THE NATIONAL REPORT EL REPORTE NACIONAL

FOR THE COUNTRY OF POR EL PAIS DE

SAINT LUCIA SANTA LUCIA

NATIONAL REPRESENTATIVE / REPRESENTANTE NACIONAL

PETER A. MURRAY



Western Atlantic Turtle Symposium Simposio de Tortugas del Atlantico Occidental

17-22 July / Julio 1983 San José, Costa Rica St. Lucia National Report, WATS I Vol 3, pages 370-380



WESTERN ATLANTIC TURTLE SYMPOSIUM San José, Costa Rica, July 1983

NATIONAL REPORT FOR THE COUNTRY OF

ST. LUCIA

NATIONAL REPORT PRESENTED BY

Peter Murray The National Representative

Address: <u>c/o Fisheries Management Unit</u> <u>Ministry of Agriculture, Lands and Fisheries</u> <u>& Cooperatives</u> <u>Castries, St. Lucia</u>

NATIONAL REPORT PREPARED BY

Peter Murray

DATE SUBMITTED: <u>11 November 1982</u>

Please submit this NATIONAL REPORT no later than 1 December1982 to:

IOC Assistant Secretary for IOCARIBE % UNDP, Apartado 4540 San José, Costa Rica

St. Lucia National Report, WATS I Vol 3, pages 370-380





With a grant from the U.S. National Marine Fisheries Service, WIDECAST has digitized the databases and proceedings of the **Western Atlantic Turtle Symposium (WATS)** with the hope that the revitalized documents might provide a useful historical context for contemporary sea turtle management and conservation efforts in the Western Atlantic Region.

With the stated objective of serving "as a starting point for the identification of critical areas where it will be necessary to concentrate all efforts in the future", the first Western Atlantic Turtle Symposium convened in Costa Rica (17-22 July 1983), and the second in Puerto Rico four years later (12-16 October 1987). WATS I featured National Reports from 43 political jurisdictions; 37 presented at WATS II.

WATS I opened with these words: "The talks which we started today have the multiple purpose of bringing our knowledge up to date about the biological peculiarities of the marine turtle populations of the western Atlantic; to know and analyse the scope of the National Reports prepared by the scientific and technical personnel of more than thirty nations of the region; to consider options for the orderly management of marine turtle populations; and in general to provide an adequate forum for the exchange of experiences among scientists, administrators, and individuals interested in making contributions for the preservation of this important natural resource."

A quarter-century has passed, and the results of these historic meetings have been lost to science and to a new generation of managers and conservationists. Their unique importance in providing baseline data remains unrecognized, and their potential as a "starting point" is neither known nor appreciated.

The proceedings document what was known at the time concerning the status and distribution of nesting and foraging habitat, population size and trend, mortality factors, official statistics on exploitation and trade, estimated incidental catch, employment dependent on turtles, mariculture operations, public and private institutions concerned with conservation and use, legal aspects (e.g. regulations, enforcement, protected areas), and active research projects. In most cases it was the first time a national sea turtle assessment had been conducted.

Despite the potential value of this information to agencies responsible for conducting stock assessments, monitoring recovery trends, and safeguarding critical habitat in the 21st century, the hand-written National Reports, largely illegible in the published proceedings, have slipped into obscurity. To help ensure the legacy of these symposia, we have digitized the entire proceedings, including the National Reports, plenary presentations and panels, and annotated bibliographies of both meetings, and posted them online at http://www.widecast.org/What/RegionalPrograms.html.

Each article has been scanned from the original document. Errors in the scan have been corrected; however, to be true to the original content (as closely as we can discern it), potential errors of content have not been corrected. This article should be cited:

Murray, P.A. 1984. <u>National Report for Saint Lucia</u>, pp.370-380. *In*: Bacon, P., F. Berry, K. Bjorndal, H. Hirth, L. Ogren and M. Weber (Editors), Proceedings of the First Western Atlantic Turtle Symposium, 17-22 July 1983, San José, Costa Rica. Volume III: The National Reports. RSMAS Printing, Miami.

Karen L. Eckert WIDECAST Executive Director June 2009

COUNTRY: ST. LUCIA

INTRODUCTION

Beginning May 14, 1982 a sea turtle study of St. Lucia was conducted. This study had to be spread over a five month period since it was not possible for the investigation to be carried out in a short intensive study. The purpose of this study was to obtain data to complete a national report of St. Lucia for the Western Atlantic Turtle Symposium (W.AT.S.) to be held in July 1983 in San Jose, Costa Rica.

The following guidelines were used to collect the data:

- 1. Conduct surveys of the marine shoreline of St. Lucia
 - a. Record all sign of sea turtle tracks and nests on nesting beaches to determine the extent of nesting activity.
 - b. Record the type of shoreline present-to record actual or potential sea turtle nesting beaches.
- 2. Compile all available data to determine the status of sea turtle populations.
- 3. Review present conservation and management programs in regard to sea turtles.
- 4. Determine socio-economic importance of sea turtles.
- 5. Make recommendations to help promote the survival status of sea turtle populations inhabiting the territorial waters of St. Lucia.

GENERAL GEOGRAPHIC DESCRIPTION OF ST. LUCIA

St. Lucia is a newly independent nation, comprising of the main island adjoined by four (4) islets: Pigeon Islet in the Northwest was recently joined to the mainland by a cause-way; Rat Island just Northwest of the capital city of Castries; and the two Maria Islets to the east of the southern most extremity of the island. St. Lucia is situated at latitude 13 N and longitude 61 W, just south of Martinique (one of the French West Indian Islands) and north of St. Vincent. St. Lucia has an area of 512.8 square kilometers.

The population of St. Lucia was estimated in 1980 at 120,300.

COASTLINE AND OFFSHORE AREAS

The coastline of St. Lucia is fairly varied, with roughly 29.9% of its length being cliffs and 11.5% being sand beaches. On the east coast can be found the moderate to high energy beaches. The vegetation varies greatly along the length of the east coast, from sea grapes and coconut trees, in some areas, to white cedar and shrubs in other areas. The beaches on the east coast tend to be reasonably long by West Indian standards, one being as long as 1.6 kilometers.

The sand appears to be mainly biogenic marine carbonate with a small terrigenous component. The sand ranges from fine grained to medium grained, on occasion one type being seen on either of two adjacent beaches. The colour ranges from light tan (mainly) to dark gray.

In addition to the long stretches of sandy beaches, the east (Windward) coast has areas of sheer rocky coastline. The major communities of mangrove on the island are to be observed on the east coast.

The West coastline of St. Lucia is much more rugged with mountains and hills that drop off straight into the sea. There are, however, a number of relatively short beaches made up of medium to coarse grained particles.

The offshore areas of St. Lucia are reasonably diverse. Unmapped grass beds can be found in water of one to two meters depth, comprised of a large extent of *Thalassia* and *Syringodium*.

The south-eastern coast of the island has the major fringing reef systems running from Saltibus point southwards to Moule-a-Chique. These reefs contain a reasonable diversity of marine flora and fauna, but are not as esthetically pleasing as the west coast patch reefs found close inshore in areas less than twenty-five meters from shore.

HISTORY OF SEA TURTLES IN ST. LUCIA

Sea turtles have been a significant factor in the diets of the inhabitants of coastal areas of St. Lucia. In fact some fishermen have been known to fish only for turtle during the open season (September to April). Green Turtle, Hawksbill, Leatherback and occasionally Loggerheads are captured. The Turtle industry of St. Lucia started circa 1937. Live Green Turtles were shipped to England and the U.S.A. up to 1941 after which time dried green turtle was shipped. Around 1949 green turtles began being imported from Aves Island and landed at Castries; this took place during the local closed season under special licence; up to three hundred turtles would be brought in. Some of this turtle meat was sold locally up to 1975. Turtle meat was being shipped from St. Lucia to Hamburg, Germany up to 1979 after being brought in from Aves. Presently turtle is imported from other islands and re-exported to Germany. Bebel (1974) quotes landing estimates for 1969 as being 17,046 kilograms of green turtle and 10,909 kilograms of hawksbill turtle. The closed season is in effect from 1st May to 31st August, but does not apply to animals taken outside territorial waters.

Turtles are caught in nets and when they come ashore to lay eggs, although this latter practice is illegal. The problem is however, that though the nesting females and their eggs are protected by law, there is no adequate means of enforcing the legislation. In addition, only hawksbill and green turtle are protected; the legislation does not include the leatherback sea turtles.

STATE OF KNOWLEDGE OF SEA TURTLES

Only as a result of this survey is a significant amount of knowledge coming to hand about the sea turtle population of St. Lucia. Prior to preparation for the W.A.T.S. there was in fact no attempt at a systematic study of these animals. What little is known comes from three main sources: fishermen's takes, incidental observations by local sport divers, and a survey conducted by Anne Meylan and Archie Carr in 1979.

Information from these three sources as well as the present survey indicates that there is significant nesting activity for the green, hawksbill and leatherback turtle on the island. Most of the crawls observed belong to leatherback sea turtles, and a few belong to hawksbill and green turtles. No crawls belonging to loggerheads were observed.

The more active turtle fishermen however have described sea turtles which appear to fit the description of loggerhead sea turtles.

Local fishermen and some professional dive tour leaders have given information which indicates a reasonably large population of juvenile green sea turtles present in the waters of the south western coast of the island. Though the magnitude of the population has not been verifies, staff members of the Fisheries Management Unit have sighted green turtles near patch reefs on the west coast of the island.

Recently the fisheries Management Unit bought five green sea turtles from a local fisherman ranging in weight from 7.3 kilograms to 15.2 kilograms (35.6 cm to 55.9 cm carapace length). These turtles, which had been caught on the east coast of the island, were tagged and released on a secluded beach further south. It is hoped that this beach would be imprinted on the turtles, and that at some subsequent time if not caught, they will return to that beach. This was the first recorded turtle tagging experiment carried out in St. Lucia to the best knowledge of this investigator.

One member of the Fisheries Management Unit has sighted a hawksbill hatchling in mid-October on an east coast beach entering the sea, indicating some hawksbill nesting activity on that coast.

Beach surveys on the east (Windward) coast of the island, have indicated a fair amount of leatherback turtle nesting; this has been known by the inhabitants of that part of the island for some time as shown by the number of leatherback carcasses found in Grand Anse Beach, which has a length of 1.60 kilometers and an average width of 53.2 meters.

In a period ranging from May 14, 1982 to June 16, 1982, seven leatherback carcasses were found as well as six crescent shaped sets of tracks (indicating successful nesting and escape) and one nest with the tracks to and from it washed away.

Interviews with fishermen suggest that the largest observations of Green and Hawksbill turtles have been made on the west coast of St. Lucia. It is not possible to state conclusively whether these turtles were foraging or basking. In one day in late August four green and one hawksbill were landed in the village of Canaries. It seems fairly certain that the nesting season for turtles in St. Lucia is from May to August each year, but there appears to be the distinct possibility that nesting may continue into mid-September.

Fishermen have indicated the numbers of sea turtles seen, and/or captured in 1982 showed a significant decrease relative to 1980 and a major decrease since relative to 1972. One interviewer suggests that circa 1962 leatherback sea turtles were the least abundant in St. Lucian waters and that nesting of green and hawksbill sea turtles may be at the same level but since there are less turtle fishermen in evidence, indications of these turtles' presence go more unnoticed.

METHODS

Due to temporal constraints, only two strategies were used to obtain information to prepare the national report for St. Lucia:

- 1. Beach survey of known nesting beaches and potential nesting beaches,
- 2. Conducting personal interviews with local fishermen.

It must be acknowledged that the investigation was aided by the volunteered assistance of members of the St. Lucia Naturalist society, particular note being made of Mr. Terry Cross who spent a number of hours of his spare time walking beaches and visiting beaches at night in the hope of seeing emergent turtles.

BEACH SURVEYS

Daytime visits were made to known turtle nesting beaches or beaches that were potential nesting beaches (identification of the latter was carried out using criteria indicated by Anne Meylan in a personal communication). These visits were all made by land and the observers walked the entire length of the beaches. In addition to recording nesting activity and other signs of turtle presence, the observers noted the nature of the sand (colour, grain size). This latter determination was perforce subjective, since the facilities and knowledge base were not available for objective analysis.

A number of night watches were staged by members of the fisheries Management Unit and volunteers from the Naturalists Society in the hope that sighting of turtle, coming to nest, would be made. On one occasion a two-shift, twenty-hour watch was carried out nine days after finding signs of a successful nesting which appeared to be no more than three days old. This particular watch however proved futile.

INTERVIEW WITH FISHERMEN AND LOCAL INHABITANTS

Six local fishermen and a number of other inhabitants of different areas were interviewed to gain information for this report. The general format found on pages 64-68 of the Sea Turtle Manual of Research and Conservation Techniques (June 1982) was followed, but not verbatim because of the necessity of dealing with two languages, English and Patois. Some interviews were carried out in the same days as a number of beach surveys.

RECOMMENDATIONS

Based on the findings of this survey, it is felt that the following recommendations would make a significant contribution to the survival of the sea turtles inhabiting the waters of St. Lucia.

- 1. The lobster, turtle and fish protection act number 13 of 1972 should be amended such that:
 - a. All species of sea turtles are protected.
 - b. The minimum legal weight for sea turtles becomes 13.608 kilograms (30 lbs.).
 - c. The closed season be from April through September.
- 2. There should be active enforcement of the above act.
- 3. St. Lucia should become a signatory to C.I.T.E.S.
- 4. The taking of sea turtles should be restricted except for local consumption, with a maximum allowable yearly weight for the country.
- 5. A more intensive study be made the population of turtles (by species) in St. Lucian waters and a tagging program be properly instituted.
- 6. Major nesting beaches should be declared natural marine sanctuaries for sea turtles and pedestrian traffic on the sanctuaries be restricted from April through September, as well as the renewal of sand.
- 7. A public education programme be developed to include all aspects of the society and to stress the need to manage the sea turtle population so that its continued survival can be guaranteed.

TABLE 1. GEOGRAPHIC INVENTORY				
Length of Coastline*	190.975 Km **			
Km ² of Continental Shelf Area				
Seaward Extent of Jurisdictions				
Territorial Sea	4.8 Km			
Extended Economic Zone				
Fisheries Jurisdiction	4.8 Km			
Other (Describe)				
 Coastline length is the measurement of distance from border to border for a coast 	the national seaward boundary of a country; i.e., the stal country and the distance around an island country.			

** See Editor's note (2009), Table 2

TABLE 2. COASTAL HABITAT INVENTORY OF MARINE SHORELINE

		Km of Shoreline	
Marine Shoreline Characteristics*	Undeveloped	Developed**	Total
1. Sand Beach (Total)			21.975
A. High Energy			
B. Low Energy			
2. Reef (exposed)			
3. Rocks			
4. Cliffs			57.075
5. Vegetation (Total)			
A. Vines			
B. Grasses			
C. Mangroves			
D. Coconut Trees			
E. Other Trees or Shrubs			
F. Marshes			
6. Mouths of Lagoons, Rivers, Canals			1.300
7. Total Shoreline			***80.350

* Refer to SEA TURTLE MANUAL (Aerial Survey)

** Human development or use (See MANUAL)

*** *Editor's note (2009):* Shoreline Total was corrected from values given in the original National Report to reflect accuracy in summed values. Original National Report listed Total Shoreline as 190.975 Km.

TABLE 3. NESTING BEACH INVENTORY

List beaches in geographic sequence. Provide additional information on following page.

Name of Beach	Length In Km	Species Nesting (use abbreviations)*	Months of Recorded Nesting
1. Grande Anse	1.60	D	May, June, July
2. Cariblue	0.21	E	August
3. Anse Ger	0.29	D	June
4. Anse Troumassee	0.12	D ?	June
5. Trou l'Oranger	0.09	Cm, E ?	June, July
6. Anse Micoud	0.71	E ?, D ?	June
7. Anse Chastanet	0.25	Cm, E	July
8. Dennery	0.37	E	July, August
9. Anse de Sables	2.41	Cm ?, E ?	?
10. Anse Commerette	0.19	Cm ?, E ?	May, June, July ?
11. Honeymoon		Cm, E	?
12. Fond d'Or	0.97	Cc ?, D ?, E ?	?
13. Anse Lapins	0.55	Cc ?, E ?	?
Species*	Abbreviation		
Caretta caretta	Cc		
Chelonia mydas	Cm		
Dermochelys coriacea	D		
Eretmochelys imbricata	E		
Lepidochelys kempi	Lk		
Lepidochelys olivacea	Lo		

TABLE 3A. NESTING BEACH INVENTORY (supplementary page)

Please give additional information about each nesting beach identified in Table 3. Include information on color of sand, particle size, beach profile, backbeach vegetation, artificial lighting, etc.

Beach	Sand Colour	Particle Size	Shape	Energy	Backbeach Vegetation	Artificial Light
Grande Anse*	White	M-F	*1/4	Н	Shrubs, coconuts	-
Cariblue	Light grey	M-C	1/24	L	Sparse due to hotel	+
Anse Ger	White	F	1/49	М	Shrubs	-
Anse Troumassee	White	С	1/57	Н	Shrubs, coconuts	-
Trou l'Oranger	White	K	1/5	L-M	Trees, shrubs	-
Anse Micoud	White & Grey	F	1/21	M-H	Cliff	-
Anse Chastanet	White	K	1/4	L	Hotel	+
Dennery	White	F-M	1/20	М	-	+
Anse de Sables	White	K	1/32	М	Shrubs	+
Anse Commerette	White	F	1/3	М	Shrub	-
Honeymoon	White	M-F	-	М	Mixed	-
Fond d'Or	White	M-F	1/50	M-H	Coconut estate, shrubs	-
Anse Lapins	White	F	1/3	L-M	-	-

* Grand Anse beach has an average width of 60 meters; nearest to the sea the beach has a very steep gradient for an average of 5 metres for the MHW line. This is the slope recorded above similarly for Anse Commerette.

TABLE 4.1. NESTING CENSUS FOR BEACH: Grande Anse

Table summarizes census data for each beach listed in Table 3. Tables numbered sequentially.

Species	Numbe	Dates of collection	
	Nest/Night (average)	Nest/Season (estimated)	
Caretta caretta			
Chelonia mydas			
Dermochelys coriacea	3	18	14 May; 16 June; 19 June; 29 June; 05 July; 13&14 July
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4.2. NESTING CENSUS FOR BEACH: Cariblue

Table summarizes census data for each beach listed in Table 3. Tables numbered sequentially.

Species	Numbe	Dates of collection	
	Nest/Night (average)	Nest/Season (estimated)	
Caretta caretta			
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata	1	3	31 July; 02 August
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4.3. NESTING CENSUS FOR BEACH: Anse Ger

Table summarizes census	s data for each beach listed	in Table 3. Tables numbered	l sequentially.
Species	Number	Dates of collection	
-	Nest/Night (average)	Nest/Season (estimated)	n
Caretta caretta			
Chelonia mydas			
Dermochelys coriacea	1	2	22 June
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4.4. NESTING CENSUS FOR BEACH: Anse Troumassee

Table summarizes census data for each beach listed in Table 3. Tables numbered sequentially.

Species	Number of Nests		Dates of collection
	Nest/Night (average)	Nest/Season (estimated)	
Caretta caretta			
Chelonia mydas			
Dermochelys coriacea	1	2	22 & 26 June
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4.5. NESTING CENSUS FOR BEACH: Trou L'oranger

Table summarizes census data for each beach listed in Table 3. Tables numbered sequentially.

Species	Number	of Nests	Dates of collection
	Nest/Night (average) Nest/Season (estimated)		
Caretta caretta			
Chelonia mydas	1	1	22 June
Dermochelys coriacea			
Eretmochelys imbricata	1	2	05 and 22 July
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4.6. NESTING CENSUS FOR BEACH: Anse Micoud

Table summarizes census data for each beach listed in Table 3. Tables numbered sequentially.

Species	Numbe	Dates of collection	
	Nest/Night (average)	Nest/Season (estimated)	
Caretta caretta			
Chelonia mydas	?	2	22 June
Dermochelys coriacea			
Eretmochelys imbricata	?	3	22 June
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4.7. NESTING CENSUS FOR BEACH: Anse Chastanet

Table summarizes census	s data for each beach listed	in Table 3. Tables numbered	l sequentially.
Species	Number	Dates of collection	
	Nest/Night (average)	Nest/Season (estimated)	
Caretta caretta			
Chelonia mydas	1	3	10 July
Dermochelys coriacea			
Eretmochelys imbricata	1	1	10 July
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4.8. NESTING CENSUS FOR BEACH: Dennery

Table summarizes census data for each beach listed in Table 3. Tables numbered sequentially.

Species	Number of Nests		Dates of collection
	Nest/Night (average)	Nest/Season (estimated)	
Caretta caretta			
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata	1	2	10 October
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4.9. NESTING CENSUS FOR BEACH: Anse De Sables									
Table summarizes census data for each beach listed in Table 3. Tables numbered sequentially.									
Species	Number	of Nests	Dates of collection						
	Nest/Night (average)	Nest/Season (estimated)							
Caretta caretta									
Chelonia mydas	?	?	07 July						
Dermochelys coriacea									
Eretmochelys imbricata	?	?	07 July						
Lepidochelys kempi									
Lepidochelys olivacea									
			·						

TABLE 4.10. NESTING CENSUS FOR BEACH: Anse Commerette

Table summarizes census data for each beach listed in Table 3. Tables numbered sequentially.

Species	Numbe	Dates of collection	
	Nest/Night (average)		
Caretta caretta			
Chelonia mydas	?	?	May, June 1982
Dermochelys coriacea			
Eretmochelys imbricata	?	?	May, June 1982
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4.11. NESTING CENSUS FOR BEACH: Honeymoon

Table summarizes census	s data for each beach listed	l in Table 3. Tables numbered	sequentially.
			· · ·
Species	Numbe	Dates of collection	
	Nest/Night (average)	Nest/Season (estimated)	
Caretta caretta			
Chelonia mydas	?	?	07 July, 1982
Dermochelys coriacea			
Eretmochelys imbricata	?	?	07 July, 1982
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4.12. NESTING CENSUS FOR BEACH: Fond D'or

Table summarizes census data for each beach listed in Table 3. Tables numbered sequentially.

Species	Numbe	Dates of collection						
	Nest/Night (average)	Nest/Night (average) Nest/Season (estimated)						
Caretta caretta	?	?	June 1972					
Chelonia mydas								
Dermochelys coriacea	?	?	June 1972					
Eretmochelys imbricata	?	?	June 1972					
Lepidochelys kempi								
Lepidochelys olivacea								

TABLE 4.13. NESTING CENSUS FOR BEACH: Anse Lapins

Table summarizes census data for each beach listed in Table 3. Tables numbered sequentially.

Species	Number	Dates of collection						
-	Nest/Night (average)	Nest/Night (average) Nest/Season (estimated)						
Caretta caretta	?	?	June 1982					
Chelonia mydas								
Dermochelys coriacea								
Eretmochelys imbricata	?	?	June 1982					
Lepidochelys kempi								
Lepidochelys olivacea								

TABLE 5. AERIAL BEACH SURVEY SUMMARY

Give any additional information available from aerial surveys. Information should include ground truth observation if conducted.

Date	Beaches Surveyed	Numbers of Nesting Tracks										
		Сс	Cm	D	E	Lk	Lo	No ID				
14 May 1982	Anse Commerette, Anse Lapins, Grande Anse			2								
16 May 1982	Grande Anse			5								
19 May 1982	Grande Anse			1								
22 June 1982	Anse Ger, Anse Micoud, Anse Troumassee											

05 July 1982	Grande Anse		2			
13 July 1982	Grande Anse					
19 July 1982	Anse de Sables					
22 July 1982	Trou l'Oranger			1		

Species	Abbreviation
Caretta caretta	Сс
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	10

TABLE 5. AERIAL BEACH SURVEY SUMMARY (supplementary page)

Give any additional information available from aerial surveys. Information should include ground truth observation if conducted.

Note: Aerial surveys were not carried out. All information obtained for nesting beaches were from ground observations and interviews.

14 May 1982 Grande Anse: in addition to 2 tracks, 4 carcasses of leatherbacks were found.

16 June 1982 <u>Grande Anse</u>: 3 new carcasses were found in addition to the 5 new sets of nesting tracks.

TABLE 6. ESTIMATED POPULATION SIZE OF NESTING FEMALES

Summarize the estimated number of nesting females for the years indicated and describe methods of estimation on the next page.

Species	Year									
	1982	1981	1980	1979	1978	1977				
Caretta caretta	2									
Chelonia mydas	6									
Dermochelys coriacea	22									
Eretmochelys imbricata	11									
Lepidochelys kempi										
Lepidochelys olivacea										

TABLE 6 ESTIMATED POPULATION OF NESTING FEMALES (supplementary page)

Please give brief details on methods of estimation for Table 6. .

Estimates for Table 6 obtained by adding estimated numbers of nests per season per beach for all the beaches considered in Tables 4.1 to 4.13, inclusive, and assuming that each nest represents one different female.

TABLE 7. FORAGING AREAS INVENTORY

Name of Area	Ар	prox. Area	Species Foraging	Nature of Evidence
(or give coordinates)		(Km²)	(use abbreviations &	(observation, fishery, incidental
			approx. numbers)	catch)
1. Anse Chastanet			Cm 30; E 10	Observation; incidental catch
2. Cicerion			Cm 30; E 10	Observation
3. Maria Islands/ V.F.			Cm 10; E 5	Observation; incidental catch
4. Dennery			Cm 5	Fishery
Species		Abbreviatio	n	
Caretta caretta		Сс		
Chelonia mydas		Cm		
Dermochelys coriacea		D		
Eretmochelys imbricata		E		
Lepidochelys kempi		Lk		
Lepidochelys olivacea		Lo		

TABLE 8.1 TURTLE SPECIES PRESENT ON FORAGING AREAS: Anse Chastanet

Please complete one of these tables for each of the areas identified in Table 7. Number each table as enumerated in Table 7 (7-1, 7-2, etc.).

Species	Month								Months of				
													Greatest Activity
	J	F	Μ	Α	Μ	J	J	Α	S	0	Ν	D	
Caretta caretta													
Chelonia mydas						Х			Х				September
Dermochelys coriacea													
Eretmochelys imbricata						Х			Х				September
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 8.2 TURTLE SPECIES PRESENT ON FORAGING AREAS: Cicerion

Please complete one of these tables for each of the areas identified in Table 7. Number each table as enumerated in Table 7 (7-1, 7-2, etc.).

Species	Month										Months of Greatest Activity		
									-	-			0.00.000.000.000
	J	F	M	A	M	J	J	A	S	0	N	D	
Caretta caretta													
Chelonia mydas										Х			?
Dermochelys coriacea													
Eretmochelys imbricata													
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 8.3 TURTLE SPECIES PRESENT ON FORAGING AREAS: Maria Island

Please complete one of these tables for each of the areas identified in Table 7. Number each table as enumerated in Table 7 (7-1, 7-2, etc.).

Species						Мо	nth						Months of Greatest Activity
	J	F	Μ	Α	Μ	J	J	Α	S	0	Ν	D	
Caretta caretta													
Chelonia mydas						Х			Х				?
Dermochelys coriacea													
Eretmochelys imbricata						Х			Х				?
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 8.4 TURTLE SPECIES PRESENT ON FORAGING AREAS: Dennery

Please complete one of these tables for each of the areas identified in Table 7. Number each table as enumerated in Table 7 (7-1, 7-2, etc.).

					Мо	nth						Months of
												Greatest Activity
J	F	Μ	А	Μ	J	J	Α	S	0	Ν	D	
									Х			?
	J	J F 	J F M 	J F M A	J F M A M	J F M A M J J F M A M J I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I	J F M A M J J J F M A M J J I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I	Month J F M A M J J A J F M A M J J A J F M A M J J A J F M A M J J A J F M A M J J A J F M A M J J A J F F M A M J J A J F F M A M J J A J F F M A M J J A J F F M J I	Month J F M A M J J A S J F M A M J J A S J F M A M J J A S J F M A M J J A S J F M A M J J A S J I I I I I I I I I J I	Month J F M A M J J A S O I I I I I I S O I I I I I I S O I I I I I I I I I I I I I I I I I I I I <t< td=""><td>Month J F M A M J J A S O N I I I I I I I I I N I</td></t<> <td>Month J F M A M J J A S O N D a a a M J J A S O N D a a a a a a a S O N D a a a a a a a a a a a a</td>	Month J F M A M J J A S O N I I I I I I I I I N I	Month J F M A M J J A S O N D a a a M J J A S O N D a a a a a a a S O N D a a a a a a a a a a a a

TABLE 10. NATURAL MORTALITY

Life Stage Unit	Spe	cies (abbrev.)*	Causes**	Extent of Mortality (%
	- 1 -	,		of Linit)
	~		Deve have been determined	70
Nests/eggs	C	C, CM, D, E	Dogs, human intervention, pigs	70
Hatchlings	Cc,	Cm, D*** , E	Unknown	?
Juveniles		Unknown	Unknown	
Adults (in water)	С	c, Cm, D, E	Human intervention (fishing or	25 - 40
· · · · ·			incidental catch)	
Nesting females	С	c, Cm, D, E	Human intervention	50
Species*		Abbreviation		
Caretta caretta		Cc		
Chelonia mydas		Cm		
Dermochelys coriacea		D		
Eretmochelys imbricate	а	E		
Lepidochelys kempi		Lk		
Lepidochelys olivacea		Lo		

** Natural mortality causes may include: Beach erosion of nests; egg and/or nestling predation by crabs, wild animals, seabirds, etc.; disease; sharks and other predators at sea, etc.

*** *Editor's note (2009):* In the original National Report this item was coded "C"; the Editor assumed a coding error and changed it to "D" based on the species codes available and other table entries.

TABLE 10A. NATURAL MORTALITY (supplementary page for additional biological data)

Please report below, and on additional pages, if necessary, additional data obtained or available such as measurements (length, width, weight) of adult females, adult males, hatchlings, numbers of eggs per nest, hours of nesting, hours and conditions of hatchlings, etc.

otal length (m)	Carapace length	Width (m)	Weight	Width of track (m)	Sex
Dermochelys o	coriacea	I I			
1.38	*	0.85	*	**	F
1.45	*	0.80	*	**	F
**	**	**	**	1.5	F
**	1.48	N.C.	*	**	F
**	1.3	0.80	*	**	F
1.85	1.5	0.85	*	**	F
**	**	**	**	1.7	F
**	**	**	**	1.5	F
1.70	1.4	0.85	*	**	F
1.65	1.45	0.65	*	**	F
**	**	**	*	1.76	F
Chelonia myda	as	11			
*	0.43	*	9.53	*	*
*	0.36	*	9.48	*	*
*	0.56	*	15.20	*	*
*	0.48	*	11.34	*	*
*	0.48	*	11.34	*	*

Below are data on carcasses, tracks and live turtles observed.

TABLE 11. LANDING SITES FOR TURTLES AND TURTLE PRODUCTS

Name of Port or Site	Species Landed (use abbrev)	Fishing Gear Used	Months of Landings	Numbers & Weights (estimate)
1. Castries	Cm	"Turtle net"	September	5
2. Canaries	Cm, E	Net	September	4; 1
3. Vieux Fort	Cm	Net	September, November	4
Species	Abbreviation			
Caretta caretta	Cc			
Chelonia mydas	Cm			
Dermochelys coriacea	D			
Eretmochelys imbricata	E			
Lepidochelys kempi	Lk			
Lepidochelys olivacea	Lo			

TABLE 18. PUBLIC AND PRIVATE INSTITUTIONS CONCERNED WITH TURTLE CONSERVATION / MANAGEMENT / UTILIZATION

Institution or Organization Name And Address	No. of Active Members	Activities in Progress
Fisheries Management Unit Ministry of Agriculture, Lands, Fisheries and Co-Operatives Saint Lucia	10	WATS, Turtle Survey
Saint Lucia Naturalists Society Castries Saint Lucia		Aid Fisheries Management unit with WATS Survey

TABLE 20. REGULATORY AUTHORITY

Indicate all entities with statutory responsibilities (e.g., Fisheries Departments and Ministries, Police, Coast Guard, etc.)

Name and Address of Organization	Budget Allocation to Turtles	No. of Staff Assigned to Turtles	Comments on Levels of Enforcement
Fisheries Management Unit Ministry of Agriculture, Lands, Fisheries and Co-Operatives Saint Lucia	Nil	1	Manpower not available for proper enforcement
Royal Saint Lucia Police Force Saint Lucia	Nil	Nil	

TABLE 20A. REGULATORY AUTHORITY (supplementary page)

Please list National, regional, and local legislation concerning turtle management and conservation. List title, date, and stated purpose.

Fish, Lobster and turtle Protection Act No. 13 of 1971.

TABLE 21. NATIONAL RI List turtle research activitie	ESEARCH PRO	DJECTS your counti	y.
Project Title	Dat	e	Name and Address of Institution & Chief
	Start	End	Investigator
WATS Turtle Survey	May 1982	Ongoing	Peter A. Murray Fisheries Management Unit, Ministry of Agriculture, Lands, Fisheries and Co-Operatives Saint Lucia



INTRODUCTION

Reginning May 14, 1952; a sea furthe study of St. Lunic was conducted. This study had to be spread over a five month period annow it was not possible for the investigation to be carried out in a abort intensive study. The purpose of this study was to obtain data to complete a national report of St. Lucis for the Mattern Atlantic Tu-the Symponium (Mai.T.S.) to be bell in July 1913 in the Jobe, Oncie Rues.

The following guidelines were used to collect the data:

- to Conduct surveys of the marine shoreline of St. Incis.
 - Becord all sign of sea surile tracks and meste on mesting beaches to determine the axiant of mesting activity.
 - b. Record the types of shoreline present to record actual or potential sea turble meeting beaches.
- Compile all svailable data to determine the status of sea turtle populations.
- Noview present conservation and management programs in regard to mee turtles.
- 4. Determine socio-economic importance of mea turtles.
- Kabs recommendations to help promote the murvival status of maturble populations inhabiting the territorial unters of St. Lucia.

OLINAL GEOTEPASIC MISCHIPTIC: CF ST. LUCIA

St. Lucia is a newly independent mation, comprising of the main island adjuined by four (4) islats, Pigeon Island just Horthmest was recently joined to the mainland by a sause-way. But Island just Horthmest of the capital city of Castrics and the two Maris Islats to the sant of the Southern most extremity of the island. St. Lanis is situated at lattitude 13K and long-tude 61%, just south of Martinique (one of the Prench What Indian Islands) and Worth of Mt. Timemit. St. Lasis has an area of 517.8 square kilemeters.

The population of St. Lenis was estimated in 1960 at 120300.

to fish may for turtle during the open season (September to April). Green Partle, Hanksbill, leatherback and scoasismally some Logerteeds are explored. The turtle industry of St. Incis started <u>citra 1917</u>. Live Green Turtles were shipped to England and the U.S.A. up to 1941 after which time dried green turtle was shipped. Around 1949 green turtles begue being imported from dress loland and landed at Castrien; this took place during the leased season under special licence; up to three handred turtles unld be brought in. Same of this turtle meat was sold leagly up to 1975. Turtle was being shipped from St. Lacia to Hashurg, Germany up to 1975 after being throught in from Ste. Presently turtle is imported from other islands and to Greany. Babel (1974) quotes landing estimates for 19-9 as being 17046 kilograms of green turtle and 10909 kilograms of hawksbill turtle. The closed essem is in effect from its Kay to 31st August, but dees not apply to minute turtle terristorial waters.

Turtles are sample in note and when they come ashors to bay eggs, although this latter practice is illegal. The problem is however, that though the sesting females and their eggs are protected by law, there is no adequate means of enforcing the legislation. In addition only hashabili and grown turtle are projected, the legislation does not include leatherback sea turtles.

STATUS OF THE EXCLEDED OF SA TURTLES

Only as a result of this survey is a significant mount of knowledge owing to hand about the sea turtle populations of Bt. Lucia. Frier to preparation for the M.A.T.S. there was infact so attempt at a systematic study of these minals. Whi little is known comes from three main sources, fic symm's takes, incidental observations by local sport divers and a survey comfucted by some Neylam and Archie Carr in 1979.

Information from these three sources as well as the present survey indicates that there is a significant neuting activity for the green, haddshill and leatherback turtle on the island. How of the crushs observed belonged to leatherback as turtles, and a few belonged to handshill and green turtles. No scattle belonging to laggerheads were emerved.

The more active turtle fisherses however have described sea turtles which appear to fit the description of loggerbeat sea turtles.

COARTINEL AND OFPORTO ANIAS

The coastline of St. Lucia is fairly varied, with roughly 29.5% of its langth being oliffs and 11.5% being sund beaches. On the east coast own he found the mederate to high emergy beaches. The vegetation varies greatly along the length of the east coast, from sea grapes and concout trees, in some areas, to white order and shrubs in other areas. The beaches on the sust coast tend to be reastably low; by dust indicat standards on the basis coast tend to be reastably low; by dust indicat standards on the sust coast tend to be reastably low; by dust indicat stan-

The and appears to be mainly biogenic marine carbonate with a small terrigenous component. The used ranges free fine grained to mediar grained, an eccasion due type being mean on either of two adjacent beaches. The colour ranges from light ten (mainly) to dark gray.

In addition to the long stretches of sandy beach, the east (windward) sount has areas of sheer rocky constline. The major communities of mangrove on the island are to be observed on the east coast.

The Mest constline of Si. Lucis is much more rugged with mourtains and bills that drop off straight into the sea. There are however a number or relatively short sandy beaches, made up of medium to source grained particles.

The offshore areas of \$1. Lucia are resonably diverse. Unsayed grass bods can be found in unter of one to two meters depth, comprised of a large extent <u>Thelessis</u> and <u>Myriogedium</u>.

The south-eastern seart of the island has the anjor finging rest system: running from Saltibus Peint southwards to Houle-so-Chique. These rests comtain a reasonable diversity of marine florm and fourn, but are not as estimtically pleasing as the uses coast patch rests found alose inshore in areas less than tunity-five marine from shore.

LISTRC: OF SLA TURTLES IF ST. LUCIA

Bon Turblos have been a significant factor in the dists of the inhubitants of seastal areas of St. Incis. In fact sume figurates have been incus

Local fishermon and mane professional dive tour leaders have given information which indicates a reasonably large population of juvenile green sea turtles present in the unters of the south vectors coast of the island. Though the magnitude of the population has not been verified, staff embers of the Pisheries Management Unit have sighted green turtles near patch reefs on the vect scent of the island.

momnthy the Pinkeries Hanagement that boucht five group sea turtlet from a local ficherman ranging in weight from 7.5 kilogram to 15.2 kilogram (35.6 on to 55.9 on separate length). These turtles, which had been canjit on the vast court of the island, were tagged and released an a socluded beach further mouth. It is heped that this beach would be imprinted on the further, and that at some subsequent time if not cought, they will return to that beach. This must the first recorded turtle tagging experiment carried out in 5t. Lucia to the best involving of this investigator.

One manher of the Finherics Management Unit has mighted a hashebill hatchling in mid Outober an an east coast beach entering the sea, indicating even hashebill acting activity on that coast.

Bash surveys on the part (Mindemed) each of the inland, have indicated a fair mount of leatherback turble marking; this has been known by the inhebitants of that part of the island for some time as shown by the number of leatherback correspond found in Grand does Beach, which has a length of 1.60 klicenters and an average width of 53.2 corres.

In a period renging from May 14, 1982, to June 16, 7962, seven leatherbook caroneses usue found as well as aix creacent shaped sets of trucks (indicating successful secting and decays) and one next with the trucks to out from it unabed many.

Interview with finherman suggest that the largest observations of from and Eastabill turtles have been made on the unst court of it. Lucia. It is not possible to state conclusively whether these turtles user foreging to banking. It one day is into impurt four great and one hashabill wave landed in the village of Camarica.

It come fairly cortain that the meeting senses for Auriles in St. Jacia

is from May to August each year, but there appears to be the distinct possibility that mesting may continue into mid-deptember.

Finherman have indicated that the numbers of sea turtles seen, end/or saptured in 1982 shows a significant decrease relative to 1980 and a major decrease relative to 1972. One interviews suggests that <u>circs</u> 1962 leatherhard ses turtles were the least abundant in St. Jacoism waters and that mestings of green and hasksbill sea turtles may be at the assor level but minor there are less turtle finherman in evidence, indications of these turtles pressure go more unnoticed.

1.1.105

Due to temporal constraints, only two strategies were used for obtaining information to propage the national report for St. Luciat

- to Beach surveys of known mesting beaches and potential mesting beaches,
- 2. Conducting personal interviews with local figurement.

It must be anknowledge that the investigation was added by the voluntered assistance of members of the St. Iucia Naturalists Society, particular note being made of Mr. Herry Gross who spent a number of hours of his spare time making beaches and visiting beaches at night in the keps of seeing energy, turtles,

ELCH STRUTS

Baytime visits were made to known turtle nesting beaches or beacher wh. ph were potential meeting beaches (identification of the latter was carried out using criteria indicated by Anne Keyler in a personal communication). These visits were all made by land and the observers walked the matire largeh of the beaches. In addition to recording meeting activity and other might of turtle presence, the observers moted the mature of the send (colour, grain mise): this latter determination was performe subjective, minor the familities and knowledge base was not available for objective scalymin. A number of "hight matches" user stared by markers of the Pinheriec Hanagement Unit and volunteers from the Haturalists Society in the hope that eighting of furthes, coming to nest, would be made. On one operation a twomhift, twenty hour which was carried out mine days after finding signs of a successful menting which appeared to be as more that three days old. This particular much housver proved futile.

Interview with Pishermer and local inhabitarie

Hir local fisherman and a number of other inhabitants of different areas were interviewed to gain information for this report. The general formet found on papes 64 ~ 65 of the Sea Turtle Manual of Messarch and Conversation Technique (June 1957) was followed, but not vertain because of the necessity of dealing with two languages, English and Patois. Some interviews were carried out in the same days as a purber of the beach surveys.

BECHICEROATIONS

Based on the findings of this survey, it is felt that the following recommendations would make a significant contribution to the survival of the sea turtles inhabiting the waters of St. Aucia.

- The lobster, burtle and fish protection not number 13 of 1972 should be anomaded much that:
 - a. All species of sea turiles are protected.
 - The minimum legal weight for sea turtles becomes 13.602 Eilegram (30 lbs).
 - c. The plosed season be from April through September.
- 2. There should be active enforcement of the above act.
- 3. St. Incia should become a signatory to C.I.T.L.S.
- The taking of ees turtles should be restricted except for local consumption, with a megimum allowable yearly weight for the country.
- 5. A more intensive study be made of the population of furtles (by species) in St. Lucian waters and a tagging program be properly instituted.
- 6. Najor masting beaches should be declared natural marine manctuaries

Count	y	
Langt	of Constitue" 199+275	6
te ² o	Continental Shelf Area	
500-10	d Extent of Jurisdictions:	
T	rritoria) Sea	
E	tanded Economic Zone	
F	sheries Jurisdiction	P
0	her (Describe) K	

TABLE 1. GEOGRAPHIC INVENTORY

 Coastline length is the measurement of the matianal semmard boundary of a country; i.e., the distance from border to border for a coastal country and the distance pround on island country.

for sea tubiles and pedestrian traffic at the sanctuaries be restricted from April through September, as well as the remeval of mend.

Programmet.
7. A public education, be developed to include all expects of the society and to stress the need to manage the sea turble population on that its continued survival can be guaranteed.

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TI AND	INE CHANCIENTS		evene a	×+AELOPED++	TOTAL		SPECIES REFINE	
1. Sent Jeach [Total)					21.975			
A. Righ Energy			;	I			a	The town the
L. Lee Energy						2. Caritèles 0.21		
2. Neer (supered)	4		I			3. Attendiar	A	
3. links							(e) F	1
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			i			7. 11 Surter:	ji j	-1w1
C. Hunterin	i			:				
8. Coconet Trees				!	-	6. Dennery 0.37	, iii	July_August
E. Other Tress or Sirely				:		9. Amase de Sables 7.41	Gn(7)1 T(1)	•
F. Nurshee				1			(a), n(a)	
6. Nuiths of Jopsons, rivers,	, comis			;	8	10, Ante Correctia n.19	Car(7); 15(7)	Rys June July (1)
7. Total Sucretine					-410-061	thate 3. Nesting beach inventory		Species Morrelations:
TABLE 2. CONSTR. MOLITAT IN	110M JO AVELLING	in succession of home de	SEA TURTL	e use (See) er use (See)	stal Servey) suulat)	List beches in goographic sources for the poor and the poor of the source for the source of the sour	mere. on fallouting page.	Chelgers gards Chelgers gards Cremochelge confices Cremochelge Confices Legidochelge gegen Legidochelge gigter Legidochelge gilferen
	T IIIII	SPECIES RESI'M				THALE 3. MESTING BEACH INFORTON (Supplementary page)	E	
	5	(014 BACKALOUSIA		4		Please give additional ten Table 3. Teclade 4 beech merije. becche	i tefermation about such s information en color of su ach vegetation, artificial	ssting beach identified al. particle size, lighting, etc.
	L L	m(s). c_(s). E(s)		•		Beach Mutho Colour Partic	cle State Shape Merry	Beck-beach Artificial Version 1.1
		m(1). E(1)	 	•		المعتمل المعتمل لتتوجرن	r %1/4 E	Bitrubs, Bocomute =
						Caribium Light Grey M - C	c 1/24 L	<pre>dperme due tc hotel +</pre>
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М.			$\frac{1}{2}$			র কাদির গ্রমায়না কার্য	1	

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Grand dree beach has an energy width of 60 metres seared to the each the brach has a reamp gradient for an average of 3 metres for the MES Names Thin it the sign recented above statisticfy for Amen Commercia.

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Spector Larvette Chelonia

TARLE 2. MESTIGE BEACH INVERTORY Litt banches in geographic sequence. Provide additional information on fellening maps.

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	NUMBER 0	I RESTS	
54C0165	Neets/Might (Average)	Nests/Season (Estimated)	DATES OF DATA COLLECTION
Carretta caratta			
Challenis gydes			
<u>Dermachelyn</u> c arleon	6	\$	14th Mar 10th June 1 29th Junes 5th July 19th Junes 13th & 14th July
Evelopedial tehritata			
Les idectedas hamf			
Levientin elimon			

THULE 4 - __ MESTING CENSUS FOR BLOCH CRAME AND (1977) (1994)

Places complete and these tailes to sementiv consis Ato for and beach tisted in Table J. Number tailes sequentially (a.1, 4.2, 4.3, etc.) as memorized in Table J.

	H3BH/H	JF NESTS	
SPECIUS	Nes ts/Night (Average)	Nests/Saeson (Estimated)	DATES OF DATA COLLECTION
Caretta carette			
Chelenia nydat			
Dermachelys curlaces	•		
Erstmechnigs federicate			
teridechalge hemet			
Levidectelys elfraces			

TABLE 4 - ___ ACSTING CENSUS FOR DEACH _____ATSK. (27) (Acros) _____(Acros)

Please complete one of these tables to sommerize connes data for each back litted in Table 1, manner tables sequentially (41, 42, 41, 411, 411, an enumerated in Table 3.

SPECIES	lests/Night {Average}	Nes ts/Sarsan {Estimpoed}	DATES OF DATA COLLECTION
<u>Ceretta ceretta</u>			
Distants sydes			
bernacha tra confacaa			
interdedys tetricate	+	n	list July and August
LeptdocheTys hamp!			
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TABLE 4 - 2. NESTING CENSUS FON BEACH SARTHERE

(averu)

Mease complete one of these tables to summerize consus data for each back listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as annumerated in Table 3.

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	NUMER C	DE MESTS	
346115	Nests/Nitght (Average)	Hes ts/Season (Estimated)	DATES OF BATA COLLECTION
Gentla caratta			
Culture andre			
Correctie In confected]	June 723 26
much is thriat			
(selectuly tenel			
Leviedair stirece			

TAXLE 4 - 👃 MESTING CENSUS FOR PEACH

Places complete one of these tables to summerize consus data for each back listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as ensurrated in Table 3.

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SPECIES	lasts/Night (Average)	Nests/Seesen (Estimated)	ARTES OF DATA COLLECTION
Cerrita cerrita			
Chelmis artes		•	July 22
Dynactelin, carlesa			
Eretmela terlerte	-	~	July 5, July 22
Lastachin terri	1		
Lapidachelys el insces			

TALE 4 - 5 RESTING CONSUS FOR MEADIN THEN LUCILITIE

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Places complete one of these tables to summerize consex data for each based to table 3. Number tables second(s)/y (4-1, 4-2, 4-3, etc.) as connerted in Table 3.

	NUMBER OF	# #ESTS	
SPECIES	Nests/Night (Average)	Ney ts/Season (Estimated)	DATES OF DATA COLLECTION
Centte centte		•	
Deleris grins	+	~	July 10
Dermacheilte cerfecen		1	
Ertudelin, Maricita	-	-	of the
Lestechtin kest		· · · · · · · · · · · · · · ·	
Lastdeteins allinees			

THALE 4 = T MESTING CENSUS FOR BEACH JACK CHARTERS

Piezes complete and of these tailst is summerine conses duty for each beech listed in Tails J. Runner tailst sessentially (41, 4-2, 4-3, 45c.) as exemuted in Tails J.

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		AF AESTS	
SMECTES	Nests/Hight (Average)	Nests/Seatm [[stimated]	MARES OF DATA COLLECTION
Contta contta			
Chalanta mydes	•	6N	Jean 22
Bermachelys carfectes			
Eretwochelys tabricate	•	n	June 72
Legidochelys kempi	;		
Leptenchalys alivaces			

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TARLE 4 - 6 MESTING CITERES FOR BEACH ANSW MICCUS

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Please complete and of these tablet to summarize crows data for each beach littled in Imple 3. Number tablet sequentially (4.1, 4.2, 4.3, etc.) as enumerated in Fable 3.

	1 U3BdW	NF MESTS	
\$ PECIES	Nasts/Hight (Average)	Mests/Seeton {[st]mated]	DATES OF DATA COLLECTION
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Colorig grits			
Dermochetys certaces			
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THULE 4 - 8 MESTING CENSUS FON BEACH HANDLET (neve)

Plasse complete one of these tables to summerize contes data for each workh listed in Table 3. Number tables sementially (4-1, 4-2, 4-3, air.) as numerated in Table 3.

	Municity (OF NESTS	
SPTCIES	kests/kight {Average]	Nests/Season (Estimated)	BATES OF DATA COLLECTION
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Chelants meter	•		July 7
Dermechalys confeces			
Entracted rs Maricete	•	•	
Lauldschitz hart			
Laydechalys of Insen			

ATTE DE CANUES THALE 4 - 9. MESTING CITERS FOR ADACK

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Please complete and of these tables to summarize consus data for each sound listed in Table 3. Andrea tables secondularly (4.1, 4.2, 4.2, etc.) as converted in Table 3. This states indications that the informant we would to give definite dates of meeting or frequency but identified the species as meeting on that particular breach cafe tables 4 - 10to 4 - 1 inclusive.

PTCIES	Masts/Might (Average)	Nests/Sanson (Estimated)	DATES OF DATA COLLECTION
Centa centa	•	;	
Chelants meter	•	•	July 1, 1992
teractely corleces			
Entercholyn Martesta	•	, , , , , , , , , , , , , , , , , , ,	July, 7. 1982
Lesidechely: Lesid			
Letteralrs of traces			

IGNYERCE COACH thate 4 - 15 nesting census for beach Masse complete and af Wass tablet be summerine context data for each back fisted in Table 3. Number tables sequentially (41, 42, 43, etc.) as enumerated in Table 3.

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	130-M	JF HESTS	
SPECIES	Nests/Hight (Average)	Hests/Season (Estimated)	DATES OF DATA COLLECTION
Caretta caretta			
Cheltonie entes	6 -	•	ling, June 02
Dermochelys certeces			
Erstmethelys Morfesta	*-	•	Kay, Jane B2
Legidechelys hand			
Laptdechalty of fracts			

ADDE CONTRECTE TABLE 4 - TO RESTING CORUS FOR BEACH

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Please complete one of these tables to summerize conses data for each beech listed in Toble 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as munerated in Toble 3.

	139-M	OF NESTS	
JACIES	Nests/Night {Average}	Nests/Season (Estimated)	DATES OF DATA COLLECTION
Caretta caratta	4		June 82
Chellenis aprilis			
Dermechelys corlecee	••	•	Jare 82
Eretmechalm Interlecta	*	• •	Jane N2
Legislacheiter kempt			
Lesidechelys eliveon			

TABLE 4 + 12 MESTING CENSUS FON BEACH FICHD D'OR

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Please complete and of these tables to summarize consus data for each back litered to lable 3. Number tables secondially (41, 4-2, 4-3, etc.) as momented in Table 3.

.

	NUMBER C	of NESTS	
SPECIES	hests/9/ght (Average)	Nes ta/Seeson (Estimuted)	DATES OF DATA COLLECTION
Gertta gentu	•	•	Janto 82
Cheitente syste			
Remochalys conflocat			
Entracialm translate	•	•	5
Latitude Land		5 4 49.5 M MHHH	
Laptebolyz el incen			

Places complete and of theme tailer to summarize concess data for each bacch litered in Tole 3. Number tailes sequentially (4-1, 4-2, 4-2, etc.) as emerated in Table 3.

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		E M	BEACHES SURVEYED		3	8	•
Hesta/Season (Estimated)	DATES OF DATA COLLECTION	21./K/BB	inde Comercito, Ane Lapires, Grand Anna	I	j	1	~
•	Junto 82	\$475/2a	drawd Anse	,	ļ	1	h
		61/X/B	Organia Aluma 		l	i	÷.
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•	786 62	5/1/20	Grand. Anen	;	ļ	1	۲,
:		E1/1/24	Ormited Ahree	:	ļ	1	ł
		61/1/2:	Ante de Sabies	•	i		ł
		2/424	Trai I'Ormiger]	Ï
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HIPPIERS OF RESTORS TRACKS

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EACH SUMPER SUPPORT	r addittional information available from adviat	Information should include pround truth	tion If conducted.
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THALE S. NETLAL BEACH SUPPART (Samplementary MAGE)

Etw any additional information weallable from aeriel surveys. Isformation should include ground truth abservation if conducted.

derial durys was not carried out all information obtained for secting become we from ground observations and interviews. **Teres**

 $\delta z/y/z_{1}$ is drawn the addition to 2 tracks, 4 carcannes of leatherback wave found.

 $0_2/6/161$ Grand phases 3 new caronanses were found in addition to the 5 new sets of mesting tradin.

PECIES TON	otte carette	lenta <u>syden</u>	mechalys confacea	twochelys Interleate	laudielys kenut	Mechelys allvaces
2861	~	ve	2	ŧ		
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0961						
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8/61						
1977			- - -			

Figure 4. Estimated proventions of Meeting Fernify. Summarize the extinneted mathem of meeting fermine for the years findicated and describe methods of estimation for the meetinger.

TABLE 6. ESTIMATED POPULATIONS OF MESTIMS FEMALES. (Supplementary page)

Planse give brief details an appends of estimation for Table 6.

Markingkich for table 6 obtained by adding extremeted municers of nosts par-sension per basich for all the besches eccularized in tables d = 1.5 cc + 1.5tablestrey and assuming that each nest represents are different female.

RAME OF AREA (av give coordina tas)	10 Marsh Atta	SPECIES FRANCING (Use ambreviations A approx. numbers)	KATUNE OF EVINENCE (Observation, Tishery, Incloanta) catch)
1. Ann Chantant		01/II 105/MD	Obeerwations insidental outch
2. Montran		د/ع	Observati III
3. Marta Jalanda/Y.P.		5/3 lat/20	Compressions incidental estab
4. Bunnary		Se .	Pishery .
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ANDLE 7. FININGING ANELS IN	NVE AT NRT		Specifier Auberwicktions: Specifier Auberwicktions: Carefordie gender Rectorie geden
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 Precies Annual J	Consta consta Chelonie ordes	Barnoche (y) car faces	Erstmethelys Imbricate	Lepidochetys hanpt	Lepidocheirs oliveces	1781E 8 - 1 TURTLE SPECIES PI Please complete anumerated in Tab

COLLEGATE COLLEGATION

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	SPECIES ADMIN	Caretta caretta	Chelonia mydes	Demochelys contaces	Eretmochelys Imbricata	Lepidochelys kempi	Lepidochelys ollyaces	THATE & - T THATE SPECIES

These complete one of these tables for each of the areas identified in Table 7. Number sech table A enumerated in Table 7 (7-1, 7-2, etc.).

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	℃,€e,£,€o	Rewert into receition	yax

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NAME OF PORT IN SITE	SPECIES LANDEO Use abbrev)	FISHING GEAR USED	LANDING OF	umens 4 velours (Extimute
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TABLE T1. LANDING SLITES FOR TURTLES & TURTLE PRODUCTS

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ANTIVAL MONTALITY (Sepplementary page for additional biological data) THALE YO.

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Bernechellen Cortaon

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lable 20. REGULATORY AUTHODEST Indicate all emitties with statutory responsibilities (e.g., fisheries Departments and Ministeries, Police, Coast Gward, etc.)

MATCH TITLE SIMIT END	NAME & AUDRESS OF INSTITUTION & CHIEF INVESTIGATOR Prior & Murry, Planariae Management Duity Cliniatry of Arriculture, Landa, Planariae and Concernitives, St. Landa
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TABLE 21. WITINNAL RELEACH PRAJECTS List turtle Prevent activities funded within your country.

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NGTERVEEK ON ONCONTATION NOT AND ANYRESS	M. OF ACTIVE MCTIVE	ACTIVITIES IN PRODUCES
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THULE 14. FOULT AND PRIVATE INSTITUTIONS CONCERNED NOTA THATLE CONTERNATION/HUMICENENT/ATTILIZATION

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REBULATORY AUTHORITY (Supplementary mor) TIGUE ID.

Please Tist Mational, regional, and Tecal Tegislation concerning burile mukepenent and conservation. List tille, data, and stated burpose.

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