



Olive Ridley Turtle (*Lepidochelys olivacea*)

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Note: All references mentioned below are cited in full under the detailed results page for the species on the *IUCN Red List of Threatened Species*.

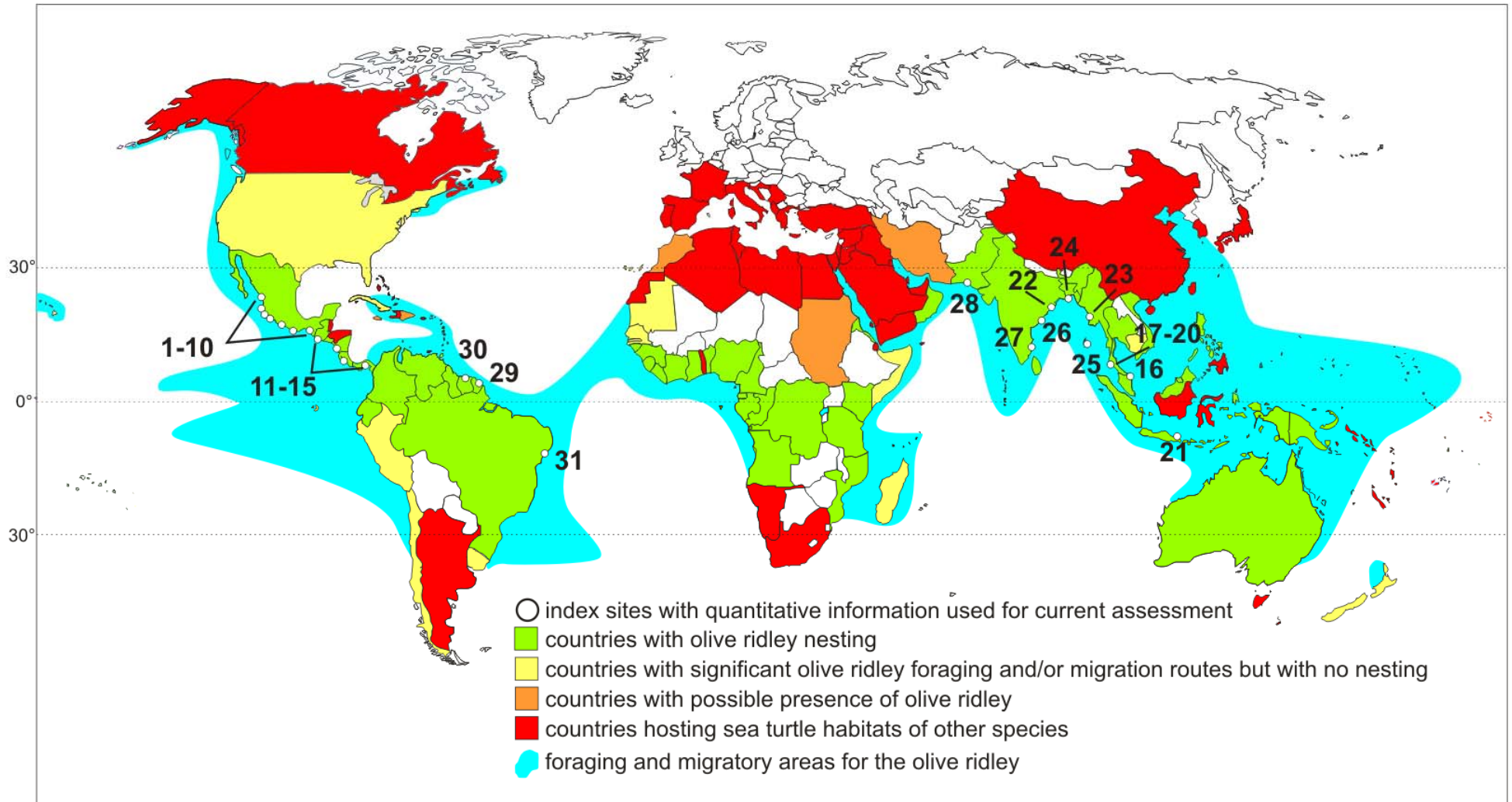


Figure 1. Geographic range of habitats utilized by the Olive Ridley, *Lepidochelys olivacea*, based on data in Table 5.

Table 1. List of Olive Ridley Turtle index sites used for the status assessment.

No.	Index nesting site	Justification and references
EASTERN PACIFIC OCEAN		
<i>ARRIBADA ROOKERIES (current or historical)</i>		
3	México: El Playon de Mismaloya, Jalisco	One of the five former arribada rookeries in México that collapsed in the 1970s due to overexploitation (Márquez <i>et al.</i> 1976) with some historical quantitative information.
6	México: Ixtapilla, Michoacán	New Olive Ridley rookery that now nests in arribadas. Not known prior to the early 1990s.
7	México: Piedra de Tlalcoyunque, Guerrero	One of the five former arribada rookeries in México that collapsed in the 1970s due to overexploitation (Márquez <i>et al.</i> 1976) with some historical quantitative information.
8	México: Chacahua, Oaxaca	One of the five former arribada rookeries in México that collapsed in the 1970s due to overexploitation (Márquez <i>et al.</i> 1976) with some historical quantitative information.
9	México: Escobilla, Oaxaca	One of the two arribada rookeries remaining in México. Showing significant increases such that now >1,000,000 nests laid/yr (Centro Mexicano de la Tortuga 2005, Alvabera 2006).
12	Nicaragua: La Flor	One of the two remaining arribada rookeries in Nicaragua, with some quantitative information.
13	Costa Rica: Nancite	One of two historical arribada rookeries in CR, showing signs of sharp declines (Valverde <i>et al.</i> 1998).
14	Costa Rica: Ostional	Currently most important arribada rookery in Costa Rica, with continuous extraction of eggs (Chávez <i>et al.</i> in press).
15	Panama: Isla Cañas	Most southerly arribada rookery in E Pacific.
<i>NON-ARRIBADA ROOKERIES</i>		
1	México: El Verde, Sinaloa	Northern limit of nesting range for Olive Ridley in E Pacific. Excellent monitoring records since 1974 (Rios <i>et al.</i> 2005, Briseño-Dueñas and Abreu-Grobois 1994).
2	México: Platanitos, Nayarit	Selection of non-arribada rookeries in México spanning the entire length of the country to increase the geographical variety of trends from a region with extensive monitoring of Olive Ridley subpopulations. Included Ixtapilla, a subpopulation which appears to have originated recently.
4	México: Cuyutlán, Colima	
5	México: Maurata+Colola, Michoacan	
10	México: Pto Arista, Chiapas	
11	Guatemala	Added context for Central American non-arribada rookeries (Muccio 1998).

No.	Index nesting site	Justification and references
CENTRAL & WESTERN PACIFIC OCEAN		
	Australia: Arnhem Land	Most significant collection of rookeries in Central Pacific (Limpus unpublished doc.).
16	Malaysia: Terengganu	Long term records available.
17	Thailand: Thaimaung	
18	Thailand: Ko Pharathong	Additional insight from an area with traditional use of eggs (Limpus 1995).
20	Thailand: Maikaw Beach	
21	Indonesia: Alas Purwo NP	Rare example of recently increasing non-arribada rookery.
EASTERN INDIAN OCEAN		
<i>ARRIBADA ROOKERIES</i>		
22	India: Gahirmatha + Rushikulya + Devi River mouth	One of the largest sets of arribada rookeries in the world with long term datasets (Shanker <i>et al.</i> 2003).
<i>NON-ARRIBADA ROOKERIES</i>		
23	Myanmar	Site of ancient commercial egg harvest (Maxwell 1911).
24	Bangladesh: St Martin's Island	Additional regional coverage; extensive history of trade in turtle products and egg collection (Cornelius <i>et al.</i> 2007).
25	India: Cuthbert Bay, Andaman & Nicobar Islands	Area of traditional use of turtle meat and eggs, with extensive predation by wild and feral animals (Cornelius <i>et al.</i> 2007). Few sites surveyed in the past.
26	India: Chennai (Madras)	Representative of area in the region with widespread extraction of nests by humans and animals (Shanker 2003). 15 years of data available (Shanker 2003; Kachhapa).
WESTERN INDIAN OCEAN		
28	Pakistan - Hawkes Bay and Sandspit, Karachi	Only representative from WIO. History of use in Baluchistan, Pakistan of direct fishery for Olive Ridleys (Cornelius <i>et al.</i> 2007).
EASTERN ATLANTIC OCEAN		
29	None available with long term quantitative information	

No.	Index nesting site	Justification and references
WESTERN ATLANTIC OCEAN		
<i>ARRIBADA ROOKERIES</i>		
29	Suriname: Eilanti	Historically an arribada rookery and primary nesting ground for the Western Atlantic Olive Ridley subpopulation (Reichart 1993).
<i>NON-ARRIBADA ROOKERIES</i>		
30	French Guiana	Very little historical data but new monitoring programs by WWF-France (L. Kelle pers. comm.) and local groups are evidencing increasing population size.
31	Brazil: State of Sergipe: Abaís, Pirambu, Ponta dos Mangues and northern portion of Bahia State: Sítio do Conde, Costa do Sauípe, Praia do Forte and Arembepe	Southern limit for species, good monitoring from 1982 onwards demonstrating a significant and growing rookery (da Silva <i>et al.</i> in press).

Table 2. Summary of available estimates of *Past* and *Present* population abundance (raw estimates) at rookeries of *Lepidochelys olivacea* selected as Index Sites for this assessment. Codes for data types: FH, number of females harvested; NF, nesting females; AE, census estimate of nesting females from arribada beaches; NN, number of nests; PN, protected nests (would not include poached, predated and otherwise lost); NK, nests/km; EP, egg production; and, EH, egg harvest. All values are annual means unless otherwise stated.

Index #	Subpopulation	Data type	Past estimate		Past estimate		Present estimate		References (Past)	References (Present) and comments
			1	2	1	2	1	2		
			years	mean	years	mean	years	mean		
EASTERN PACIFIC										
<i>ARRIBADA ROOKERIES (current and former)</i>										
3	México (Playon de Mismaloya, Jalisco)	AE / PN	1969 - 1979	35,000 – 100,000 females			2001–2006	2,328 protected nests	Montoya 1969, Márquez <i>et al.</i> 1976, Casas-Andreu 1978, Villa Guzmán 1980.	Antonio Trejo, in litt; Dirección General de Vida Silvestre. SEMARNAT México; (max. of last 5 years). Due to impossibility of complete protection assume only 60% of total nests protected.
6	México (Ixtapilla, Michoacán)	NF / PN	Prior to 1994	0			1999 – 2005	2,900 – 10,000 nests	No known Olive Ridley rookery at this site prior to early 1990s.	Dirección General de Vida Silvestre. SEMARNAT México (max. 5 years). Due to impossibility of complete protection assume only 35% of total nests reported.

Index #	Subpopulation	Data type	Past estimate		Past estimate		Present estimate		References (Past)	References (Present) and comments
			1		2					
			years	mean	years	mean	years	mean		
<i>Table 2 - continued</i>										
7	México (Piedra de Tlalcuynque, Guerrero)	AE / PN	1974	20,000 – 50,000 females			1997	608 protected nests	Márquez <i>et al.</i> 1976.	Dirección General de Vida Silvestre. SEMARNAT México; Márquez <i>et al.</i> 1998; Peñaflores <i>et al.</i> 2001. Due to impossibility of complete protection assume only 35% of total nests are protected.
8	México (Chacahua, Oaxaca)	AE / PN	1974	20,000 – 50,000 females			2001–2005	2,042 nests	Márquez <i>et al.</i> 1976.	J.C. Padilla (in litt.); Dirección General de Vida Silvestre. SEMARNAT México. 100% of nests are reported (max. of last 5 years).
9	México (Escobilla, Oaxaca)	AE / AE	1973-1975	180,000 – 401,000 females			2001–2005	1,013,034 females	Márquez <i>et al.</i> 1976 (arribadas in Aug-Oct only).	Dirección General de Vida Silvestre. SEMARNAT México; Alvabera, 2006 (max. of last 5 years).
12	Nicaragua (La Flor)	NN					1993 – 2004	33,530 – 68,753 nests	None.	Hope (2000) informs of 69,765 combined for La Flor and Chacocente; Honarvar and van der Berghe (in press).

Index #	Subpopulation	Data type	Past estimate		Past estimate		Present estimate		References (Past)	References (Present) and comments
			1		2					
			years	mean	years	mean	years	mean		
<i>Table 2 - continued</i>										
13	Costa Rica (Nancite)	AE / AE	1970s	142,000 – 335,000 females			2005	20,800 females	Valverde <i>et al.</i> 1998.	Solís <i>et al.</i> 2007.
14	Costa Rica (Ostional)	AE / AE	1971	10,000 females			2006	336,000 females	Hughes and Richard 1974, Chaves <i>et al.</i> (in press).	Solís <i>et al.</i> 2007.
15	Panama (Isla Cañas)	AE / AE	1990s	15,000 – 60,000 females			2006	8,768 females	Evans and Vargas 1998.	L. Vargas, Autoridad Nacional del Ambiente (in litt.) 2007.
<i>NON-ARRIBADA ROOKERIES</i>										
1	México (El Verde, Sinaloa)	NF / PN	1974	10,000-20,000 females			2000-2005	1,160 protected nests	Márquez <i>et al.</i> 1976.	D. Ríos, Annual Reports 2000-2005; Dirección General de Vida Silvestre. SEMARNAT México (max. 5 years). Due to impossibility of complete protection only 90% of total nests are reported.

Index #	Subpopulation	Data type	Past estimate		Past estimate		Present estimate		References (Past)	References (Present) and comments
			1		2					
			years	mean	years	mean	years	mean		
2	México (Platanitos, Nayarit)	NF / PN	1974	5,000-10,000 females			2000-2005	1,301 nests	Márquez <i>et al.</i> 1976.	Dirección General de Vida Silvestre. SEMARNAT México. Due to impossibility of complete protection assume only 35% of total nests reported (max. 5 years).
4	México (Cuyutlán, Colima)	NF / PN	1974	5,000-10,000 females			1999-2003	1,257 nests	Márquez <i>et al.</i> 1976.	Dirección General de Vida Silvestre. SEMARNAT México (max. 5 years).
5	México (Maruata-Colola, Michoacán)	NF / PN	1974	5,000-10,000 females			1999-2003	4,198 nests (max in 1993)	Márquez <i>et al.</i> 1976.	Sum of two beaches; Dirección General de Vida Silvestre. SEMARNAT México (max. 5 years). Due to impossibility of complete protection assume only 35% of total nests reported.
10	México (Pto Arista, Chiapas)	NF / NN	1974	1,000-5,000 females			1999-2004	707 nests	Márquez <i>et al.</i> 1976.	Dirección General de Vida Silvestre. SEMARNAT México (max. 5 years). Due to impossibility of complete protection assume only 35% of total nests reported.

Table 2 - continued

Index #	Subpopulation	Data type	Past estimate		Past estimate		Present estimate		References (Past)	References (Present) and comments
			1		2					
			years	mean	years	mean	years	mean		
<i>Table 2 - continued</i>										
11	Guatemala	NK	1981	1.87 nests/km/ d			1997	1.24 nests/km/ d	Muccio 1998, from data in Higginson 1982.	Muccio 1998. For 16 km Barra de Chapeton to Monterrico.
CENTRAL & WESTERN PACIFIC OCEAN										
16	Malaysia (Terengganu)	EH / nests	1977	240,000			1998-1999	10	Malaysian Fisheries Dept data cited in Limpus 2001.	Liew 2002.
17	Thailand (Thaimaung)	NF	1975	300 females			1996-2000	10 nests	Chantrapornsyl 1992.	Chantrapornsyl, in litt. To A. Abreu.
18	Thailand (Pharathong Island)	NF	1975	300 females			1996-2000	10 nests	Chantrapornsyl 1992.	Aureggi, 2001 cited by Chantrapornsyl, in litt. to A. Abreu.
20	Thailand (Maikaw Beach)	NF	1975	150 females			1996-2000	10 nests	Chantrapornsyl 1992.	Chantrapornsyl, in litt. To A. Abreu.
21	Indonesia (Alas Purwo NP)	NN	1984	10 nests			1993- 1998	230 nests	Dermawan 2002.	Dermawan 2002.
EASTERN INDIAN OCEAN										
<i>ARRIBADA ROOKERIES</i>										
22	India (Gahirmatha + Rushikulya + Devi River mouth)	NF	1975	150,000 females			1990s - present	150- 200,000 females	Bustard 1976.	Shanker <i>et al.</i> 2003.

Index #	Subpopulation	Data type	Past estimate		Past estimate		Present estimate		References (Past)	References (Present) and comments
			1	2	1	2	1	2		
			years	mean	years	mean	years	mean		
<i>Table 2 - continued</i>										
NON-ARRIBADA ROOKERIES										
23	Myanmar	EP / NN	1911	1.5 mill eggs			1999	700 nests	Maxwell 1911.	Thorbjarnarson <i>et al.</i> 2000.
24	Bangladesh (St. Martin's)	NF	1980s	35 nesting females/night			2001	7 nesting females/night	S. M. A. Rashid, unpublished data, cited in Cornelius <i>et al.</i> 2007.	Islam 2002.
25	India (Andaman & Nicobar Islands)	NF / NN	1978-1989	445 nesting females			2001	185 nests	M. Tiwari report from Bhaskar, 1993	K Shanker, unpubl report
26	India (Chennai / Madras)	NK/NK	1977	~ 10 nests/km			2002	11.2 nests/km	Shanker 2003.	Shanker 2003.
WESTERN INDIAN OCEAN										
28	Hawkes Bay, Pakistan	NN	1982-1984	25-120 nests			1996-1997	2 nests	Asrar 1999.	Asrar 1999.
WESTERN ATLANTIC OCEAN										
ARRIBADA ROOKERIES										
29	Suriname (Eilanti beach)	FH / NN	1967	2,875 females			2005	138 nests/yr	Geijskes 1945, cited in Reichart and Fretey 1993.	STINASU; Foundation for Nature Conservation and WWF Guianas.

Index #	Subpopulation	Data type	Past estimate		Past estimate		Present estimate		References (Past)	References (Present) and comments
			1	2	1	2	years	mean		
			years	mean	years	mean	years	mean		
<i>Table 2 – continued</i>										
<i>NON-ARRIBADA ROOKERIES</i>										
30	French Guiana	NN	1987	452 nests			2005-2006	2,600 nests	Fretey 1989 cited in Godfrey and Chevalier, unpublished report.	Benoit de Thoisy Kwata NGO pers. comm.
31	Brasil (Sergipe)	NN	1940s	250 nests			2005-6	2,971 nests	Godfrey and Chevalier, unpublished report.	da Silva <i>et al.</i> , in press; L. Soares, in litt.

Table 3. Summary of estimates of population change for the olive ridley turtle Index Sites as determined from raw data and extrapolations from it for past abundances using procedures indicated in individual entries of the table. Past and Present estimates are provided in Table 2. Subpopulation size units were based on any of the following estimates: mean annual number of nesting females or of nests at site, or observations per unit effort. Unless otherwise stated, conversions from Table 2 data to number of females was determined using a mean value of 2.5 nests / female and 105 eggs / nest for any given nesting season. Extrapolation functions were used only when there was a suspected change in the subpopulation size over a time interval falling outside of the period covered by available raw data. When using regressions to extrapolate past abundances due to absence of information over the time interval required, linear (L) and/or exponential (E) functions (unless otherwise indicated) were employed using as much of the available abundance data as possible.

Index #	Subpopulation (Index Site)	Raw Data (from Table 2) Past	Raw Data (from Table 2) Present	Notes on Population Trajectories & (Comments on Current Status)	Past Annual Nesting Female Subpopulation Size	Present Annual Nesting Female Subpopulation Size	% Change over time period
EASTERN PACIFIC OCEAN							
<i>ARRIBADA ROOKERIES (current and former)</i>							
3	México (Playon de Mismaloya, Jalisco)	35,000-100,000 females/yr (1969-1970)	2,328 protected nests (2001-2006)	<p>1945-1965: assume no significant change.</p> <p>1965-1980: significant decline due to intense commercial extractions in Mexican Pacific of 1.5 -2.5 million adults (1960-1980), or 150,000–250,000 per year (Peñaflores <i>et al.</i>, 2001).</p> <p>1980-1990: continued extraction at levels 20% lower (derived from Peñaflores <i>et al.</i>, 2001 data).</p> <p>(Depleted but <u>stable</u>; <u>currently no arribadas</u>)</p>	341,204 (E, using 1969-1979 data to 1965)	3,024	-99% (2 generations)
6	México (Ixtapilla, Michoacán)	256 nests (1994)	2,853 nests	Olive Ridley not known at this site prior to 1994, used earliest datum available	293 (taking into account 35% survey coverage)	3,261–11,429 (taking into account 35% survey coverage)	3,806% (½ generation)

Index #	Subpopulation (Index Site)	Raw Data (from Table 2) Past	Raw Data (from Table 2) Present	Notes on Population Trajectories & (Comments on Current Status)	Past Annual Nesting Female Subpopulation Size	Present Annual Nesting Female Subpopulation Size	% Change over time period
<i>Table 3 - continued</i>							
7	México (Piedra de Tlalcoyunque, Guerrero)	20,000–50,000 females (1974)	608 protected nests/yr (1997)	<p>1945-1965: assume no significant change.</p> <p>1965-1980: significant decline due to intense commercial extractions in Mexican Pacific of 1.5-2.5 million adults (1960-1980), or 150,000–250,000 per year (Peñaflores <i>et al.</i> 2001).</p> <p>1980-1990: continued extraction at levels 20% lower (derived from Peñaflores <i>et al.</i> 2001 data).</p> <p>1990-2005: stable.</p> <p>(Depleted but stable; currently no arribadas)</p>	247,558 (E, using 1974-1993 data to 1965)	1,266 (E, using >1990 data and assuming 35% survey coverage)	-99.5% (2 generations)
8	México (Chacahua, Oaxaca)	20,000 – 50,000 females (1974)	2,042 nests (2001-2005)	<p>1945-1965: assume no significant change</p> <p>1965-1980: significant decline due to intense commercial extractions in Mexican Pacific of 1.5-2.5 million adults (1960-1980), or 150,000–250,000 per year (Peñaflores <i>et al.</i> 2001).</p> <p>1980-1990: continued extraction at levels 20% lower (derived from Peñaflores <i>et al.</i>, 2001 data).</p> <p>1990-2005: declining.</p> <p>(Depleted and declining; currently no arribadas)</p>	98,563 (E, using 1974-1992 data to 1963)	460 (E, for 2005)	-99.5% (2 generations)

Index #	Subpopulation (Index Site)	Raw Data (from Table 2) Past	Raw Data (from Table 2) Present	Notes on Population Trajectories & (Comments on Current Status)	Past Annual Nesting Female Subpopulation Size	Present Annual Nesting Female Subpopulation Size	% Change over time period
<i>Table 3 - continued</i>							
9	México (Escobilla, Oaxaca)	180,000-401,000 nesting females (Aug-Oct 1973-1975)	1,013,034 nesting females (2001-2005)	<p>1945-1965: assume no significant change.</p> <p>1965-1980: significant decline due to intense commercial extractions in Mexican Pacific of 1.5-2.5 million adults (1960-1980), or 150,000–250,000 per year (Peñaflores <i>et al.</i> 2001).</p> <p>1980-1990: continued extraction at levels 20% lower (derived from Peñaflores <i>et al.</i> 2001 data).</p> <p>1990-2005: increasing.</p> <p>(Increasing and has incremented number of arribadas per year)</p>	254,208 (E, extrapolation for data 1973-1978) correcting 73-75 datum of 3 months by dividing by 0.68, the proportion of females in those months relative to whole year; Alvabera 2006)	574,937 (correcting for nest frequency)	+126% (2 generations)
12	Nicaragua (La Flor)	33,530 - 68,000 nests (1993-1999)	69,765 nests for La Flor + Chacocente (2000)	<p>1945-1970s: assume no significant change.</p> <p>1970-1980s: probably populations had decreased due to commercial extractions (Cornelius 1982) but no data available. In absence of data adopt value for 2004) and assume no change in 3 generations.</p> <p>1990s-2005: information is inconclusive and often confused with Chacocente information.</p> <p>(Depleted? and <u>stable?</u>)</p>	27,906	27,906 (avg. 2003-2004)	0%

Index #	Subpopulation (Index Site)	Raw Data (from Table 2) Past	Raw Data (from Table 2) Present	Notes on Population Trajectories & (Comments on Current Status)	Past Annual Nesting Female Subpopulation Size	Present Annual Nesting Female Subpopulation Size	% Change over time period
<i>Table 3 - continued</i>							
13	Costa Rica (Nancite)	142,000- 345,000 females (1970s)	20,800 females (2005)	1945-1980s: assume no significant change. 1980s-1990: decline (Valverde <i>et al.</i> 1998). 1990s-2005: continued decline. (Depleted? and declining)	138,000 (max value 1971- 1981) <hr/> 187,178 (E, regression to 1965)	8,320 (corrected for nest frequency)	-94 to -96%
14	Costa Rica (Ostional)	10,000 nesting females (1971)	336,000 nesting females (2006)	1945-1980s: assume no significant change. 1980s-2005: increasing? Will need to continue with Gates and Valverde method to determine if increasing or stable. (at least stable and has incremented number of arribadas per year; Chávez <i>et al.</i> in press)	4,000 (correcting for nest frequency) (1971 datum)	134,400 (correcting for nest frequency)	+3,260%

Index #	Subpopulation (Index Site)	Raw Data (from Table 2) Past	Raw Data (from Table 2) Present	Notes on Population Trajectories & (Comments on Current Status)	Past Annual Nesting Female Subpopulation Size	Present Annual Nesting Female Subpopulation Size	% Change over time period
<i>Table 3 - continued</i>							
15	Panama (Isla Cañas)	15,000-60,000 nesting females (1997)	8,768 nesting females (2006)	<p>1945-1970s: assume no significant change.</p> <p>1970s-1980: No long term information, though heavy egg extraction during this period led Central American coastal residents and government officials to acknowledged by early 1980s a decline in Olive Ridleys due to widespread egg harvesting augmented by the incidental capture of turtles in shrimp trawls and by the commercial turtle fishery in Ecuador (Cornelius 1982).</p> <p>1980s: high levels of turtle exploitation and poaching in island, increases in the fishing effort in nearby port. Anecdotal evidence that arribadas at Isla Cañas have decreased in number (J.A. Cordoba, in litt and in Cornelius <i>et al.</i> 2007).</p>	6,000-24,000 (accounting for 2.5 nest frequency)	3,507 (accounting for 2.5 nest frequency)	-42 to -85% (½ generation)

Index #	Subpopulation (Index Site)	Raw Data (from Table 2) Past	Raw Data (from Table 2) Present	Notes on Population Trajectories & (Comments on Current Status)	Past Annual Nesting Female Subpopulation Size	Present Annual Nesting Female Subpopulation Size	% Change over time period
<i>Table 3 - continued</i>							
NON-ARRIBADA ROOKERIES							
1	México (El Verde, Sinaloa)	10,000-20,000 nesting females (1974)	1,160 nests	<p>1945-1965: assume no significant change.</p> <p>1965-1980: significant decline due to intense commercial extractions in Mexican Pacific of 1.5-2.5 million adults (1960-1980), or 150,000–250,000 per year (Peñaflores <i>et al.</i> 2001).</p> <p>1980-1990: continued extraction at levels 20% lower (derived from Peñaflores <i>et al.</i>, 2001 data).</p> <p>1990-2005: stable.</p> <p>(Depleted but <u>stable</u>)</p>	10,000 to 20,000 (consider these values to reflect fairly well pre-1965 abundances)	306-516 (assuming 90% survey coverage and 2.5 nest frequency)	-95 to -97% (2 generations)
2	México (Platanitos, Nayarit)	5,000-10,000 nesting females (1974)	1,301 nests	<p>1945-1965: assume no significant change.</p> <p>1965-1980: significant decline due to intense commercial extractions in Mexican Pacific of 1.5-2.5 million adults (1960-1980), or 150,000–250,000 per year (Peñaflores <i>et al.</i> 2001).</p> <p>1980-1990: continued extraction at levels 20% lower (derived from Peñaflores <i>et al.</i>, 2001 data).</p> <p>1990-2005: increasing.</p> <p>(Depleted but <u>increasing</u>)</p>	5,000 to 10,000 (consider these values to reflect fairly well pre-1965 abundances)	439-1,301 (assuming 35% survey coverage and 2.5 nest frequency)	-74 to -87% (2 generations)

Index #	Subpopulation (Index Site)	Raw Data (from Table 2) Past	Raw Data (from Table 2) Present	Notes on Population Trajectories & (Comments on Current Status)	Past Annual Nesting Female Subpopulation Size	Present Annual Nesting Female Subpopulation Size	% Change over time period
<i>Table 3 - continued</i>							
4	México (Cuyutlán, Colima)	5,000-10,000 nesting females (1974)	4,198 max nests (1999-2003)	<p>1945-1965: assume no significant change.</p> <p>1965-1980: significant decline due to intense commercial extractions in Mexican Pacific of 1.5 -2.5 million adults (1960-1980), or 150,000 – 250,000 per year (Peñaflores <i>et al.</i> 2001).</p> <p>1980-1990: continued extraction at levels 20% lower (derived from Peñaflores <i>et al.</i> 2001 data).</p> <p>1990-2005: increasing.</p> <p>(Depleted but <u>increasing</u>)</p>	5,000 to 10,000 (consider these values to reflect fairly well pre-1965 abundances)	483-1,437 (assuming 35% survey coverage)	-71 to -86% (2 generations)
5	México (Maruata-Colola, Michoacán)	5,000-10,000 nesting females (1974)	4,198 nests (max in 1993)	<p>1945-1965: assume no significant change.</p> <p>1965-1980: significant decline due to intense commercial extractions in Mexican Pacific of 1.5-2.5 million adults (1960-1980), or 150,000–250,000 per year (Peñaflores <i>et al.</i> 2001).</p> <p>1980-1990: continued extraction at levels 20% lower (derived from Peñaflores <i>et al.</i> 2001 data).</p> <p>1990-2005: stable.</p> <p>(Depleted but <u>stable</u>)</p>	5,000 to 10,000 (consider these values to reflect fairly well pre-1965 abundances)	591 -2,806 (assuming 35% survey coverage)	-44 to -72% (2 generations)

Index #	Subpopulation (Index Site)	Raw Data (from Table 2) Past	Raw Data (from Table 2) Present	Notes on Population Trajectories & (Comments on Current Status)	Past Annual Nesting Female Subpopulation Size	Present Annual Nesting Female Subpopulation Size	% Change over time period
<i>Table 3 - continued</i>							
10	México (Pto Arista, Chiapas)	1,000-5,000 females (1974)	707 nests	<p>1945-1965: assume no significant change.</p> <p>1965-1980: significant decline due to intense commercial extractions in Mexican Pacific of 1.5-2.5 million adults (1960-1980), or 150,000– 250,000 per year (Peñaflores <i>et al.</i> 2001).</p> <p>1980-1990: continued extraction at levels 20% lower (derived from Peñaflores <i>et al.</i> 2001 data).</p> <p>1990-2005: stable.</p> <p>(Depleted but stable)</p>	1,000 to 5,000 (consider these values to reflect fairly well pre-1965 abundances)	85 - 808 (taking into account 35% survey coverage)	-19 to -84% (2 generations)
11	Guatemala	1.87 nests/km/d (1981)	1.24 nests/km/d (1997)	<p>1945-1960s: assume no significant change.</p> <p>1960s-1980: heavy egg extraction; Central American coastal residents and government officials acknowledged by early 1980s a decline in Olive Ridleys due to widespread egg harvesting augmented by the incidental capture of turtles in shrimp trawls and by the commercial turtle fishery in Ecuador (Cornelius 1982).</p> <p>1990s-present: legal harvests probably unsustainable as it only protects <2% of all eggs (Muccio 2000).</p>	3,191 (E, extrapolated to 16km and all season to 1960)	1,004 (E, extrapolated to 16km and all season to 2005)	-69% (2 generations)

Index #	Subpopulation (Index Site)	Raw Data (from Table 2) Past	Raw Data (from Table 2) Present	Notes on Population Trajectories & (Comments on Current Status)	Past Annual Nesting Female Subpopulation Size	Present Annual Nesting Female Subpopulation Size	% Change over time period
<i>Table 3 - continued</i>							
CENTRAL & WESTERN PACIFIC OCEAN							
16	Malaysia (Terengganu)	240,000 eggs harvested/year (1977)	<10 nests	Common local practice of egg harvesting in large numbers at least since the 1950s. Practically extinct.	813 (L, extrapolated to 1950)	<4	-99.5%
17	Thailand (Thaimaung)	300 nesting females (1975)	10 nests (1996-2000)	Probably long-term egg harvest (Limpus, 1995). Assume started in the 1950s so back extrapolation only to 1950	238 (L, correcting for nest frequency)	4	-98%
18	Thailand (Pharathong Island)	300 nesting females (1975)	10 nests (1996-2000)	Probably long-term egg harvest (Limpus, 1995). Assume started in the 1950s so back extrapolation only to 1950	238 (L, correcting for nest frequency)	4	-98%
20	Thailand (Maikaw Beach)	150 nesting females (1975)	10 nests (1996-2000)	Probably long-term egg harvest (Limpus, 1995). Assume started in the 1950s so back extrapolation only to 1950	118 (L)	4	-97%
21	Indonesia (Alas Purwo NP)	10 nests (1984)	230 nests max (1993-1998)	Unknown if depleted from earlier times	4	92	+2,200%

Index #	Subpopulation (Index Site)	Raw Data (from Table 2) Past	Raw Data (from Table 2) Present	Notes on Population Trajectories & (Comments on Current Status)	Past Annual Nesting Female Subpopulation Size	Present Annual Nesting Female Subpopulation Size	% Change over time period
<i>Table 3 - continued</i>							
EASTERN INDIAN OCEAN							
<i>ARRIBADA ROOKERIES</i>							
22	India (Gahirmatha + Rushikulya + Devi River mouth)	150,000 nesting females (1975)	150,000 – 200,000 nesting females (1990s-present)	Commercial harvest of sea turtle eggs occurred since colonial days at Gahirmatha and continued until 1974 when it became illegal (Kar 2001). Up to 1,500,000 eggs a year were harvested (e.g. in 1973, FAO 1974), although the illegal take was probably much more (Kar, 1988, 2001). In 1974, 800,000 eggs were collected (FAO, 1974), after which all licensed harvesting was halted (Kar, 2001). Nevertheless, and in spite of death of about 15,000 breeding adults per year from the mid 1990s to the present (Shanker <i>et al.</i> 2003) no consistent evidence of decline in the set of 3 rookeries (Shanker <i>et al.</i> 2003). Therefore assume stable over last 3 generation period.	150,000–200,000 (did not need correcting for nest frequency)	150,000–200,000 (did not need correcting for nest frequency)	0%
<i>NON-ARRIBADA ROOKERIES</i>							
23	Myanmar	1.5 mill eggs harvested (1911)	700 nests (1999)	Continuous egg harvest since early 1900s. Assume steady linear decline from 1911 datum to present	3,429 (L)	280	-92%

Index #	Subpopulation (Index Site)	Raw Data (from Table 2) Past	Raw Data (from Table 2) Present	Notes on Population Trajectories & (Comments on Current Status)	Past Annual Nesting Female Subpopulation Size	Present Annual Nesting Female Subpopulation Size	% Change over time period
<i>Table 3 - continued</i>							
24	Bangladesh (St. Martin's)	35 nesting females/night (1980s)	7 nesting females/night (2001)	With no protection, by the 1980s anecdotal accounts underline declines due to severe exploitation of eggs and illegal killing of adult turtles by fishing and other activities (Islam 1998). Assume same rate of linear declines since the 1960s.	62 (L)	7	-89%
25	India (Andaman & Nicobar Islands)	445 nesting females (1978-1989)	185 nests (2001)	Unknown historical abundances or trends. Use available information that nonetheless indicates significant decline in less than three generations.	178 (correcting for nest frequency)	74	-58% in less than 1 generation
26	India (Chennai / Madras)	~ 10 nests/km	11.2 nests/km	Substantial fluctuations in abundance, from 3.7–14.3 nests/km between 1988-2002.			0
WESTERN INDIAN OCEAN							
28	Pakistan - Hawkes Bay and Sandspit, Karachi	25-120 nests (1982-1984)	2 nests	Unknown historical abundances or trends. Use available information that nonetheless indicates significant decline in less than three generations.	10-48 in 1980s	< 1	-60 to -98% (1 generation)

Index #	Subpopulation (Index Site)	Raw Data (from Table 2) Past	Raw Data (from Table 2) Present	Notes on Population Trajectories & (Comments on Current Status)	Past Annual Nesting Female Subpopulation Size	Present Annual Nesting Female Subpopulation Size	% Change over time period
<i>Table 3 - continued</i>							
WESTERN ATLANTIC OCEAN							
<i>ARRIBADA ROOKERIES</i>							
29	Suriname (Eilanti beach)	2,875 females (1967)	411 nests/yr (200s)	As per review by Godfrey & Chevalier (unpublished) take of nesting females goes back at least to the 1930s. Convert to 1945 data using assumption that min 15 and max 50% of all females were being harvested per year (1,500) and continuous linear decline (Godfrey and Chevalier, unpublished). Geijskes (1945, cited in Reichart and Fretey 1993) Also calculated using a back extrapolation from exponential regression of decline rate to derive 1945 and 1965 values (5,354 and 1,125, respectively) so consider the above values acceptable. Note: as Eilanti beach does not exist anymore, the present monitored areas are not the same but we have assumed they represent remnants of the same population	1,758 (L) <hr/> 5,647 (L)	164	-91 to -99%
<i>NON-ARRIBADA ROOKERIES</i>							
30	French Guiana	1,000 nests (1940s)	2,600 nests (avg 2005 & 2006)	No historical information, made best approximations based on oldest surveys available and most plausible past abundances (Godfrey and Chevalier, unpublished)	400 (L)	1,040 (correcting for nest frequency)	+160%

Index #	Subpopulation (Index Site)	Raw Data (from Table 2) Past	Raw Data (from Table 2) Present	Notes on Population Trajectories & (Comments on Current Status)	Past Annual Nesting Female Subpopulation Size	Present Annual Nesting Female Subpopulation Size	% Change over time period
<i>Table 3 - continued</i>							
31	Brasil (Sergipe)	250 nests (1940s)	2,971 nests (2005-6)	No historical information, made best approximations based on oldest surveys available and most plausible past abundances (Godfrey and Chevalier, unpublished)	100 (L)	582 (correcting for nest frequency)	+1,396%
<i>Global totals <u>only for non-arribada</u> sites (max / min)</i>					60,309	10,281	-67% to -83%
					31,271	5,319	
<i>Global totals <u>only for arribada</u> sites (max / min)</i>					1,266,558	841,309	-30% to -34%
					1,195,490	833,137	
<i>GLOBAL TOTALS (max / min)</i>					1,326,867	851,590	
					1,226,762	841,309	-31% to -36%

Table 4. Population changes for the Olive Ridley Index Sites grouped by region. Changes are determined as explained in previous sections to obtain compilations of regional subtotals.

Region	Past Annual Nesting Female Subpopulation Size	Present Annual Nesting Female Subpopulation Size (2005)	% Change
EASTERN PACIFIC OCEAN			
Arribada rookeries - Playon de Mismaloya, Jalisco, México; Ixtapilla, Michoacán, México; Piedra de Tlalcoyunque, Guerrero, México; Chacahua, Oaxaca, México; Escobilla, Oaxaca, México; La Flor, Nicaragua; Nancite, Costa Rica; Ostional, Costa Rica; Isla Cañas, Panama.	1,184,911	765,249	-32% to -35%
	1,117,732	757,081	
Non-arribada rookeries - El Verde, Sinaloa, México; Platanitos, Nayarit, México; Cuyutlán, Colima, México; Maruata-Colola, Michoacán, México; Pto Arista, Chiapas, México; Barra de Chapeton - Monterrico, Guatemala.	58,191	7,871	-95% to -73%
	29,191	2,908	
TOTALS	1,243,102	773,120	-39% to -33%
	1,146,923	759,989	
CENTRAL & WESTERN PACIFIC OCEAN			
Only non-arribada rookeries - Terengganu, Malaysia; Thaimaung, Thailand; Pharathong Island, Thailand; Maikaw Beach, Thailand; Alas Purwo NP, Indonesia.	1,412	108	-92%
EASTERN INDIAN OCEAN			
Arribada rookeries - Gahirmatha + Rushikulya + Devi River mouth, India.	76,000	76,000	0%
Non-arribada rookeries - Myanmar; St. Martin's, Bangladesh; Andaman & Nicobar Islands, India.	178	74	-58%
TOTALS	76,178	76,074	0%

Region	Past Annual Nesting Female Subpopulation Size	Present Annual Nesting Female Subpopulation Size (2005)	% Change
<i>Table 4 - continued</i>			
WESTERN INDIAN OCEAN			
Only non-arribada rookeries - Hawkes Bay, Pakistan.	48	4	-98% to -60%
	10	1	
WESTERN ATLANTIC			
Arribada rookeries - Eilanti beach, Suriname.	5,647	55	-99% to -97%
	1,758	55	
Non-arribada rookeries - Cayenne and Kourou, French Guiana; Sergipe, Brasil.	480	2,228	364%
TOTALS	6,127	2,284	-63% to 2%
	2,238	2,284	

Table 5. Country distribution.

Country	Presence	Nesting	Foraging	Reference
WESTERN ATLANTIC				
1 Cuba	P	F		Moncada <i>et al.</i> 2000
2 Puerto Rico	P	F		Caldwell and Erdman 1969, Caldwell <i>et al.</i> 1969
3 Jamaica	P			Brongersma 1972 in Fretey 1999
4 Dominican Republic	P	N?		Bacon 1981 in Fretey 1999
5 Barbuda	P?			Fuller <i>et al.</i> 1992 in Fretey 1999
6 Guadeloupe	P			Fretey and Lescure 1999
7 Martinique	P			Bacon 1981, Fretey and Lescure 1999
8 Curaçao	P			Sybesma and Hoetjes 1992 in Fretey 1999
9 Panama	P?		F	Bacon 1981 in Fretey 1999
10 Trinidad and Tobago	P	N1	F	Carr 1957, Gyan 1987 in Fretey 1999
11 Venezuela	P	N1	F	Nowak 1974 in Fretey 1999
12 Guyana	P	N		Pritchard and Trebbau 1984, Fretey 1999, Godfrey and Chevalier 2004
13 Suriname	P	N		Reichart and Fretey 1993, Schulz, 1975, Caldwell <i>et al.</i> 1969, Pritchard and Trebbau 1984, Godfrey and Chevalier 2004
14 French Guiana	P	N		Fretey 1989 in Fretey 1999, Godfrey and Chevalier 2004
15 Brazil	P	N		Marcovaldi and Marcovaldi 1987, de Silva <i>et al.</i> 2003
16 Uruguay	P			Frazier 1984 in Fretey 1999
EASTERN ATLANTIC				
17 Morocco	P?	N?	XF	Fretey 2001
18 Mauritania	P?	XN	XF	Fretey 2001
19 Cape Verde	P	XN	XF	Fretey 2001
20 Senegal	P	XN	XF	Fretey 2001
21 Gambia	P	XN	XF	Barnett <i>et al.</i> 2004
22 Guinea Bissau	P	N	XF	Barbosa <i>et al.</i> 1998
23 Guinea	P	N?	XF	Fretey 2001
24 Sierra Leone	P	N	XF	Siaffa <i>et al.</i> 2003
25 Liberia	P	N	XF	Fretey 2001

Country	Presence	Nesting	Foraging	Reference
<i>Table 5 - continued</i>				
26 Cote D' Ivoire	P	N	XF	Gomez <i>et al.</i> 2003
27 Ghana	P	N	XF	Beyer 2002
28 Togo	P	XN	XF	Hoinsoude <i>et al.</i> 2003
29 Benin	P	N	XF	Doussou Bodjrenou <i>et al.</i> 2004
30 Sao Tome & Principe	P	N	XF	Fretey, 2001
31 Boiko, São Tome, Corisco, Mbanye, Hoco Islands				Fretey <i>et al.</i> 2004
32 Nigeria	P	N	XF	Fretey 2001
33 Cameroon	P	N	XF	Fretey <i>et al.</i> 2004
34 Equatorial Guinea	P	N	XF	Fretey <i>et al.</i> 2004
35 Gabon	P	N	XF	Fretey <i>et al.</i> 2004
36 Congo	P	N	XF	Fretey <i>et al.</i> 2004
37 Angola	P	N	F	Fretey <i>et al.</i> 2004
38 Namibia	P	XN	XF	Fretey 2001
39 South Africa	P	XN	XF	Fretey 2001
RED SEA				
40 Eritrea		N		Ross and Barwani 1982; Frazier 1975, 1980; Pilcher <i>et al.</i> 2006
WESTERN INDIAN OCEAN				
41 India, West coast	P	N	?	Kar and Bhaskar 1982, Shanker and Choudhury 2006, Sunderraj <i>et al.</i> 2006
42 Pakistan	P	N	?	Kabraji and Firdous 1984, Asrar 1999, Qureshi 2006
43 Iran	P	XN	?	Kami 1997
44 Kenya	P	N	?	Zanre pers. comm., Church 2004
45 Madagascar	P	XN	F	Frazier 1975, 1980, 1982; Pritchard 1979
46 Maldives	P	XN	?	Frazier 1975, 1980, 1982; Pritchard 1979
47 Mozambique	P	N	?	Frazier 1975, 1980, 1982; Pritchard 1979
48 Oman	P	N	?	Ross and Barwani 1982; Frazier 1975, 1980, 1982; Salm <i>et al.</i> 1993; Baldwin and Al- Kiyumi 1999
49 Somalia	P	?	?	Frazier 1975, 1980, 1982
50 South Africa	P	N	?	Hughes 1972

Country	Presence	Nesting	Foraging	Reference
<i>Table 5 - continued</i>				
51 Sudan	P?	XN	X	Ross and Barwani 1982; Frazier 1975, 1980, 1982
52 Tanzania	P	N	?	Frazier 1975, 1980, 1982; Frazier 1976
53 Yemen	P?	XN	?	Walczak 1979
EASTERN INDIAN OCEAN				
54 Andaman & Nicobar Islands	P	N		Andrews <i>et al.</i> 2006
55 Thailand	P	N	?	Aureggi <i>et al.</i> 2004
56 Bangladesh	P	N	?	Rashid and Zahirul 1998, Islam 2002, Sarker 2004, Rashid 2006
57 India, East coast	P	N	F	Bhaskar 1981, Kar and Bhaskar 1982, Shanker and Choudhury 2006, Tripathy <i>et al.</i> 2003, Bhupathy and Saravanan 2006, Shanker 2003
58 Myanmar	P	N	?	Thorbjornarsson <i>et al.</i> 2000, Shanker and Pilcher 2003
59 Sri Lanka	P	N	F	Dattatri and Samarajiva 1983, Hewavisenthi 1990, Amarasooriya and Jayathilaka 2002, Kapurusinghe 2006, De Silva 2006
WESTERN PACIFIC				
60 Australia	P	N	?	Harris 1994, Whiting 1997, Limpus <i>et al.</i> 1981, Limpus 1975
61 Brunei	P	N	?	Pilcher 2001, Shanker and Pilcher 2003
62 Cambodia	?	?	F	Kosal Mao 2004
63 Federated States of Micronesia	P		?	Falanruw <i>et al.</i> 1975
64 Indonesia	P	N	F	Suwelo 1999, Putrawidjaja 2000, Halim <i>et al.</i> 2001
65 Japan	P		?	Kamezaki 1999
66 Malaysia	P	N	?	Tisen and Bali 2002
67 Papua New Guinea	P	N	F	Spring 1979, Spring and Gwyther 1999, Phillip 2002
68 Philippines	P	N	?	Gomez 1980.
69 Taiwan	?			
70 Thailand	P	N	?	Chantrapornsyl 1992, Charuchinda, and Chantrapornsyl 1999
71 USA (Hawai'i)	P		?	Balazs and Hau 1986
72 Viet Nam	N		?	Shanker and Pilcher 2003, Hamann <i>et al.</i> 2006

Country	Presence	Nesting	Foraging	Reference
EASTERN PACIFIC				
73 USA	P			Houck and Joseph 1958, Hubbs 1977
74 México	P	N	F	Márquez <i>et al.</i> 1976
75 Guatemala	P	N	F	Higginson and Orantes 1987, Higginson 1989, Márquez 1990, Muccio 1998, Juarez and Muccio, 1997
76 El Salvador	P	N	F	Cornelius 1982, Hasbún and Vásquez 1999
77 Honduras	P	N	F	Cornelius 1982, Minarik 1985, Lagueux 1989, Lagueux 1991
78 Nicaragua	P	N	F	Cornelius 1982, Martínez <i>et al.</i> 1998, Pritchard 1979
79 Costa Rica	P	N	F	Hughes and Richard 1974, Pritchard 1979
80 Panama	P	N	F	Cornelius 1982, Córdoba 2000, Pritchard 1979
81 Colombia	P	N	F	Amochocho <i>et al.</i> 1989, Martínez 2000, Pritchard 1979, Martínez and Paez 2000
82 Ecuador	P	N	F	Hurtado 1981, Green and Ortiz-Crespo 1982, Fritts 1981, Alava <i>et al.</i> 2007
83 Peru	P	N	F	Brown and Brown 1982
84 Chile	P			Brito 1994

1 = Possibly now extinct or no recent evidence of continued nesting

x ="no"