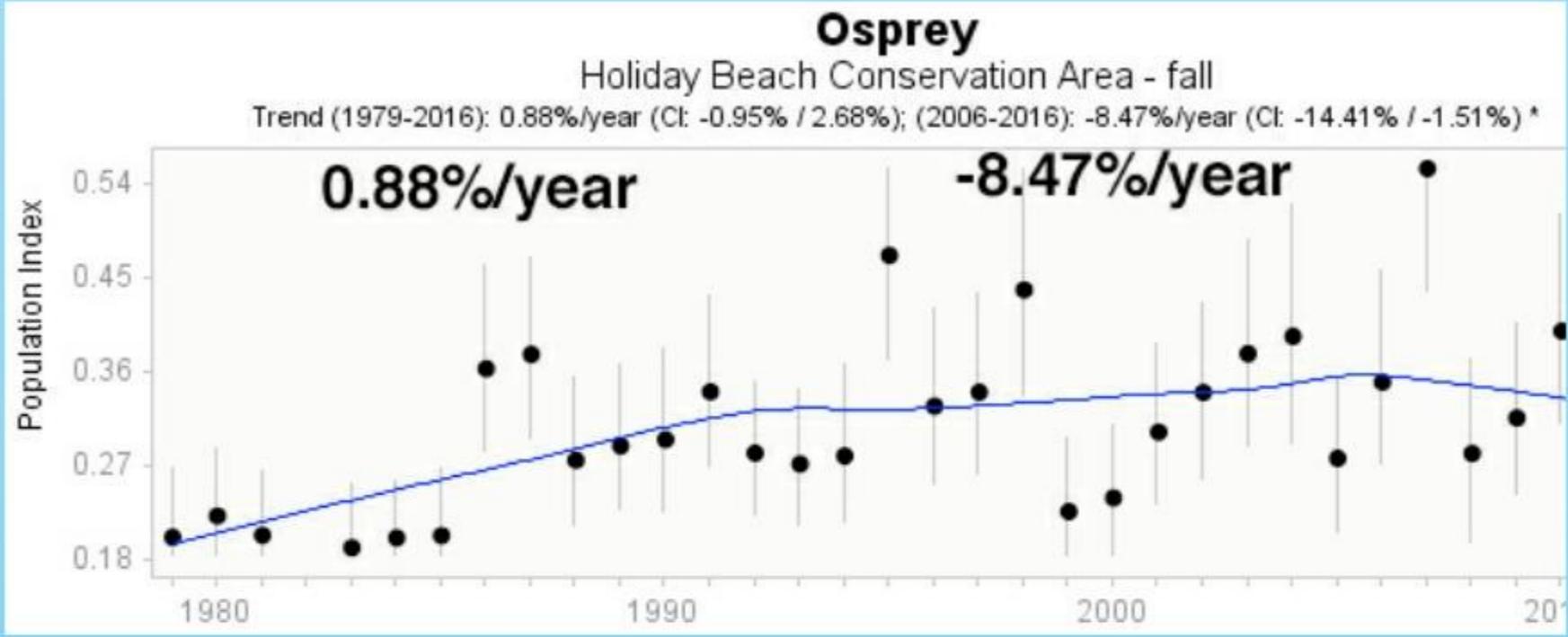
# Holiday Beach Migration Observatory



**A Black Line separates the white throat from white head.**



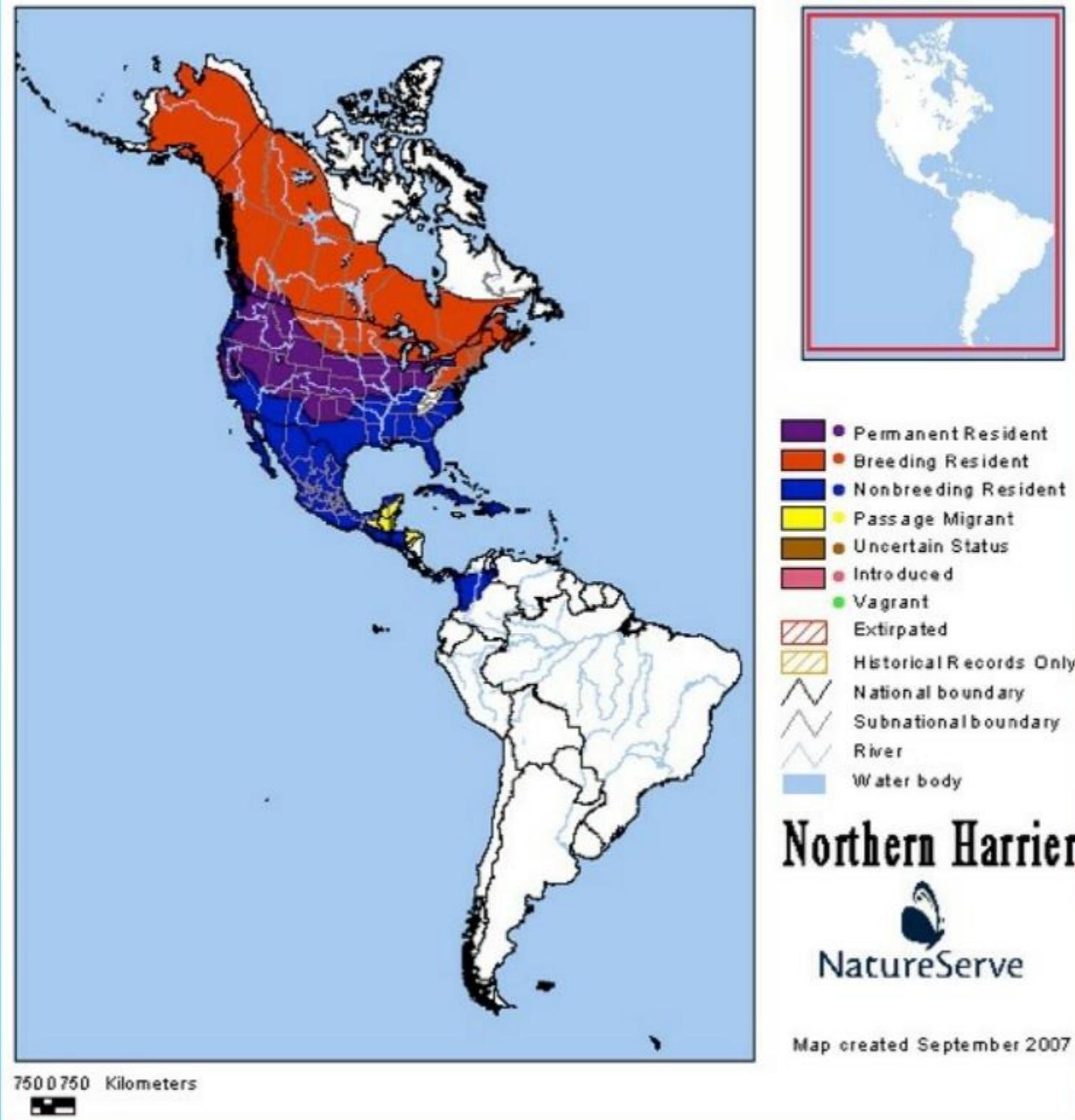
# Holiday Beach Migration Observatory



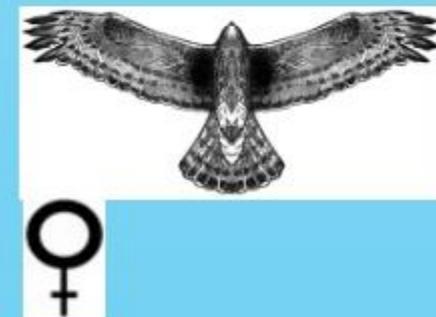
**0.43%/year**

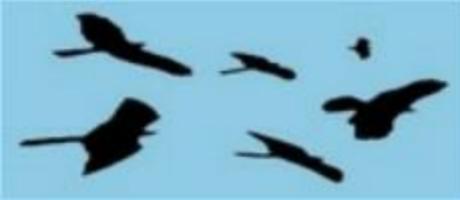
Ospreys  
observed/hour  
*not a significant change*  
0.43% each year.

# Holiday Beach Migration Observatory



## Northern Harrier





# Holiday Beach Migration Observatory

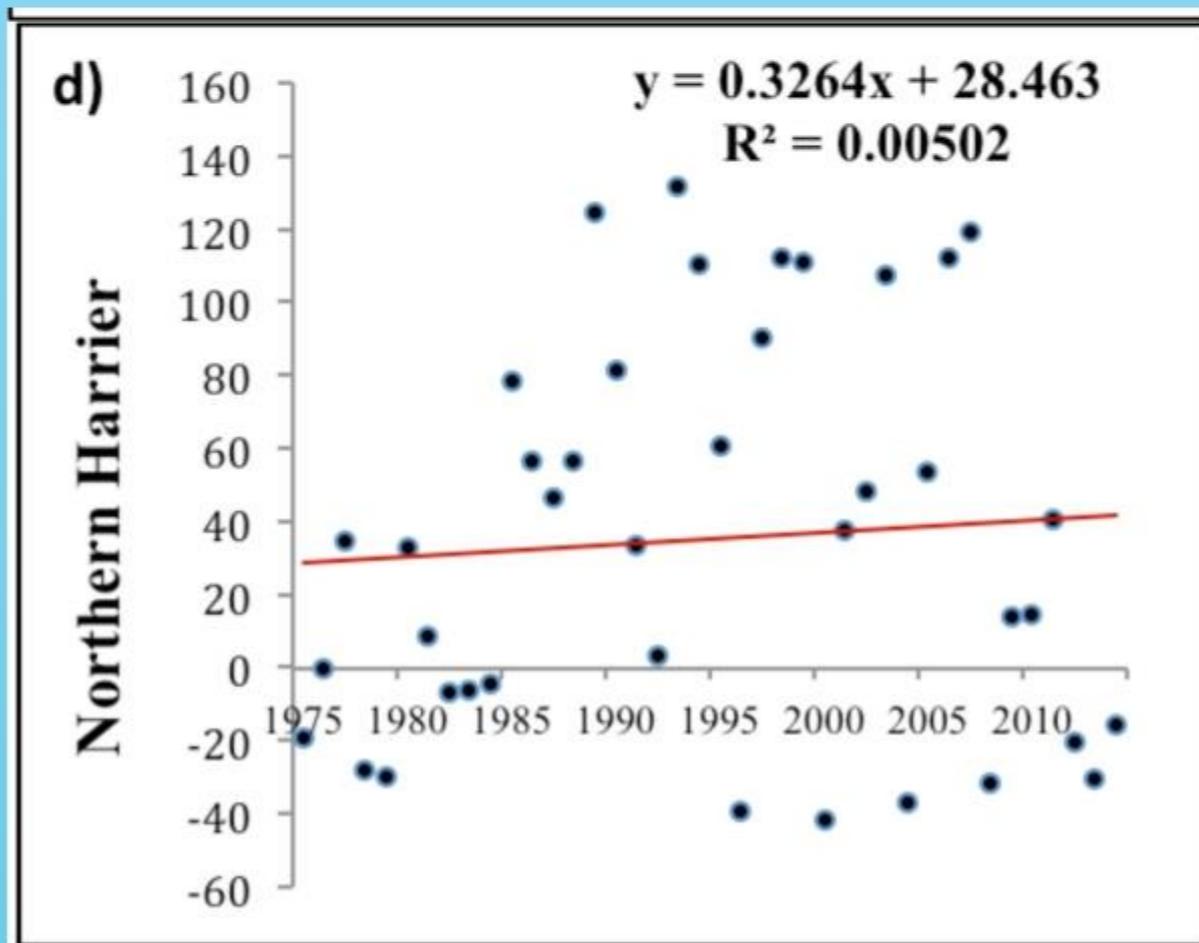
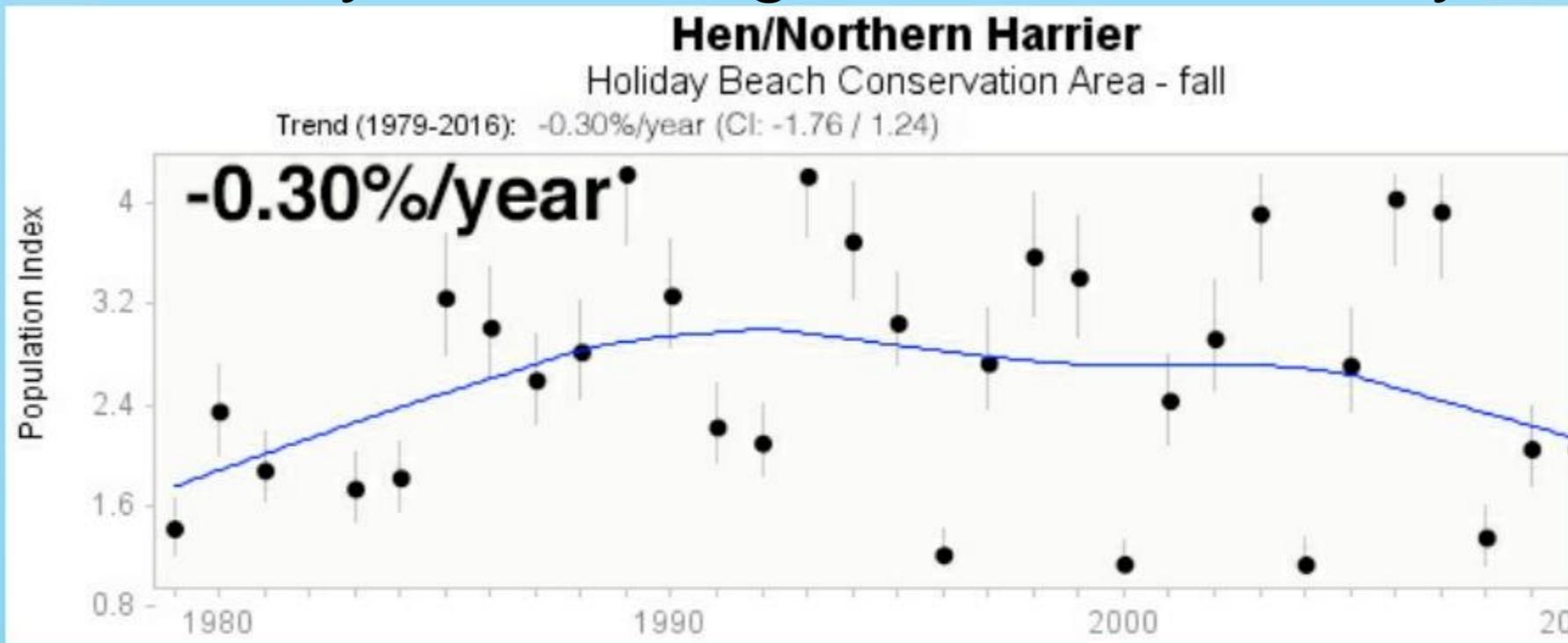


**Proportionately longest tail of all N. American raptors.**

**Hairy Armpits = Harrier**



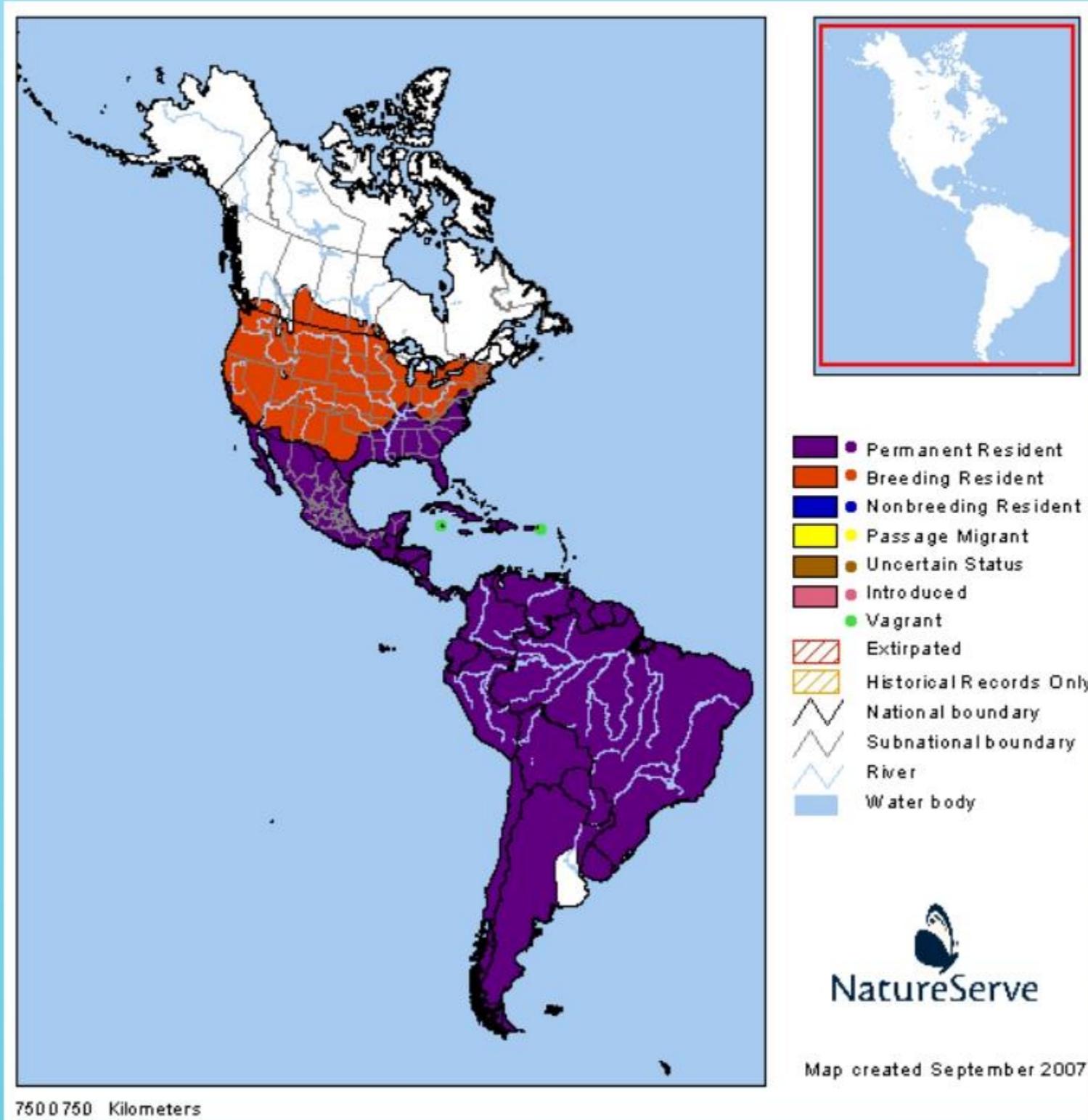
# Holiday Beach Migration Observatory



**0.33%/year**

Northern Harriers  
observed/hour  
*not a significant change*  
0.33% each year.

# Holiday Beach Migration Observatory



## Turkey Vulture



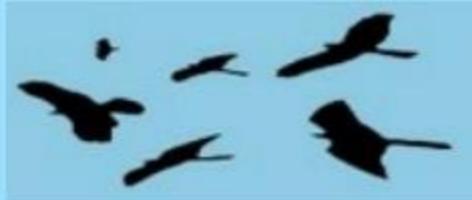
## Kettling TVs



## Hatchlings

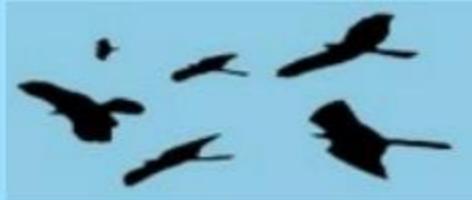


# Holiday Beach Migration Observatory

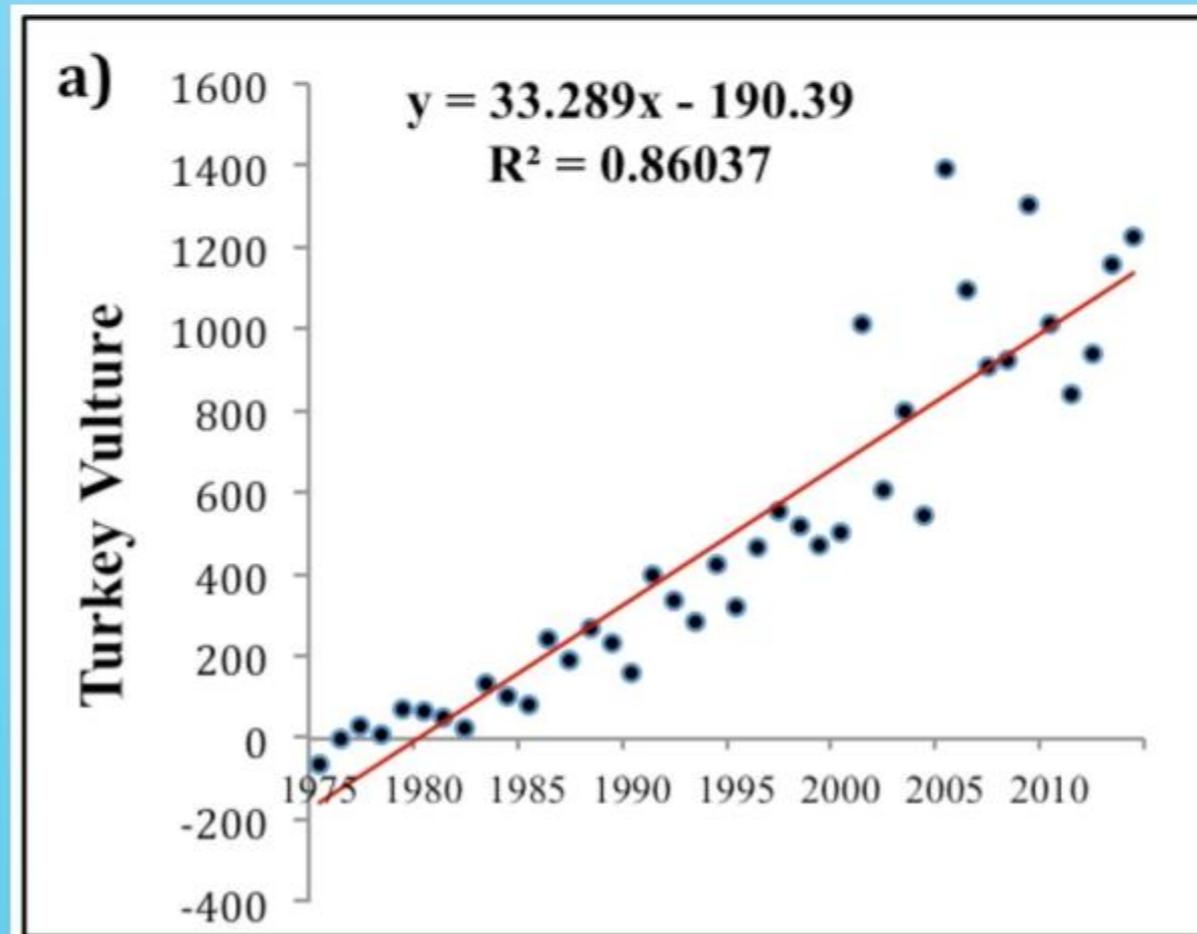
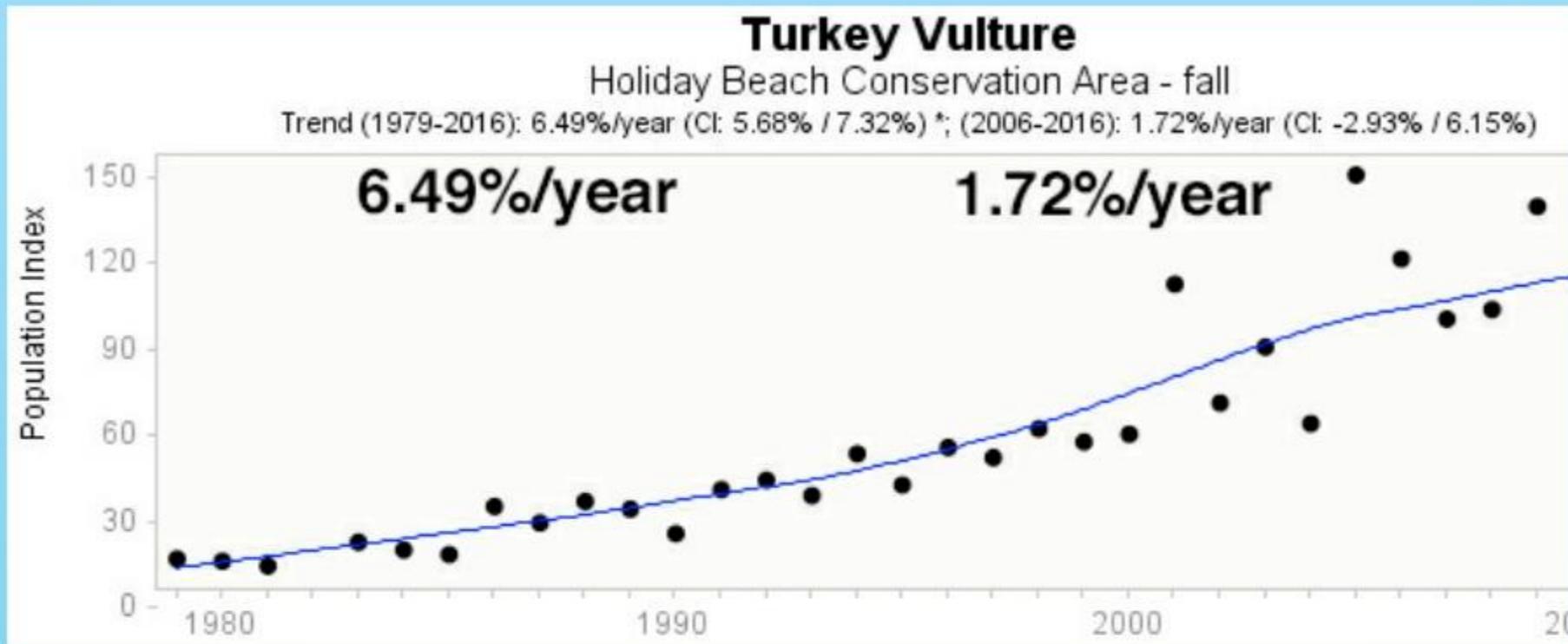




# Holiday Beach Migration Observatory



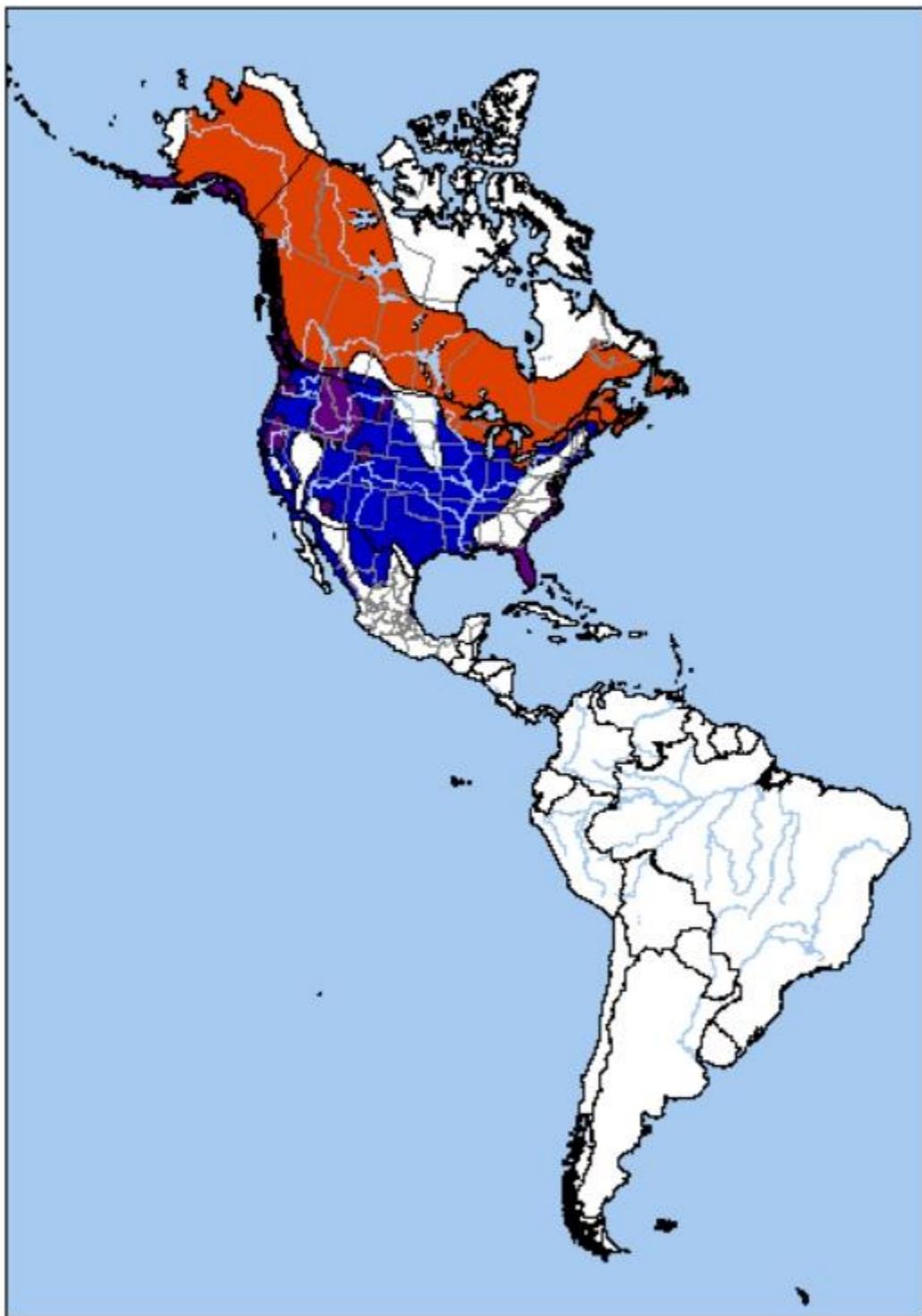
# Holiday Beach Migration Observatory



**33.28%/year**

**Turkey Vultures  
observed/hour  
*strong increase*  
33.28% each year.**

# Holiday Beach Migration Observatory



- Permanent Resident
- Breeding Resident
- Nonbreeding Resident
- Passage Migrant
- Uncertain Status
- Introduced
- Vagrant
- Extirpated
- Historical Records Only
- National boundary
- Subnational boundary
- River
- Water body



Map created September 2007

## Bald Eagle



# Holiday Beach Migration Observatory



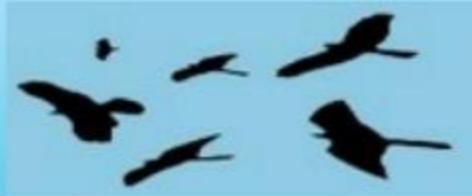
**Flap continuously or**

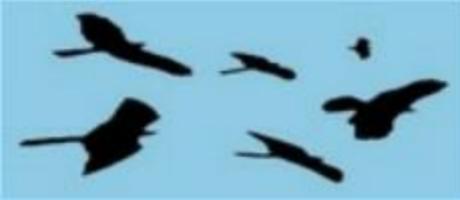


**not at all.**

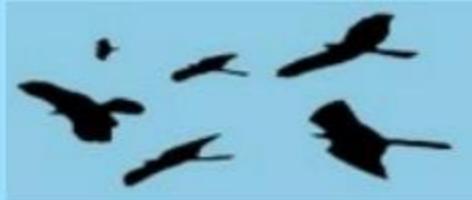


**Immatures locking talons. Mock courtship. Play.**

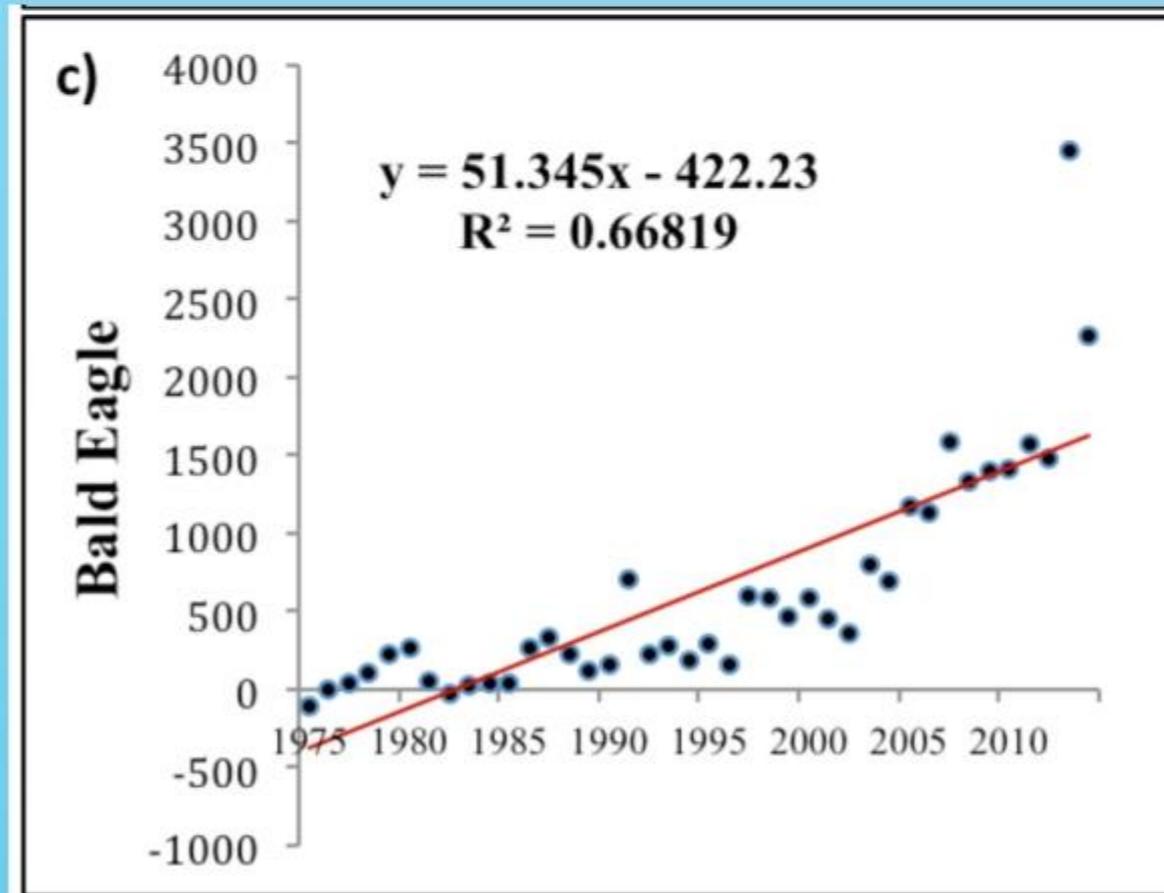
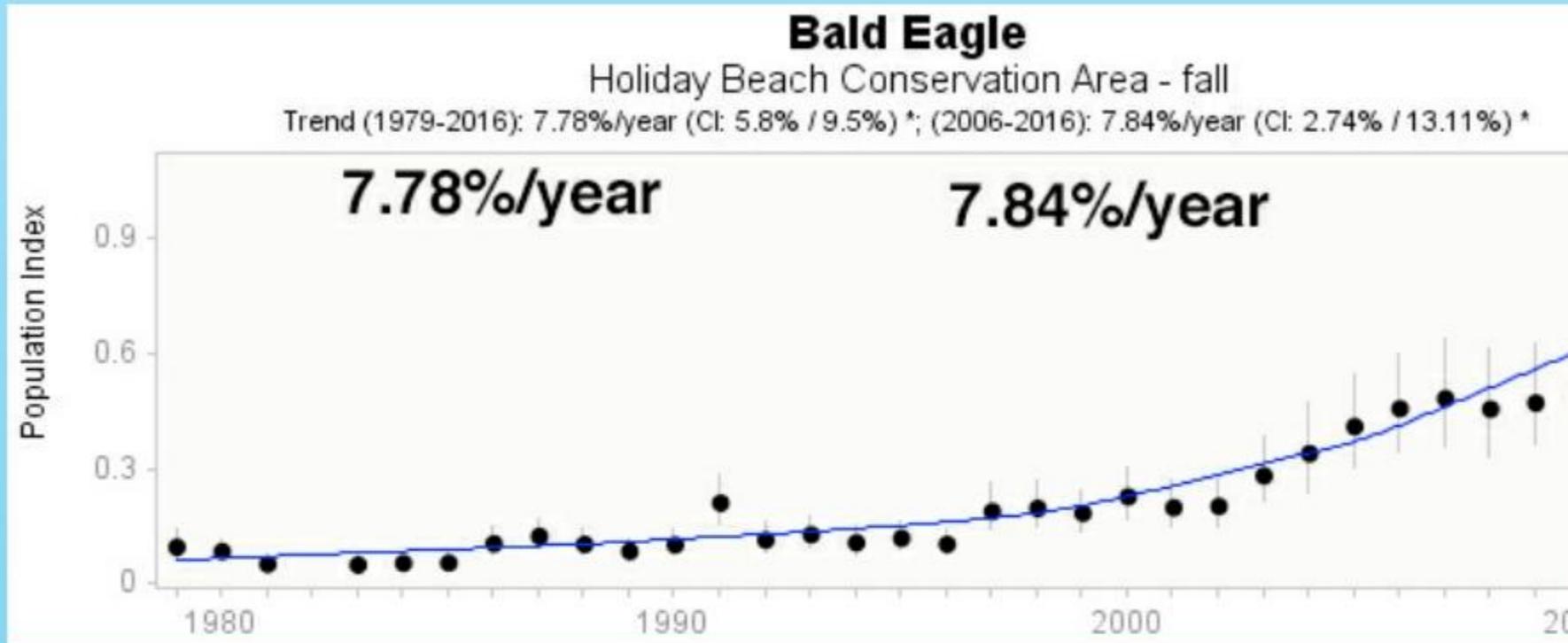




# Holiday Beach Migration Observatory



# Holiday Beach Migration Observatory

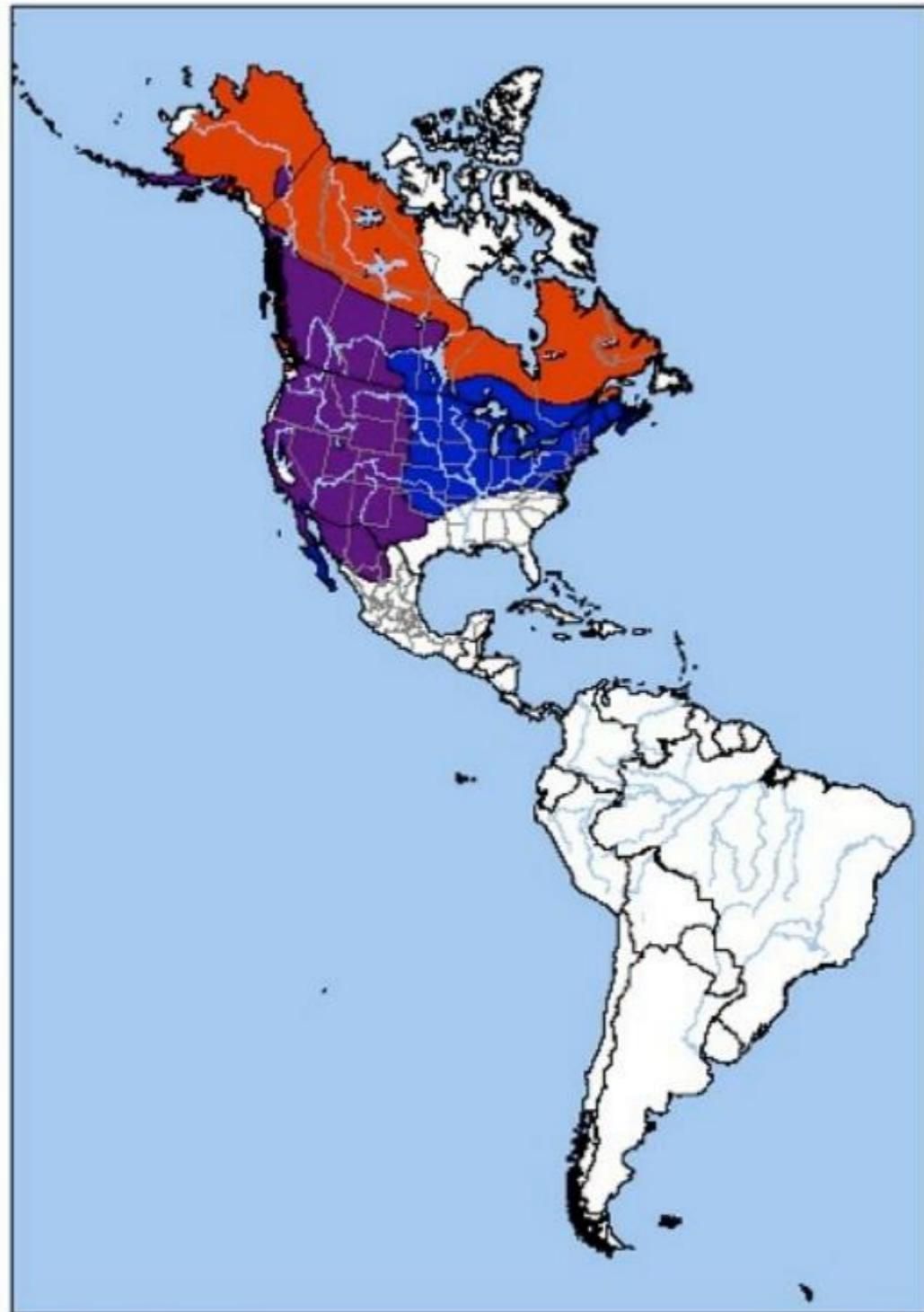


**51.35%/year**

**Bald Eagles  
observed/hour  
*strong increase*  
51.35% each year.**

# Holiday Beach Migration Observatory

## Golden Eagle



- Permanent Resident
- Breeding Resident
- Nonbreeding Resident
- Passage Migrant
- Uncertain Status
- Introduced
- Vagrant
- Extirpated
- Historical Records Only
- National boundary
- Subnational boundary
- River
- Water body

### Golden Eagle



NatureServe

Map created September 2007

750 0 750 Kilometers



# Holiday Beach Migration Observatory



**Claude Radley  
with Friend**

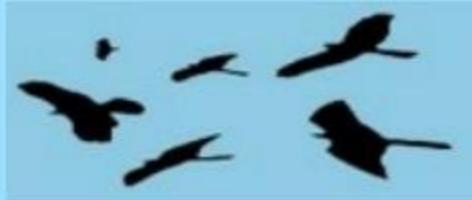


# Holiday Beach Migration Observatory



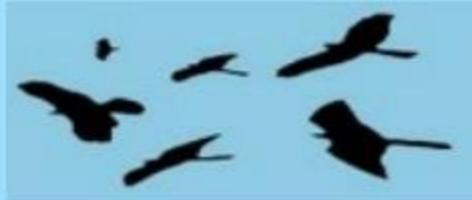


# Holiday Beach Migration Observatory

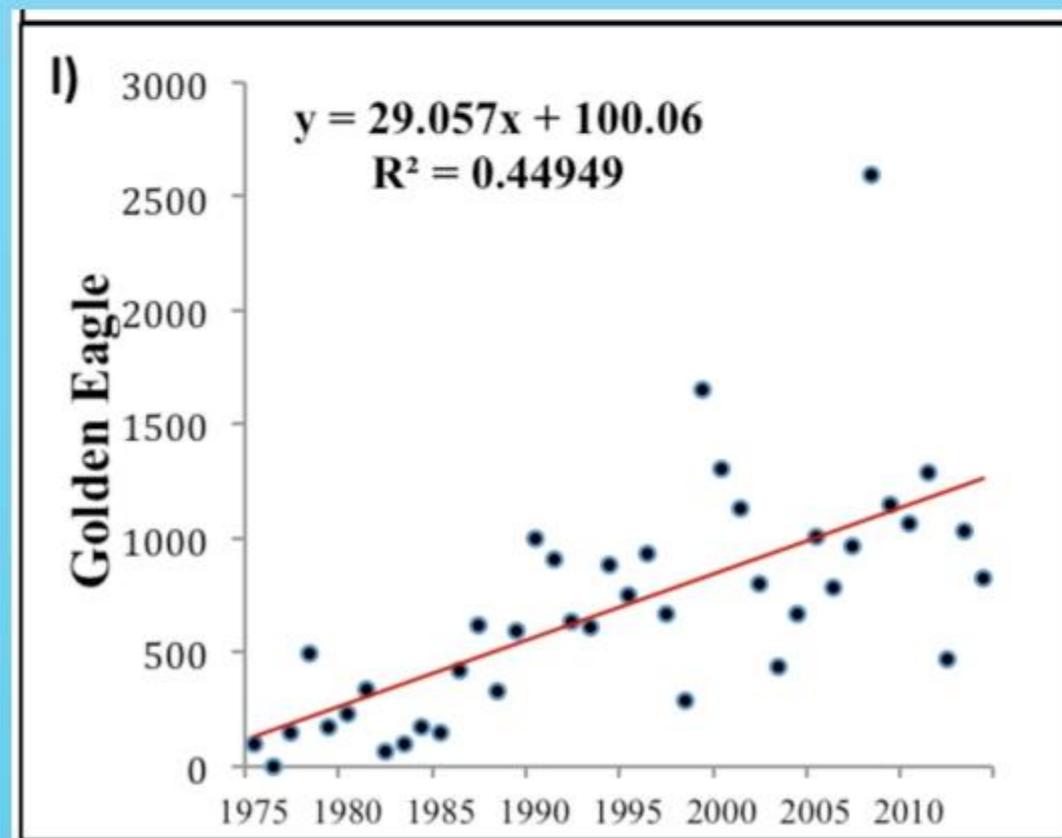
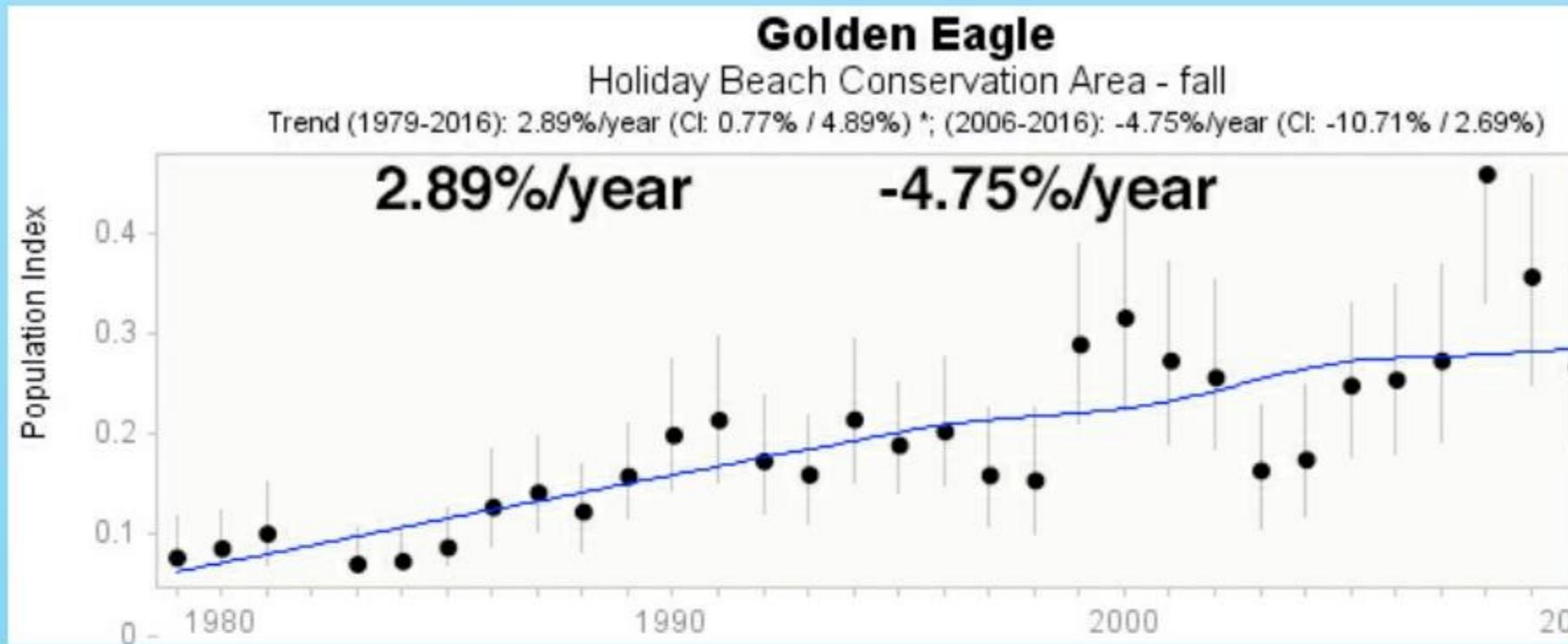




# Holiday Beach Migration Observatory



# Holiday Beach Migration Observatory



**29.06%/year**

**Golden Eagles  
observed/hour  
*Strong increase*  
29.06% each year.**

# Holiday Beach Migration Observatory



**Gold Dollar - Bald Eagle**



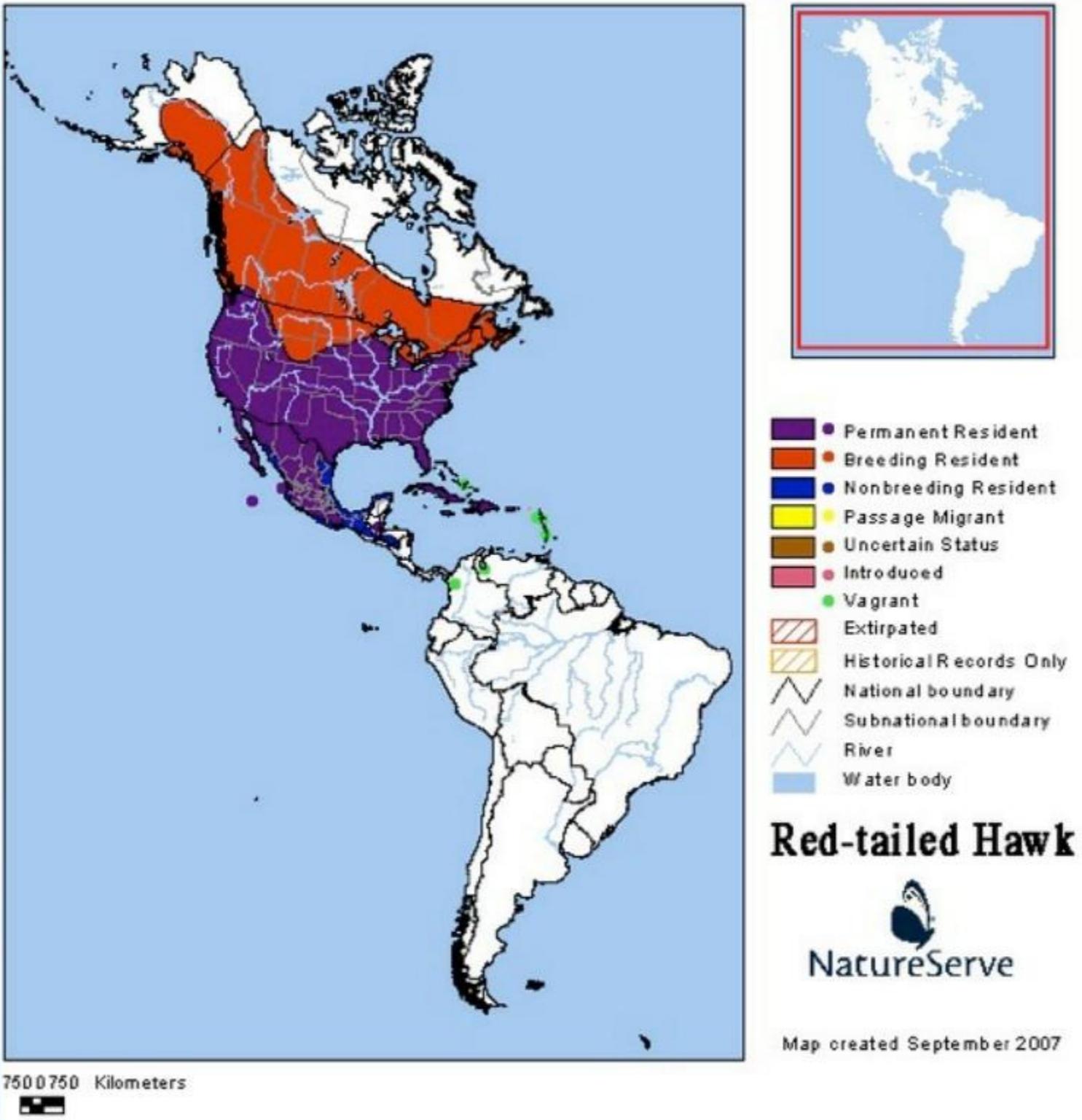
**Quarter - Golden Eagle**

# Holiday Beach Migration Observatory

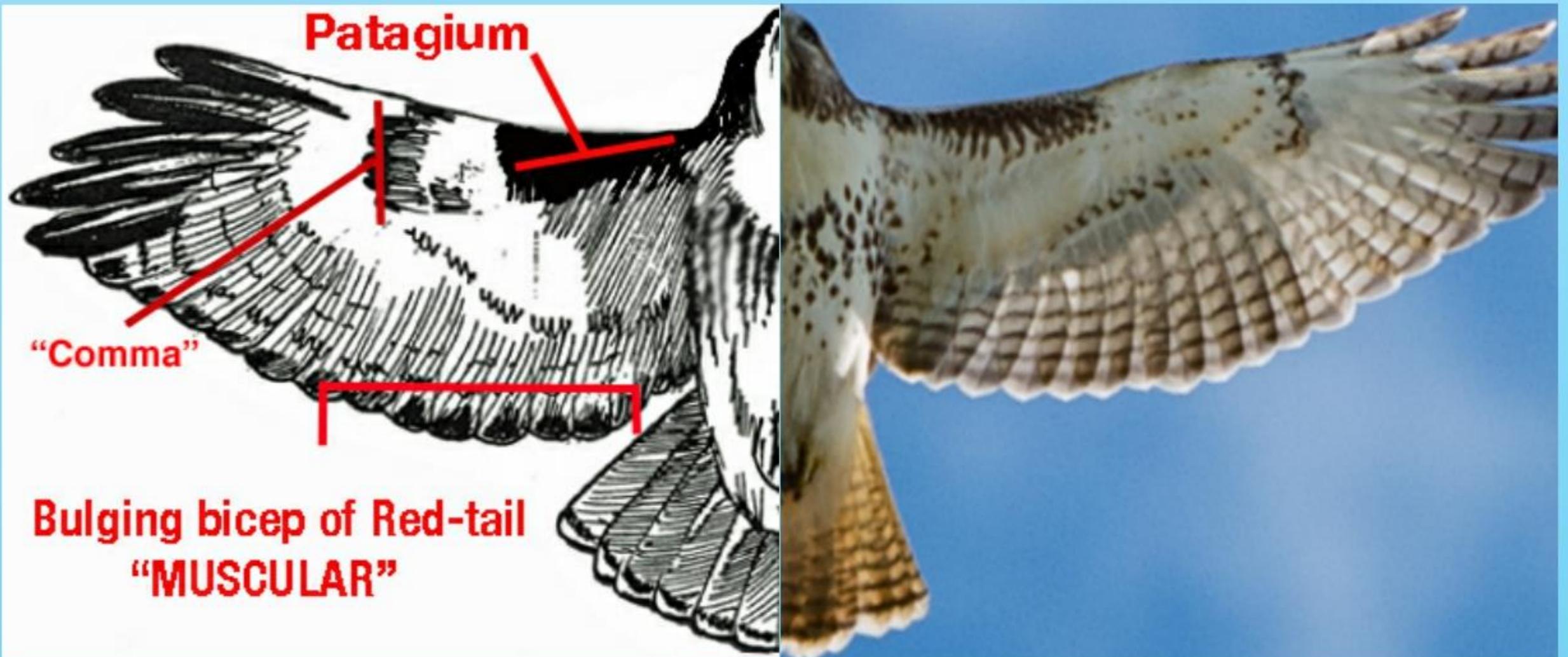
## Red-tailed Hawk



HY Red-tail with yellow eye



# Holiday Beach Migration Observatory



Patagium key to Red-tail.

Red-tail wing is Muscular.

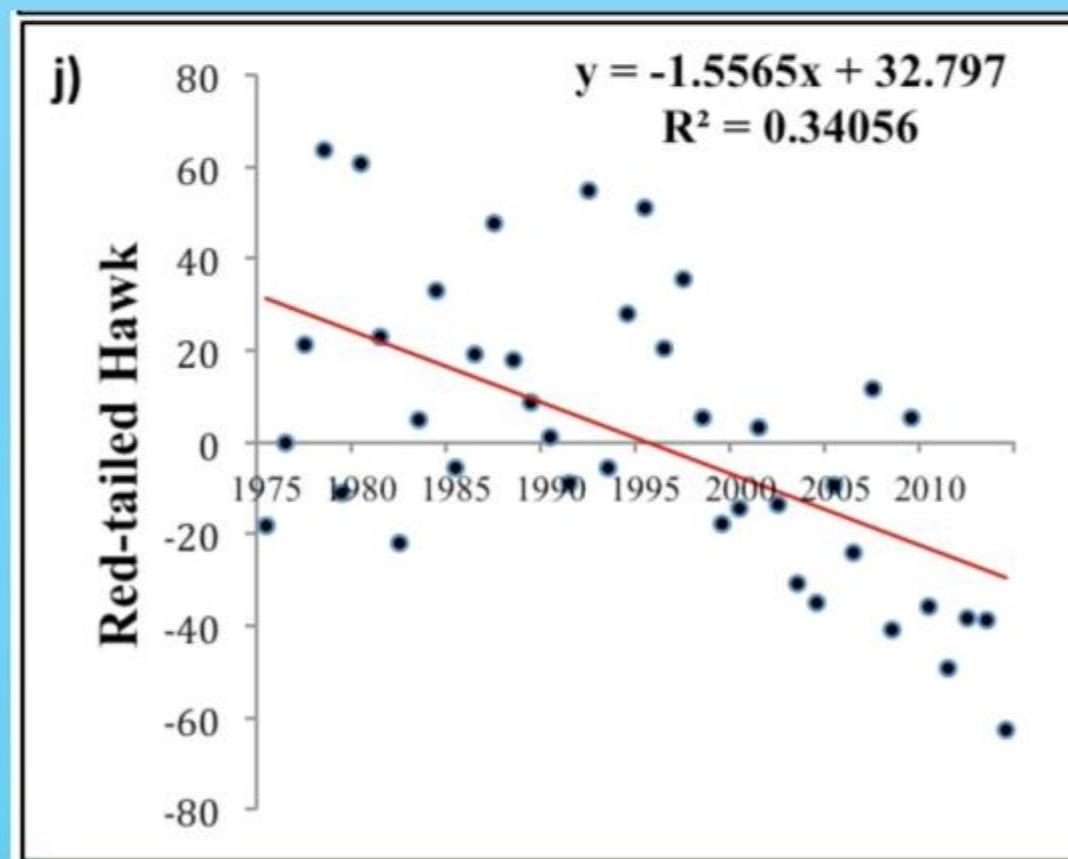
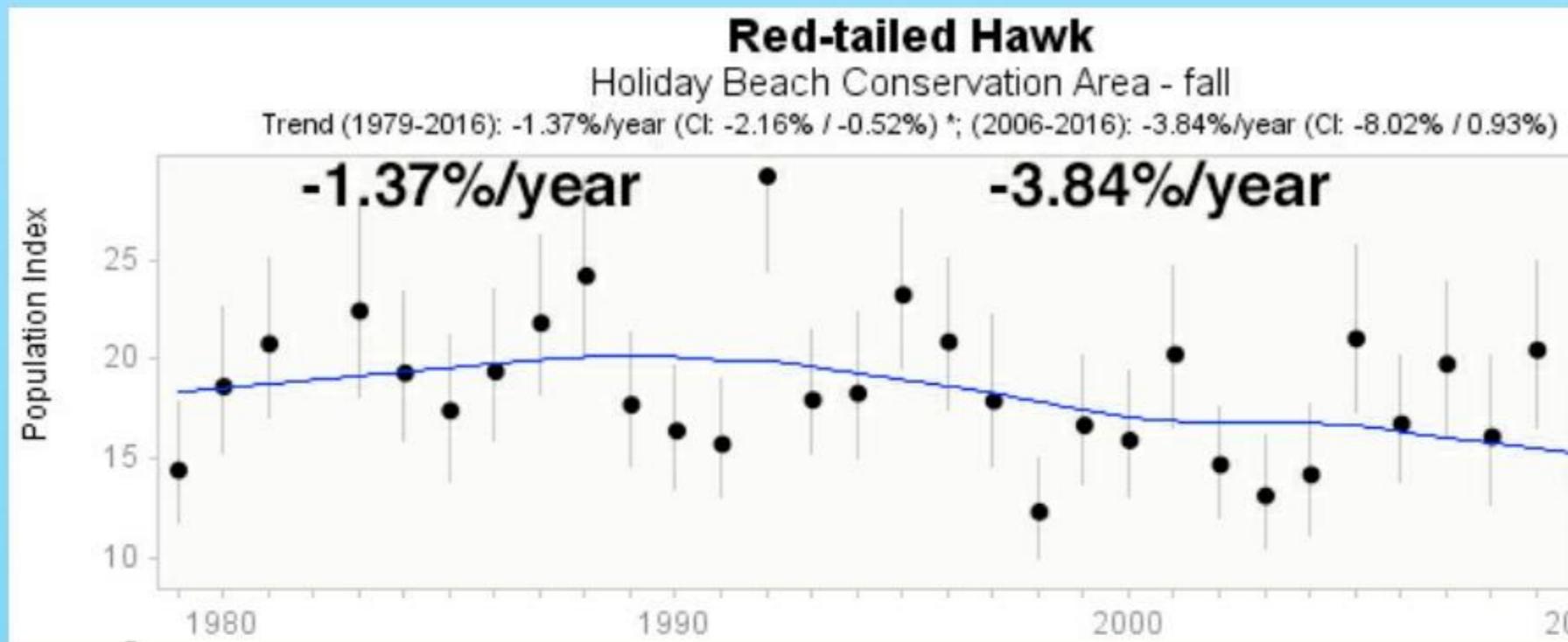
**most commonly seen Buteo.**



# Holiday Beach Migration Observatory



# Holiday Beach Migration Observatory

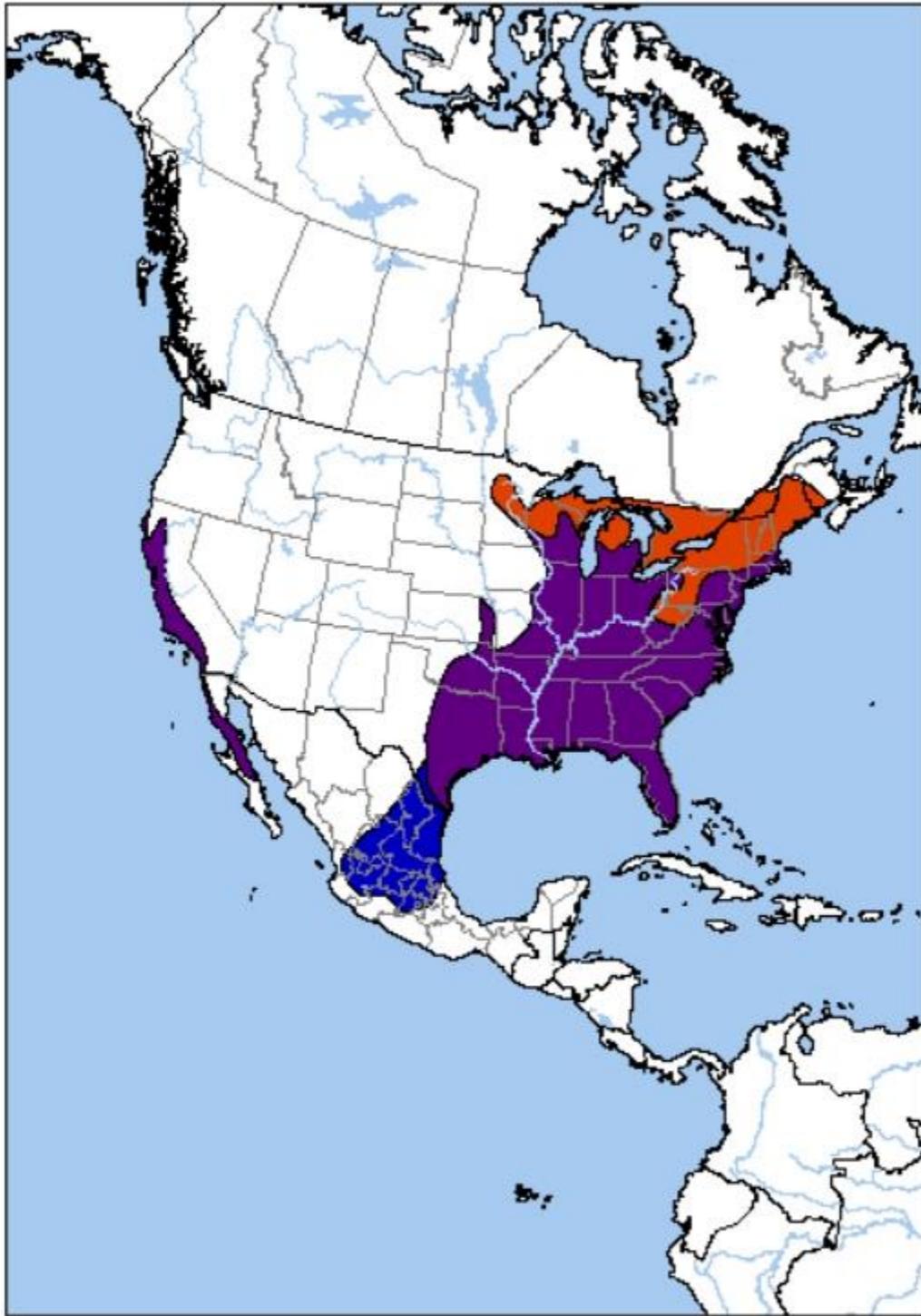


**-1.56%/year**

**Red-tailed Hawks  
observed/hour  
*strong to moderate***

***decrease*  
-1.56% each year.**

# Holiday Beach Migration Observatory



- Permanent Resident
- Breeding Resident
- Nonbreeding Resident
- Passage Migrant
- Uncertain Status
- Introduced
- Vagrant
- Extirpated
- Historical Records Only
- National boundary
- Subnational boundary
- River
- Water body



Map created September 2007

750 0 750 Kilometers

## Red-shouldered Hawk

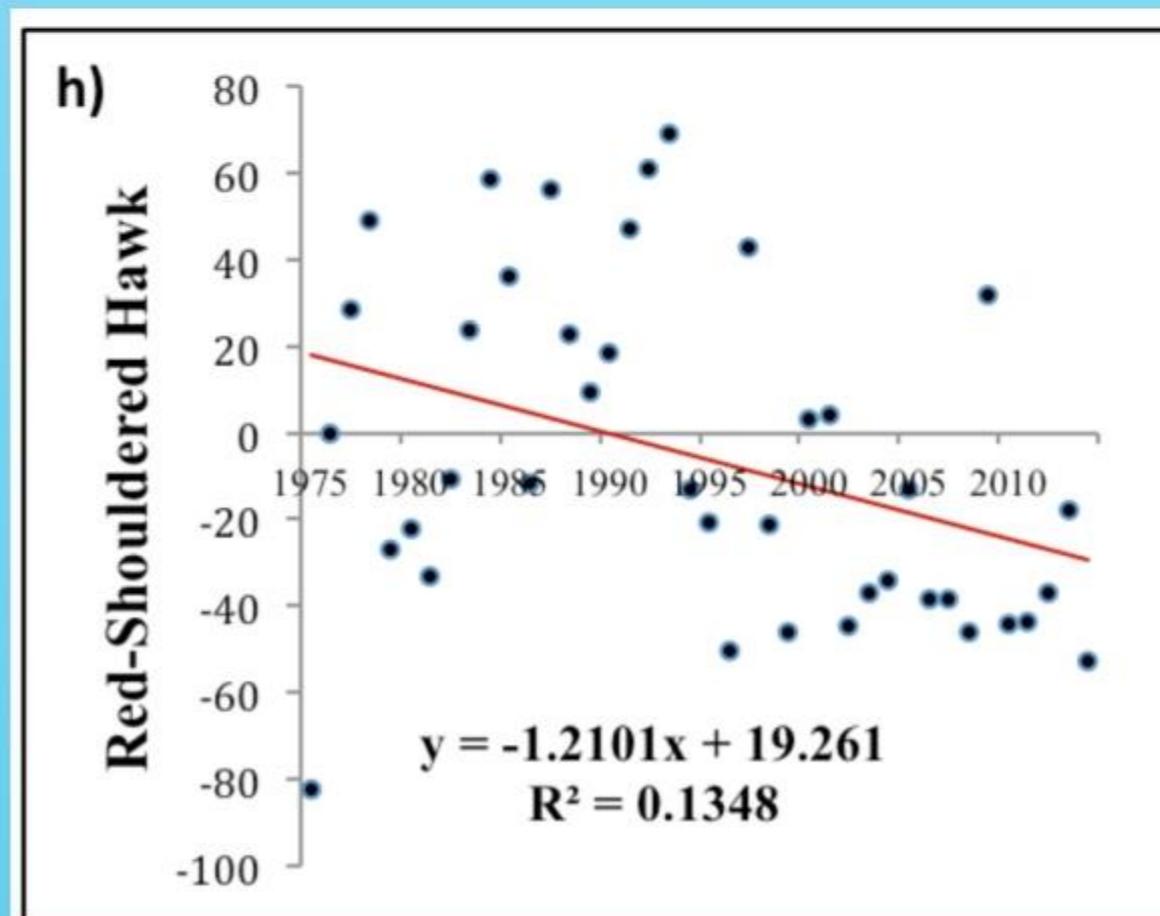
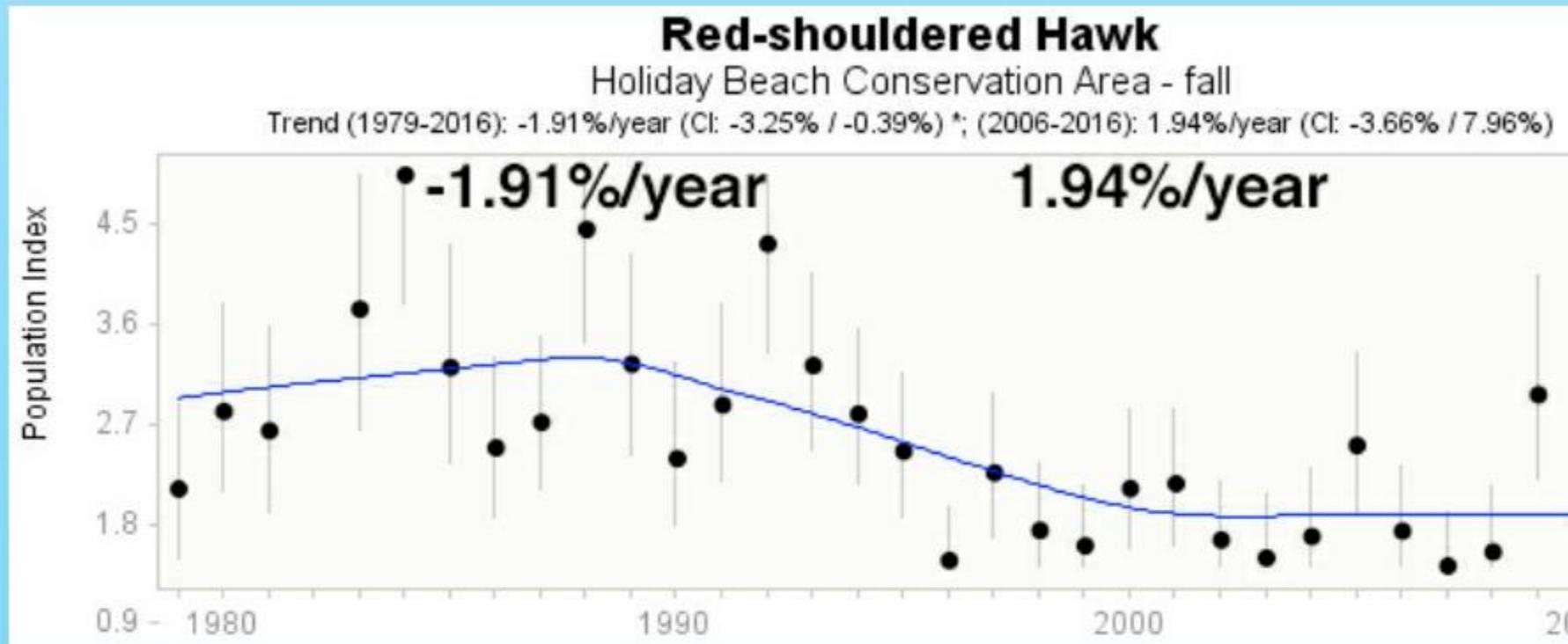




# Holiday Beach Migration Observatory



# Holiday Beach Migration Observatory



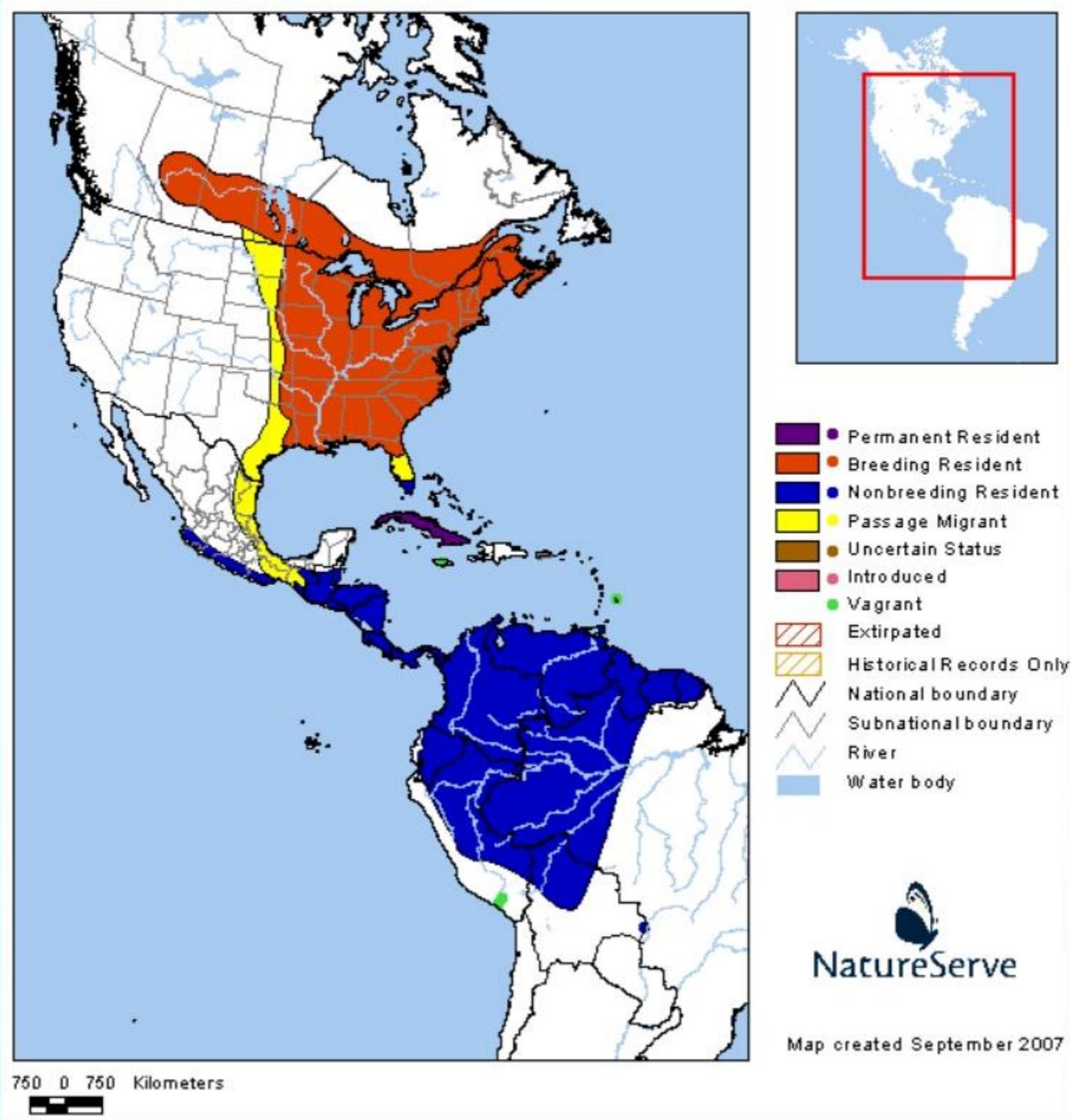
**-1.21%/year**

**Red-Shouldered Hawks  
observed/hour  
*strong to moderate***

***decrease***

**-1.21% each year.**

# Holiday Beach Migration Observatory



## Broad-winged Hawk



Adult



Adult with black trailing edge to wing.



HY without black trailing edge to wing.



# Holiday Beach Migration Observatory

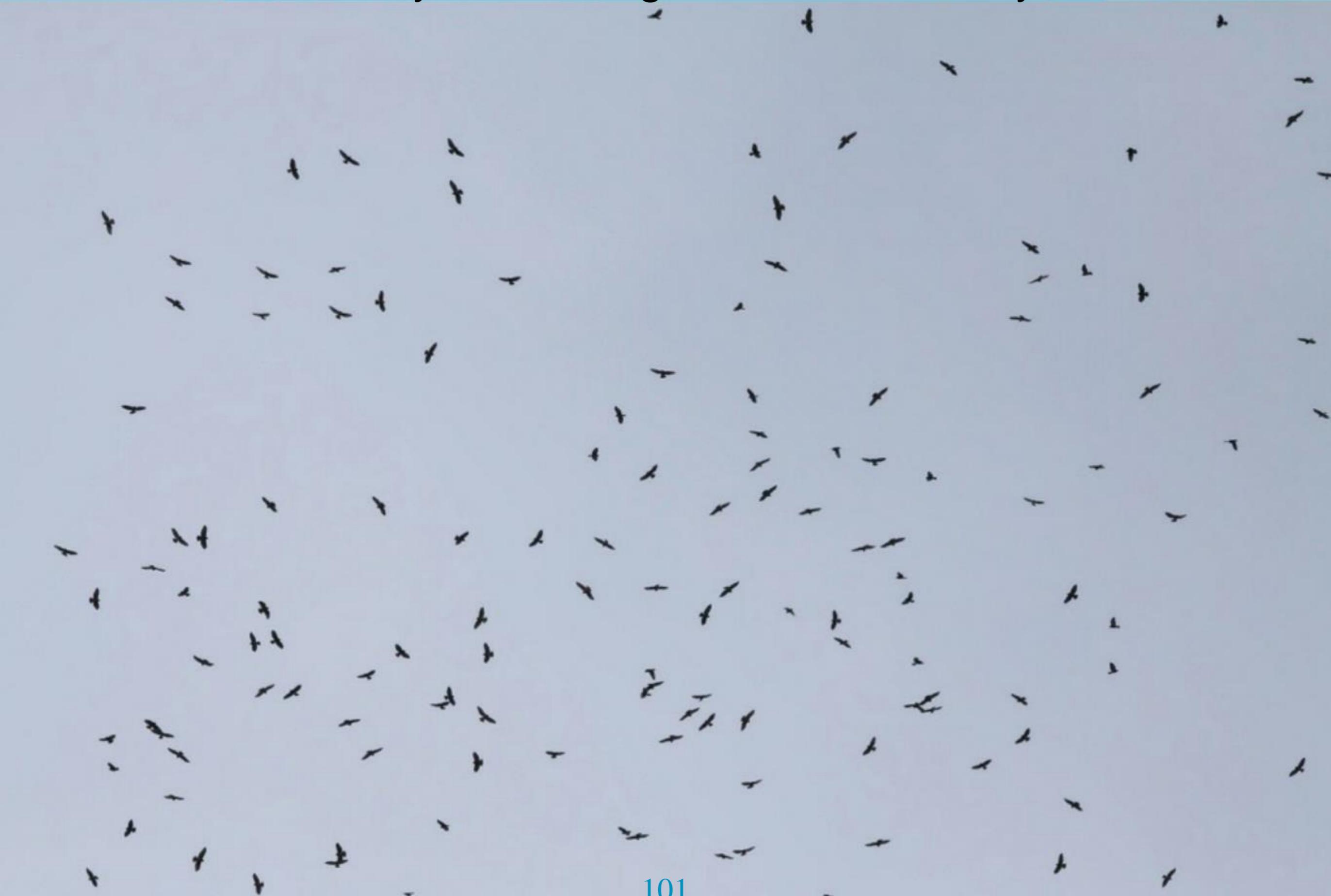




# Holiday Beach Migration Observatory



# Holiday Beach Migration Observatory



# Holiday Beach Migration Observatory



# Holiday Beach Migration Observatory



# Holiday Beach Migration Observatory



# Holiday Beach Migration Observatory



# Holiday Beach Migration Observatory



# Holiday Beach Migration Observatory



# Holiday Beach Migration Observatory

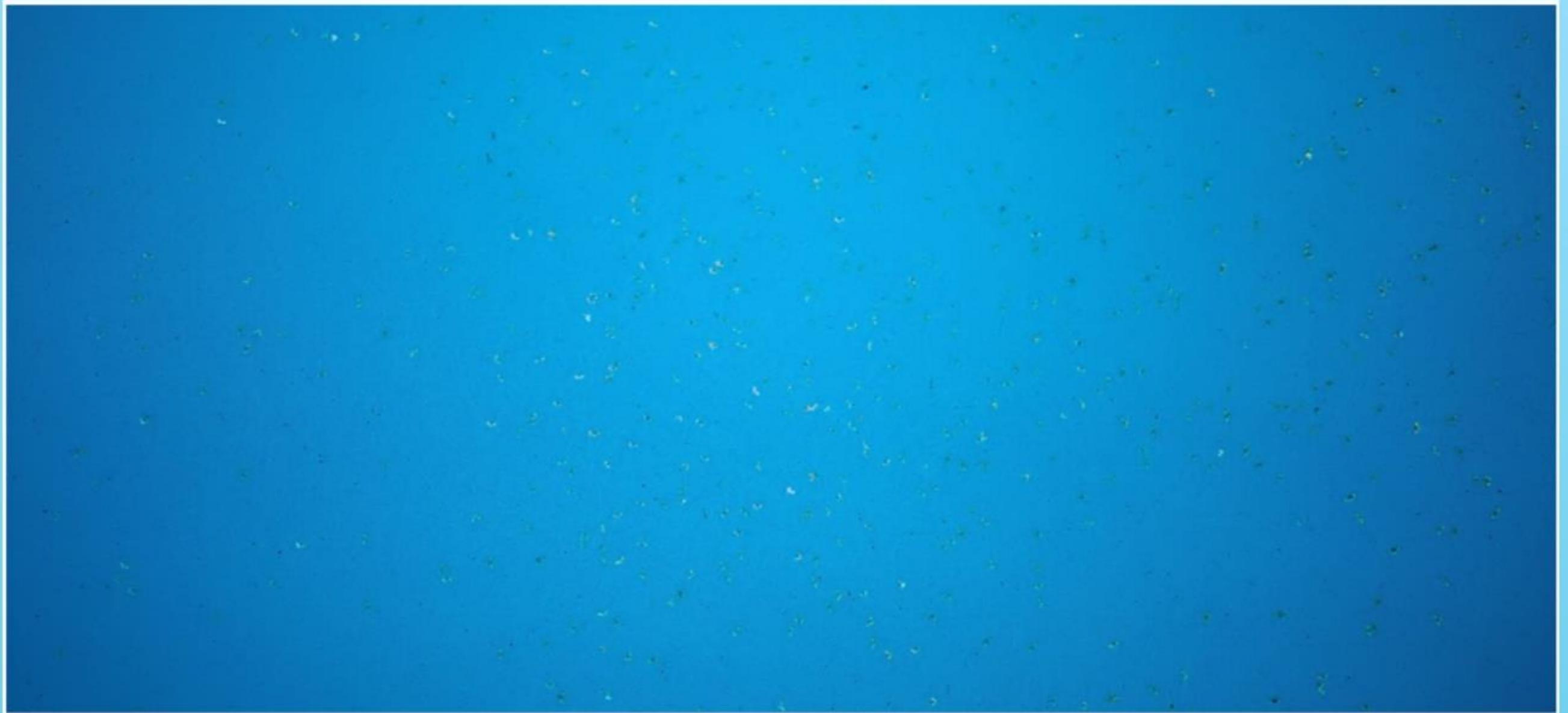
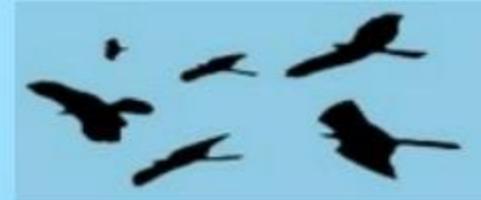


# Holiday Beach Migration Observatory





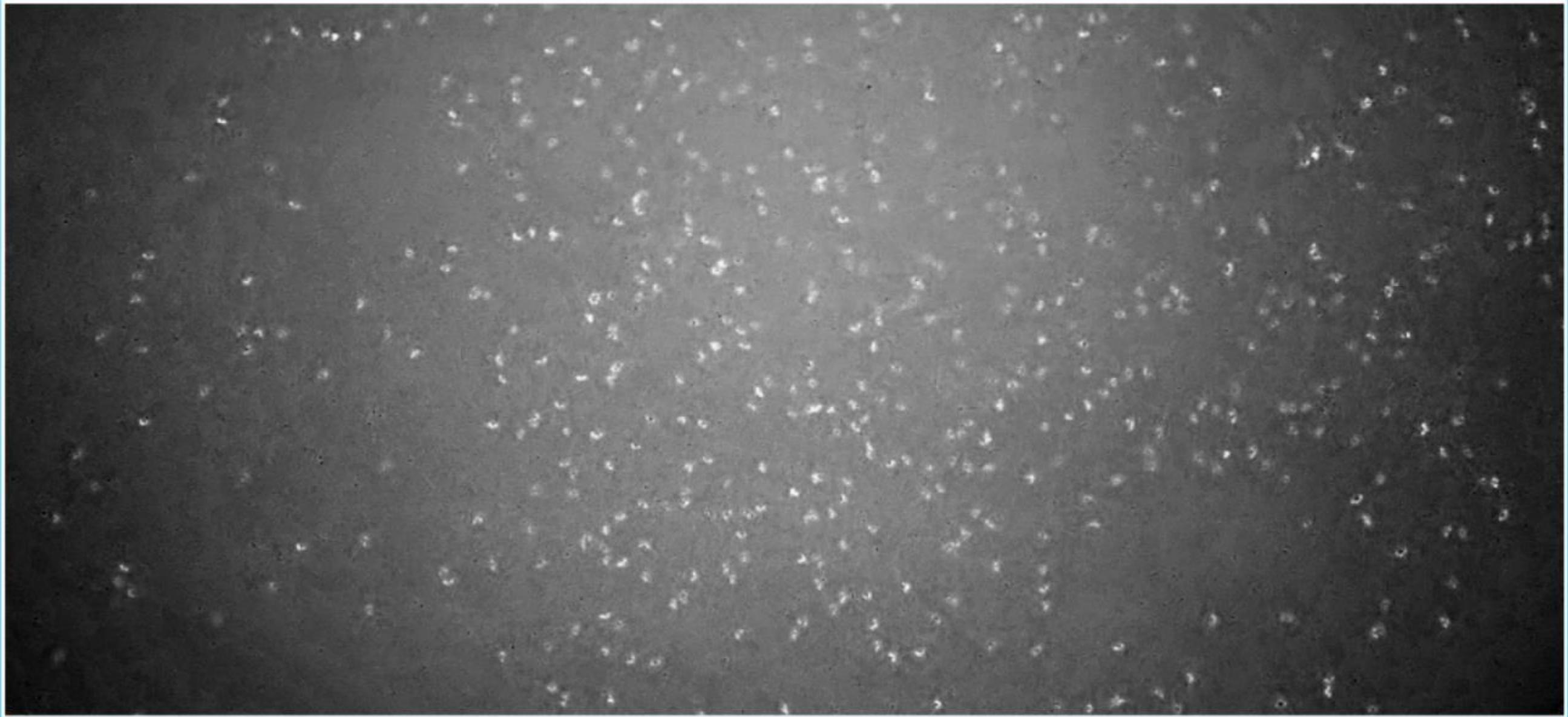
# Holiday Beach Migration Observatory



**Directly overhead photo with 300mm lens. Broad-winged Hawks appear like moving brown sugar.**



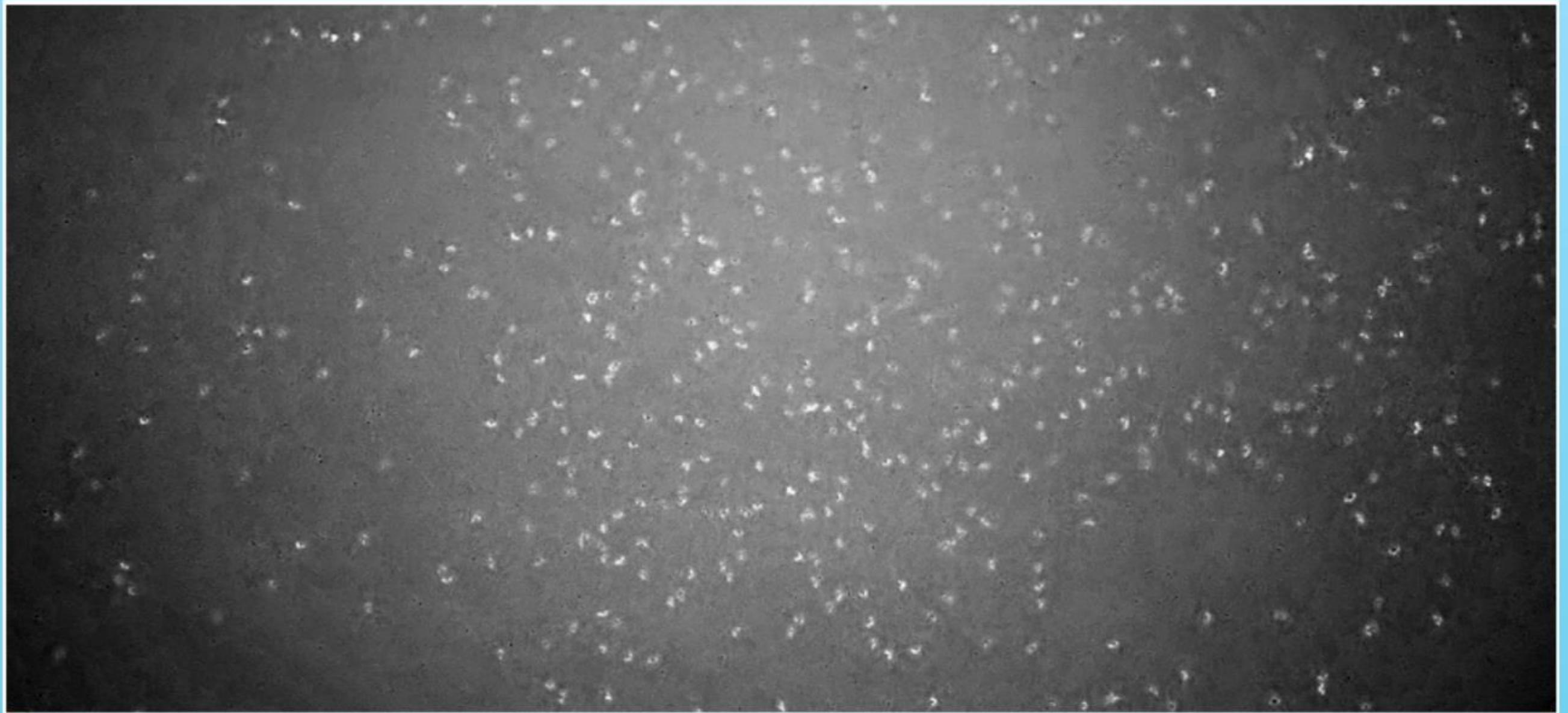
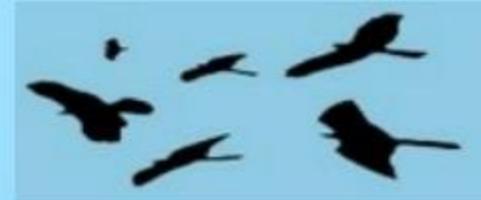
# Holiday Beach Migration Observatory



Same Broad-winged Hawks with reversed black and white. How many?

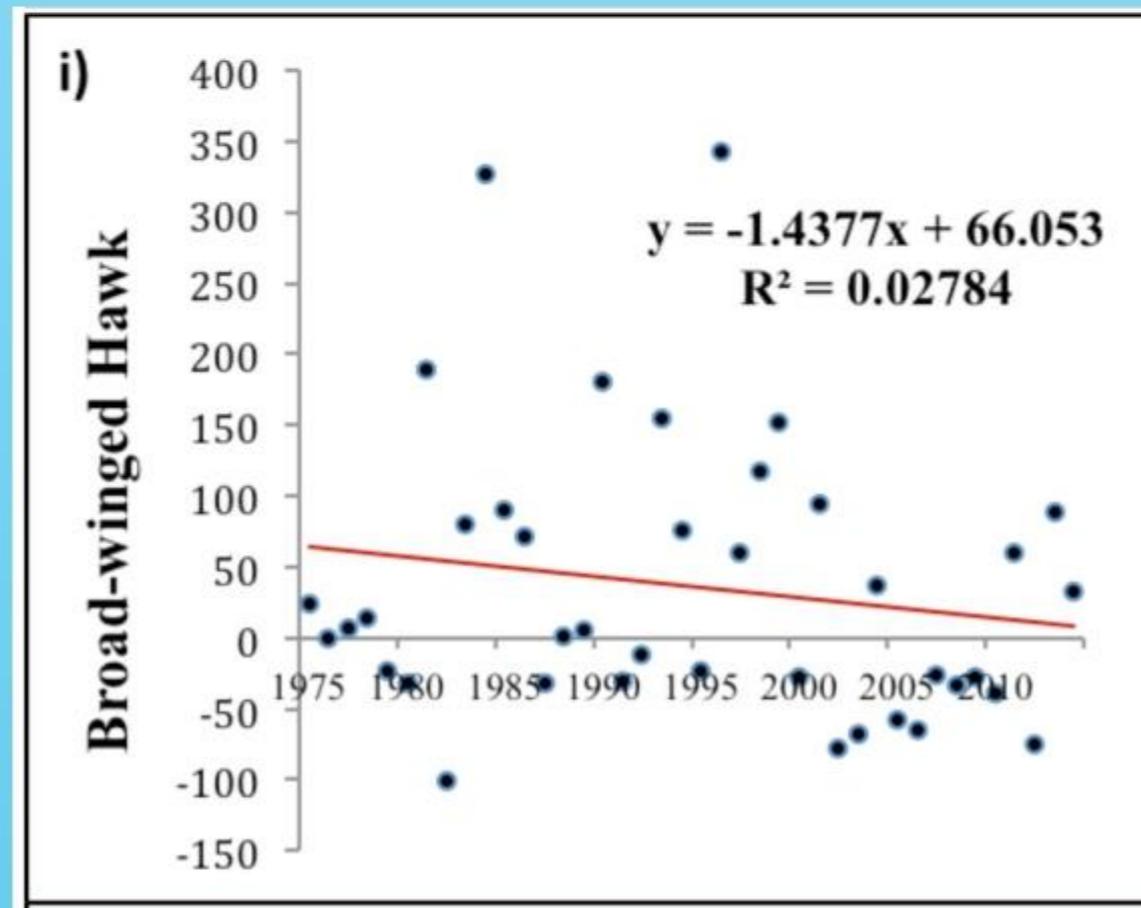
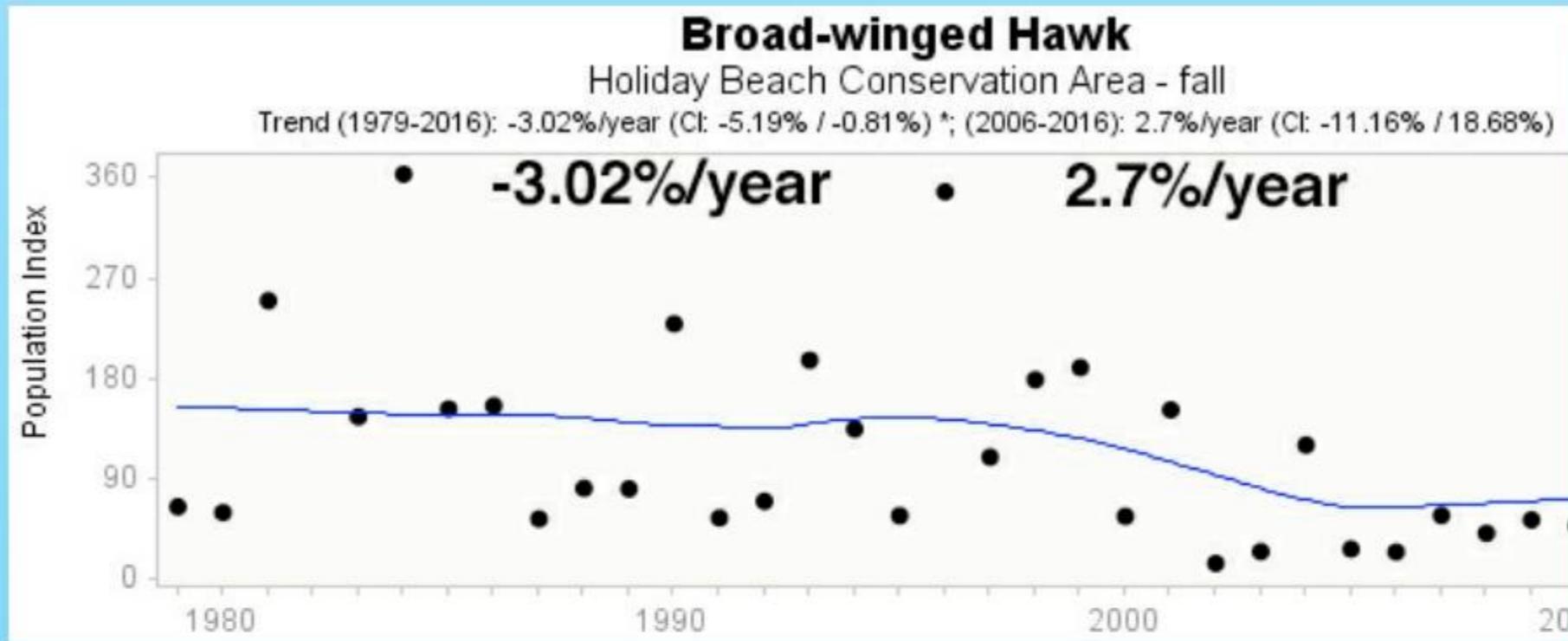


# Holiday Beach Migration Observatory



**Same Broad-winged Hawks with reversed black and white. How many? 300.**

# Holiday Beach Migration Observatory



**-1.44%/year**

**Broad-winged Hawks  
observed/hour  
*not a significant***

***decrease*  
-1.44% each year.**

# Holiday Beach Migration Observatory

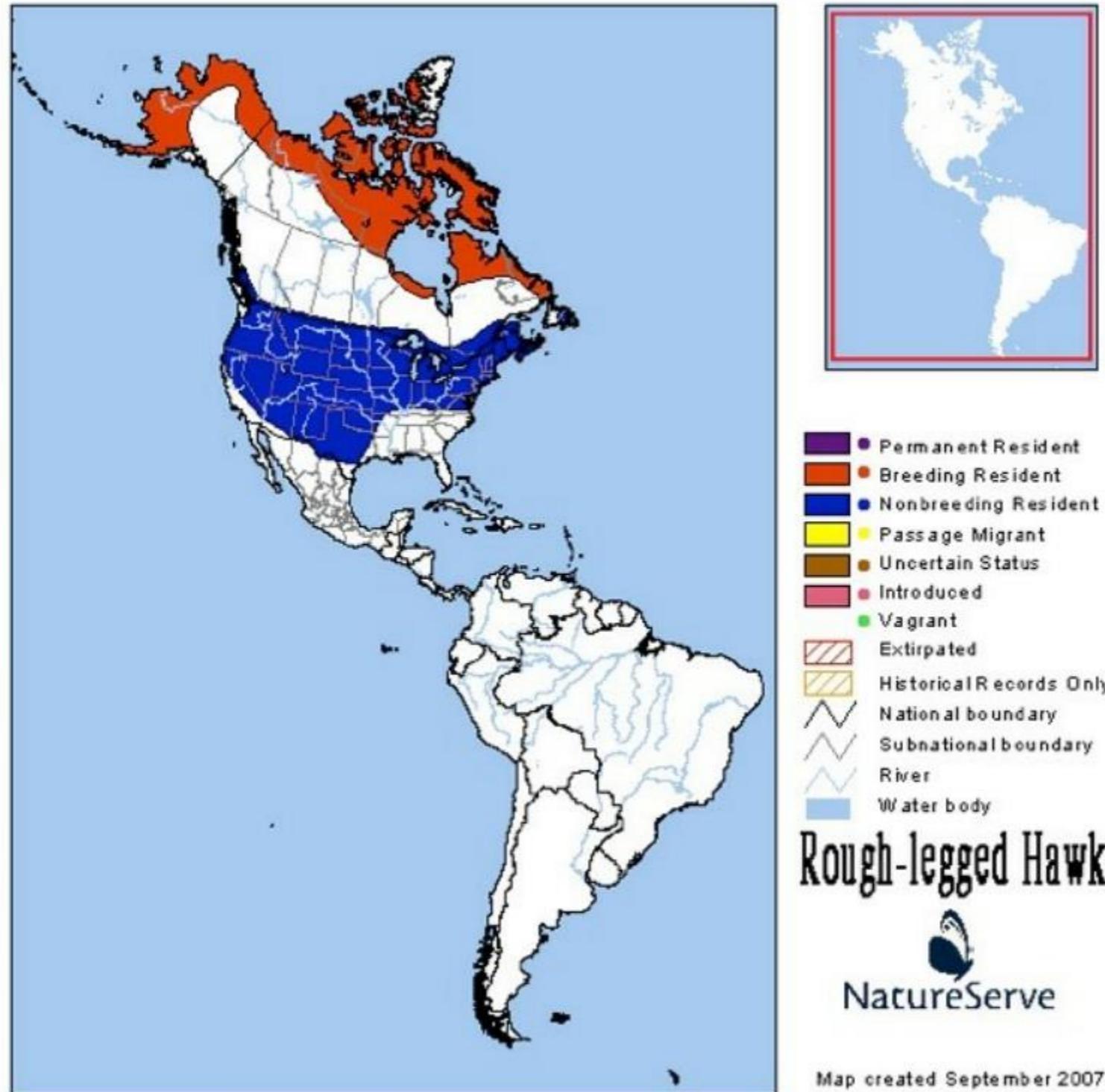
## Rough-legged Hawk



Light



Dark



# Holiday Beach Migration Observatory



Variation in color forms Light to Dark



Small Feet



Radley  
12/11/04



Small Head

**Allen's Rule** broadly states that animals adapted to cold climates have relatively short limbs.

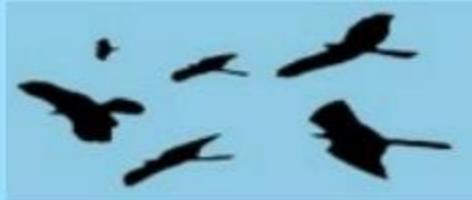


# Holiday Beach Migration Observatory





# Holiday Beach Migration Observatory



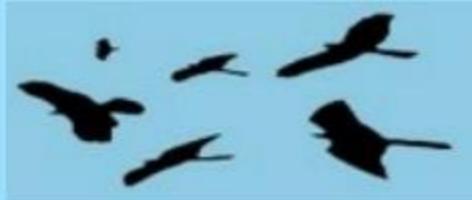


# Holiday Beach Migration Observatory

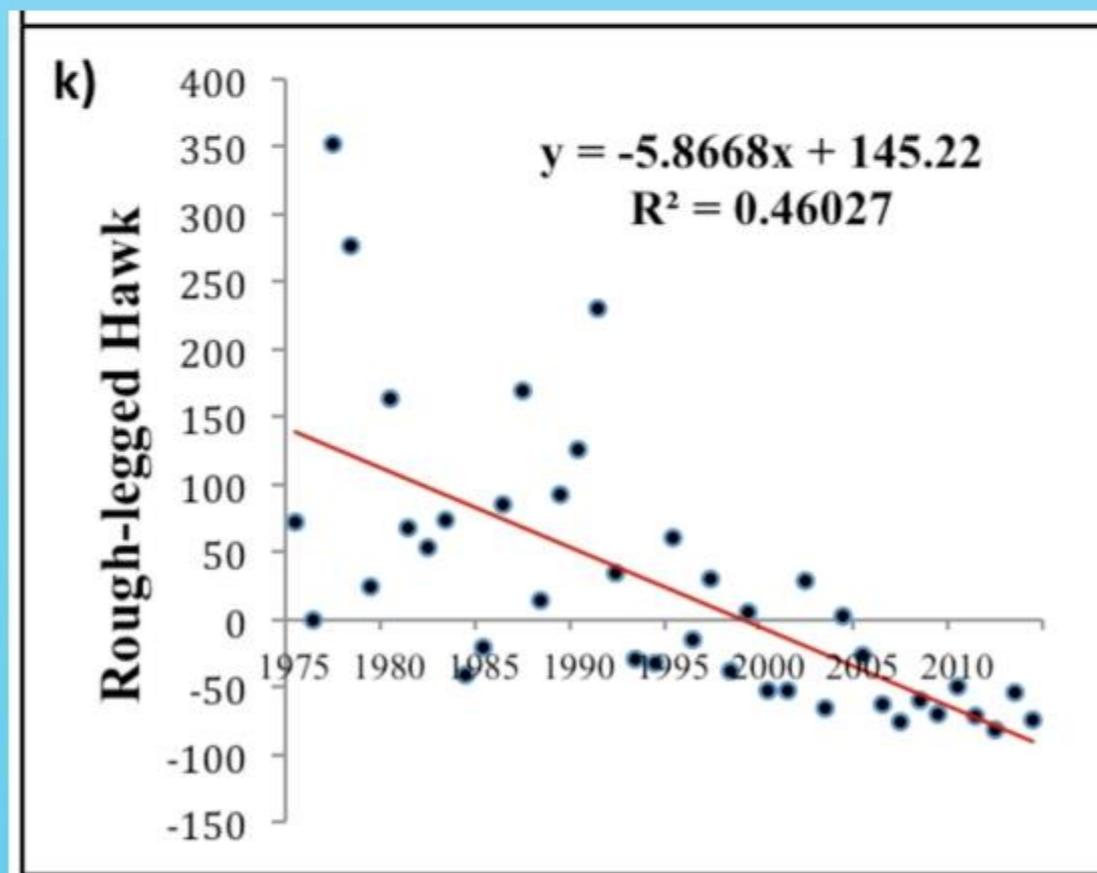
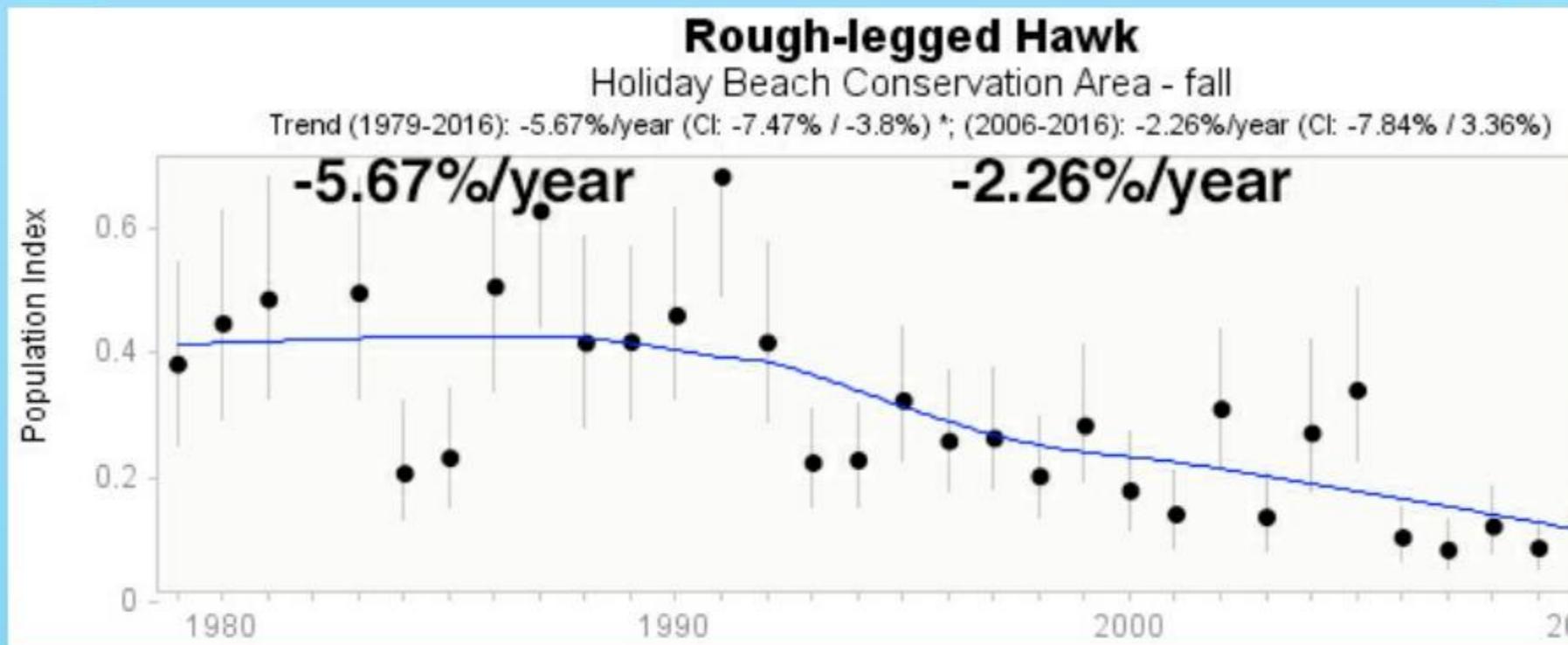




# Holiday Beach Migration Observatory



# Holiday Beach Migration Observatory



**-5.87%/year**

**Rough-legged Hawks  
observed/hour  
*strong to moderate***

***decrease*  
-5.87% each year.**



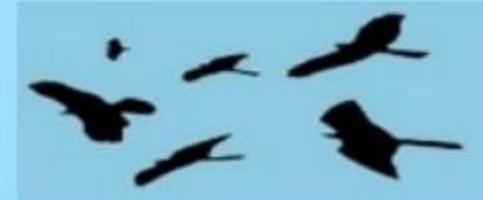
Holiday Beach Migration Observatory



**Thank You.**



# Holiday Beach Migration Observatory



**Thank You.**

**Consider becoming a member of HBMO and HMANA.**