

CIT-CC11-2014-Tec.7



**INTER-AMERICAN CONVENTION FOR THE
PROTECTION AND CONSERVATION OF SEA TURTLES**

IAC Index nesting beach data analysis (2009-2013)



Prepared by:
Jeffrey A. Seminoff and Matthew Steinwurtzel

IAC Secretariat *Pro Tempore* • Virginia, USA

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*Inter-American Convention for the Protection
and Conservation of Sea Turtles*

***IAC Index nesting
beach data analysis
(2009-2013)***

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This report is intended to provide the IAC Member Countries with a first glance of the index nesting beach data that has been provided as per the recently adopted IAC protocols for reporting nesting beach abundance information. This report has been prepared by Jeffrey A. Seminoff delegate of United States to the IAC Scientific Committee and his research assistant Matthew Steinwurtzel (Franklin & Marshall College, US).

Introduction

During the 9th Meeting of the IAC Scientific Committee Meeting in Buenos Aires, Argentina, the IAC Scientific Committee Working Group on Nesting Trend Analysis reported the results of a study to examine the value of IAC Annual Report data for monitoring changes in nesting abundance for sea turtles in the IAC countries (Document CIT-CC10-2013-Tec.5; Selecting Index Nesting Beaches in the IAC Region and Data Collection Guidelines). The goals of this report were 1) to more clearly explain why the IAC Scientific Team recommends the use of real numbers instead of ranges for tracking or monitoring long term changes in nesting abundance, 2) to describe the advantages and disadvantages of reporting only for nesting index sites rather than all sites in a country, and 3) to develop guidelines for determining which nesting beaches should be considered index sites within IAC countries. Based on this report, the IAC Scientific Committee agreed that for future IAC Country Annual Reports, each country will report real nesting numbers (versus ranges in numbers) and will provide this information for species specific index nesting beaches in each country.

During the 10th Meeting of the IAC Scientific Committee Meeting in Tegucigalpa, Honduras, the IAC Index Beach Working Group reported the results of a study to examine the value of IAC Annual Report data for monitoring changes in nesting abundance for sea turtles in the Party countries. During the meeting, each Scientific Committee Member was asked to provide a summary of the proposed index sites for each sea turtle species nesting in their country. The current document summarizes this information and provides a country-by-country, and species-by-species account of how nesting abundance has changed during the last five years (2009-2013). We recognize that five years of nesting abundance data is insufficient for determining population trends, but by continuing with this reporting strategy we expect that more years of data will eventually allow for a strong understanding of population trends.

Nesting Beach Data Reported To Date

The countries that have reported information so far include Belize, Brazil, Caribbean Netherlands, Costa Rica, Ecuador, Guatemala, Mexico, the United States, and Venezuela. The specific index sites for each country/species are listed below in Table 1.

Table 1.

Summary of Index Nesting Beach data provided by IAC countries. DC = *Dermochelys coriacea*, CM = *Chelonia mydas*, LO = *Lepidochelys olivacea*, LK = *Lepidochelys kempii*, CC = *Caretta caretta*, EI = *Eretmochelys imbricata*. PD = only partial data reported.

Name of Beach	DC	CM	EI	CC	LO	LK
Belize (2)						
Gales Point			X			
Bacalar Chico Marine Reserve		X		X		
Brazil (18)						
Comboios	X			X		
Povoação	X			X		
Busca Vida			X	X		
Santa Maria				X		
Barra Jacuipe			X	X		
Guarajuba			X	X		
Itacimirim			X	X		
Praia do Forte			X	X		
Barra do Furado				X		
Farol				X		
Farolzinho				X		
Maria Rosa				X		
Berta			X			
Pipa			X			
Mangue Seco					X	
Coquieros					X	
Pirambu					X	
Trindade Island		X				

Name of Beach	DC	CM	EI	CC	LO	LK
Caribbean Netherlands (2)						
Klein Bonaire, Bonaire		X	X	X		
Zeelandia, St. Eustatius	X	X				
Costa Rica- Pacific (9)						
Isla Murcielago		X				
Nancite					X	
Naranjo		X			X	
Cabuyal		X				
Nombre de Jesus		X				
Punta Pargos		X				
Playa Grande	X					
Ostional					X	
Hermosa					X	
Costa Rica – Atlantic (4)						
Tortuguero	X	X				
Pacuare Norte	X					
Mondonguillo	X					
Cahuita			X			
Ecuador (9)						
San Lorenzo					X	
La Botada					X	
Playa Chocolatera		X			X	
Playa Tres Cruces		X			X	
PlayaMar Bravo		X			X	
Playita (Machalilla)			X			
Quinta Playa (Galapagos)		X				
Barahona (Galapagos)		X				
Las Bachas (Galapagos)		X				
Guatemala (2)						
Hawaii	X				X	
La Barrona					X	

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Mexico – Atlantic (12)						
Rancho Nuevo, Tamps		X		X		X
Barra del Tordo, Tamps		X		X		X
Altamira, Tamps		X		X		X
Mirama, Tamps						X
Lechuguillas, Ver		X	X			X
Isla Aguada-Xicalango-Victoria		X	X			X
Chenkan, Camp		X	X			X
Las Coloradas/Rio Lagartos.		X	X	X		
Xcacel, Quintana Roo		X		X		
Name of Beach	DC	CM	EI	CC	LO	LK
Mexico – Atlantic (continued)						
Chemuyil, Q. Roo		X		X		
Xel Ha, Q. Roo		X		X		
Puerto Aventuras, Q. Roo		X		X		
Mexico – Pacific (13)						
El Verde, Sin	X				X	
Platanitos, Nay					X	
Nuevo Vallarta, Nay					X	
Mismaloya, Jal					X	
Chalacatepec, Jal					X	
El Chupadero, Col						
Mexiquillo, Mich	X	X			X	
Tierra Colorada, Gro	X	X			X	
Cahuitan, Oax	X					
Escobilla, Oax	X				X	
Barra de la Cruz, Oax	X	X			X	
Maruata, Mich		X				
Colola, Mich		X				
United States – Atlantic (7)						
Culebra Island, Puerto Rico	X					
Vieques Island, Puerto Rico	X	X	X			
Mona Island, Puerto Rico			X			

Buck Island National Mon.	X	X				
Sandy Point NWR, Virgin Is.	X	X	X			
Florida Index Beaches	X	X		X		
Texas (South Padre Island)						X
United States – Pacific (2)						
French Frigate Shoals (HI)		X				
Hawaii			X			
Venezuela (10)						
Querepare	X			X		
Cipara	X	X		X		
Macuro	X	X	X			
La Caracola (Edo. Nueva Espa.)	X					
Hotel Dunes (Edo. Nueva/Esp.)			X			
Cardon Beach (Edo. Nueva Es.)			X			
Parguito Beach (Edo. Nueva Es.)			X			
Hotel Portofino (Edo. Nueva Es)			X			
Beaches between Moron/ Yara.			X	X		
RFS Isla de Aves		X				

Summary and Recommendations

The goal of this report is to provide information on nesting beach abundance for all IAC countries that host nesting. However, of the 11 total countries with nesting, data from only nine countries are included in this report. These data reflect nesting abundance for six sea turtle species that are distributed among 95 index nesting sites for which data were submitted. Graphical summaries of the data provided so far are provided by species, nesting beach, and country below (Pages 7-34).

Based on our preliminary analyses, we have developed a series of recommendations that we believe will help ensure that the IAC is best suited to analyze changes in nesting abundance for all species within the region into the future.

List of Recommendations:

- 1.** The IAC Scientific Committee recommends IAC Countries to provide real number data rather than ranges for nesting beach abundance, as this is the best way to evaluate changes in population status. The IAC Secretariat should continue to encourage IAC countries to do so when filling out the information in the IAC Annual Report.
- 2.** The IAC Secretariat should encourage each country to provide the methodology for how they arrived at their nesting abundance values. This may include a short description of how they collected data each year and if so, what changes in their techniques have taken place since the previous data report.
- 3.** The IAC Scientific Committee recommends that countries report numbers of observed females or number of clutches, as these are the two most reliable data forms. Other data types such as estimated females or emergence/track counts based on incomplete survey effort should be avoided. See IAC Document CIT-CC10-2013-Tec.5 for more information.
- 4.** The IAC Scientific Committee recommends that countries pay closer attention to their selection of index nesting sites. Whereas some countries reported upwards of 12 sites per species, a more reasonable number of index sites per species is 5 sites or less per species. Selection of the best sites for index reporting should focus on sites with most consistent data collection, and sites that are most likely to be monitored over the long-term (i.e for decades into the future).
- 5.** The IAC Secretariat must encourage all countries to provide data for all index beaches for each year. Provision of partial data or abundance counts that do not have a standardized collection technique should be avoided. See IAC Document CIT-CC10-2013-Tec.5 for more information. When no data, or only partial data are provided for any given index site, the Reporting Countries should provide a clear explanation for why all data were not provided.
- 6.** The IAC Scientific Committee recommends that a similar analysis as to that presented in this document is conducted every 5 years, with a final report submitted to the IAC Consultative Committee and the Conference of the Parties every 5 years.

Analysis of Nesting Trends



Common Name: Leatherback

Scientific Name: *Dermochelys coriacea*

IUCN Red List Category:

Global: Vulnerable

East Pacific: Critically Endangered

Northeast Indian: Data Deficient

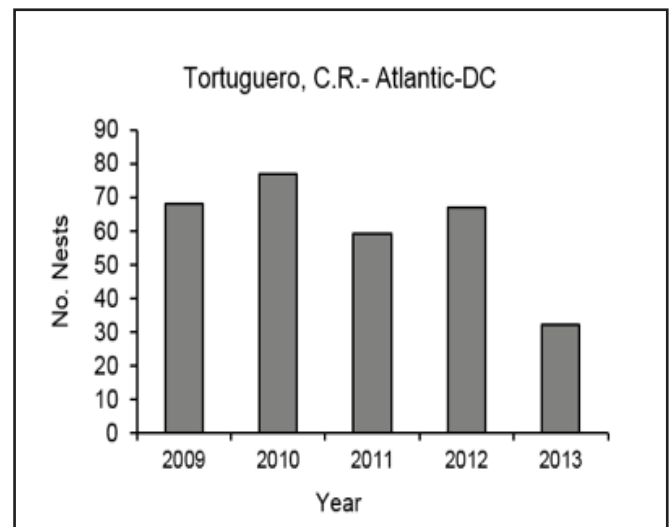
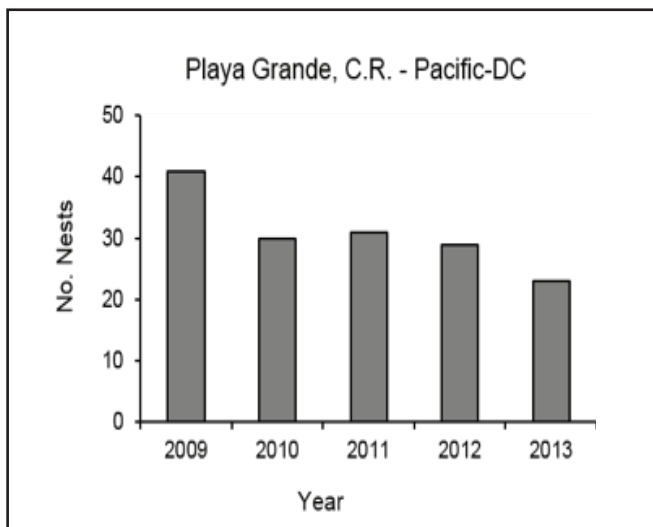
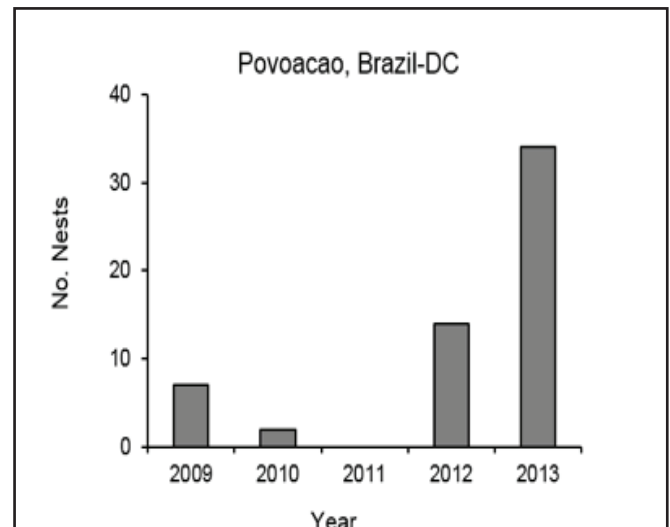
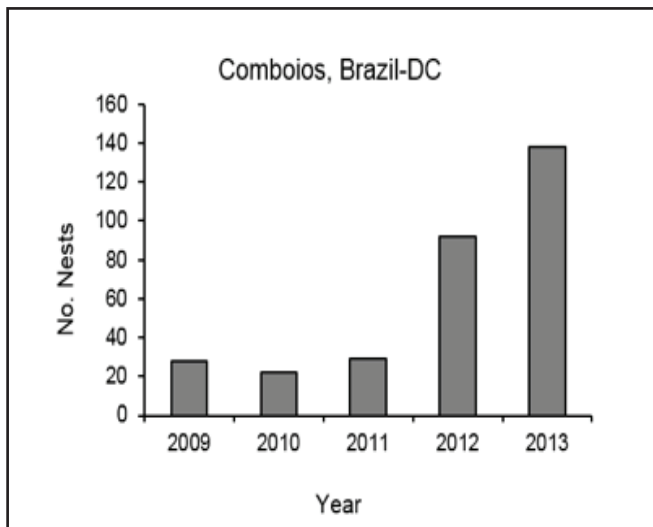
Northwest Atlantic: Least Concern

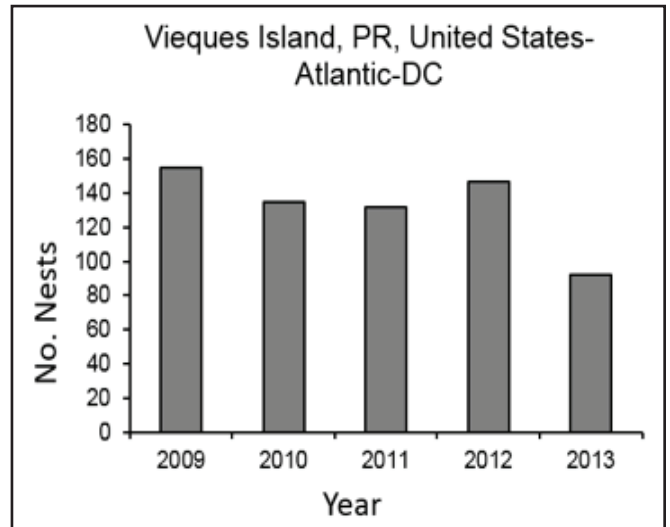
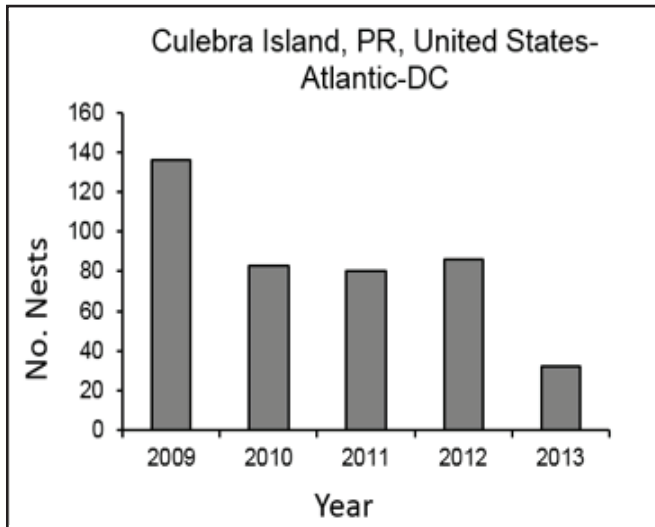
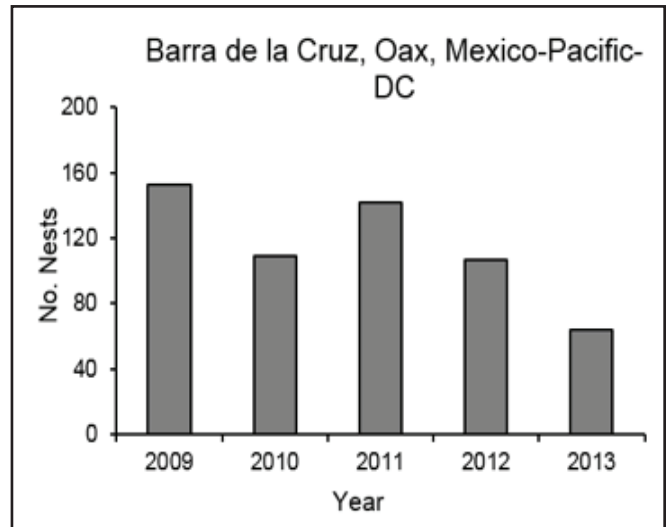
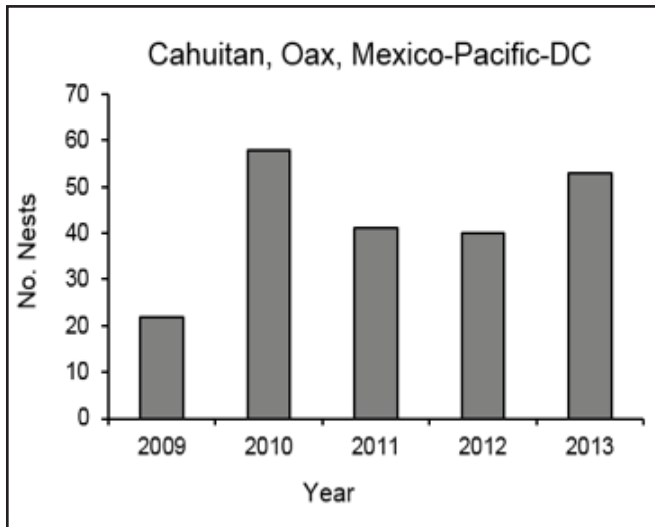
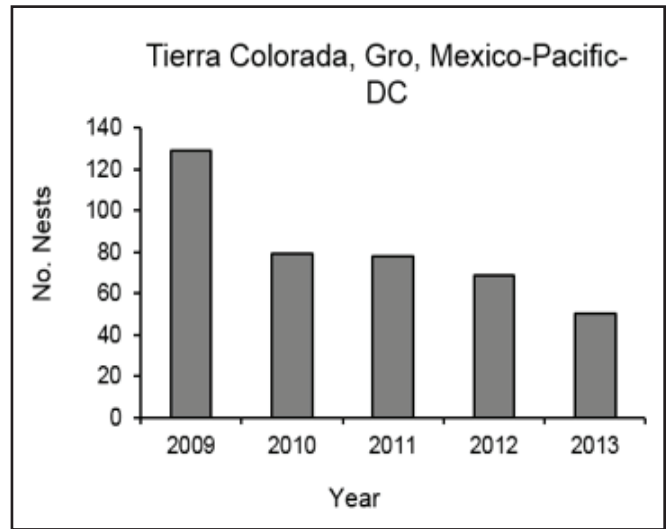
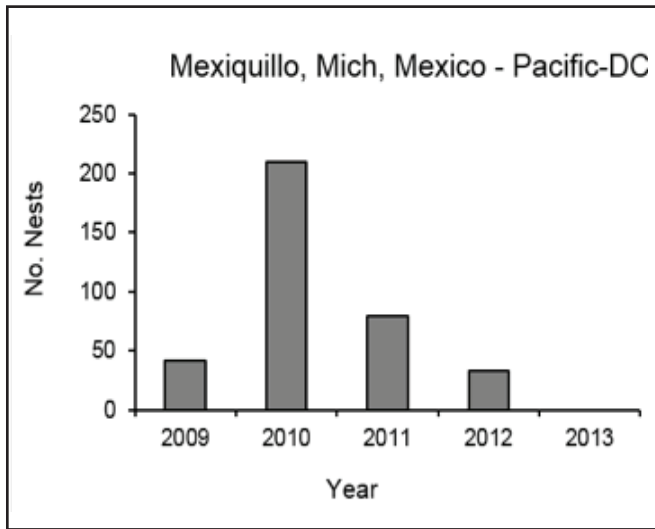
Southeast Atlantic: Data Deficient

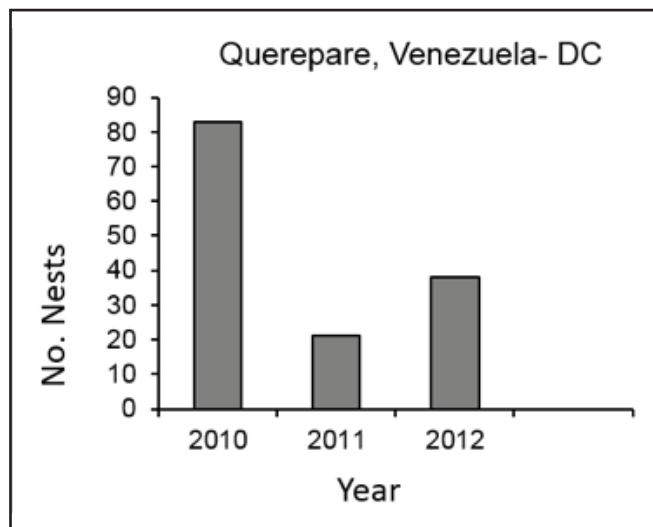
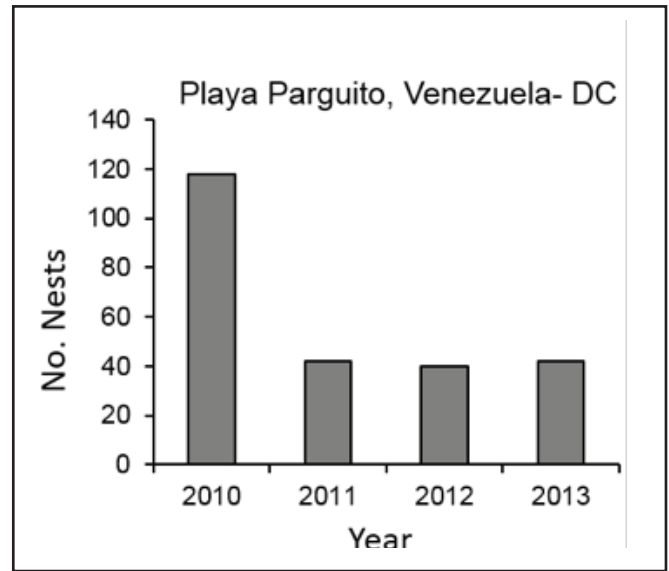
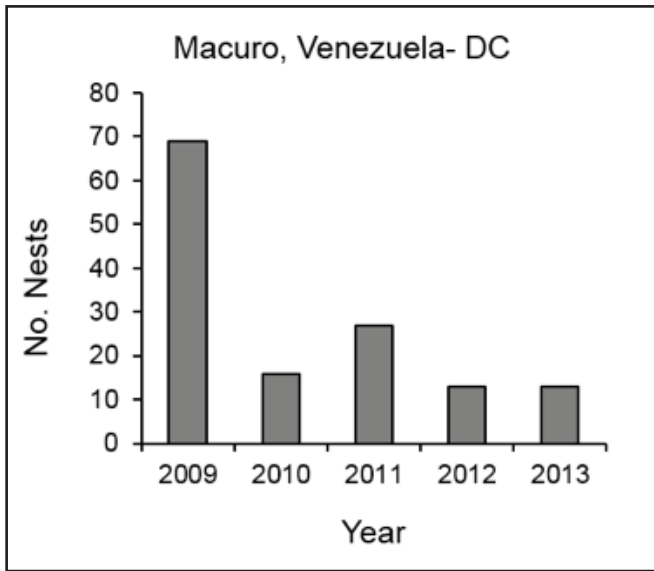
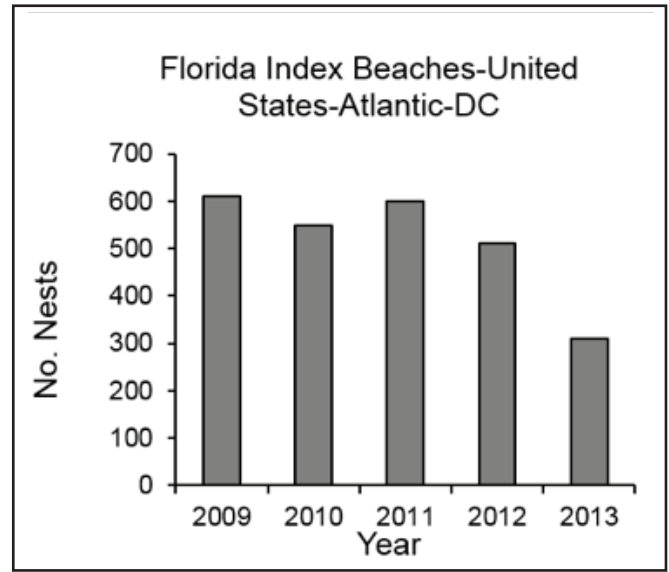
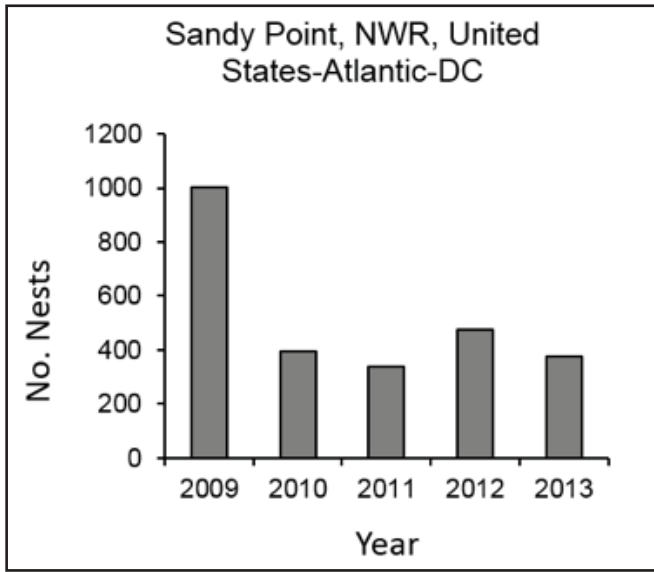
Southwest Atlantic: Critically Endangered

Southwest Indian: Critically Endangered

West Pacific: Critically Endangered

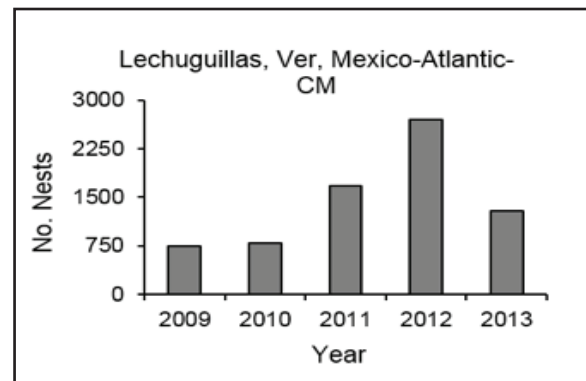
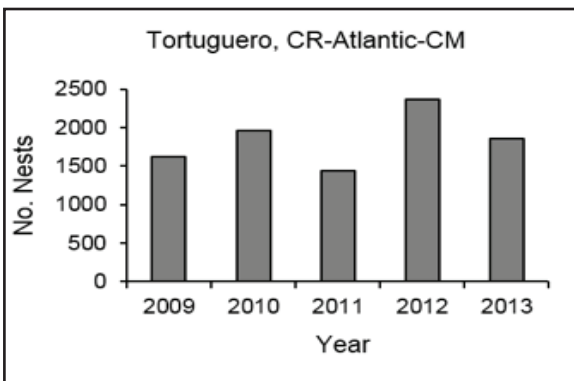
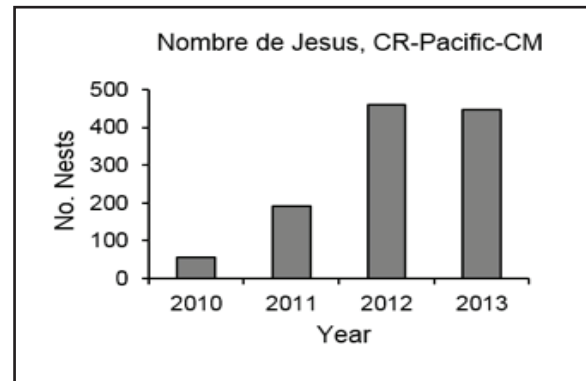
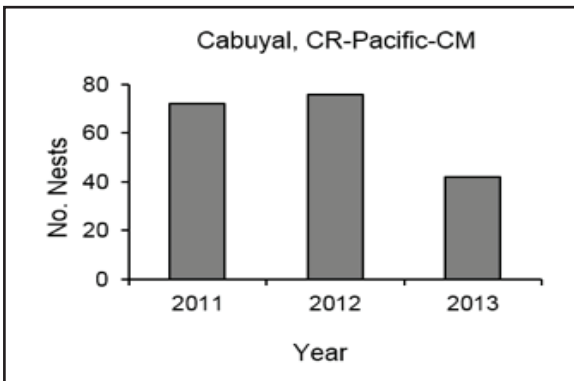
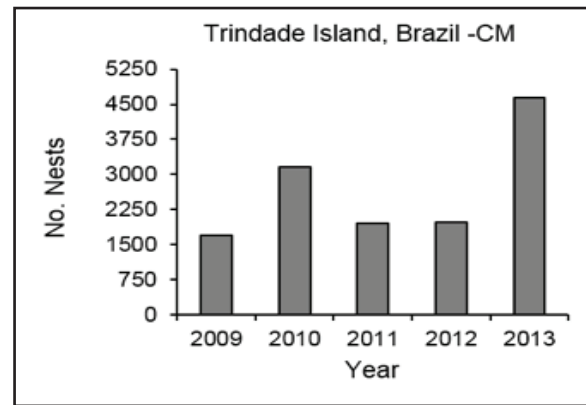
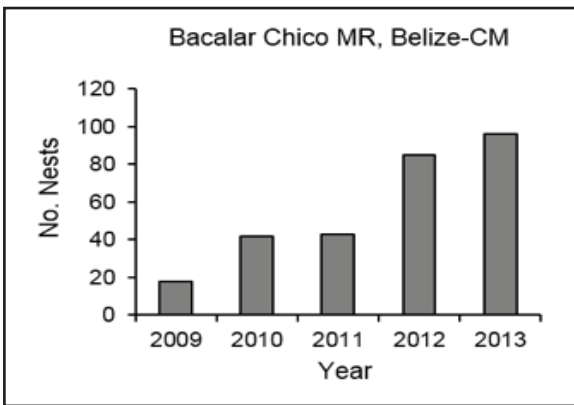


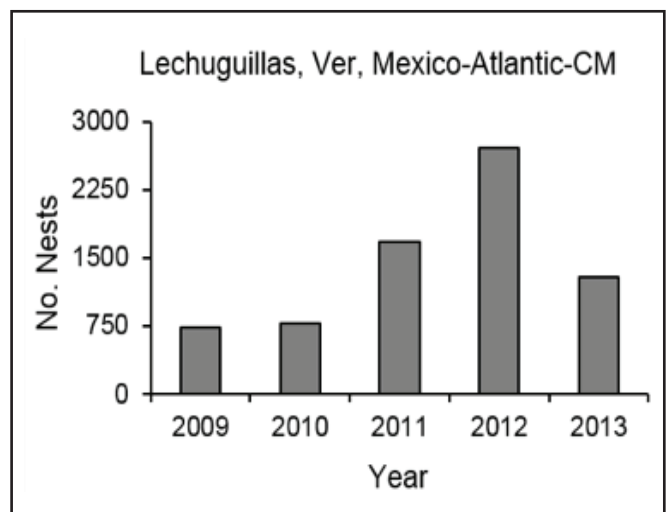
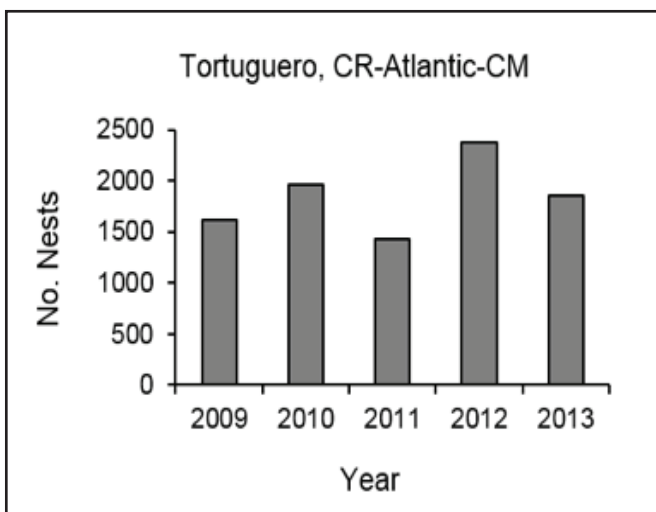
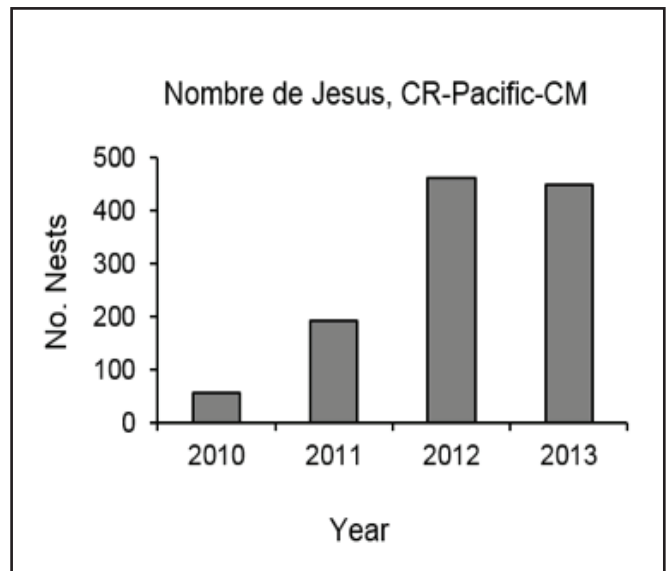
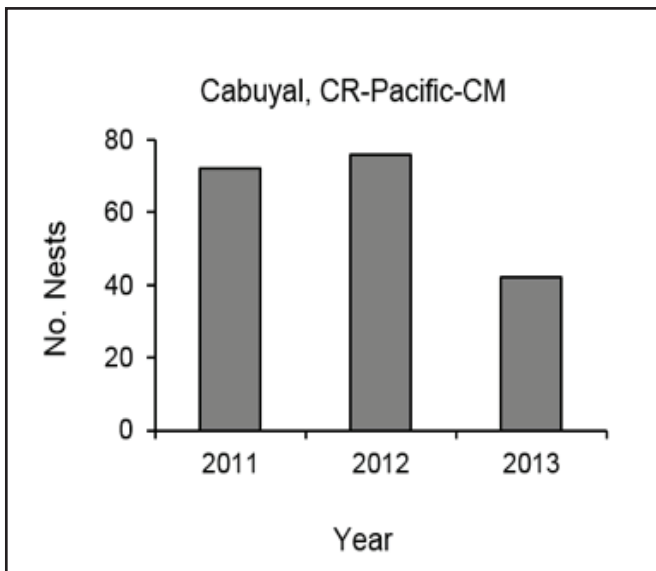
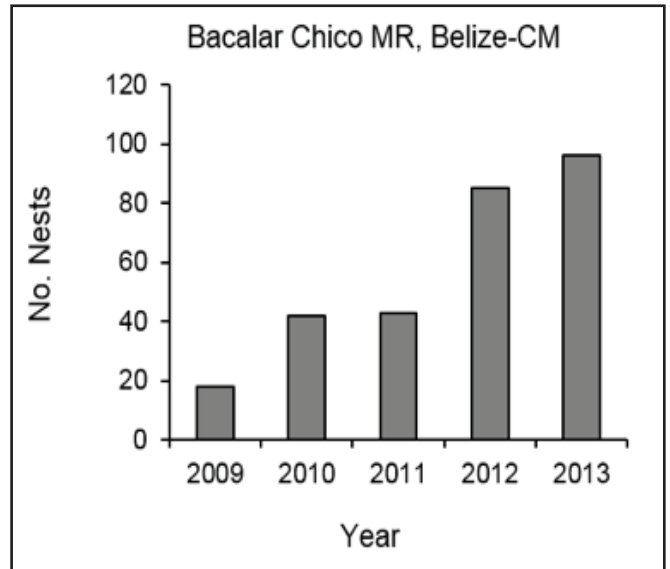
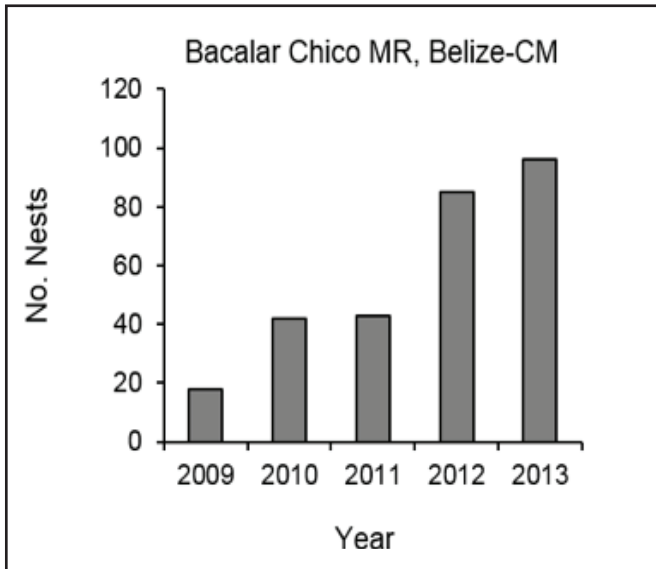


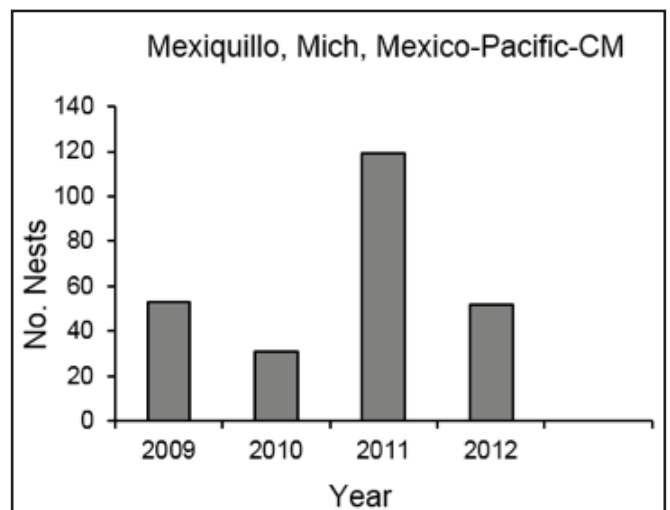
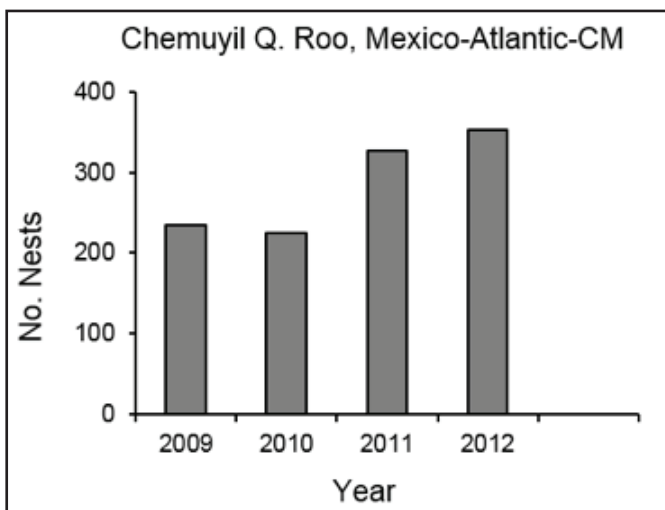
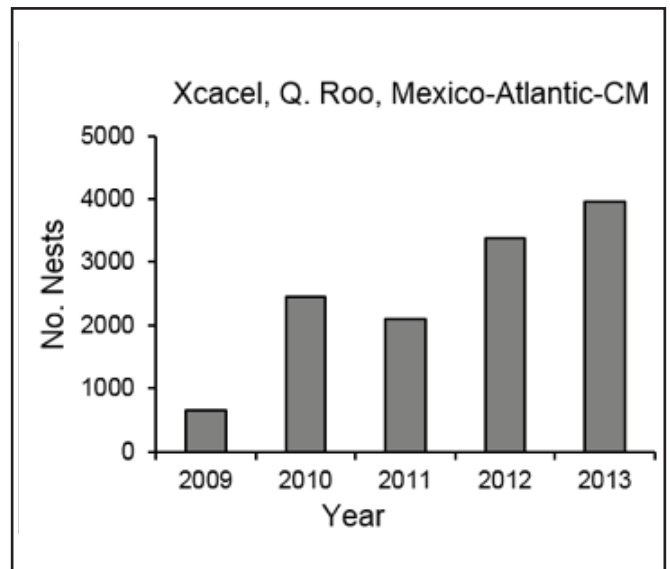
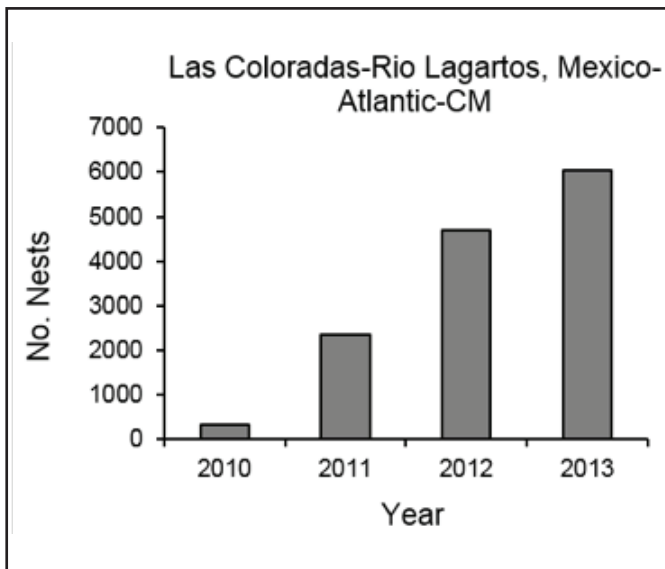
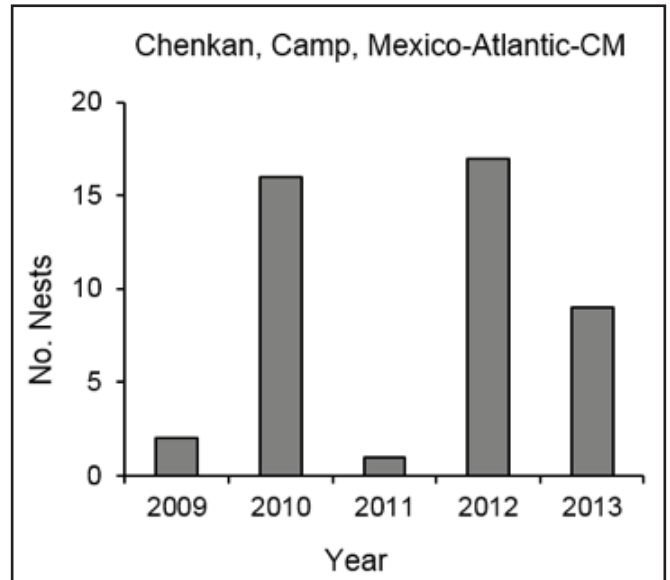
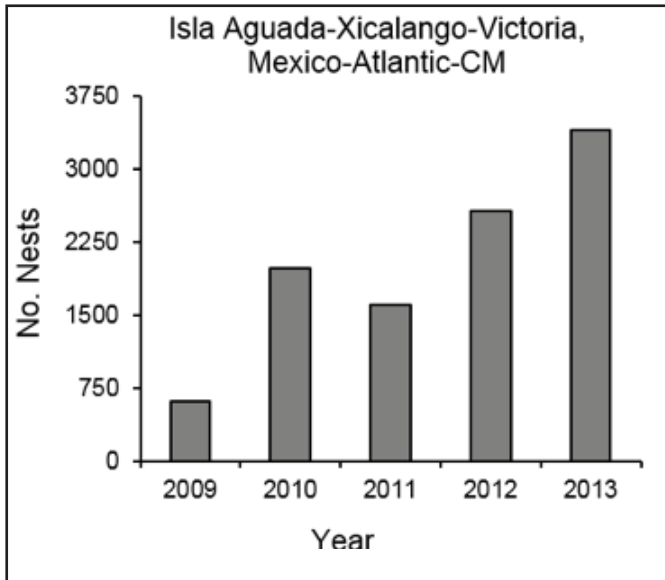


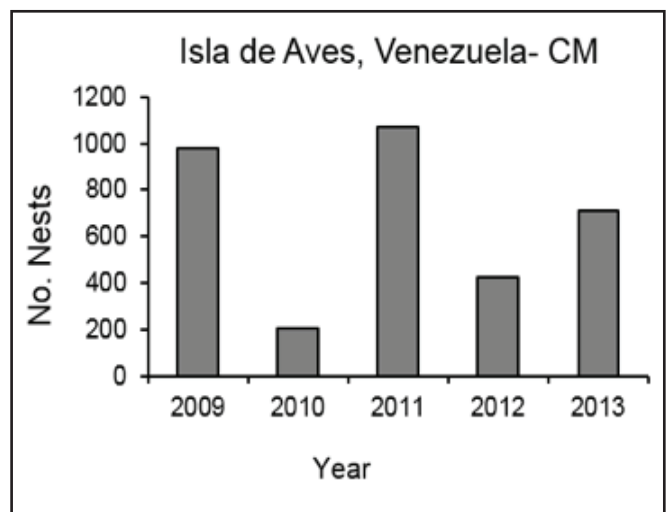
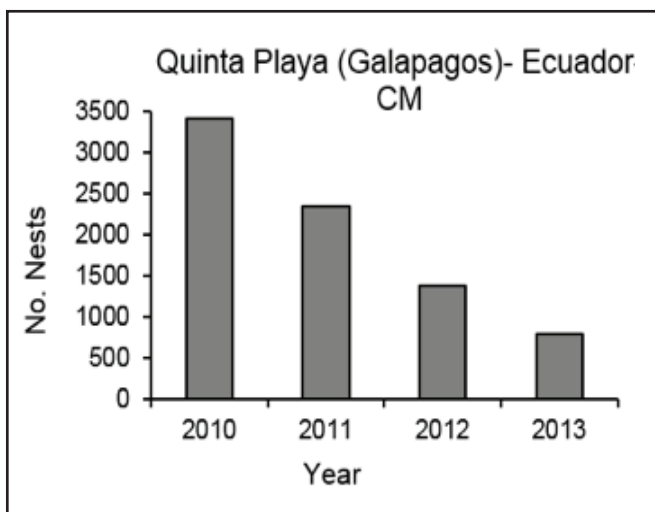
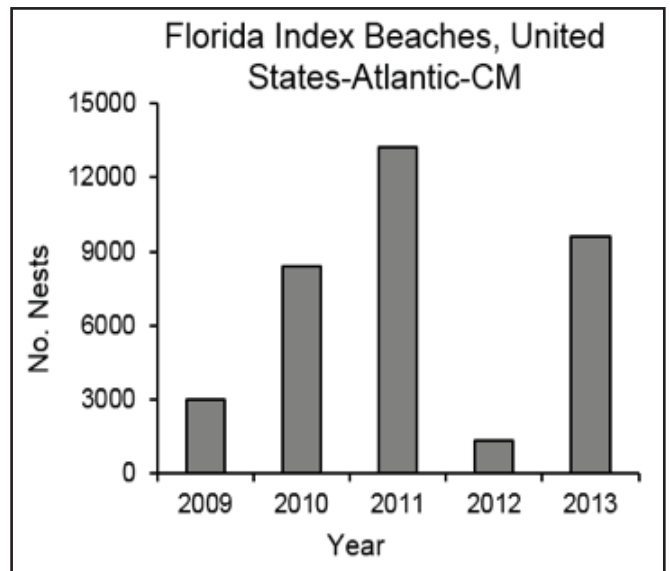
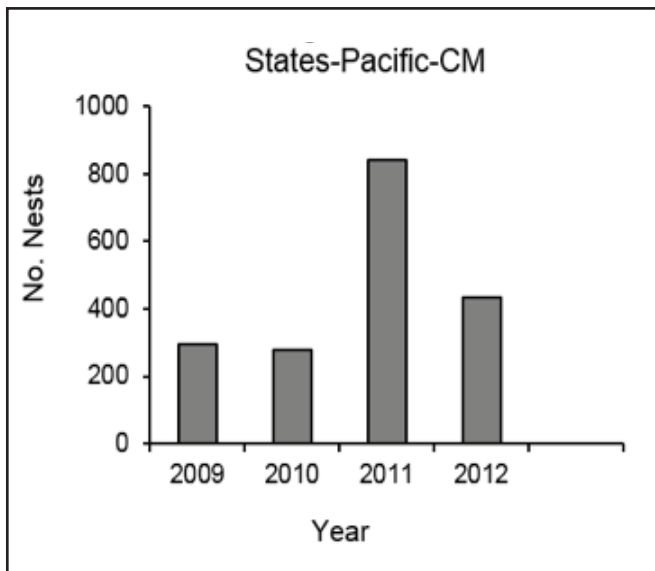
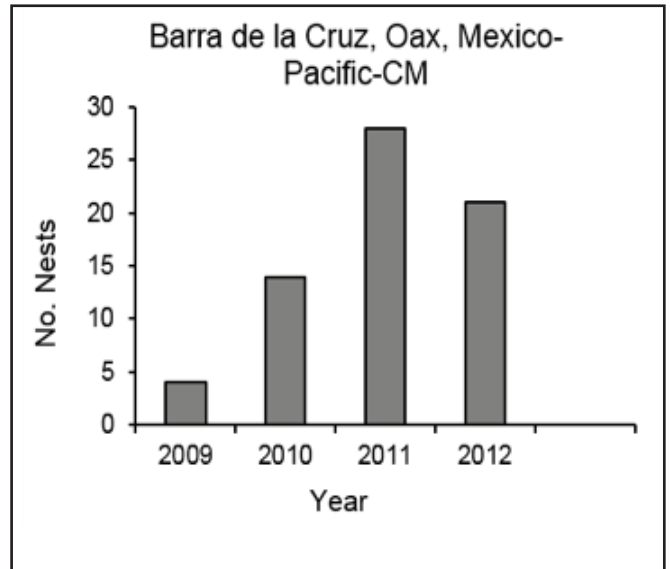
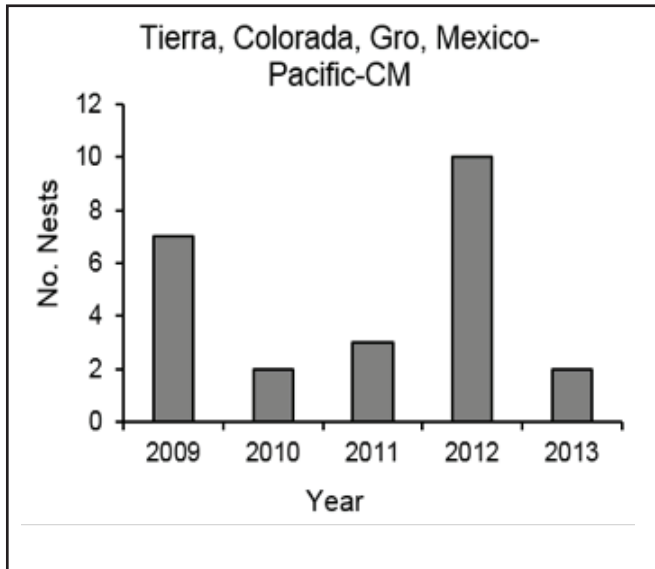


Common Name: Green Turtle
Scientific Name: *Chelonia mydas*
IUCN Red List Category:
 Global: Endangered
 Hawaiian Subpopulation: Least Concern



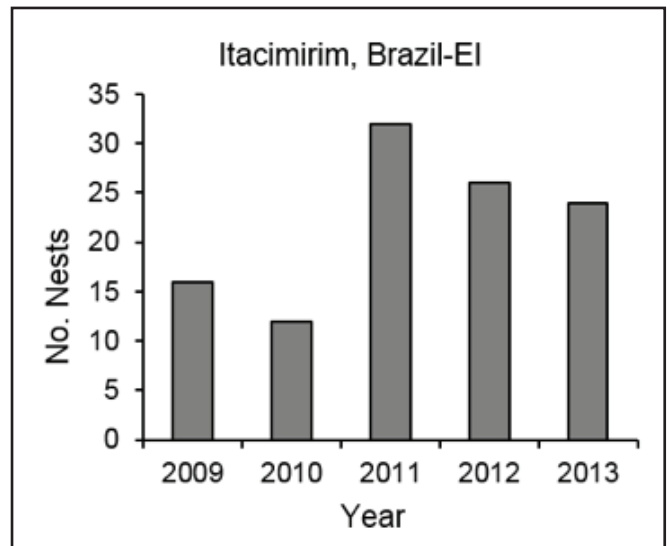
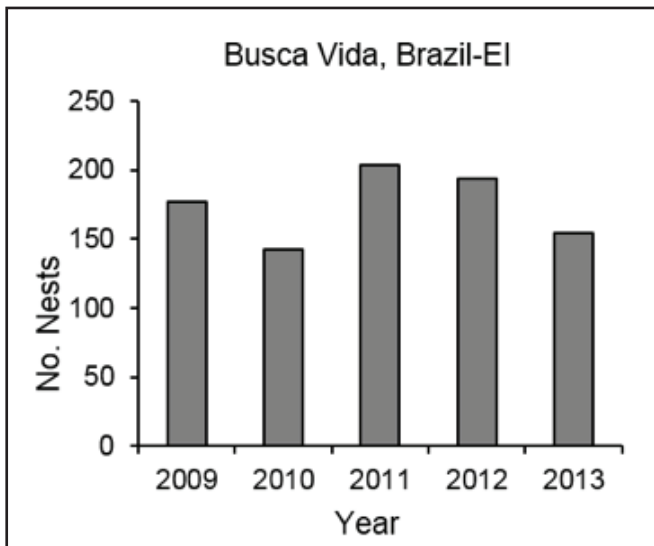
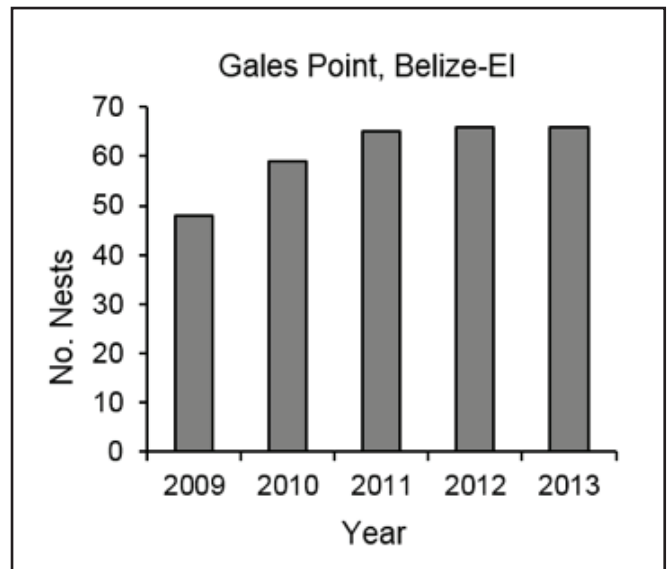
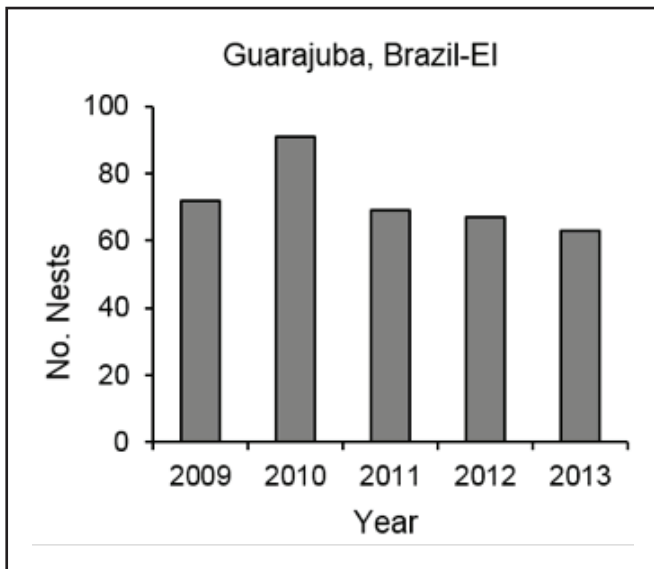


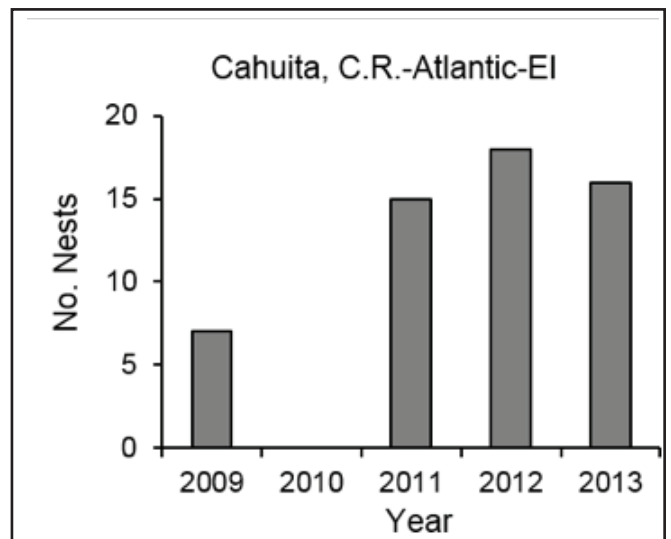
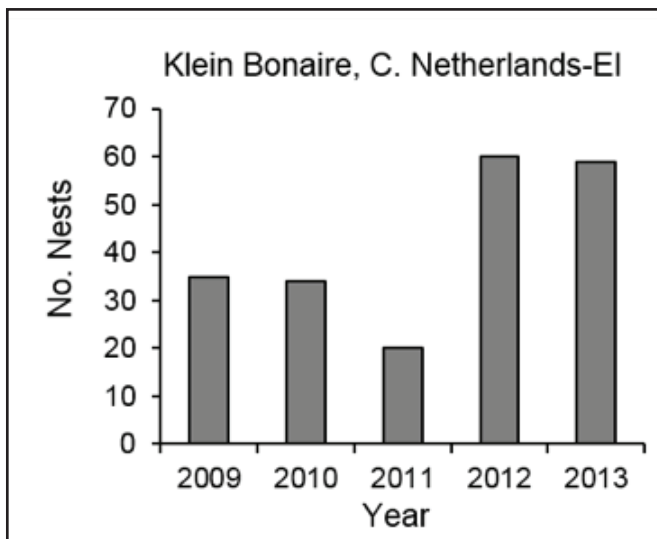
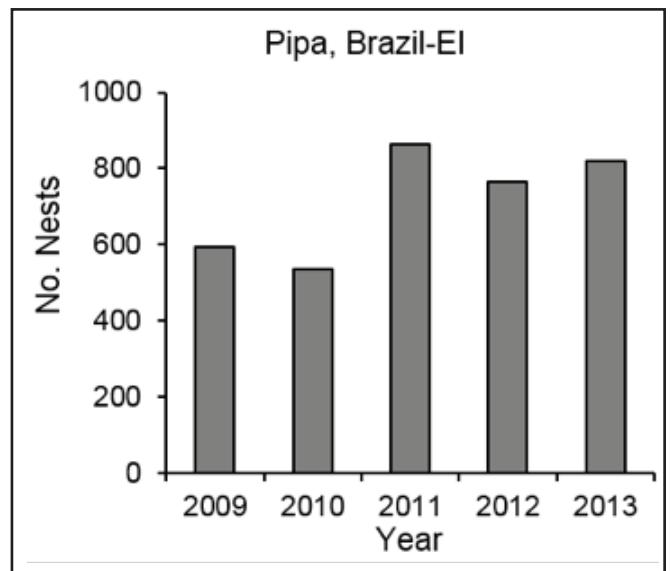
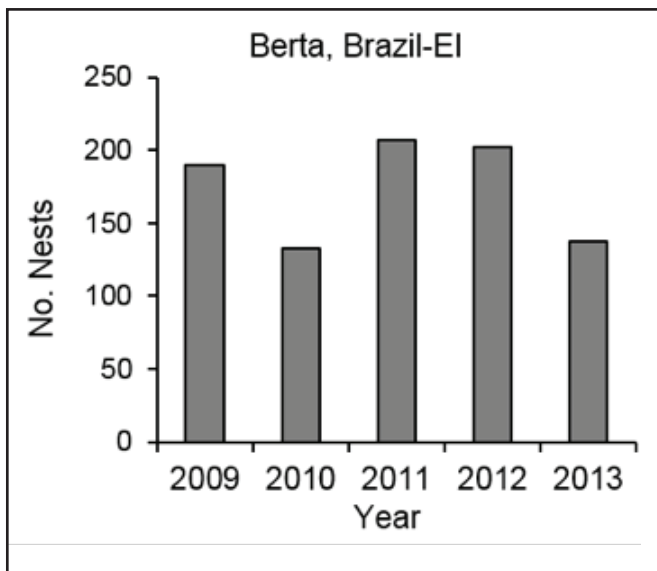
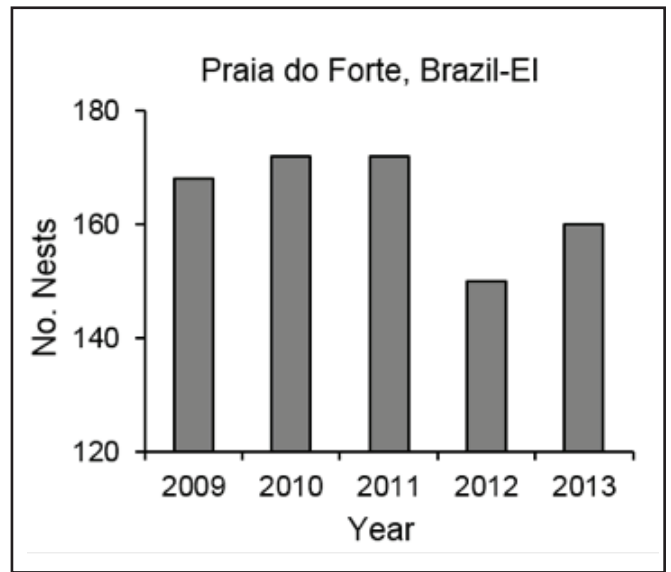
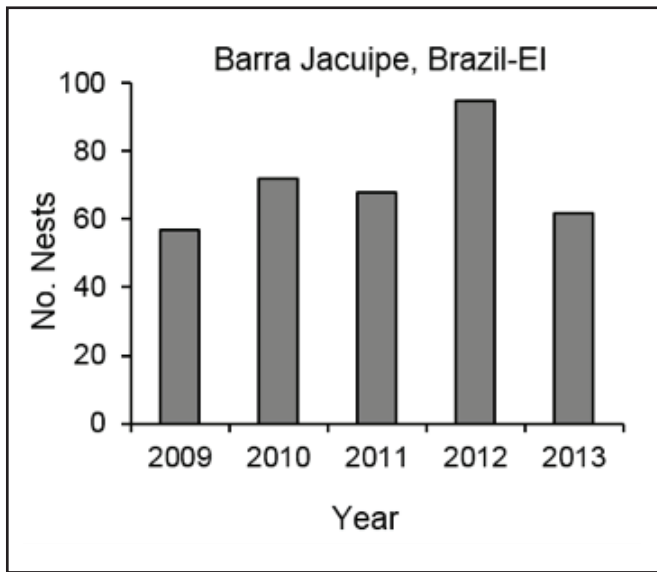


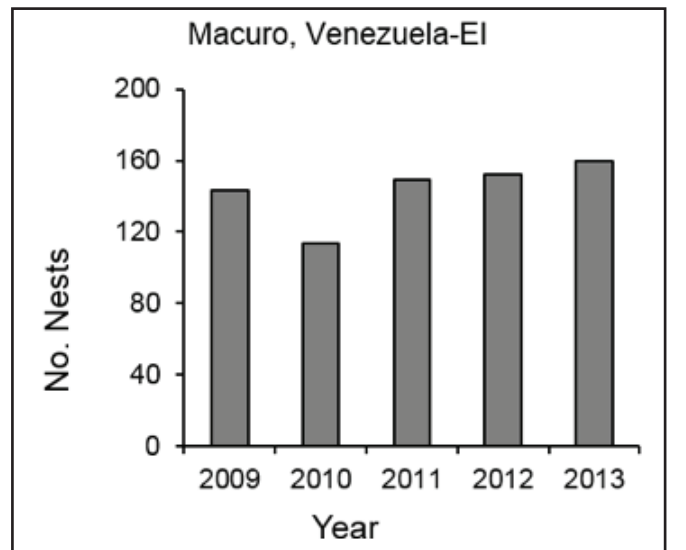
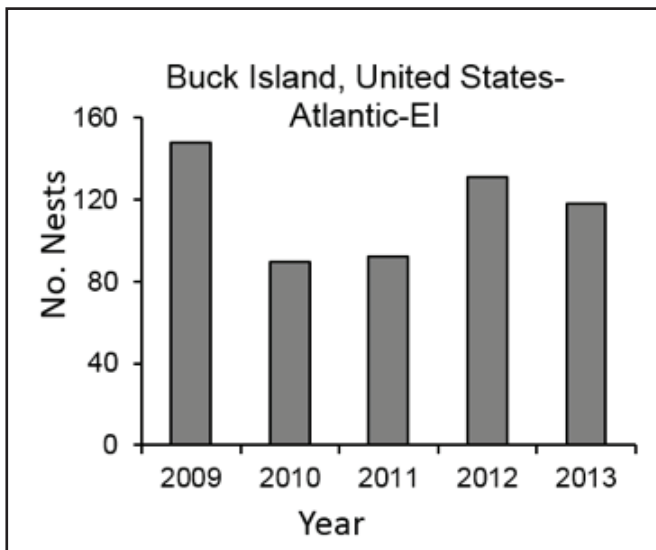
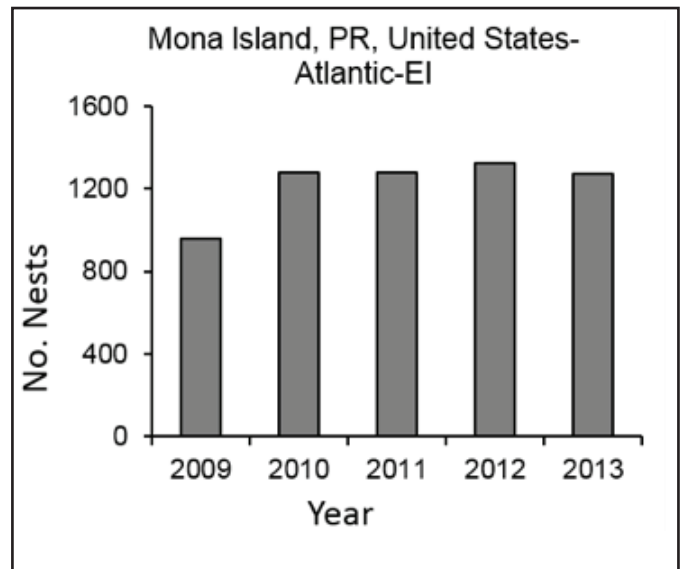
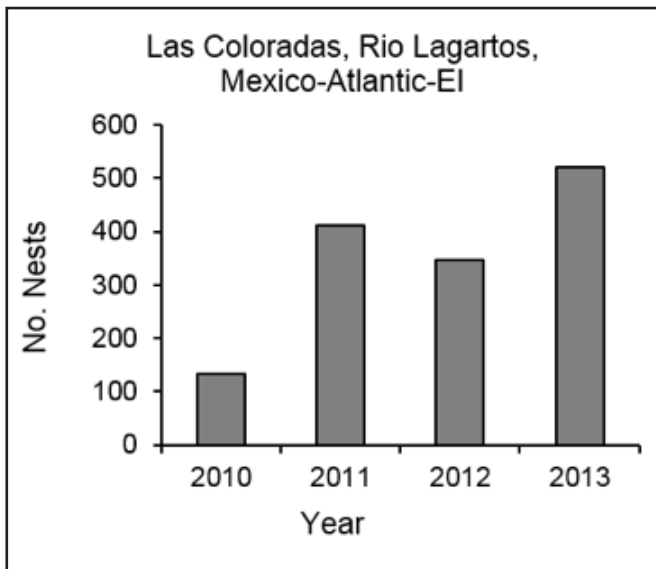
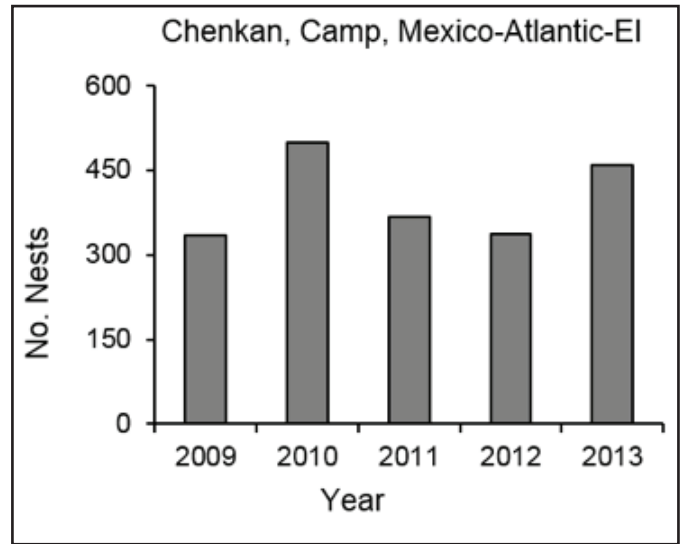
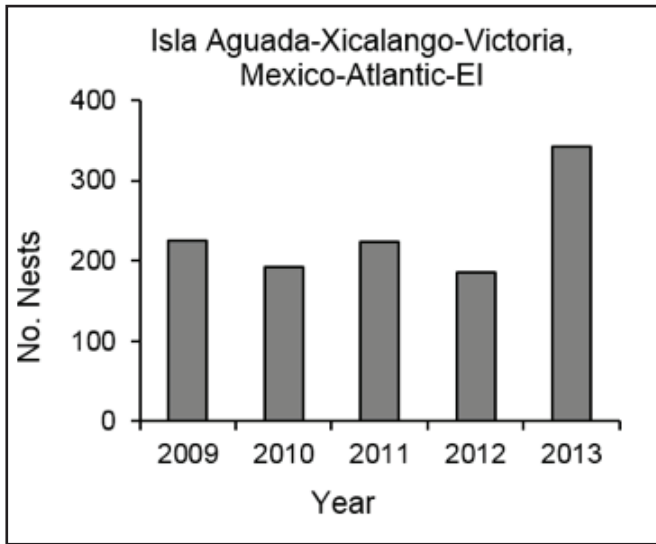




Common Name: Hawksbill Turtle
Scientific Name: *Eretmochelys imbricate*
IUCN Red List Category:
Global: Critically Endangered

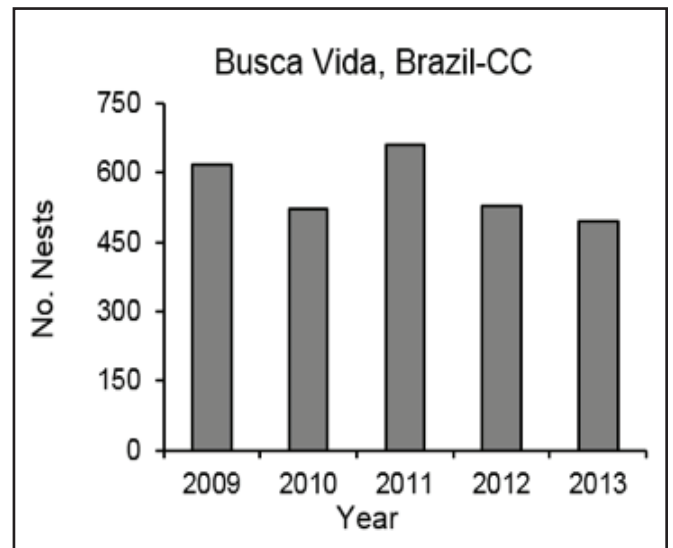
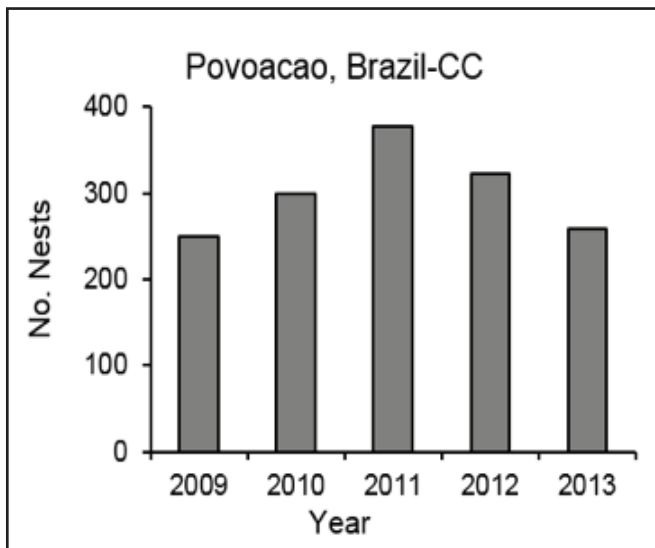
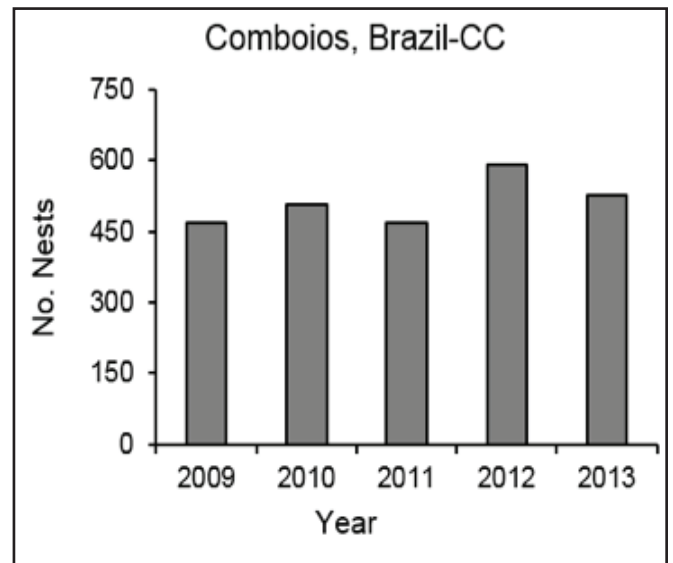
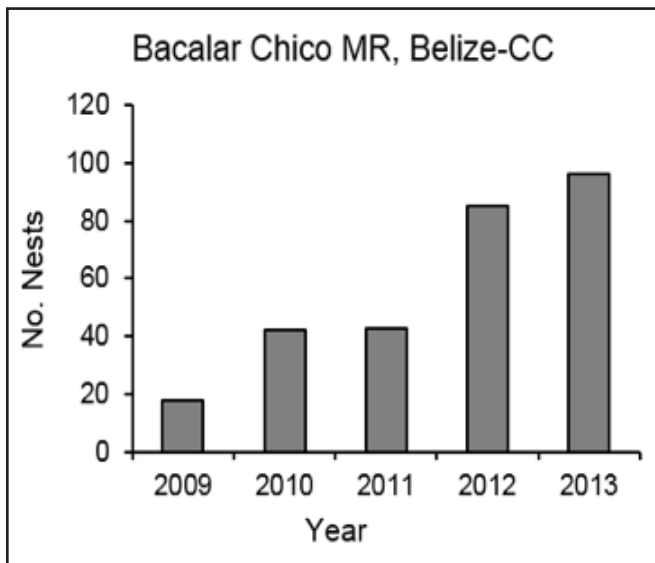


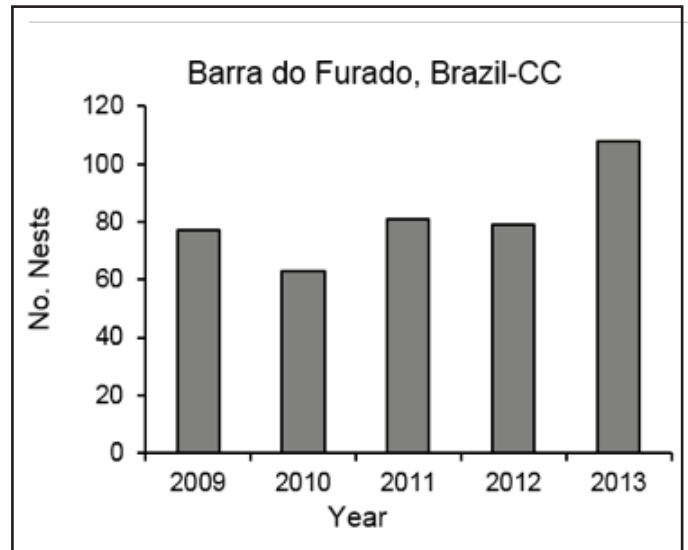
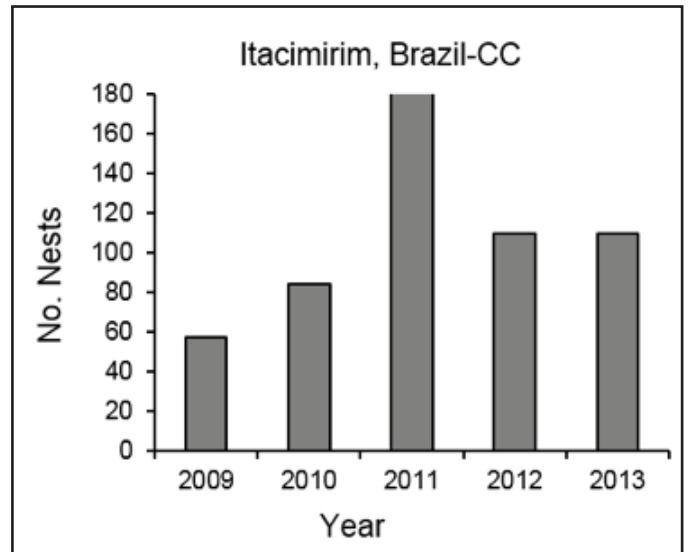
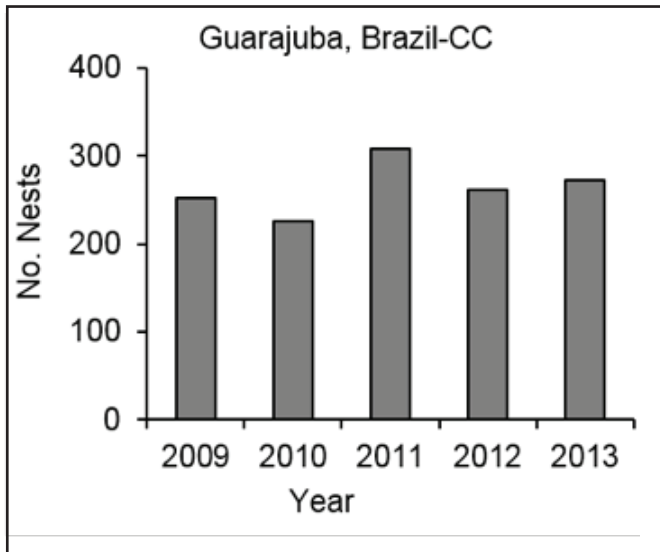
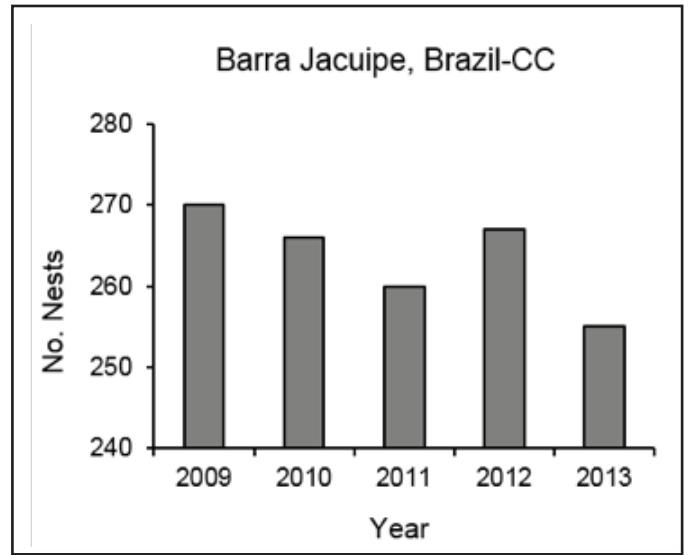
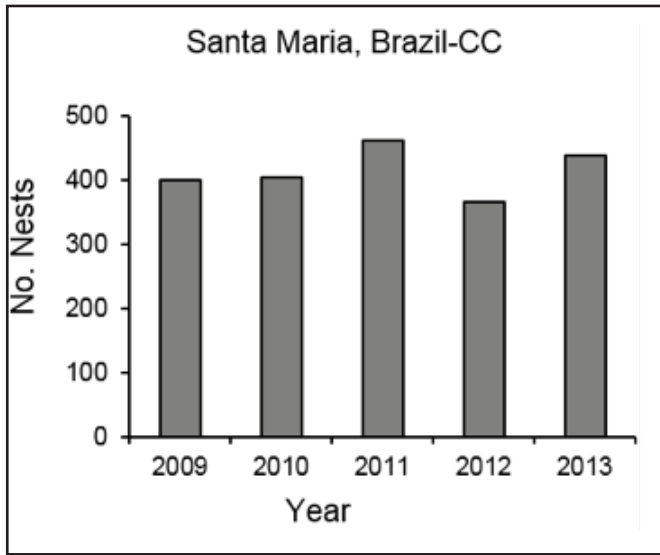


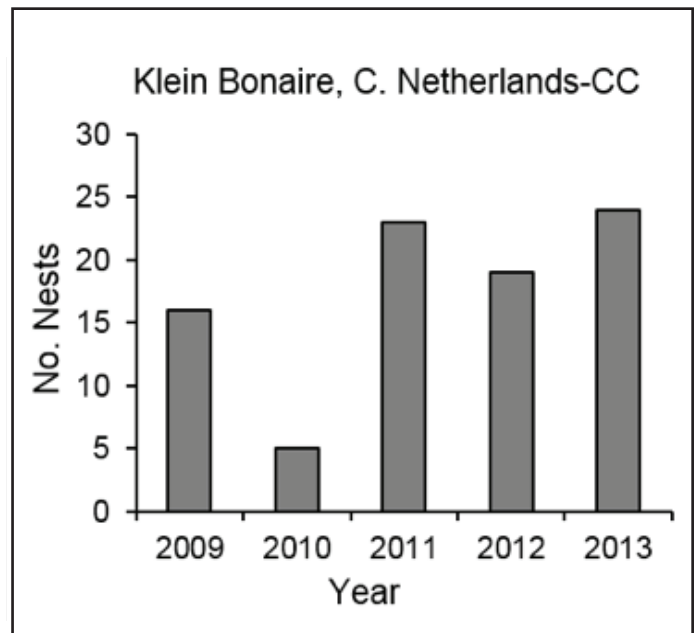
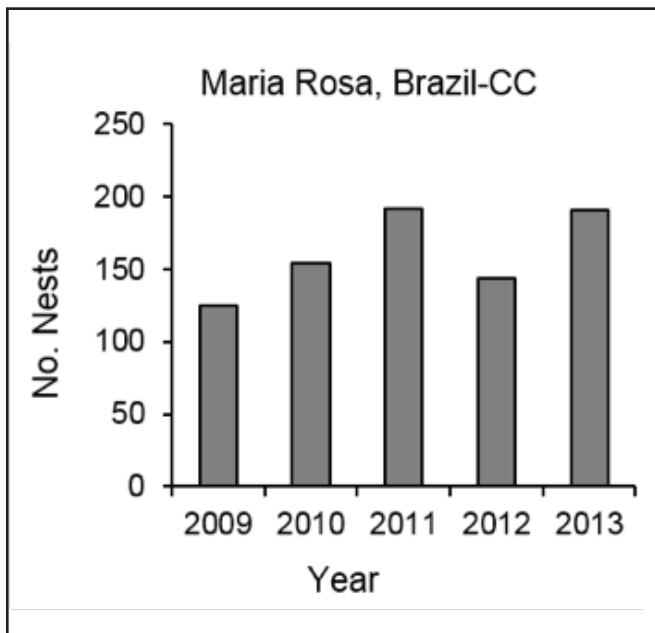
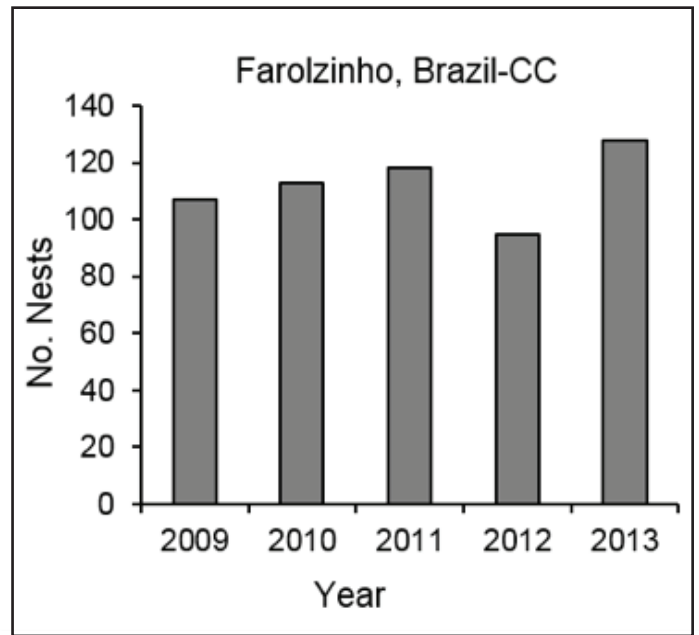
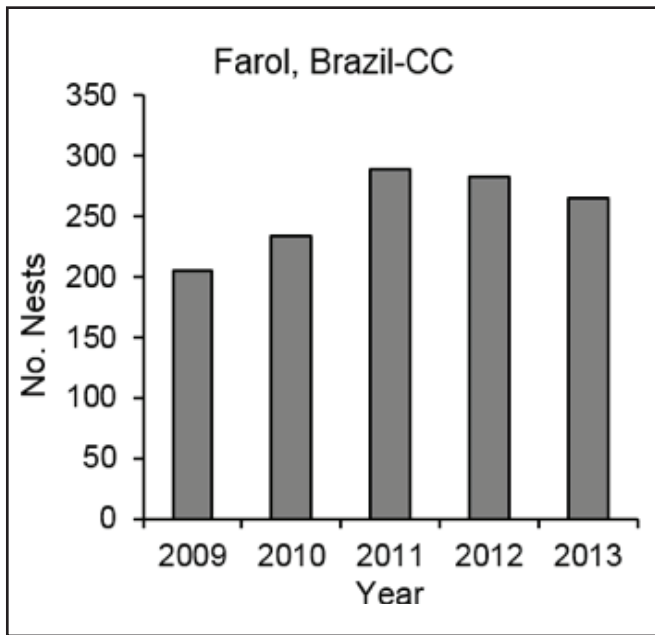


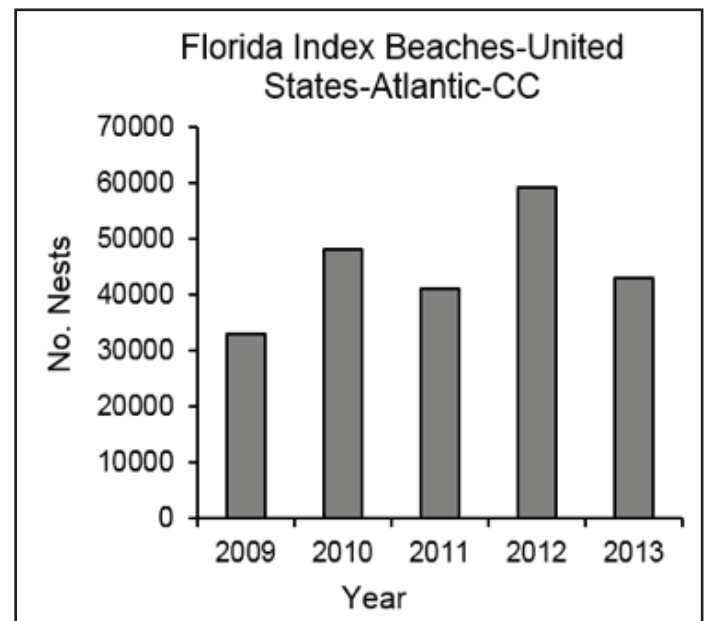
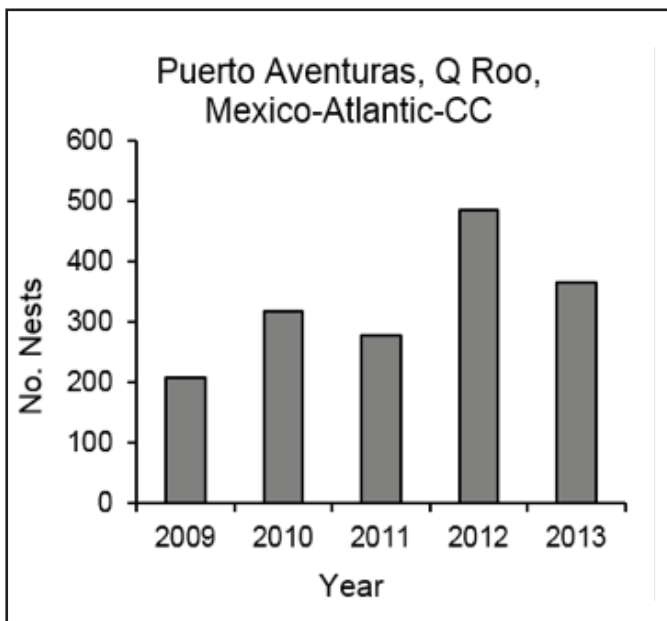
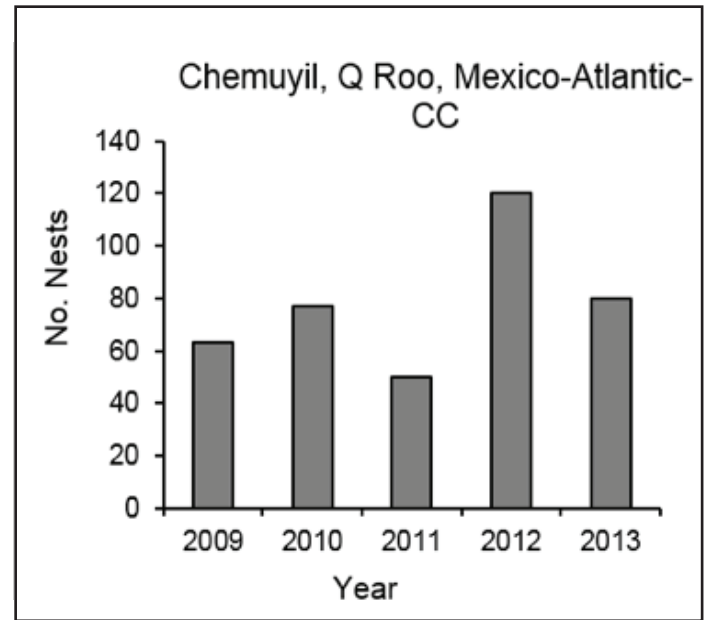
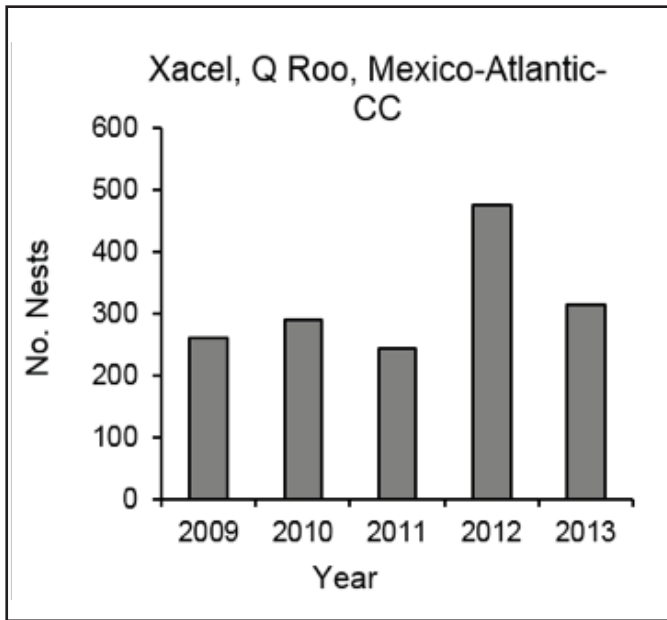


Common Name: Loggerhead Turtle
Scientific Name: *Caretta caretta*
IUCN Red List Category:
Global: Endangered



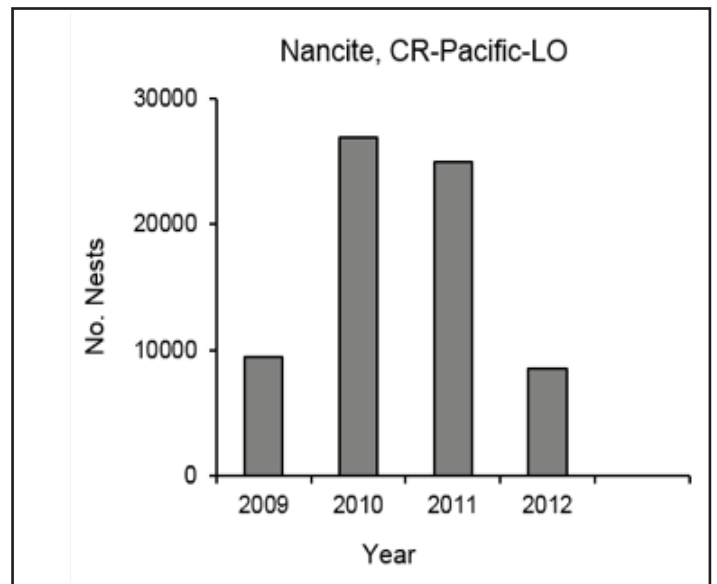
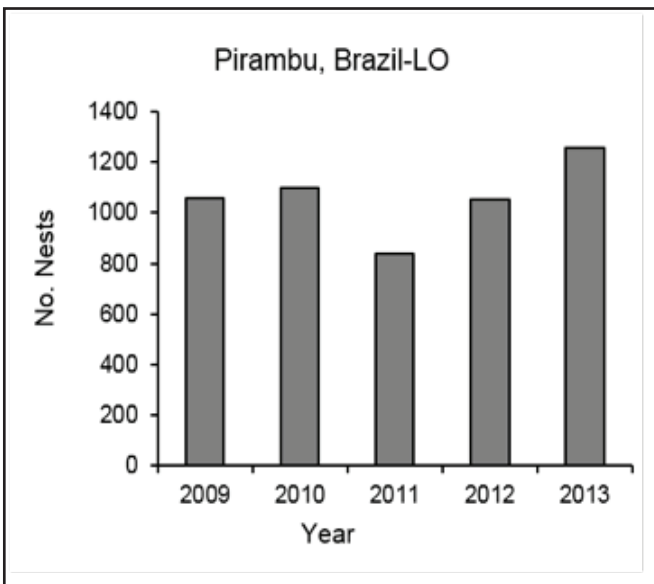
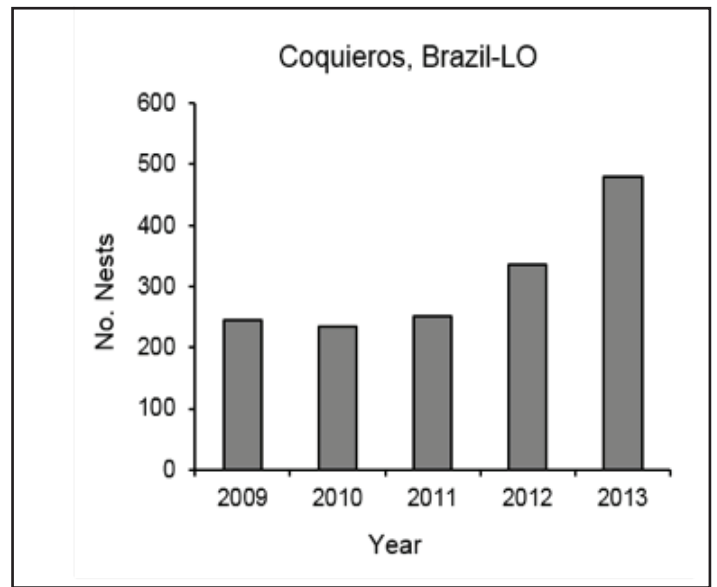
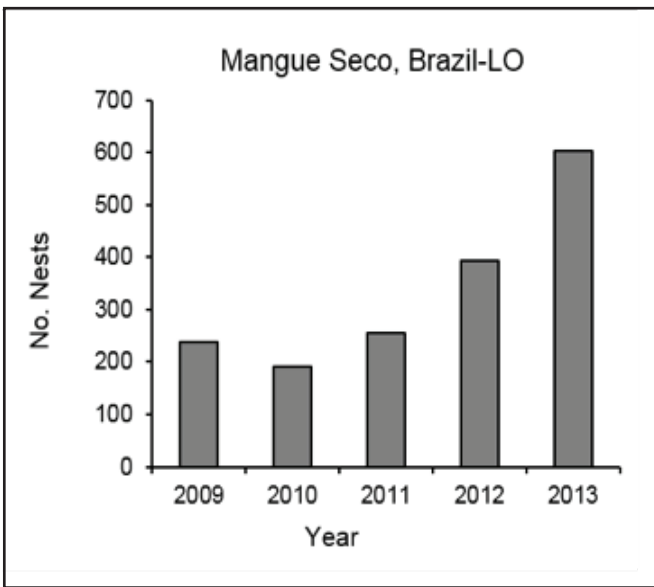


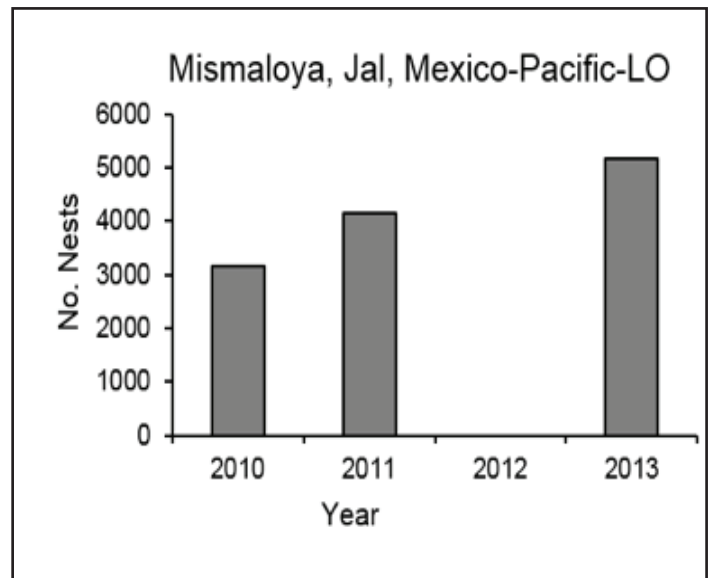
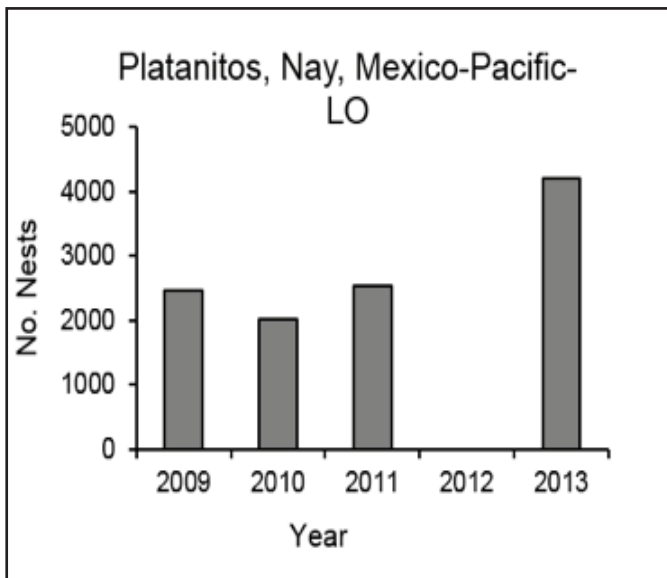
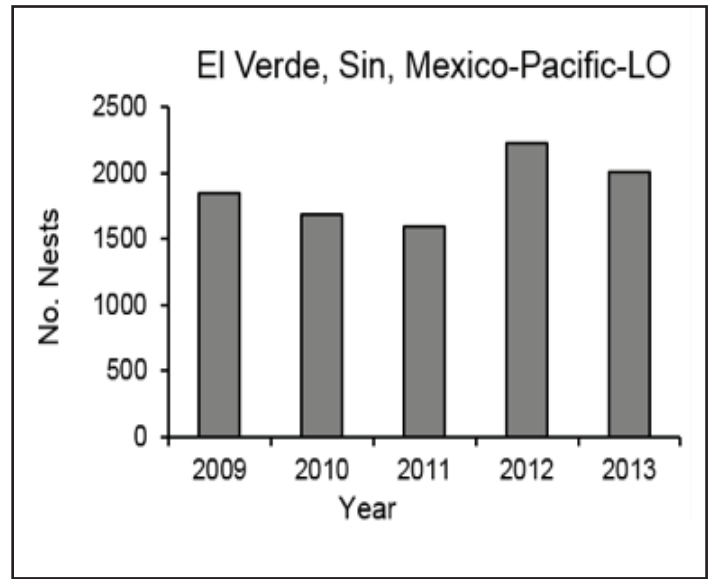
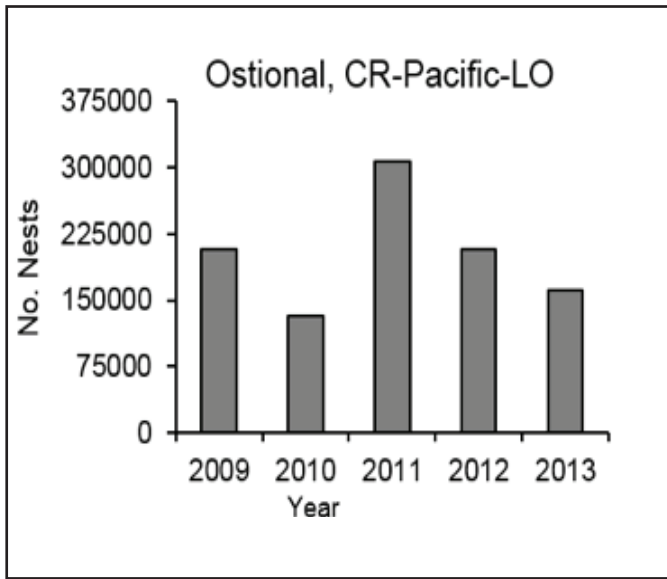


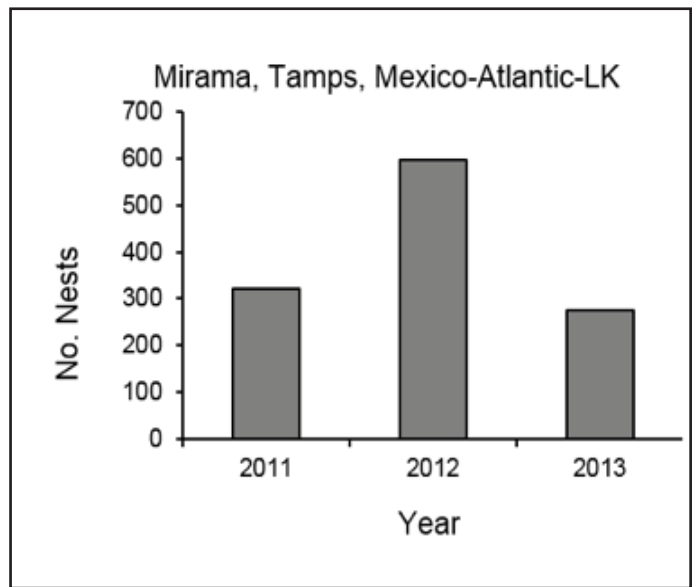
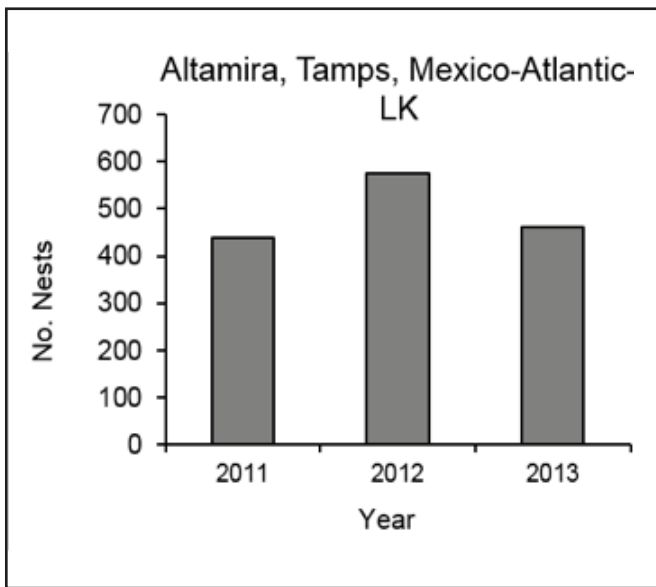
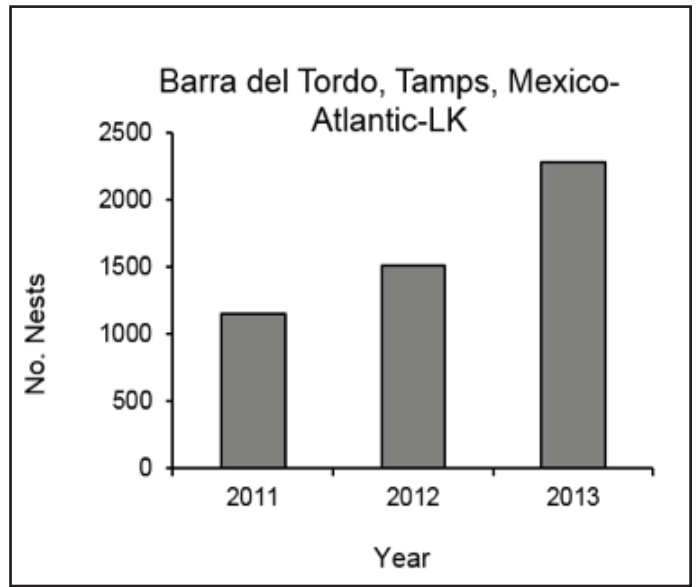
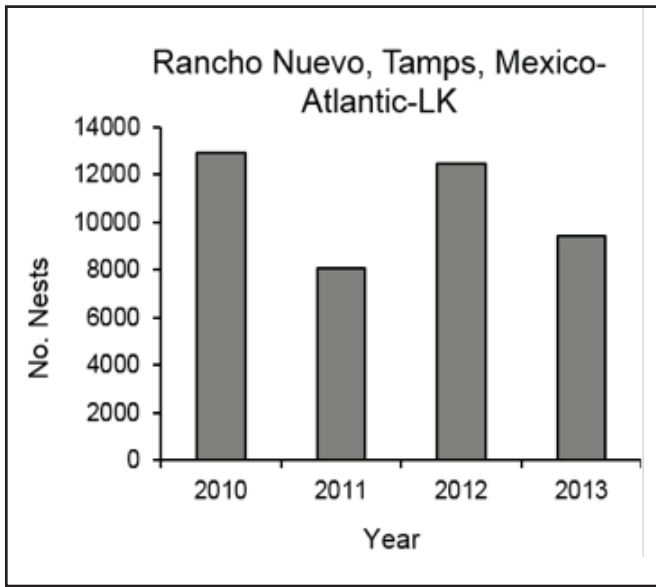




Common Name: Olive Ridley Turtle
Scientific Name: *Lepidochelys olivacea*
IUCN Red List Category:
Global: Vulnerable

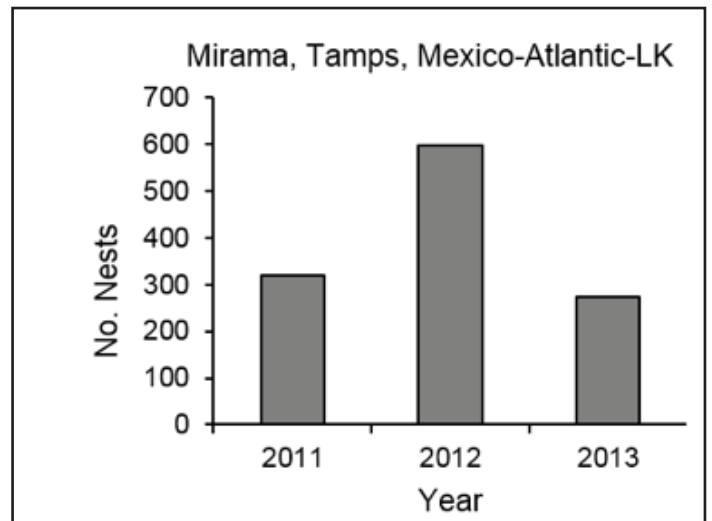
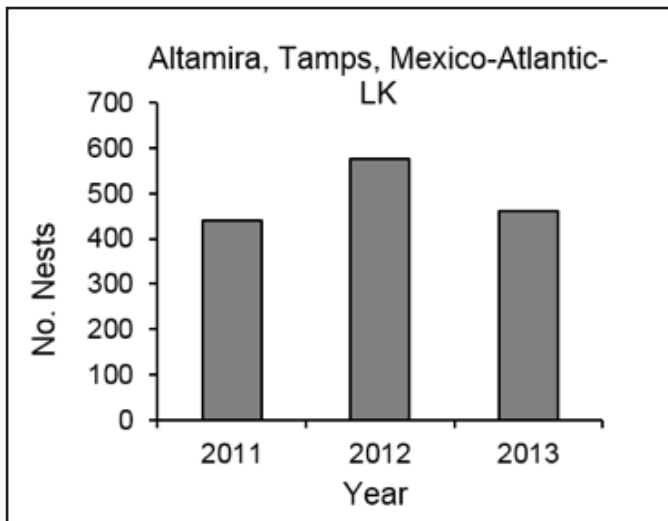
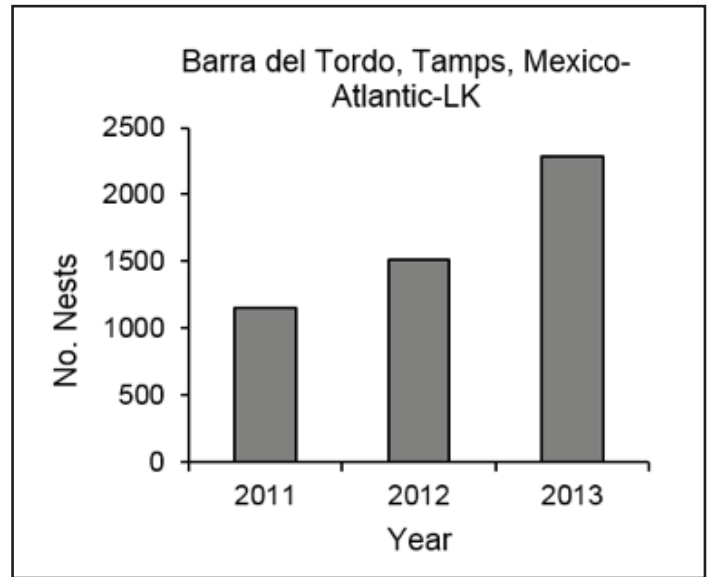
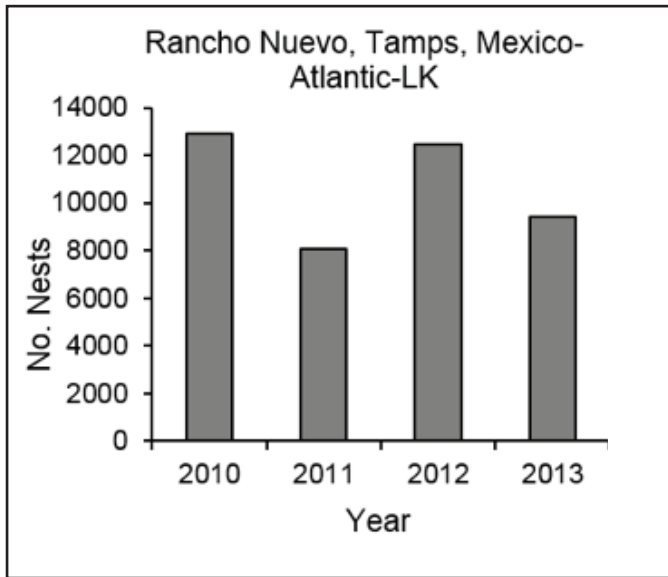


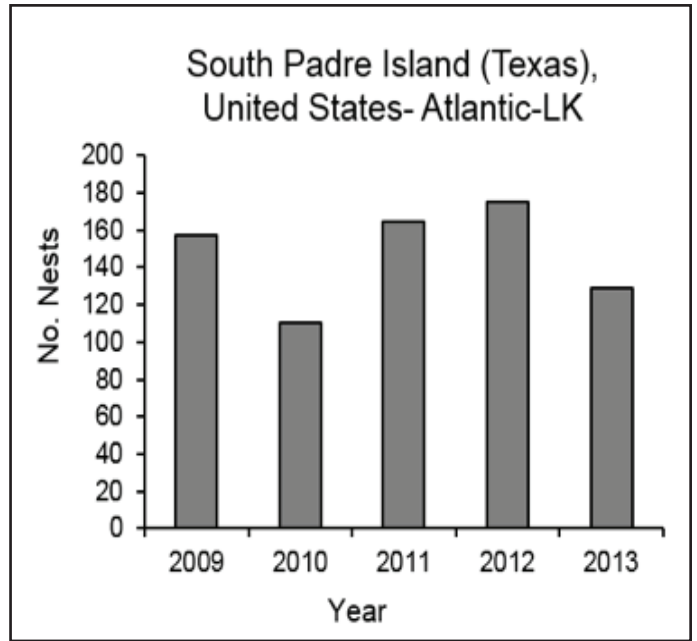
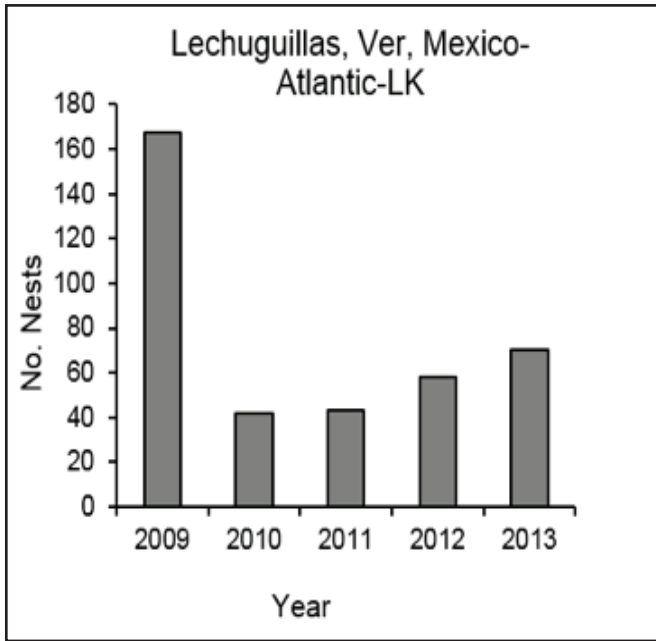




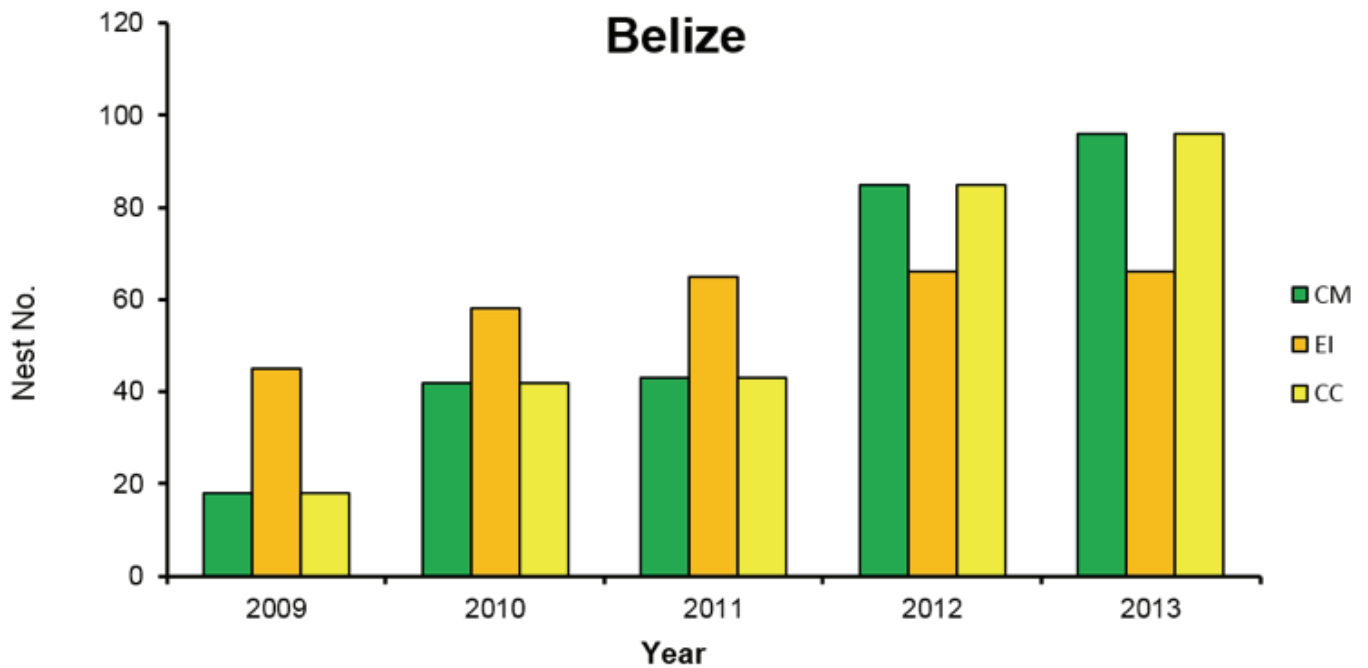
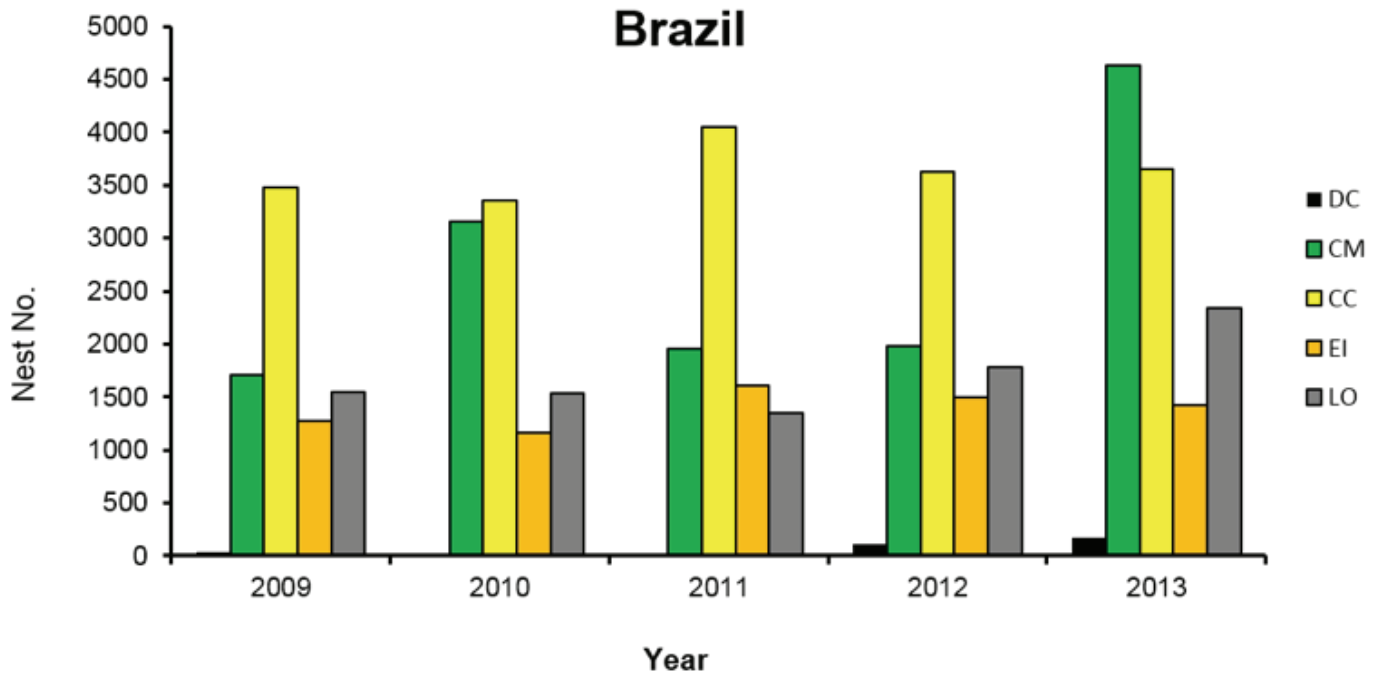


Common Name: Kemp's Ridley Turtle
Scientific Name: *Lepidochelys kempii*
IUCN Red List Category:
Global: Critically Endangered

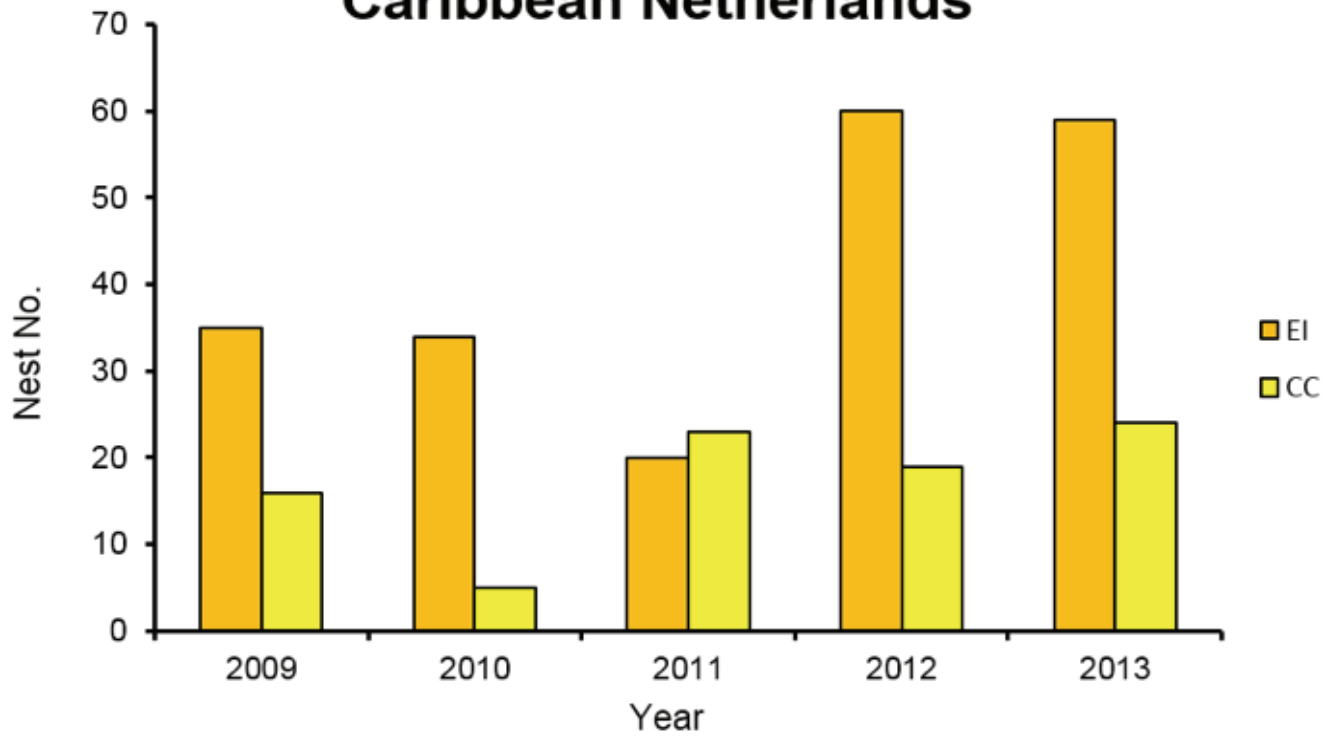




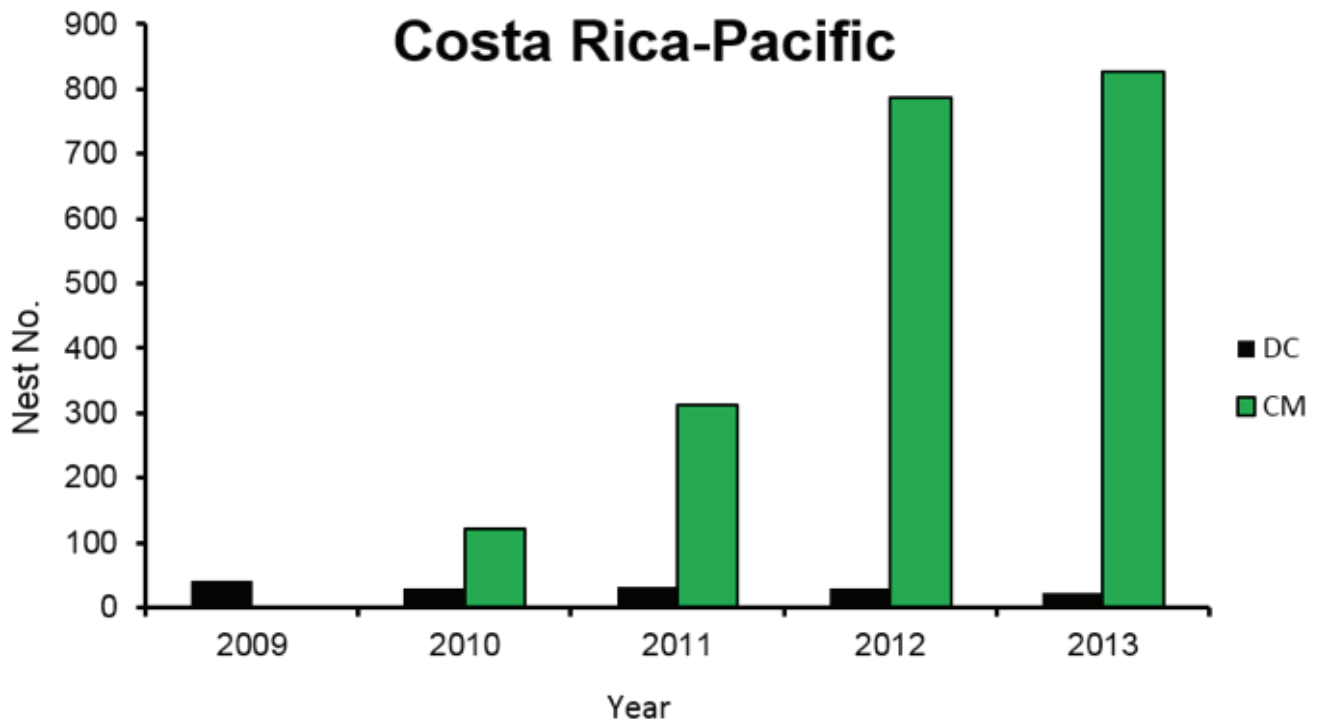
DPS Regional Graphs



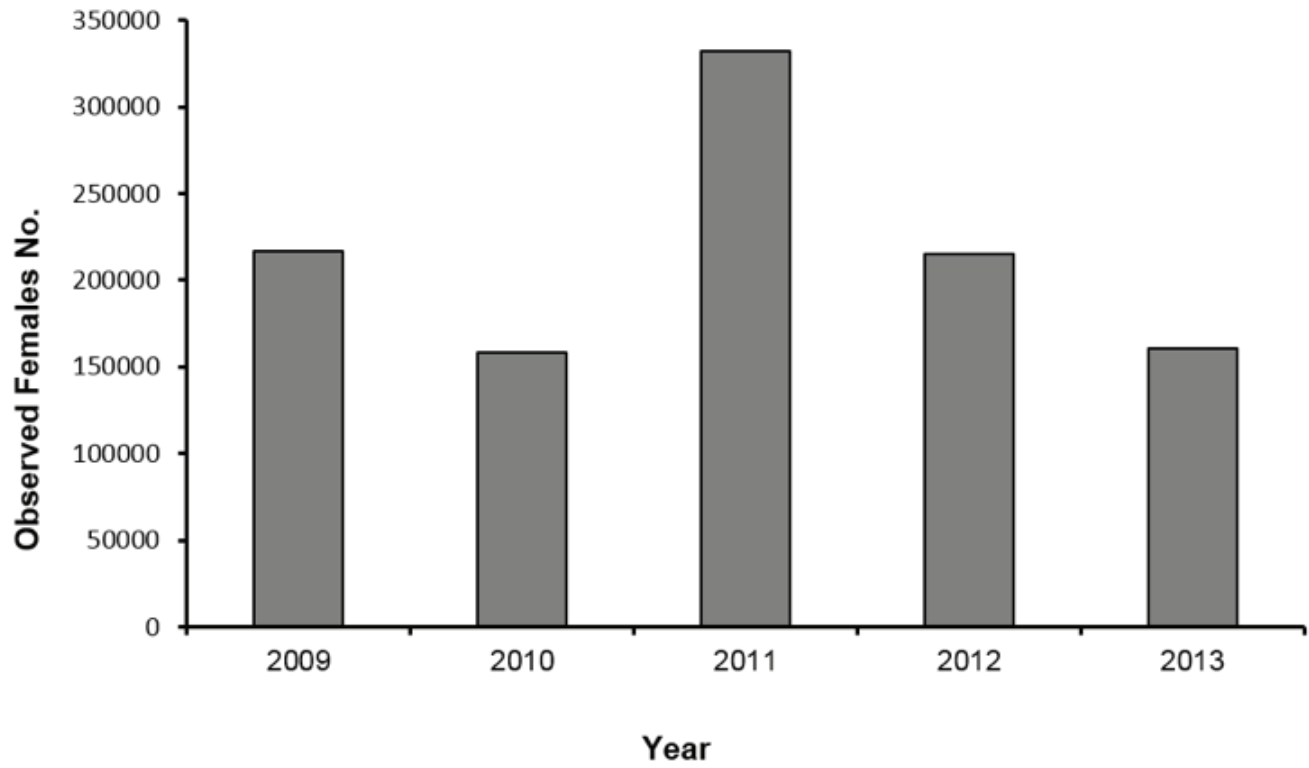
Caribbean Netherlands



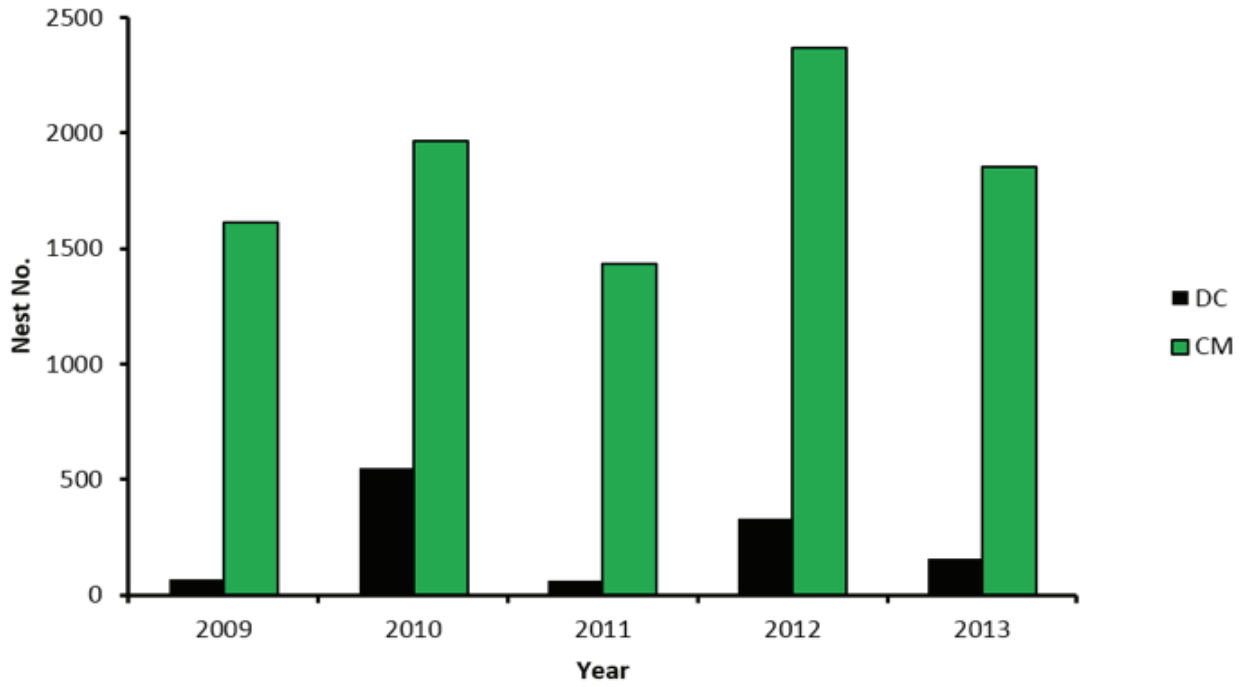
Costa Rica-Pacific



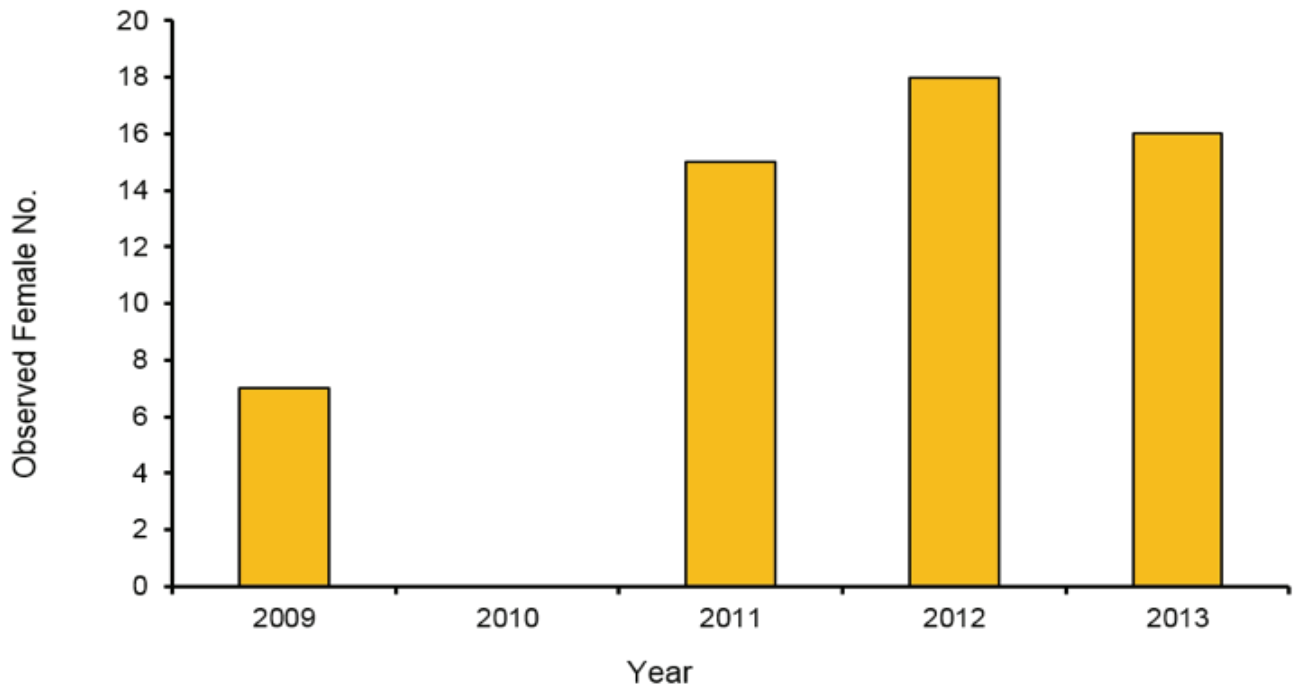
Costa Rica-Pacific- Observed Females



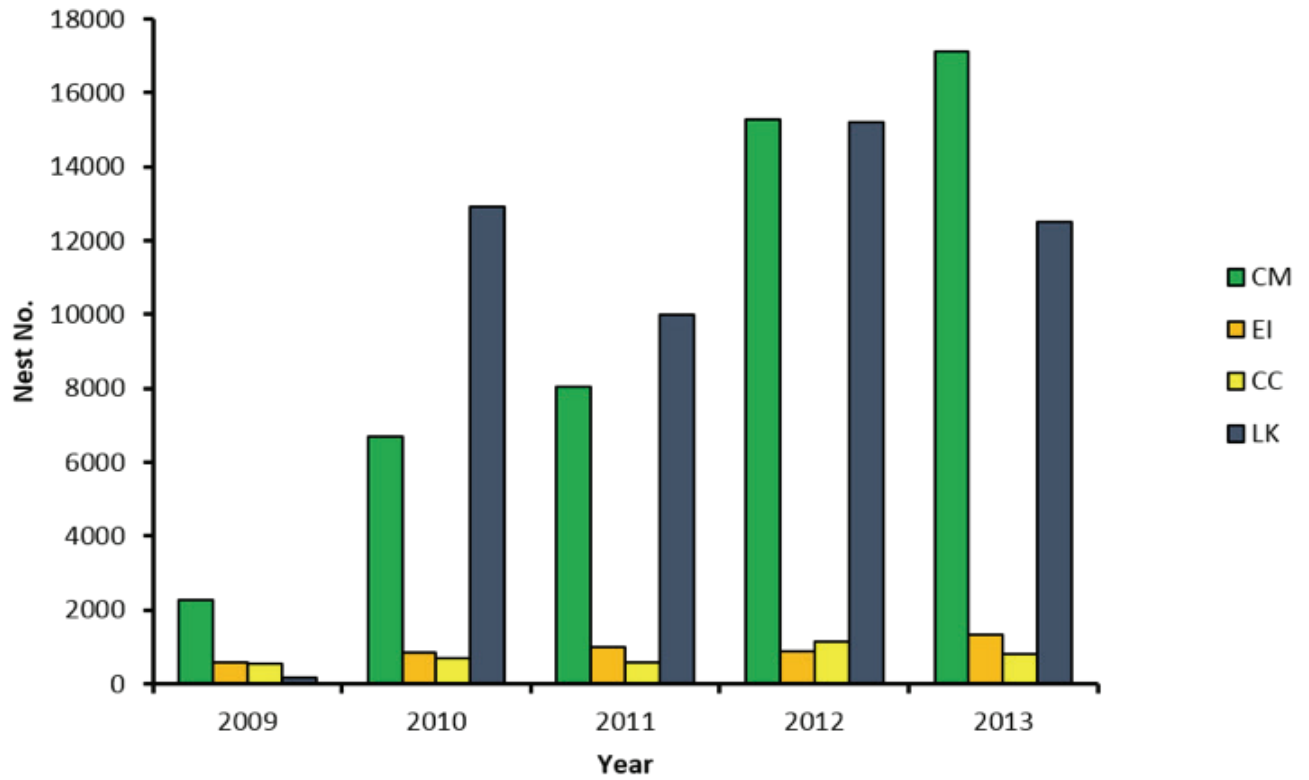
Costa Rica-Atlantic



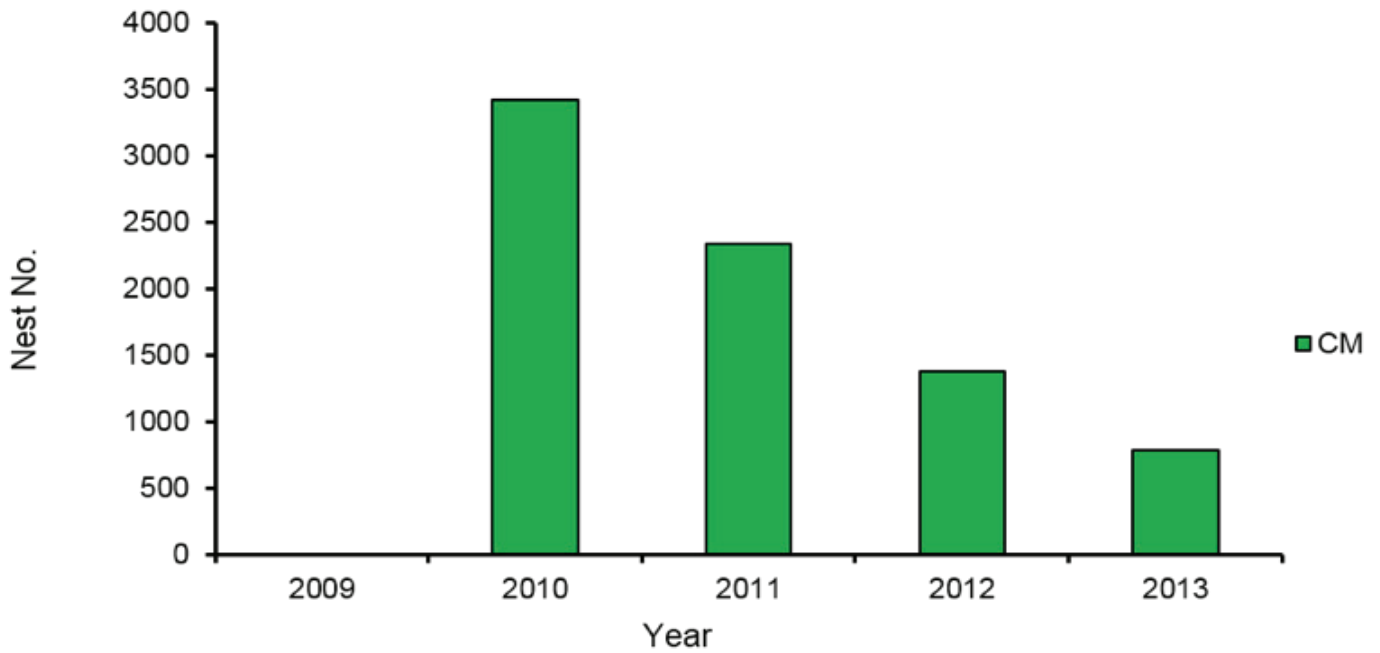
Costa Rica-Atlantic- Observed Females



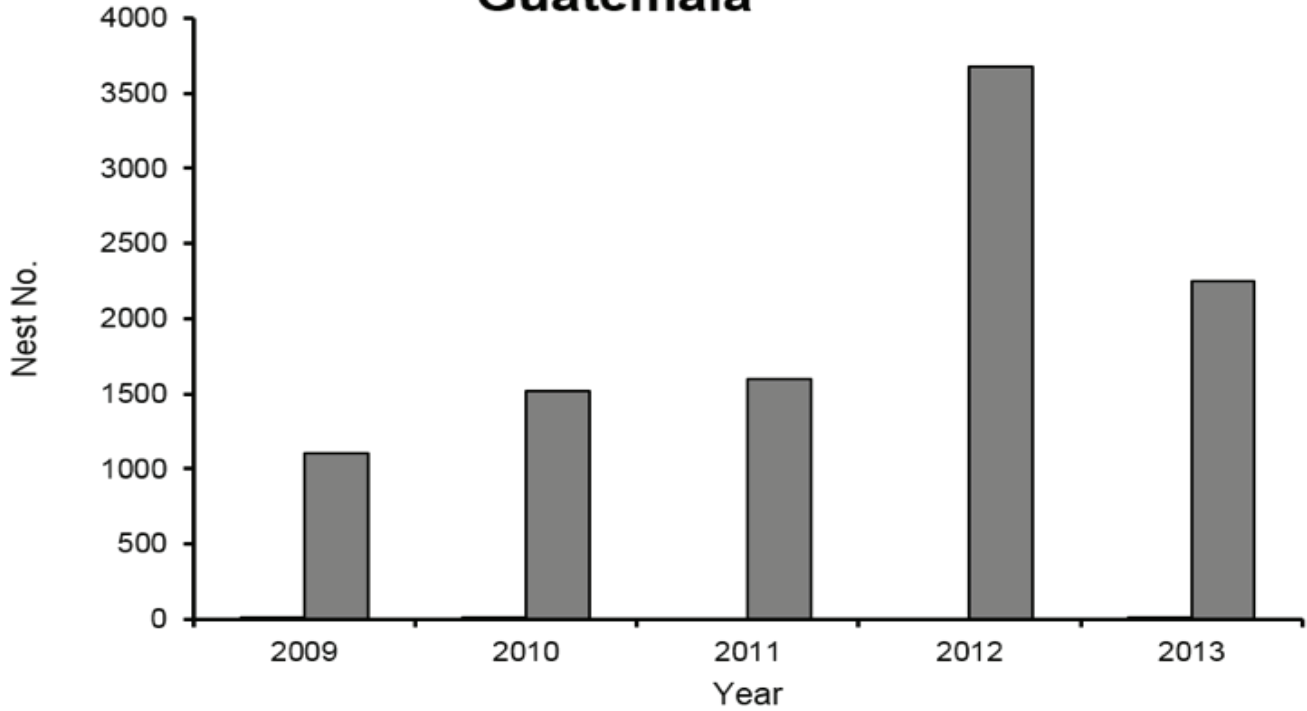
Mexico-Atlantic-Gulf of Mexico



Ecuador

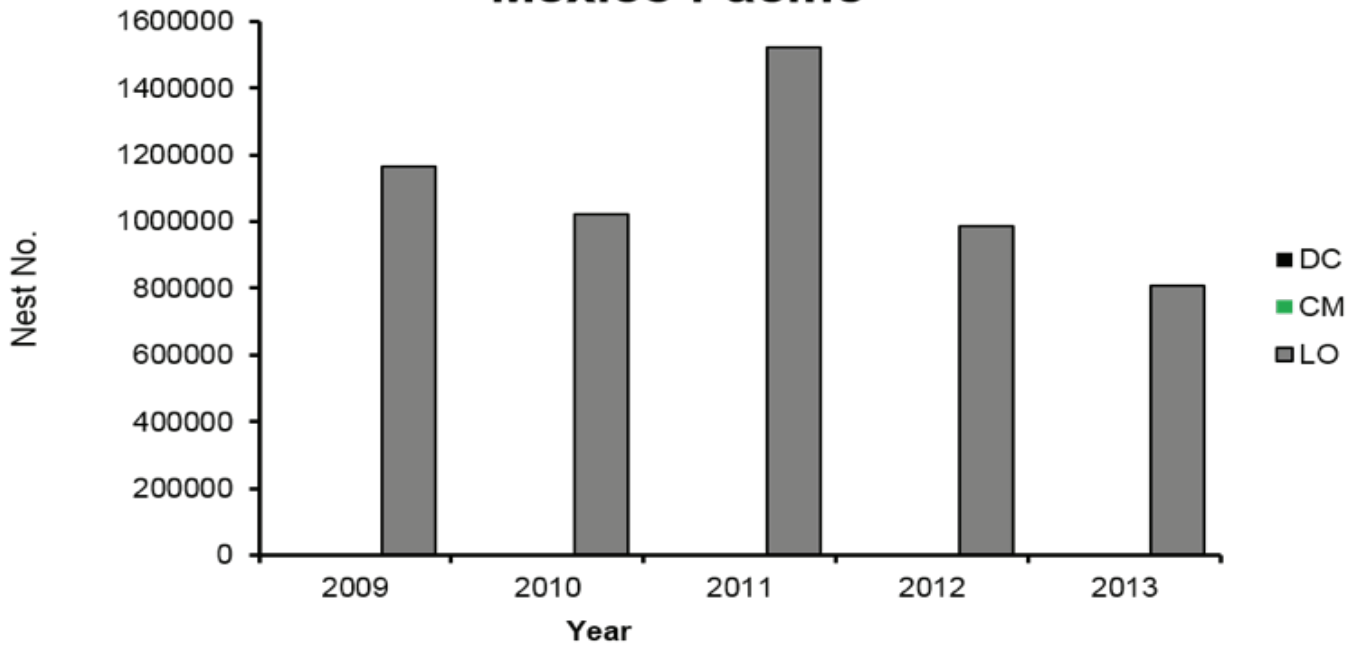


Guatemala

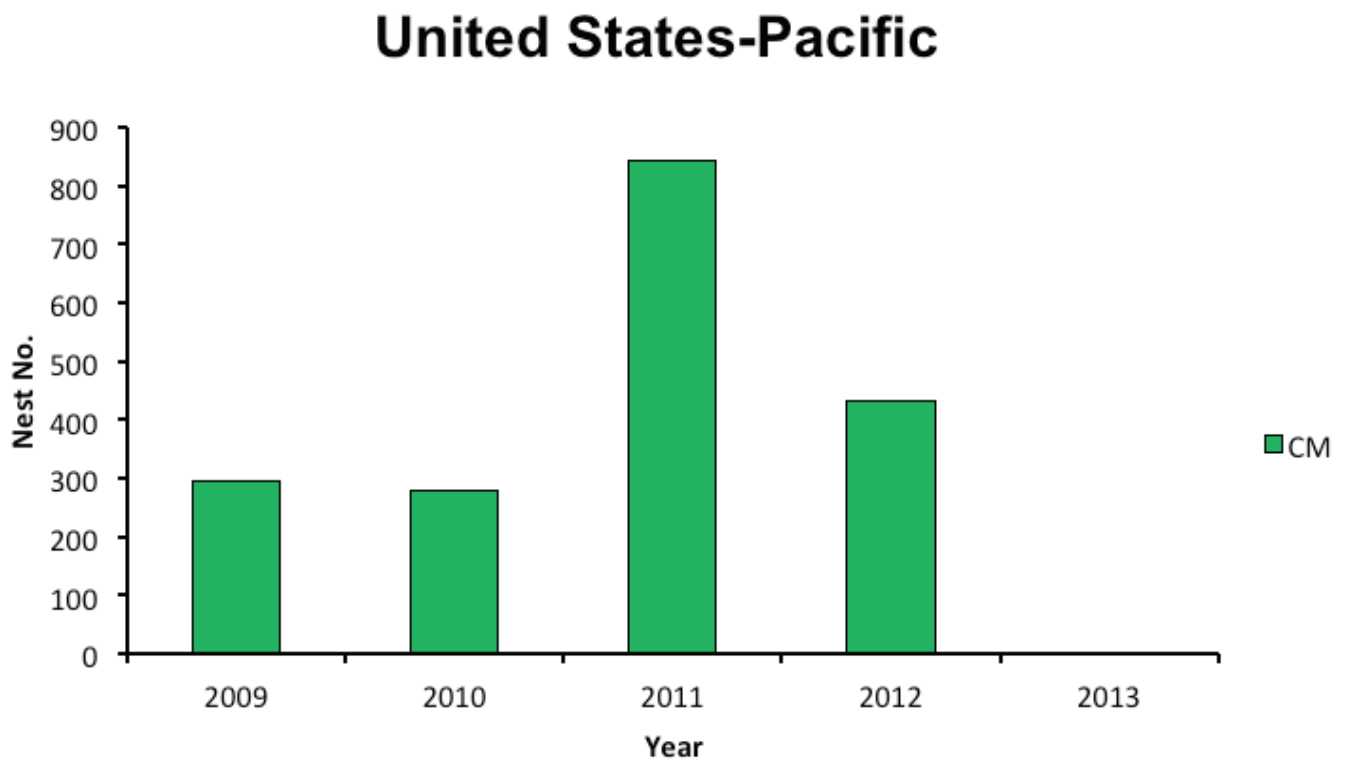
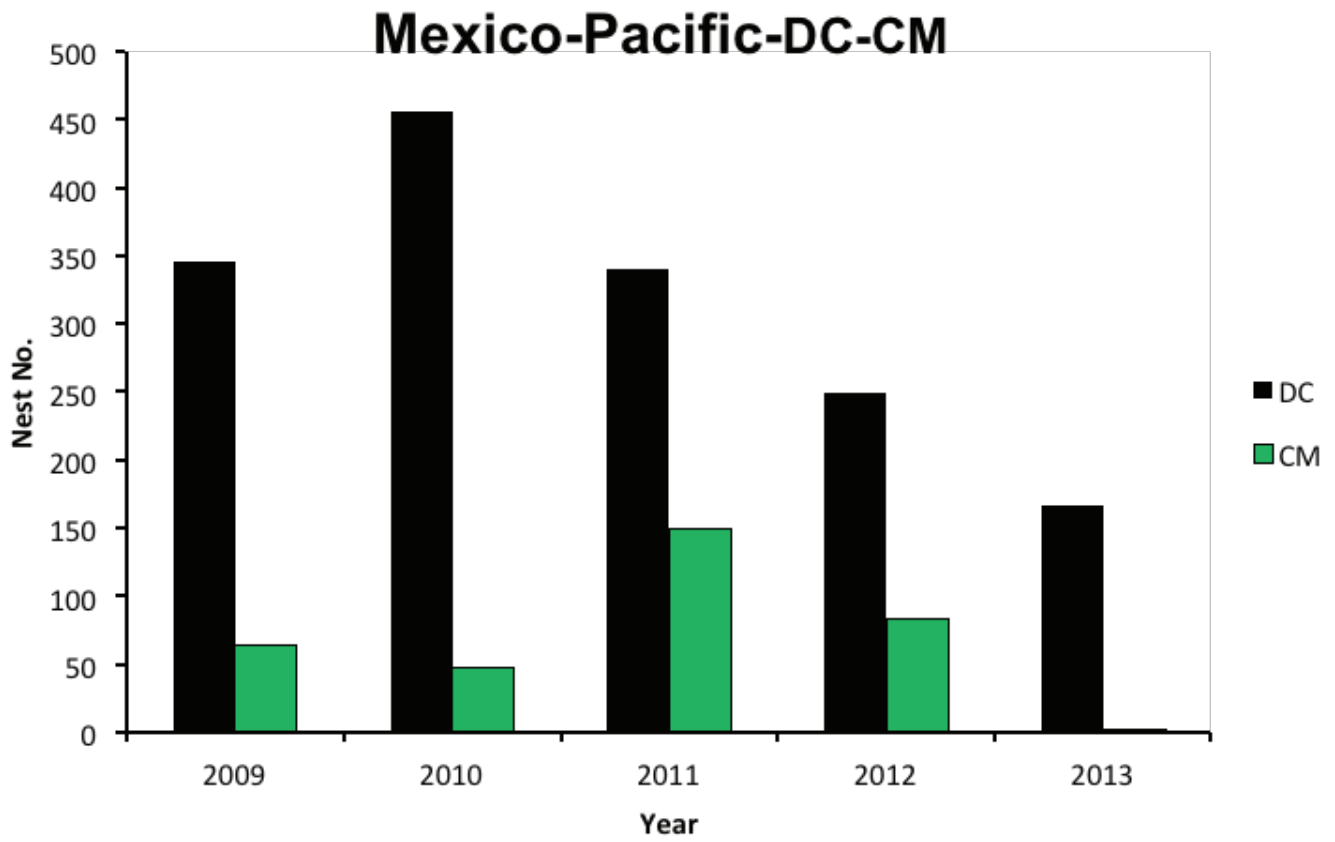


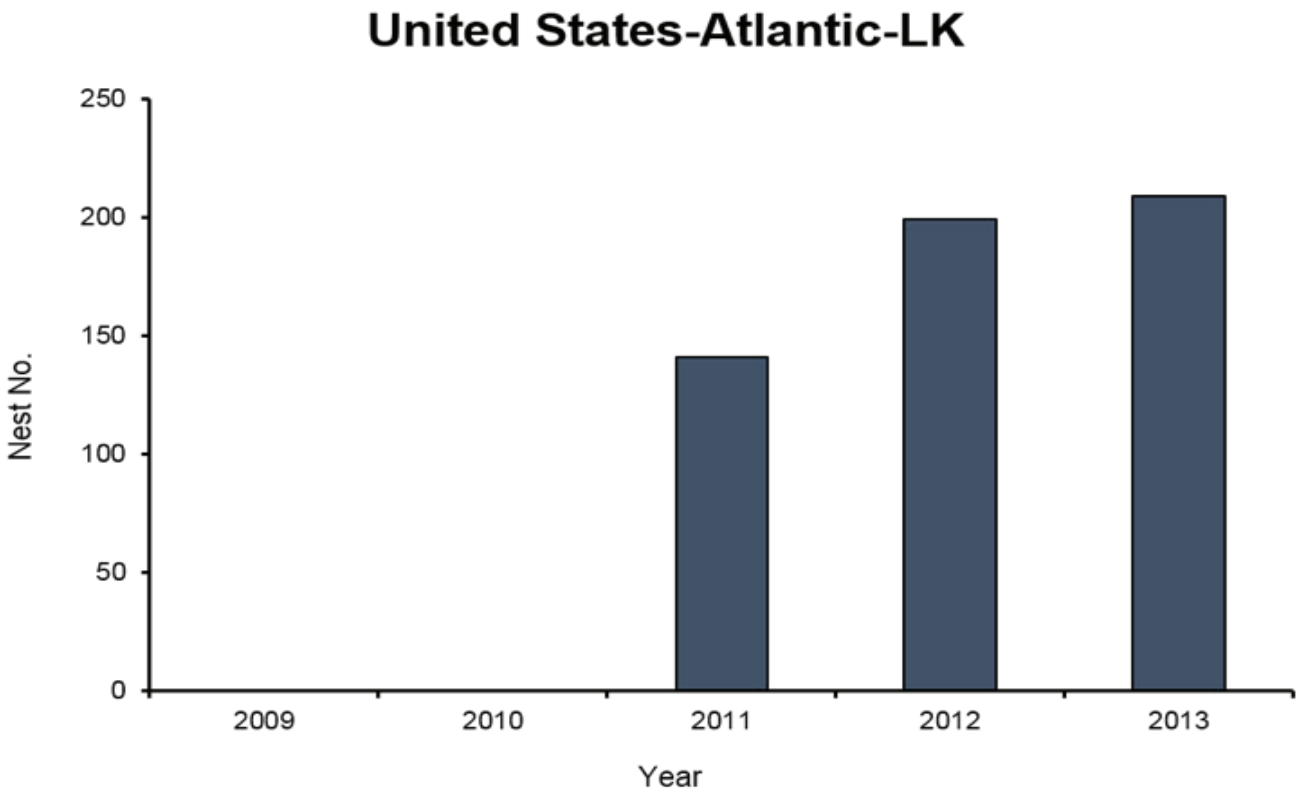
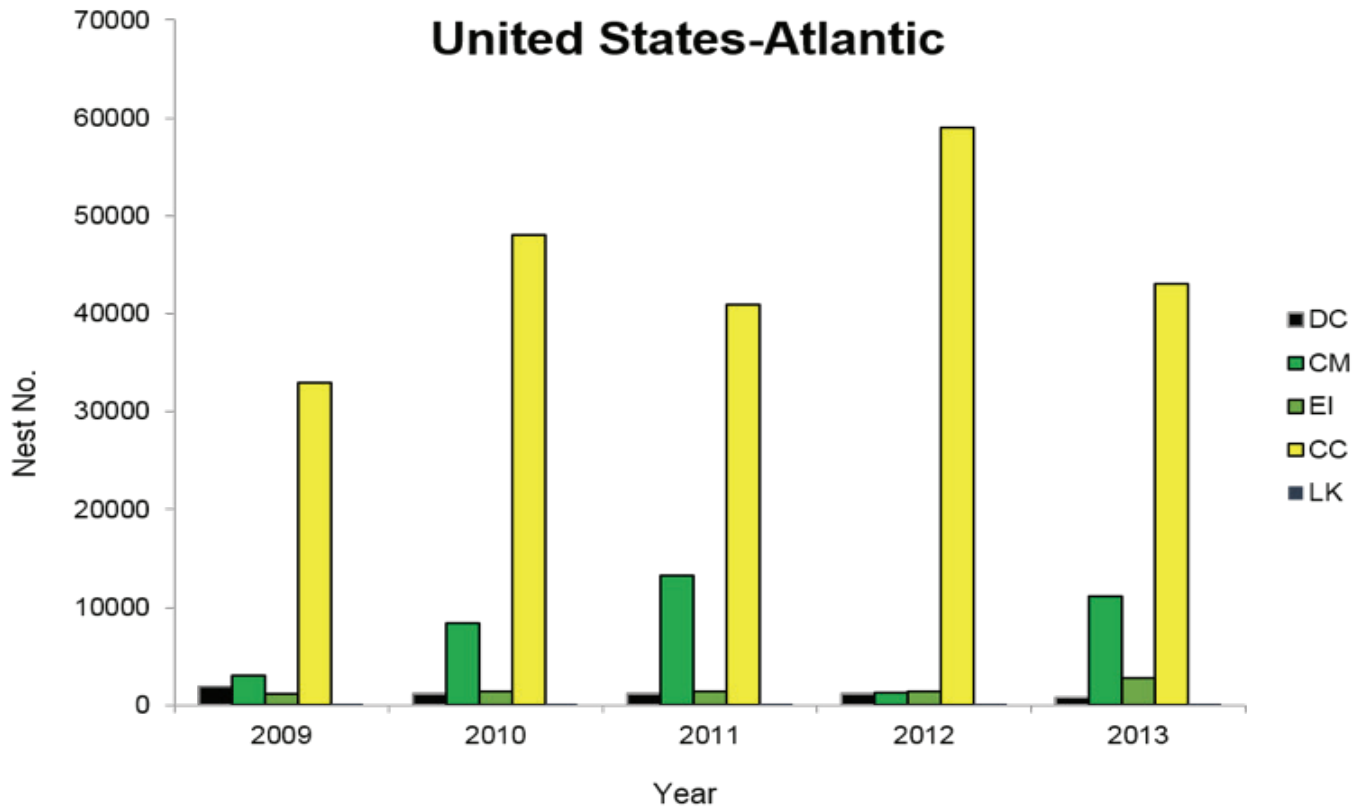
**Only received sufficient data for Hawaii Index Site*

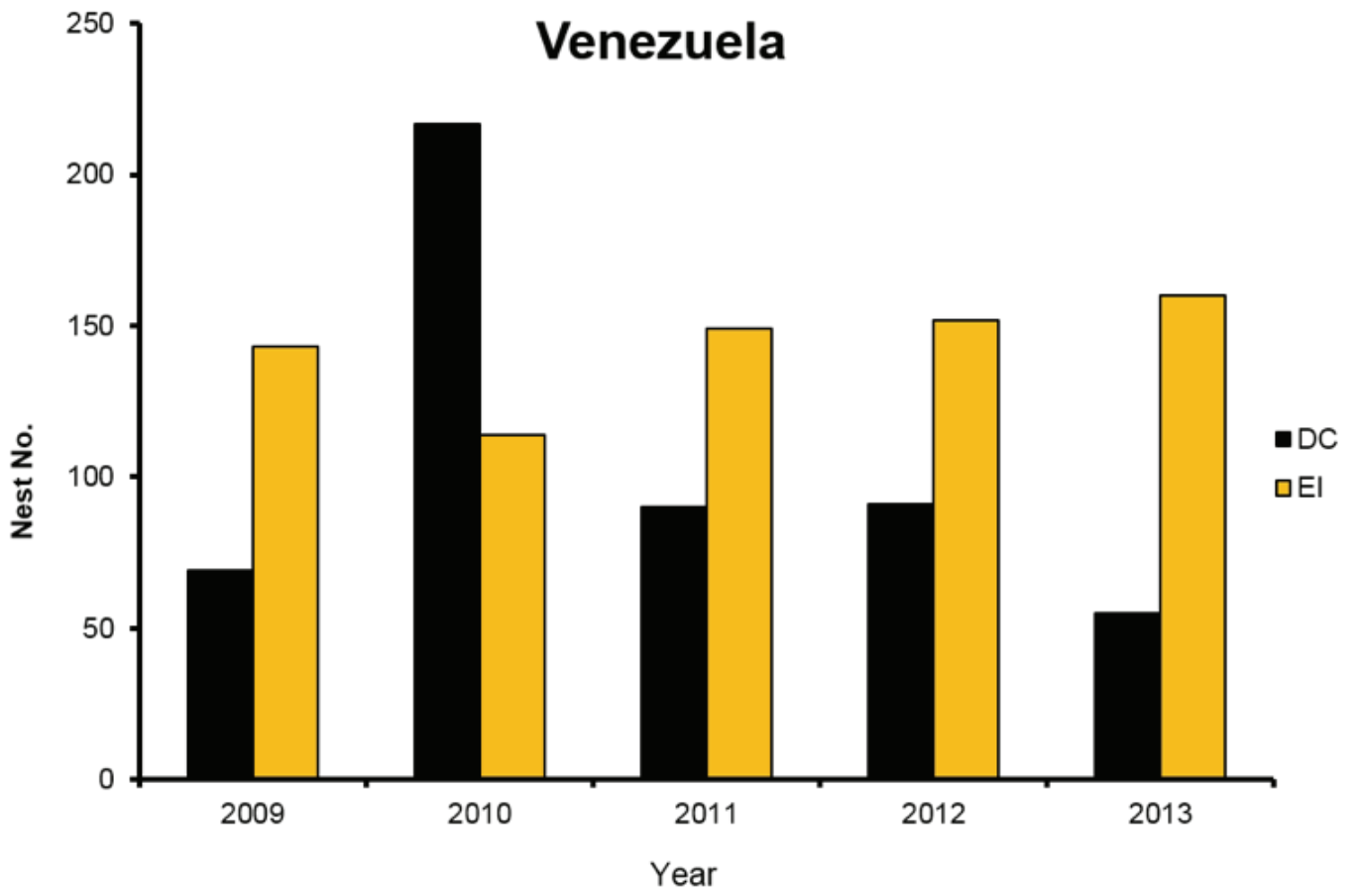
Mexico Pacific



**Excludes Maruata and Colola Beach Data*







The Inter-American Convention for the Protection and Conservation of Sea Turtles (IAC) is an intergovernmental treaty which provides the legal framework for countries in the Americas to take actions in benefit of sea turtles. The IAC addresses the need to implement measures harmonized among nations, coordinate multilateral conservation and protection actions, and oversee the implementation of a regional agenda that will lead to the recovery of the six sea turtle species included in the treaty.

For more information visit:

www.iacseaturtle.org



*Inter-American Convention for the Protection
and Conservation of Sea Turtles*

IAC Secretariat *Pro Tempore*

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contact@iacseaturtle.org