

A Decade of SWOT Teamwork

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Data Citations

Costa Rica Map

DEFINITIONS OF TERMS

Clutches: A count of the number of clutches laid by females during the monitoring period.

Estimated clutches: An estimate of the number of clutches laid in a season. Methods of estimation vary.

Year: The year in which a given nesting season ended (e.g., data collected between late 2005 and early 2006 are listed as year 2006).

GUIDELINES OF DATA USE AND CITATION

The nesting data that follow for Costa Rican sea turtles correspond directly to the map on pages 22–23. Every data record with a point on the map is numbered to correspond with that point. To use data for research or publication, you must obtain permission from the data provider and must cite the original source indicated in the Data Source field of each record.

In the records that follow, nesting data are reported as number of clutches from the most recent available year or nesting season. Beaches for which count data were not available are listed as “unquantified.” Additional metadata are available for many of those data records, including information on beach length, monitoring effort, and other comments, and that information may be found online at <http://seamap.env.duke.edu/swot>. Following the nesting data records, we have included citations for other data sources that were used in creating the map.

DATA RECORD 1

Data Source: Ramírez-Vargas, M. 2014. Reporte final: Anidación de tortugas marinas en playa de Barra de Parímina durante la temporada 2014. Unpublished report. Asociación Salvemos las Tortugas Marinas de Parímina and Ministerio de Ambiente y Energía.

Nesting Beach: Barra de Parímina

Year: 2014 **Species and Counts:**

Dermochelys coriacea—99 clutches

SWOT Contacts: Marco Ramírez-Vargas and Vicky Taylor

DATA RECORD 2

Data Source: Ramírez-Vargas, M. 2014. Reporte final: Anidación de tortugas marinas en playa de Barra de Parímina durante la temporada 2014. Unpublished report. Asociación Salvemos las Tortugas Marinas de Parímina.

Nesting Beach: Barra de Parímina

Year: 2014 **Species and Counts:** *Chelonia mydas*—19 clutches; *Eretmochelys imbricata*—1 clutch

SWOT Contacts: Marco Ramírez-Vargas and Vicky Taylor

DATA RECORD 3

Data Source: Chacón-Chaverri, D. 2015. Sea turtle nesting in Barra Norte de Pacuare and Cahuita, Costa Rica: Personal communication. In *SWOT Report—The State of the World's Sea Turtles*, vol. 10 (2015).

Nesting Beaches: Barra Norte de Pacuare and Cahuita

Year: 2014 **Species and Counts:** *Chelonia mydas*—52 and 6 clutches, respectively; *Dermochelys coriacea*—137 and 71 clutches,

respectively; *Eretmochelys imbricata*—13 and 81 clutches, respectively

SWOT Contact: Didiher Chacón-Chaverri

DATA RECORD 4

Data Source: Santidrián Tomillo, P. 2015. Leatherback nesting in Cabuyal, Costa Rica: Personal communication. In *SWOT Report—The State of the World's Sea Turtles*, vol. 10 (2015).

Nesting Beach: Cabuyal

Year: 2013 **Species and Counts:**

Dermochelys coriacea—10 clutches

SWOT Contact: Pilar Santidrián Tomillo

DATA RECORD 5

Data Source: Beange, M., and R. Arauz. 2015. Sea turtle nesting in Caletas, Corozalito, Costa de Oro, and San Miguel, Costa Rica: Personal communication. In *SWOT Report—The State of the World's Sea Turtles*, vol. 10 (2015).

Nesting Beaches: Caletas, Corozalito, Costa de Oro, and San Miguel

Year: 2014 **Species and Counts:** *Chelonia mydas*—1, 5, 3, and 3 clutches, respectively; *Dermochelys coriacea*—1, 9, 1, and 1 clutches, respectively; *Lepidochelys olivacea*—1,644; 1,931; 378; and 458 clutches, respectively

SWOT Contacts: Randall Arauz and Maddie Beange

DATA RECORD 6

Data Source: Arauz, R. 2009. Personal communication. In *SWOT Report—The State of the World's Sea Turtles*, vol. 10 (2015).

Nesting Beach: Caletas

Year: 2008 **Species and Count:**

Eretmochelys imbricata—1–25 clutches

Nesting Beach: Camaronal

Year: 2009 **Species and Count:**

Eretmochelys imbricata—1–25 clutches

Nesting Beach: Punta Banco / Punta Burica

Year: 2008 and 2009 **Species and Count:**

Chelonia mydas—3 clutches (2008);

Eretmochelys imbricata—1–25 clutches

(2009); *Lepidochelys olivacea*—213 clutches

(2008)

Nesting Beach: Sirena and Corcovado

Year: 2008 and 2009 **Species and Counts:**

Chelonia mydas—13 clutches (2008);

Eretmochelys imbricata—1–25 clutches (2009);

Lepidochelys olivacea—137 clutches (2008)

SWOT Contacts: Randall Arauz, Maddie Beange, Didiher Chacón-Chaverri, Alex Gaos,

and Sandra Viejobueno

DATA RECORD 7

Data Source: Saborío-R., G., and M. Sánchez.

Unpublished data. Sea Turtle Conservation Project, Osa Conservation, Costa Rica.

Nesting Beaches: Carate and Río Oro

Years: 2011 **Species and Counts:** *Chelonia mydas*—2 and unquantified clutches,

respectively; *Lepidochelys olivacea*—274 and unquantified clutches, respectively

Nesting Beaches: Pejeperro and Piro

Years: 2012 **Species and Counts:** *Chelonia mydas*—106 and 21 clutches, respectively;

Lepidochelys olivacea—24 and 13 clutches,

respectively

SWOT Contacts: Hansel Herrera and Guido Saborío

DATA RECORD 8

Data Source: Gaos, A. R., I. L. Yañez, and R. M. Arauz. 2006. Sea turtle conservation and research on the Pacific coast of Costa Rica.

Technical report. Programa Restauración de Tortugas Marinas (PRETOMA).

Nesting Beach: Costa de Oro

Year: 2004 **Species and Counts:**

Dermochelys coriacea—2 clutches

SWOT Contacts: Randall Arauz,

Maddie Beange, Alex Gaos, and Ingrid Yañez

DATA RECORD 9

Data Source: Dow, W. E., and K. L. Eckert.

2007. Sea turtle nesting habitat—A spatial database for the wider Caribbean region.

WIDECAST Technical Report, no. 6, Wider Caribbean Sea Turtle Conservation Network (WIDECAST) and The Nature Conservancy,

Beaufort, NC.

Nesting Beach: Erlin

Year: 2005 **Species and Counts:**

Eretmochelys imbricata—25–100 crawls

SWOT Contact: Didiher Chacón-Chaverri

DATA RECORD 10

Data Source: Malaver, M., and D. Chacón-Chaverri. 2009. Anidación de tortugas marinas en la playa de Gandoca, Caribe Sur, Costa Rica. Informe Temporada 2009.

Nesting Beach: Gandoca

Year: 2009 **Species and Counts:**

Dermochelys coriacea—524 clutches;

Eretmochelys imbricata—38 clutches

SWOT Contact: Luis G. Fonseca

DATA RECORD 11

Data Source: Chacón-Chaverri, D. 2008. Hawkbill nesting in Costa Rica: Personal communication. In *SWOT Report—State of the World's Sea Turtles*, vol. III (2008).

Nesting Beaches: Isla Uvita, Manuel Antonio National Park, Platanares, and Punta India

to Rayo

Year: 2006 **Species and Counts:**

Eretmochelys imbricata—1–25 clutches each

SWOT Contact: Didiher Chacón-Chaverri

DATA RECORD 12

Data Source: Fonseca, L. G. 2015. Green turtle nesting at Isla San José, Costa Rica: Personal communication. In *SWOT Report—The State of the World's Sea Turtles*, vol. 10 (2015).

Nesting Beach: Isla San José
Year: 2014 **Species and Counts:** *Chelonia mydas*—998 clutches

SWOT Contacts: Luis G. Fonseca and Wagner Quirós

DATA RECORD 13

Data Source: Francia, G. 2014. Proyecto de Conservación de Tortugas Marinas de Junquillal (Asociación Vida Verdiazul) 2014.

Nesting Beach: Junquillal (south Guanacaste)
Year: 2013 **Species and Counts:** *Chelonia mydas*—24 clutches; *Dermochelys coriacea*—19 clutches; *Lepidochelys olivacea*—253 clutches

SWOT Contact: Gabriel Francia

DATA RECORD 14

Data Source: Piedra, R. 2008. Hawksbill nesting on Playa Langosta, Costa Rica: Personal communication. In *SWOT Report—The State of the World's Sea Turtles*, vol. 3 (2008).

Nesting Beach: Langosta
Year: 2003 **Species and Counts:** *Eretmochelys imbricata*—2 clutches

SWOT Contact: Rodney Piedra

DATA RECORD 15

Data Source: Piedra, R., and E. Vélez. 2005. Reporte de actividades de investigación y protección de la tortuga baula (*Dermochelys coriacea*), temporada de anidación 2004–2005, Playa Langosta. Proyecto de Conservación en Tortugas Marinas—Tortuga Baula, Parque Nacional Marino Las Baulas, Guanacaste, Costa Rica. Unpublished manuscript.

Nesting Beach: Langosta
Year: 2004 **Species and Counts:** *Dermochelys coriacea*—147 clutches

SWOT Contacts: Rodney Piedra and Elizabeth Vélez

DATA RECORD 16

Data Source: Fonseca, L. G. 2015. Personal communication. In *SWOT Report—The State of the World's Sea Turtles*, vol. 10 (2015).

Nesting Beaches: Bejuco, Blanca, Coloradas, Curú, Esterillos, Esterillos Este, Jacó, Jobo, Junquillal (north Guanacaste), Montezuma, Potrero Grande, and Rajada (unquantified)

Comments: Sea turtle nesting is known to occur on these beaches but no monitoring efforts are in place.

Nesting Beach: Nancite
Year: 2012 and 2014 **Species and Counts:** *Chelonia mydas*—37 clutches (2014); *Dermochelys coriacea*—1 clutch (2012); *Eretmochelys imbricata*—1 clutch (2012); *Lepidochelys olivacea*—68,541 clutches (2014)

Nesting Beach: Naranja
Year: 2014 **Species and Counts:** *Chelonia mydas*—139 clutches; *Dermochelys coriacea*—1 clutch; *Lepidochelys olivacea*—250 clutches

Nesting Beach: Norte
Year: 2014 **Species and Counts:** *Chelonia mydas*—735 clutches; *Dermochelys coriacea*—66 clutches; *Eretmochelys imbricata*—40 clutches

SWOT Contact: Luis Fonseca

DATA RECORD 17

Data Source: Chacón-Chaverri, D., and G. McFarlane. 2005. Anidación de la tortuga baula (*Dermochelys coriacea*) en Playa Negra/Puerto Vargas, Parque Nacional Cahuita, Talamanca, Costa Rica. In *Informe de*

actividades, temporada 2005. Asociación ANAI/WIDECAS.

Nesting Beach: Negra
Year: 2005 **Species and Counts:** *Dermochelys coriacea*—196 clutches

SWOT Contact: Didiher Chacón-Chaverri
DATA RECORD 18
Data Source: Vélez, E., and R. Piedra. 2015. Leatherback nesting at Nombre de Jesus, Guanacaste, Costa Rica: Personal communication. In *SWOT Report—The State of the World's Sea Turtles*, vol. 10 (2015).

Nesting Beach: Nombre de Jesus
Year: 2014 **Species and Counts:** *Dermochelys coriacea*—745 clutches

SWOT Contacts: Rodney Piedra and Elizabeth Vélez
DATA RECORD 19
Data Source: Sarti, L. 2009. Personal communication. In *SWOT Report—State of the World's Sea Turtles*, vol. 5 (2010).

Nesting Beach: Nosara
Year: 2009 **Species and Counts:** *Lepidochelys olivacea*—unquantified

DATA RECORD 20
Data Source: Chaves, G., R. Morera, and J. R. Avilés. 2014. Seguimiento de la actividad anidatoria de las tortugas marinas (*Cheloniidae*, *Dermochelyidae*) en el RNVS Ostional: VI Informe anual. Escuela de Biología de la Universidad de Costa Rica.

Nesting Beach: Ostional
Year: 2013 **Species and Counts:** *Chelonia mydas*—27 clutches; *Dermochelys coriacea*—23 clutches

SWOT Contacts: Gerardo Chaves, Roldán Valverde, Marta Pesquero, Luis Fonseca, Carlos Mario Orrego, and Wagner Quirós

DATA RECORD 21
Data Source: Fonseca, L. G. 2015. Personal communication. In *SWOT Report—The State of the World's Sea Turtles*, vol. 10 (2015).

Nesting Beach: Ostional
Year: 2014 **Species and Counts:** *Lepidochelys olivacea*—1,192,039 estimated clutches

SWOT Contacts: Gerardo Chaves, Roldán Valverde, Marta Pesquero, Luis Fonseca, Carlos Mario Orrego, and Wagner Quirós

DATA RECORD 22
Data Source: Paladino, F. 2014. Sea turtle nesting at Playa Grande, Costa Rica. Personal communication. In *SWOT Report—The State of the World's Sea Turtles*, vol. 10 (2015).

Nesting Beaches: Playa Grande-Playa Ventanas (4.7 km)
Year: 2013 **Species and Counts:** *Chelonia mydas*—8 nesting females; *Dermochelys coriacea*—28 nesting females; *Lepidochelys olivacea*—46 nesting females

SWOT Contact: Frank Paladino
DATA RECORD 23
Data Source: Francia, G. 2008. Proyecto de Conservación Baulas del Pacífico de Junquillal (World Wildlife Fund) 2008.

Nesting Beaches: Playa Lagarto, Playa Frijolar, Playa Azul, and Playa San Juanillo (combined)

Year: 2007 **Species and Counts:** *Dermochelys coriacea*—8 clutches

SWOT Contact: Gabriel Francia
DATA RECORD 24
Data Source: Brenes Arias, O. 2015. Sea turtle nesting at Playa Tortuga, Costa Rica. Personal communication. In *SWOT Report—The State of the World's Sea Turtles*, vol. 10 (2015).

Nesting Beach: Playa Tortuga

Year: 2014 **Species and Counts:** *Lepidochelys olivacea*—90 clutches

SWOT Contact: Oscar Brenes Arias
DATA RECORD 25
Data Source: Ward, M., and C. Elkins, Sea Turtles Forever. 2015. Sea turtle nesting at Punta Pargos, Costa Rica. Personal communication. In *SWOT Report—The State of the World's Sea Turtles*, vol. 10 (2015).

Nesting Beach: Punta Pargos
Year: 2013 **Species and Counts:** *Chelonia mydas*—171 clutches; *Lepidochelys olivacea*—16 clutches

SWOT Contacts: Chris Elkins and Marc Ward
DATA RECORD 26
Data Source: Venegas-Li, R., R. Valentín-Gamazo, and A. García. 2014. Green turtle nesting at Reserva Pacuare, Limon, Costa Rica. Personal communication. In *SWOT Report—The State of the World's Sea Turtles*, vol. 10 (2015).

Nesting Beach: Reserva Pacuare
Year: 2014 **Species and Counts:** *Chelonia mydas*—26 clutches

SWOT Contacts: Aida García, Rocio Valentín Gamazo, and Ruben Venegas-Li
DATA RECORD 27
Data Source: Venegas-Li, R., R. Valentín-Gamazo, and A. García. 2014. Leatherback turtle nesting at Reserva Pacuare, Limon, Costa Rica. In *SWOT Report—The State of the World's Sea Turtles*, vol. 10 (2015).

Nesting Beach: Reserva Pacuare
Year: 2014 **Species and Counts:** *Dermochelys coriacea*—533 clutches

SWOT Contacts: Aida García, Rocio Valentín Gamazo, and Ruben Venegas-Li
DATA RECORD 28
Data Source: Venegas-Li, R., R. Valentín-Gamazo, and A. García. 2014. Hawksbill turtle nesting at Reserva Pacuare, Limon, Costa Rica. In *SWOT Report—The State of the World's Sea Turtles*, vol. 10 (2015).

Nesting Beach: Reserva Pacuare
Year: 2014 **Species and Counts:** *Eretmochelys imbricata*—6 clutches

SWOT Contacts: Aida García, Rocio Valentín Gamazo, and Ruben Venegas-Li
DATA RECORD 29
Data Source: Harrison, E. 2014. Sea turtle nesting at Tortuguero, Costa Rica. Personal communication. In *SWOT Report—The State of the World's Sea Turtles*, vol. 10 (2015).

Nesting Beach: Tortuguero
Year: 2014 **Species and Counts:** *Chelonia mydas*—10,001–500,000 clutches; *Dermochelys coriacea*—101–250 clutches; *Eretmochelys imbricata*—1–25 clutches

SWOT Contact: Emma Harrison
DATA RECORD 30
Data Source: Solano, R., and ASVO. 2015. Personal communication. In *SWOT Report—The State of the World's Sea Turtles*, vol. 10 (2015).

Nesting Beach: Punta Mala
Year: 2007 **Species and Counts:** *Lepidochelys olivacea*—759 clutches

Nesting Beaches: Guapil, Isla Bolaños, Isla Peladas, and Manzanillo
Year: 2014 **Species and Counts:** Unquantified

SWOT Contact: Roberto Solano
DATA RECORD 31
Data Source: (1) Umaña Ramírez, E., ASVO. 2009. Descripción de la Actividad de Anidación y Manejo de Nidadas de Tortuga Marina en Playa Buenavista, Península de Nicoya, Costa Rica. Informe final, temporada 2008–2009; (2) Umaña Ramírez, E., Pérez Durán, R., and

R. Soto Pérez, ASVO. 2009. Manejo Sostenido de la Colonia Anidadora de Tortugas Marinas en las Playas del Refugio Nacional Vida Silvestre Playa Hermosa—Punta Mala, Pacífico de Costa Rica, Usando Como Base a Funcionarios del MINAE, y Organizaciones Voluntarias: Informe final de temporada.

Nesting Beaches: Buena Vista and Hermosa
Year: 2008 **Species and Counts:** *Chelonia mydas*—4 and 5 clutches, respectively; *Eretmochelys imbricata*—1 clutch (Buena Vista); *Dermochelys coriacea*—1 clutch (Hermosa); *Lepidochelys olivacea*—332 and 1,185 clutches, respectively

SWOT Contact: Roberto Solano
DATA RECORD 32
Data Source: Santidrián Tomillo, P., S. Roberts, D. Díaz, and P. Aguilar Masís. 2013. Análisis de la Anidación de Tortugas Marinas en Playa Cabuyal y Golfo de Papagayo Sur.

Nesting Beach: Cabuyal
Year: 2012 **Species and Counts:** *Chelonia mydas*—173 clutches

SWOT Contacts: Pilar Santidrián Tomillo and The Leatherback Trust
DATA RECORD 33
Data Source: Sánchez, F. A., D. Melero, P. A. Smith, M. Bigler, and B. Díaz. 2007. Proyecto de Protección, Conservación y Recuperación de Poblaciones de Tortuga Marina en Playa Drake, Península de Osa, Costa Rica: Reporte Técnico Temporada 2006.

Nesting Beach: Drake
Year: 2006 **Species and Counts:** *Lepidochelys olivacea*—103 clutches

SWOT Contacts: Fabián Sánchez and Fundación Corcovado
DATA RECORD 34
Data Source: Ureña Lopez, R. 2014. Nesting of Pacific green turtle *Chelonia mydas* (Linnaeus 1758) at Playa Matapalo, Guanacaste, Costa Rica. *Marine Turtle Newsletter* 142: 17–18.

Nesting Beach: Matapalo (Guanacaste)
Year: 2011 **Species and Counts:** *Chelonia mydas*—117 clutches

SWOT Contact: Randall Ureña
DATA RECORD 35
Data Source: Conejo Salas, K., and K. Wesenberg. 2008. Monitoreo de la Dinámica de Anidación y Manejo de Nidadas Tortugas Marinas en Playa Matapalo, Pacífico de Costa Rica: Temporada 2007–2008.

Nesting Beach: Matapalo (Puntarenas)
Year: 2007 **Species and Counts:** *Lepidochelys olivacea*—212 clutches

SWOT Contact: Roberto Solano
DATA RECORD 36
Data Source: WIDECAS. 2012. Informe de Actividades de Conservación en Playas (March 31–October 15).

Nesting Beach: Moín
Year: 2012 **Species and Counts:** *Chelonia mydas*—43 clutches; *Dermochelys coriacea*—1,425 clutches; *Eretmochelys imbricata*—1 clutch

SWOT Contact: Luis Fonseca
DATA RECORD 37
Data Source: Skillos, S., and S. Rodríguez Méndez. 2014. Programa de Conservación e Investigación Colonia Anidadora de Tortugas Marinas *Dermochelys coriacea*, Estación Las Tortugas: Informe de Investigación 2014.

Nesting Beach: Mondonguillo
Year: 2014 **Species and Counts:** *Chelonia mydas*—2 clutches; *Dermochelys coriacea*—308 clutches; *Eretmochelys coriacea*—6 clutches

OTHER CITATIONS

Protected Areas: International Union for Conservation of Nature (IUCN) and United Nations Environment Programme—World Conservation Monitoring Centre (UNEP—WCMC). The World Database on Protected Areas (WDPA). Cambridge, U.K.: UNEP—WCMC. Accessed February 7, 2015, at www.protectedplanet.net.

Regional Management Units: Wallace B. P., A. D. DiMatteo, B. J. Hurlay, E. M. Finkbeiner, A. B. Bolten, et al. 2010. Regional Management Units for marine turtles: A novel framework for prioritizing conservation and research across multiple scales. *PLoS ONE* 5(12): e15465. doi:10.1371/journal.pone.0015465.

Nest Data Conversion Factors: (1) Alvarado-Díaz, J., E. Arias-Coyotl, and C. Delgado-Trejo. 2003. Clutch frequency of the Michoacán Green Sea Turtle. *Journal of Herpetology* 37: 183–185. (2) Mortimer, J. A., and R. Bresson. 1999. Temporal distribution and periodicity in hawksbill turtles (*Eretmochelys imbricata*) nesting at Cousin Island, Republic of Seychelles, 1971–1997. *Chelonian Conservation and Biology* 3: 318–325. (3) Reina, R. D., P. A. Mayor, J. R. Spotila, R. Piedra, and F. V. Paladino. 2002. Nesting ecology of the leatherback turtle, *Dermochelys coriacea*, at Parque Nacional Marino Las Baulas, Costa Rica: 1988–1989 to 1999–2000. *Copeia* 2002(3): 653–664. (4) Sarti Martínez, L., A. R. Barragán, D. G. Muñoz, N. García, P. Huerta, and F. Vargas. 2007. Conservation and biology of the leatherback turtle in the Mexican Pacific. *Chelonian Conservation and Biology* 6: 70–78. (5) Van Buskirk, J., and L. B. Crowder. 1994. Life-history variation in marine turtles. *Copeia* 1994(1): 66–81.