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FOR THE COUNTRY OF POR EL PAIS DE

# GRENADA

NATIONAL REPRESENTATIVE / REPRESENTANTE NACIONAL

JAMES FINLEY



Western Atlantic Turtle Symposium Simposio de Tortugas del Atlantico Occidental

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

#### NATIONAL REPORT FOR THE COUNTRY OF

## **GRENADA**

NATIONAL REPORT PRESENTED BY

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The National Representative

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Please submit this NATIONAL REPORT no later than 1 December 1982 to:

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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 <a href="http://www.widecast.org/What/RegionalPrograms.html">http://www.widecast.org/What/RegionalPrograms.html</a>.

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:

Finley, J. and P. Williams. 1984. <u>National Report for Grenada</u>, pp.184-196. *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: GRENADA**

#### INTRODUCTION

The Sea Turtle Socio-economic and Nesting Survey, Study of Grenada (including Isle de Ronde and Isle de Caille) began in March 1982 and continued until December 1982. It was an extensive rather than intensive survey. The purpose of this study was to collect information on and prepare a national report on Grenada for the Western Atlantic Turtle Symposium (W.A.T.S.) to be held in July 1983 in San José, Costa Rica. (For Grenada even after the report is submitted data collection will continue). The following objectives guided the study and indicate the scope of the investigation undertaken.

- (a) Record the type of shoreline about the island of Grenada. The purpose being to indicate the actual and potential sea turtle nesting beaches. This data will be valuable baseline work for subsequent studies, and also to document the kinds and amount of shoreline throughout the islands.
- (b) Record the areas that turtle sightings are frequently made by fishermen and other persons visiting the beaches; record data on concentrated and dispersed nesting locations.
- (c) Compile data of any kind that may indicate the status of sea turtle populations in Grenada.
- (d) Review the present conservation and management programs related to sea turtles.
- (e) Determine the socio-economic importance of sea turtles.
- (f) Make recommendations to help promote the survival status of sea turtle populations inhabiting the territorial waters of the Grenada group.

#### **BACKGROUND**

#### General Geographical description of Grenada Group:

Grenada is an independent English speaking east Caribbean State consisting of Grenada, Carriacou and Petit Martinique, Isle De Ronde and a number of small islets. It is the southern most island of the East Caribbean chain, lying between 12° and 13° north and 61° and 62° west (see map references).

The island group has a population of approximately 110,000 (1970 census). The citizens have very strong contacts with the sea and shoreline. The islands are volcanic in origin with evidence of sandstone and shale in many areas. For the main island of Grenada, there is substantial runoff, which together with other factors has generated much shoreline sand. Grenada is very much less of an oceanic island, than Barbados only about 100 miles away. The vegetation is tropical continental with certain varieties which reveal the dry season/rainy season character of the climate.

#### COASTLINE AND OFFSHORE AREAS

The coastline of the Grenada group is a pattern of sandy bays and rocky points. There is much more sandy shore than rock or cliff shoreline. Grenada is notably affected by the North East Trade Winds and hence the north and eastern shoreline experience high energy swells almost constantly. Hence the beaches to the Leeward side of the island have a moderately sloping beach profile and well vegetated 10 or 50 meters above the high tide mark.

The Windward beaches have gentler profiles in the high tide swash. However, in areas as characterized by Conference Bay, sand dunes spread along the profile of the beach up to 20 meters from the tide

mark. The shorter beaches occur in areas along the windward coast where the rocky points are frequent. Here the beaches are less rough.

On Grenada the colour of sand on beaches varies. Generally the leeside beaches have black sand probably due to the substantial run off from rivers. The white sand occurs in the beaches from Grand Mal to Point Saline. The windward beaches are generally white with the occasional admixture of white and black sand. Mangrove swamps occur in areas to the South East but sand, mud, beaches can be found at these locations.

Isle de Ronde, an island of about 1.5 square miles, has white sand to the south and black sand to the west. Isle de Caille, another 0.5 square mile island only 0.5 km away, has black and pervading the beaches.

The offshore areas of Grenada etc. consist of a submarine shelf of approximately 400 sq. miles of bottom varying from 0 to 20 fathoms. Most of this area consists of active and dead coral-line surfaces. Large expansion of sea grass beds and soft coral occur at various locations. References are given of known vegetation types, on map.

Since the 1940's various persons were concerned that the Sea Turtle maybe overfished in Grenada. This concern was generated from the observation made that the nest of the turtles were being over-exploited. A program was launched in the late 1950's to generate more recruitment. The principal and most visible threat to the turtle is that trammel nets which are set on the reefs, especially at times of nesting. The fishermen who engage in turtle fishing do not engage in turtle fishing exclusively. Another method of fishing is by spear-fishing.

Divers will shoot turtles while spear-fishing. Persons show strong preferences for various types of turtle. The hawksbill and green are the choice for meat but the loggerhead and leatherbacks are often rejected because of the "freshy" fat. The hawksbill and green turtles are also prized for their backs, however there is a marked preference for the hawksbill back.

By a survey conducted throughout the 1981 period, it is estimated that about 1,000 turtles are caught annually. Those turtles more than 50 pounds, the number is probably 300 with the remainder being juveniles.

There are more and more beaches that are becoming less and less secluded hence fishing pressure on eggs have been serious. The fishing pressure by divers is not serious but the threat of trammel nets is a serious one. Despite this, through personal observations and interviews of divers and net owners, juveniles are spotted at a rate of at least 4 - 6 or 7 a day on reefs.

#### STATUS OF KNOWLEDGE OF SEA TURTLES

No known objective or scientific observations have been made of Sea Turtle populations in Grenada. At Carriacou some work has apparently been done in the past.

The concerns of fisheries up to lately had been the responsibility of the Agriculture Ministry. Little serious action had been taken by way of conserving these species. Fisheries in Grenada is multispecies in nature and principally artisanal. Legislation was passed in 1957 in an effort to protect turtles, however since turtles can be landed on any beach on the island, it has been difficult to monitor or control the exploitation of these species. Hence knowledge of the present status of sea turtle populations is drawn from observations made by local trammel fishermen, divers and boys who hunt the turtle and their eggs.

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<sup>&</sup>lt;sup>1</sup> Editor's note (2009): In the original National Report, the word "past" appeared here.

The divers and fishermen reveal that although there are principal nestings at secluded beaches and on the offshore uninhabited islands, there were no concentrated nesting sites. The turtles observed making crawls and actual nestings were those of green and hawksbill turtles. Records were drawn from interviews with the three categories of turtle predators. Divers were the most helpful. A local diver in the southern part of Grenada observes green and hawksbill turtles frequently. He reports that out of nesting season juveniles of these species are observed feeding all along the grass beds which are prevalent in the area. There are many small secluded beaches in the area, he reports that whenever the turtles are found basking above the grass beds in the day time then be sure they will come in at night.

Leather-back turtles are the most infrequent and are most often seen out at sea by fishermen. The turtles fishermen report these are most frequent in the "rainy season" when the water is less salt. The loggerhead turtles have never been reported as nesting on beaches. The fishermen either catch them in dives or in the nets. Even when caught near shore they have not been found to have eggs. Only once did a fisherman report having seen eggs in a loggerhead female. Notably fishermen do not catch male loggerheads.

Through repeated interviews and probings the fishermen have indicated that only four types of turtles are observed in Grenada. These are green, hawksbill, loggerhead and leatherbacks. Reliable and keen divers have reported that turtles having the appearance of "flatback" are often caught on the offshore islands to the north of the Grenada islands. The fishermen have said they always call them a cousin to the green turtles.

To the north of the Grenada island where there are a number of offshore islands there are significant populations of turtles. Divers interviewed have indicated that hawksbill and green turtles concentrate in different areas depending on bottom type. He reports that the hawksbill feed on sponges and soft coral and occur principally along the London Bridge channel area. The green turtles which eat sea grass frequent the grass beds between the sister islands and further north of Isle De Ronde. The leatherback though not very frequent around the island makes a favourite nesting site on the Levera Beach in rainy season June -July. Only the females of leatherbacks are observed.

In the southern offshore area of Grenada, green and hawksbills are prevalent. Green turtles are especially prevalent around Hog Island where there are extensive areas of sea grass beds. Two fishermen reported that green turtles lay when larger than 80 lbs and hawksbills lay when larger 50/60. However, one reported that he had observed eggs in a 30/lb hawksbill turtle. They also reported that hawksbills are quite predictable since they lay in 15 days cycles several times in a season and according to the moon. When fresh tracks are observed, the fishermen know when to return for the subsequent crawl. They report also that hawksbills lay furthest up the beach even under bushes in the highest sand.

Fishermen report that April, May is the principal mating time when the turtles are seen chasing each other and even disregarding divers. On the southern portion of Grenada, a diver reports that October, November and December are the prevalent feeding time for the hawksbill turtles.

Another-seine net fishermen diver reports that juveniles are prevalent feeding on the seaweed (moss) in the early part of the year when the mosses are blooming. N.B. On the leeward side of the Grenada island, where seine net fishing is practiced, turtle nestings are rare and although occasionally nets draw in small juveniles, the turtles are not frequent in this area

#### **METHODS**

With limited time and resources available for such a survey in Grenada, the nature of the research was very narrow. The study involved:

a. Visits to most beaches which were actual and potential nesting sites of turtles;

- b. Researching government records of turtle management and most important interviews and discussion with turtles fishermen, local men, and divers;
- c. Observations of catches of turtles brought at the landing sites.

The ordinance survey map was used extensively for back up studies on the location for beaches in perspective. These maps were also used for translating data collected in the field to the smaller scale maps.

#### **RECOMMENDATIONS**

The findings of the survey were limited but yielded much valuable information on the status of the sea turtles about Grenada. The following recommendations should be considered:

- 1. Expend much effort in enforcing the regulations for protection of the turtles in the closed season.
- 2. Mount a campaign against the use of nets on reefs during the closed season.
- 3. Establish the presently secluded beaches of the out islands as sanctuaries for nesting turtles.

Name of Bay or Island	Approximate Length of Coastline (km)	Approximate Length of Suitable Beaches (meters)
Black Bay	0.7	300
Marigot	0.7	0
Grand Roy	0.7	300
Dothan	1.0	700
Palmiste	2.0	1,000
Gouyave	1.0	200
Milet	1.3	300
Maran	1.1	100
Mount Edgecombe	1.2	0
St. Marks	3.2	400
Crayfish Bay	1.5	100
Duquesne	1.3	300
David	3.6	300
Sauteurs	2.0	2,000
Irvins	2.5	150
Levera Bay	1.8	800
Grenada (Bathway)	3.8	1.500
Antoine	2.5	2.250
Conference/Great River	6.9	6,150
Grenville Bay	4.5	1,500
St. Andrews	3.3	250
Great Bacolet	3.5	1,250
Menere	2.1	250
Crochu Harbour	1.6	250
La Tante	1.2	100
Galby	1.3	500
Requin	1.9	700
Le Petit Trou	4.4	300

Name of Bay or Island	Approximate Length of Coastline (km)	Approximate Length of Suitable Beaches (meters)
La Sagesse	1.9	800
St Davids	1.5	0
Little Bacolet	1.1	500
Petit Bacaye	1.4	200
Westerhall	3.5	100
Calivigny Harbour	2.8	0
Calivigny Island	3.0	400
Woburrn Bay	6.0	0
Hog Island	3.7	500
Mt. Hartman	3.5	0
Lance aux Épines, Prickly Bay	4.5	800
True Blue Bays	2.4	600
Bagadi	1.1	200
Hardy Bay	1.0	0
Grand Bay	1.2	600
Cato Bay	0.4	400
Black Bay	0.4	230
Point Saline to Petit Bout Pt	4.0	600
Morne Rouge	1.5	600
Grand Anse	3.9	2,300
Martins	0.6	0
St. George's	1.9	100
Grand Mal	2.6	1,000
Dragon	1.3	400
Beausejour	3.2	300
Halifax	2.5	50
Three Sisters Island	6.0	2,000
Isle de Ronde	5.5	700
Isle de Caille	2.0	300
Lagoon (city) Harbour	2.0	300

TABLE 1. GEOGRAPHIC INVENTORY		
Length of Coastline*		
Km <sup>2</sup> of Continental Shelf Area	2780 Km	
Seaward Extent of Jurisdictions		
Territorial Sea	19.3 Km (12 mi**)	
Extended Economic Zone	321.8 Km (200 mi**)	
Fisheries Jurisdiction	321.8 Km (200 mi**)	
Other (Describe)		
distance from border to border for a	nt of the national seaward boundary of a country; i.e., the coastal country and the distance around an island country.	
** Editor's note (2009): For consistency, we converted distance from miles to kilometers.		

		Km of Shoreline	
Marine Shoreline Characteristics*	Undeveloped	Developed**	Total
Sand Beach (Total)	29.5	5.1	***34.6
A. High Energy	14.9	1.0	15.9
B. Low Energy	14.6	4.1	18.7
2. Reef (exposed)	4.0	0.0	4.0
3. Rocks	70.3	10.0	80.3
4. Cliffs	24.5	3.5	28.0
5. Vegetation (Total)	108.0	15.5	123.5
A. Vines	?	?	?
B. Grasses	?	?	?
C. Mangroves	7.0	0.0	7.0
D. Coconut Trees	?	?	?
E. Other Trees or Shrubs	100.0	15.5	115.5
F. Marshes	1.0	0.0	1.0
6. Mouths of Lagoons, Rivers, Canals	15.0	1.5	16.5
7. Total Shoreline	***251.3	***35.6	***286.9

# TABLE 2A. MARINE HABITAT INVENTORY OF BOTTOM TYPES (supplementary page)

Habitat Bottom Types	Km <sup>2</sup> of Habitat	
	Inside 25m (shoreward)	Outside 25m (shoreward)
1. Sand	?	?
2. Mud	?	?
3. Rocks	?	?
4. Submerged Vegetation	?	?
5. Reefs (Total)	250 Km	?
A. Fringing Reefs	20 Km	?
B. Patch Reefs	60 Km	?
6. Other		

TABLE 3. NESTING BEACH INVENTORY			
List beaches in geograph	ic sequence. Provid	e additional information of	on following page.
Name of Beach	Length In Km	Species Nesting (use abbreviations)*	Months of Recorded Nesting
Palmiste Bay	2.0	Cc, Cm, D	May, June, July, August
2. St. Mark Bay	1.0	Cm	June, July
3. South Bay (Isle de Calle)	0.5	E	April, May, June, July, August
4. North Bay (Isle de Calle)	0.5	Cm, E	April, May, June, July, August
5. Bacolet Bay	1.0	Cc, Cm, E	April, May, June, July, August
6. St. Davids Bays	3.0	Cc, Cm, D, E	April, May, June, July, August

<sup>\*</sup> Refer to SEA TURTLE MANUAL (Aerial Survey)

\*\* Human development or use (See MANUAL)

\*\*\* Editor's note (2009): Totals were corrected from the original to reflect accuracy in summed values

Name of Beach	Length In Km	Species Nesting (use abbreviations)*	Months of Recorded Nesting
7. Point Salines Bays (Southeast)	2.0	Cm, Cm**, E	April, May, June, July, August
8. Point Salines Bays (West)	1.5	Cc, Cm, E	April, May, June, July, August
9. Duquesne Bay	0.5	Cm, E	May, June, July, August
10. La Seuis Bay		Cm, D, E	May, June, July, August
11. David Bay	1.0	Cm, D, E	April-September
12. Irving Bay	1.5	D, E	April-August
13. Rathan Bay	0.5	Cm, D, E	April-August
14. Levera Beach	1.5	Cm, D, E	April-September
15. Great River Conference Beach	5.2	Cc, Cm, D, E	April-September
16. Sandy Island	2.0	Cm, E	April-August
17. North Bay (Isle de Ronde)	1.0	Cm, E	April-August
18. Halfmoon Bay (Isle de Ronde)	1.0	Cm, E	April-August
19. Grenada Bay (Bathway)	2.0	Cm, D, E	April-September
20. Antoine Bay	1.5	Cm, D, E	April-September
Species*	Abbreviation		
Caretta caretta	Сс		
Chelonia mydas	Cm		
Dermochelys coriacea	D		
Eretmochelys imbricata	E		
Lepidochelys kempi	Lk		
Lepidochelys olivacea	Lo		

TABLE 3A.1. Supplemental data on beaches.		
Name of island	Grenada	
Name of beach	Fort Jeudy and Westerhall	
Energy classification of beach	Low	
Description of sand characteristics	White carbonate sand with moderate proportion of silicon.	
Level of human development and/or impact	Light	
Estimated nesting activity	Major	
General comments	Very much frequented by green and hawksbill turtles	

TABLE 3A.2. Supplemental data on beaches.	
Name of island	
Name of beach	Degra, Grand, Cato, Black Bays
Energy classification of beach	High
Description of sand characteristics	Well-sorted carbonate orange and white sand. High proportion of silicon.
Level of human development and/or impact	Light
Estimated nesting activity	Major
General comments	Exposed bays but much frequented by turtles: hawksbill, green, loggerheads.

TABLE 3A.3. Supplemental data on beaches.	
Name of island	Grenada
Name of beach	North Grenada, Three Sisters Islands
Energy classification of beach	High-moderate
Description of sand characteristics	White carbonate and silicate sand.
Level of human development and/or impact	None
Estimated nesting activity	Major
General comments	Most regular nesting sites for all the four species of turtles which are observed about the island.

TABLE 3A.4. Supplemental data on beaches	S.
Name of island	Out island of Grenada
Name of beach	Isle of Ronde
Energy classification of beach	Moderate-low
Description of sand characteristics	White carbonate/silicate sand on northeast and black volcanic on northwest
Level of human development and/or impact	Light-moderate
Estimated nesting activity	Major
General comments	A very regular nesting area for turtles of all sorts since this area has foraging areas that are significant.

TABLE 3A.5. Supplemental data on beaches.	
Name of island	Grenada
Name of beach	Hog Island; Calivigny Island
Energy classification of beach	Moderate
Description of sand characteristics	White carbonate sand, well sorted occasionally
Level of human development and/or impact	Light
Estimated nesting activity	Major
General comments	A very regular turtle nesting site. Even in mangrove mud/sand areas turtles are known to nest.

TABLE 3A.6. Supplemental data on beaches.	
Name of island	Grenada
Name of beach	Prickly Bay; True Blue Bay
Energy classification of beach	Moderate
Description of sand characteristics	Variety of carbonate sand, fine to coarse grained.
Level of human development and/or impact	Moderate-heavy
Estimated nesting activity	Regular
General comments	Sites visited by hawksbill and green turtles.

TABLE 3A.7. Supplemental data on beaches.	
Name of island	Grenada
Name of beach	La Sagesse to Petit Bacaye Bays
Energy classification of beach	Low
Description of sand characteristics	Carbonate sand well sorted
Level of human development and/or impact	Light
Estimated nesting activity	Major
General comments	Good foraging offshore; much vegetation on shoreline

TABLE 3A.8. Supplemental data on beaches.	
Name of island	Grenada
Name of beach	La Sagesse, Little Bacolet, Petit Bacaye
Energy classification of beach	Low
Description of sand characteristics	White carbonate sand, coarse to fine, well graded.
Level of human development and/or impact	Light
Estimated nesting activity	Major
General comments	Low energy beaches hemmed in by rocky points. Very much frequented by hawksbill and green turtles.

TABLE 3A.9. Supplemental data on beaches.	
Name of island	Grenada
Name of beach	Antoine Bay
Energy classification of beach	High-moderate
Description of sand characteristics	Volcanic, well sorted
Level of human development and/or impact	None
Estimated nesting activity	Regular
General comments	Green and hawksbill nesting area. Much vegetation
	onshore; coconut trees, mangroves.

TABLE 3A.10. Supplemental data on beaches.	
Name of island	Grenada
Name of beach	Conference, Great River
Energy classification of beach	High
Description of sand characteristics	Sand dunes, gently sloping. Classic high energy beach, carbonate sand.
Level of human development and/or impact	
Estimated nesting activity	Major
General comments	Significant runoffs into bay by rivers. A significant nesting site; offshore foraging common.

TABLE 3A.11. Supplemental data on beaches.	
Name of island	Grenada
Name of beach	Great Bacolet
Energy classification of beach	Moderate
Description of sand characteristics	Admixture of volcanic/carbonate sand.
Level of human development and/or impact	None
Estimated nesting activity	Major
General comments	Secluded beach. Much vegetation. Much foraging area offshore. Stream runs into bay.

TABLE 3A.12. Supplemental data on beaches.	
Name of island	Grenada
Name of beach	Crochu to Le Petit Trou Bays
Energy classification of beach	Moderate
Description of sand characteristics	Galby (black sand), other beaches carbonate, well sorted.
Level of human development and/or impact	Light
Estimated nesting activity	Major
General comments	Small bays with streams running into them. Significant foraging offshore for green and hawksbill. Loggerheads are occasional.

TABLE 3A.13. Supplemental data on beaches.	
Name of island	Grenada
Name of beach	St. Mark's Bay
Energy classification of beach	Moderate
Description of sand characteristics	Volcanic black sand, well sorted.
Level of human development and/or impact	Moderate
Estimated nesting activity	Incidental
General comments	Hawksbill and green turtles occasionally nest on the beach; however, human impact is significant.

TABLE 3A.14. Supplemental data on beaches.	
Name of island	Grenada
Name of beach	Duquesne
Energy classification of beach	Moderate
Description of sand characteristics	Volcanic with carbonate sans, well sorted.
Level of human development and/or impact	Moderate
Estimated nesting activity	Incidental
General comments	Hawksbill and green turtle nesting. Beach profile steeply sloping frequently, occasionally gently sloping in high swells.

TABLE 3A.15. Supplemental data on beaches.	
Name of island	Grenada
Name of beach	David Bay
Energy classification of beach	Moderate
Description of sand characteristics	Black volcanic sandy beach with vines and coconut trees, streams running into bay.
Level of human development and/or impact	Light
Estimated nesting activity	Regular
General comments	Hawksbill and green turtles nesting. Foraging areas outside beach.

TABLE 3A.16. Supplemental data on beaches.	
Name of island	Grenada
Name of beach	Sauteurs Bay
Energy classification of beach	High-moderate
Description of sand characteristics	Principally carbonate sans. However, an admixture of volcanic/carbonate exists.

Level of human development and/or impact	Moderate
Estimated nesting activity	Regular
General comments	Human impact on parts of the beach significant.
	However, offshore is a good foraging area.

TABLE 3A.17. Supplemental data on beaches.	
Name of island	Grenada
Name of beach	Palmiste Bay
Energy classification of beach	Moderate-low
Description of sand characteristics	Fine volcanic sand with occasionally coarse sections of sand.
Level of human development and/or impact	Heavy
Estimated nesting activity	Regular
General comments	Occasionally heavy or high energy swells affect this beach. Beach is used as a source of sand. Gently sloping profile.

TABLE 3A.18. Supplemental data on beaches.	
Name of island	Grenada
Name of beach	Gouyave Bay
Energy classification of beach	Moderate
Description of sand characteristics	Volcanic and carbonate admixture, fine to medium grains, well sorted.
Level of human development and/or impact	Heavy
Estimated nesting activity	Incidental
General comments	Human impact on this beach area is very heavy.  Profile of the beach is steep. Low energy swells often with occasional high energy swells.

TABLE 3A.19. Supplemental data on beaches.	
Name of island	Grenada
Name of beach	Levera Bay
Energy classification of beach	High energy
Description of sand characteristics	Coarse to fine carbonate sand. Much high energy swells with rapid current movement.
Level of human development and/or impact	Light
Estimated nesting activity	Major
General comments	A major nesting area for all four species (types) of turtles. Foraging areas offshore are significant.

TABLE 3A.20. Supplemental data on beaches.	
Name of island	Grenada
Name of beach	Bathway (Grenada Bay)
Energy classification of beach	High
Description of sand characteristics	Well sorted carbonate sand. Sand movement is frequent
Level of human development and/or impact	Light
Estimated nesting activity	Regular
General comments	Beach has fringing reef close to shore at certain points.

TABLE 3A.21. Supplemental data on beaches.	
Name of island	Grenada
Name of beach	Beausejour
Energy classification of beach	Low
Description of sand characteristics	Black volcanic sand, well sorted and often fine
Level of human development and/or impact	Moderate
Estimated nesting activity	Incidental
General comments	Beach on quickly bay. Beach encroaching on the land. Source of sand for commercial purposes.

TABLE 3A.22. Supplemental data on beaches.	
Name of island	Grenada
Name of beach	Black Bay
Energy classification of beach	Moderate
Description of sand characteristics	Black volcanic, well sorted
Level of human development and/or impact	Light
Estimated nesting activity	Regular
General comments	Low energy/moderate energy beach. Moderate profile with much vegetation. Hawksbill and green turtle nesting site.

TABLE 3A.23. Supplemental data on beaches.	
Name of island	Grenada
Name of beach	Dragon Bay
Energy classification of beach	Moderate
Description of sand characteristics	Beach profile moderately steep. Coarse to fine well sorted sand; black with white.
Level of human development and/or impact	Moderate
Estimated nesting activity	Incidental
General comments	Impact of human activity; seine nets, etc. have limited turtle nesting.

TABLE 3A.24. Supplemental data on beaches.	
Name of island	Grenada
Name of beach	Grand Roy Bay
Energy classification of beach	Moderate-low
Description of sand characteristics	Black volcanic sand well sorted, mostly fine. Profile moderately sloping.
Level of human development and/or impact	Heavy
Estimated nesting activity	Incidental
General comments	Moderate energy beach with gently sloping profile. Only occasional nesting reported.

TABLE 3A.25. Supplemental data on beaches.	
Name of island	Grenada
Name of beach	Grand Mal Bay
Energy classification of beach	Moderate-low
Description of sand characteristics	Carbonate white sand, well sorted.
Level of human development and/or impact	Moderate
Estimated nesting activity	Incidental

General comments	Beach broken occasionally by rocks. Low energy. Sein nets frequently fish in this location. Hawksbill and green turtles nest on this beach occasionally. Feeding offshore by turtles is frequent.
------------------	---

TABLE 3A.26. Supplemental data on beaches.	
Name of island	Grenada
Name of beach	Dothan Bay
Energy classification of beach	Moderate-low
Description of sand characteristics	Volcanic mixed with carbonate sand. Beach broken by rocks occasionally.
Level of human development and/or impact	Light
Estimated nesting activity	Incidental
General comments	Beach frequently used by seine-net fishermen. Beach broken by rocks, occasionally.

TABLE 3A.27. Supplemental data on beaches.	
Name of island	Grenada
Name of beach	Point Saline to Petit Cabrits Point
Energy classification of beach	Moderate
Description of sand characteristics	Carbonate, medium grain, well sorted.
Level of human development and/or impact	None
Estimated nesting activity	Major
General comments	A frequent nesting site for hawksbill and green turtles.

TABLE 3A.28. Supplemental data on beach	es.
Name of island	Grenada
Name of beach	Morne Rouge Bay, Quarantine Point
Energy classification of beach	Low
Description of sand characteristics	White, carbonate, well sorted.
Level of human development and/or impact	Moderate
Estimated nesting activity	Regular
General comments	Shallow approach to the beach. Hawksbill and green
	turtle nesting.

TABLE 6. ESTIMATED P Summarize the estimated estimation on the next page	number of nes				nd describe m	ethods of
Species			Υe	ear		
	1982	1981	1980	1979	1978	1977
Caretta caretta	100 ± 25	*	*	*	*	*
Chelonia mydas	200 ± 50					
Dermochelys coriacea	25 ± 10					
Eretmochelys imbricata	> 500					
Lepidochelys kempi						
Lepidochelys olivacea						
* Figures not significant	ly different.					

TABLE 7. FORAGING	AREAS INVENTO	RY	
Name of Area (or give coordinates)	Approx. Area (Km²)	Species Foraging (use abbreviations & approx. numbers)	Nature of Evidence (observation, fishery, incidental catch)
1. Bays: Point Saline to Quarantine Point	15	Cm (all sizes), E	Divers observations, interviews
2. Glover Island 11° 59' N, 60° 46' W	20	Cm (all sizes), E (juvenile, sub-adult)	Divers observations, interviews
3. Grand Mal Bay	5	Cm, D (occasionally) all sizes, sub-adult, E	Divers, seine fishermen interviews
4. La Tante Bay to Galby Bay (Woburn / Hog Island)	15	Cc, Cm, E	Divers, netsetters interviews
5. Crochu Bay (Woburn / Hog Island)	15	Cc (sub-adult), Cm, D (occasionally), E	Divers, netsetters interviews
6. Great Bacolet Bay (Woburn / Hog Island)	10	Cc, Cm (sub-adult), D (occasionally), E	Divers, netsetters interviews
7. Isla de Caille (Isle de Ronde)	25	Cm (all sizes), E	Divers, netsetters interviews
8. Three Sisters Levfra (Isle de Ronde)	15	Cc, Cm & E (all sizes except for Ca)	Divers, netsetters, fishermen interviews
9. David Bay (Isle de Ronde)	10	E & Cm (all sizes)	Divers, netsetters, fishermen interviews
Charina	Abbreviatio		
Species Caretta caretta	Cc	N	
Chelonia mydas	Cm		
Dermochelys coriacea	D		
Eretmochelys imbricata	E		
Lepidochelys kempi	Lk		
Lepidochelys olivacea	Lo		

#### TABLE 8. TURTLE SPECIES PRESENT ON FORAGING AREAS.

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	М	Α	М	J	J	Α	S	0	N	D	
Caretta caretta						Χ	X	X	Χ	X	X	Χ	August (adult)
Chelonia mydas	X	X	X	X	X	X	X	X	X	X	X	X	April-June (adults & juveniles)
Dermochelys coriacea						X	X						June & July (adults only)
Eretmochelys imbricata	X	Х	X	Х	X	Х	Х	X	X	X	X	X	All year (juveniles) May-August (adults)
Lepidochelys kempi													
Lepidochelys olivacea													

Name of Port or Site	Species Landed (use abbrev)	Fishing Gear Used	Months of Landings	Numbers & Weights (estimate)
1. Sauteurs	Cm, E	Nets and spears	All year	Estimates
2. Grenville	Cm, E	Nets and spears	All year	
3. Calliste	Cc, Cm, E	Nets and spears	All year	
4. Bacolet	Cc, Cm, E	Nets and spears	All year	
5. Woburn	Cm, E	Nets and spears	All year	
6. Calivigny	Cm, E	Nets and spears	All year	
Species	Abbreviation			
Caretta caretta	Сс			
Chelonia mydas	Cm			
Dermochelys coriacea	D			
Eretmochelys imbricata	E			
Lepidochelys kempi	Lk			
Lepidochelys olivacea	Lo			

Do not include turtles caugh	nt incidental to	other fishing	goperations	(e.g., shrimp trawling)
Species	1982 (Kg)	1981 (Kg)	1980 (Kg)	Method of Determination
Caretta caretta	30-50 1,500	30-50 1,500	30-50 1,500	Market figures, observations, interviews
Chelonia mydas	100-150 2,500	100-150 2,500	100-150 2,500	Market figures, observations, interviews
Dermochelys coriacea	10-15 1,000	10-15 1,000	10-15 1,000	Market figures, observations, interviews
Eretmochelys imbricata	100-200 5,000	100-200 5,000	100-200 5,000	Market figures, observations, interviews
Lepidochelys kempi				
Lepidochelys olivacea				

Activity	Total Annual Numbers of Persons	Est. Annual Income From Turtles	Comments
Fishing	50 ± 10	\$10,000 - \$15,000	Income based on \$0.90 per lb (live wt) * obtained for turtles at local market
Processing			Fishermen process their catch
Selling			Fishermen sell their catch on most occasions

#### TABLE 16A. EMPLOYMENT DEPENDENT ON TURTLES (supplementary page)

In addition to marketed products, it is estimated that the following are taken annually from beaches or at sea for subsistence use:

A: Subsistence exploitation

Estimated number of eggs: 6,000-10,000
 Estimated number of nesting females: 100

3. Number of turtles caught at sea: 50-75

#### B: Social aspects

In addition to the described fishery activities, exploitation of turtles may be permitted in some countries according to special rights or privileges extended to certain groups of people. If such specialized turtle exploitation exists, please give details (i.e., beach rights, ethnic traditions, specific seasons of the year, special permits, etc.).

#### **TABLE 20A. REGULATORY AUTHORITY (supplementary page)**

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

#### **GRENADA**

348 Birds and other Wildlife (Protection of)

Chp 36

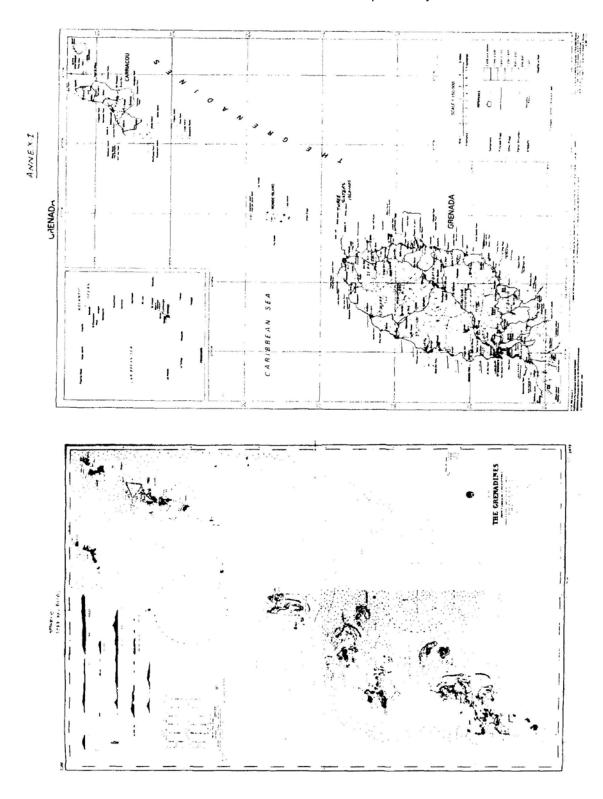
Provided that the Governor may from time to time by notice in the *Gazette* appoint some other period or periods in lieu of the periods fixed as aforesaid, and after any such appointment the periods so appointed shall be the close season for the purpose of this Ordinance.

- 5. The Governor may from time to time by notice in the Gazette declare that, as to any of the wild birds enumerated in the Second Schedule the provisions of section 4 shall cease to apply, and may from time to time vary or cancel any such alteration; and thereupon the provisions of the said section shall cease to apply, or shall again apply (as the case may be), with such variation as by the declaration may be provided, and the Governor may also, by notice as aforesaid, declare as to any bird not enumerated in the said schedule that it shall from the date of the notice be deemed to be included in the said Schedule for such close season as may be named in the notice as applicable to it, and may from time to time alter or amend the notice in the same way as if the bird had been enumerated in the Schedule; and thereupon the bird shall to all intents and purposes be deemed to be included in the Schedule for the close season assigned to it in the said notice.
- 6. Except as herein mentioned any person who shall:
  - (a) kill, wound or take, or attempt to kill, wound or take, any of the wild birds enumerated in the Second Schedule to this Ordinance or any turtle or oysters, during the close season for the same; or
  - (b) take the eggs or nest of any such bird during the close season for the same, or have in his possession any such bird killed or wounded or taken or any eggs or nest taken during the said season; or
  - (c) have in his possession any turtle, the eggs of any turtle or any oysters, during the close season for the same, shall be guilty of an offence against this Ordinance.

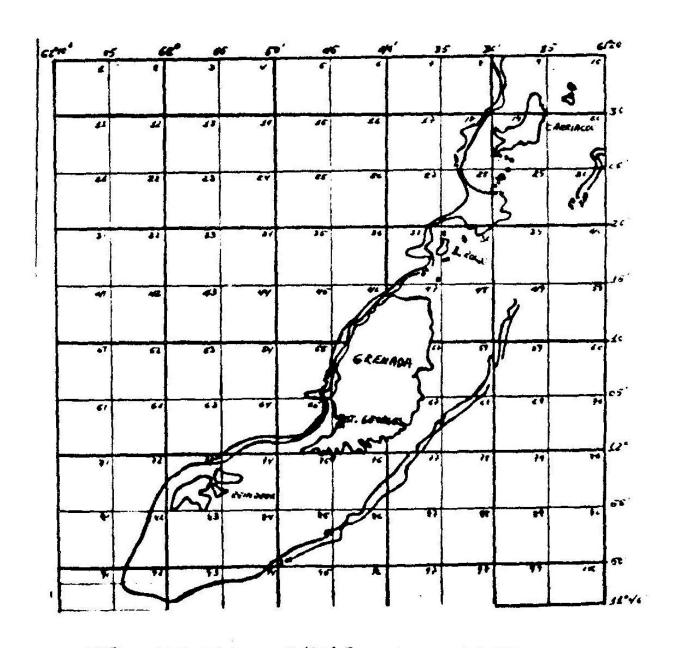
Grenada National Report, WATS I Vol. 3, pages 184-196

D: Coolel concet

**Annex I.** Grenada – W.A.T.S. National Report Study Area.<sup>2</sup>



<sup>&</sup>lt;sup>2</sup> Editor's note (2009): Maps and figures are reprinted exactly as they appear in the original WATS I Proceedings (Bacon et al., 1984); we regret the poor quality exhibited in some cases.



THE GRENADA SHELF - 1808ATH 'FATHOMS

# THE NATIONAL REPORT **EL REPORTE NACIONAI**

POR EL PAIS DE FOR THE COUNTRY



NATIONAL REPRESENTATIVE/REPRESENTANT

JAMES FINLEY



Simposio de Tortugas del Atlantico Occidental Western Atlantic Turtle Symposium

17-22 July/Julio 1983 San Jose, Costa Rica



MESTERN ATLANTIC TURTLE SYMPOSIUM

San Jose, Costa Rica July 1983 NATIONAL REPORT FOR THE COUNTRY OF

Grenada

MATIONAL REPORT PRESENTED BY

James Pinley The Mational Representative

Address: Plabaries Division, Ministry of

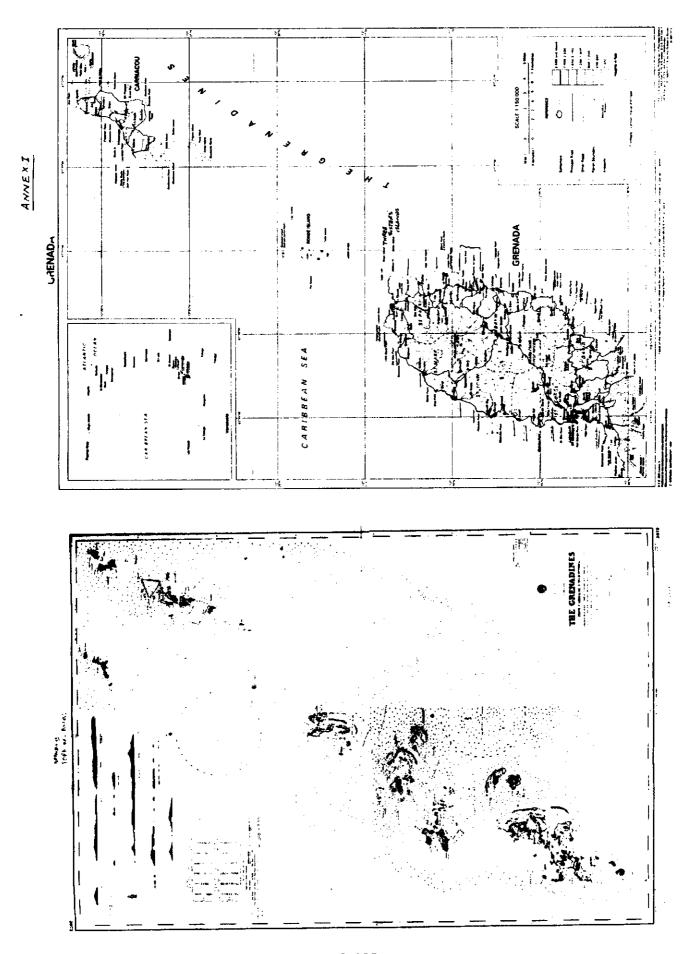
Industrial Development & Pisheries Belacut, St. George's Grenads

NATIONAL REPORT PREPARED BY

Jenes Finlay (Assisted by Paul Mill'

Pisheries Division, Ministry Development and Pisheries

DATE SURMITTED: 15th. Pobruery 1963



#### INTERDUCTION:

The San Turtle Socio-economic and Menting Survey, Study of Grames (including Tale De Bonde & Inle De Caille) began about March 1952 and continued until December 1952. It who an extensive rather than intensive study. The purpose of this study was to collect information and prepare a national separt on Grames for the Western Atlantic Turtle Symposium (W.A.T.S.) to be held in July 1953 in San Jose, Costa Rica. (Pur Grames even after the report in submitted data collection will continue). The following objectives guided the study and indicate the acope of investigation uncertaken.

- (a) Besord the type of shoreline about the inland of Grancia. The purpose being to indicate the actual and potential sea turtle meeting beaches. This date will be valuable baseline work for subsequent gtudies, and also to document the kinds and assounts of aboreline throughout the Salands.
- (b) Descri the areas in which turtle sightings are frequently under by fishermen and other persons visiting the beaches; record data on concentrated and dispersed menting locations.
- (e) Compile date of any kind that any indicate the states of see turtle populations in Granda.

maketantial emoff, which together with other factors, her

generally much aboralise send. Greends is very much less

for.

. as operate island, them European only about 100 miles

any. The vegetation is tropical continental with certain

varieties which reveal the dry season/rainy season character

of the climits.

#### COASTLINE AND OFFENCE AREAS:

The constline of the Grenada group is a pattern of sandy buys and rocky points. There is much more sendy shore than rock end cliff shoreline. Grenada is notably affected by the North Bast Ernde Minds and hence the North ann lasters shoreline experience high energy swells almost constantly. Hence the beaches to the Lecutri sides of the inlands have a moderately sloping beach profile and well vegetated 10 or 50 meters above the high tide mark.

The Mindeard beaches have gardler profile in high tide sumah. However, in areas as characterized by Conference Bay, sand domes agreed along the profile of the beach up to 20 meters from the tide mark. The shorter beaches woman in areas along the sindward court where the ronky points are frequent. Here the beaches are less rough.

- (d) Brview the present conservation and management gragmant related to see turtles.
- (a) Determine the modio-economic importance of meaturbles.
- (f) Make recommendations to help promote the survival status of sea turtle populations imhabiting the territorial waters of the Greenic group.

#### ACKOROUND:

#### General Geographical Description of Greenis Group:

Grenada is an independent, English speaking Rest Caribbean State consisting of Grenada, Carriacou and Petit Mortinique, Inle De Bonde and a sumber of small islet. It is the southermoost island of the Bast Caribbean Chais, lying between 12° and 22° Morth and 61° and 62° West (See map references).

The island group hase a population of approximately 110,000 (1970 census) The citizens have very strong contacts with the see and shoreline. The islands are volcanic in origion with evidences of sandstone and shales in many arons. For the sain island, Grenads, there is

describly the leaside beaches have blacked probably due to the substantial run off from rivers. The white east occurs is the beaches from Grand Hal to Point Selins. The Windows' beaches are generally white with the occasional admixture of white and black sand. Heagrove summe soom in mreas to the South Bast but sand and beaches one be found at those leastiess.

Zole De Bende and island of short 1.5 square miles has white sand to the south and black sand to the wort. Isle De Onille another 0.5 square miles island only .5 he many has black and pervading the benches.

The offshore areas of Gresses etc. consist of a subscrime shelf of approximately 400 eq. miles of bottom varying from 0-20 fathens. Heat of this area consists of active and head sorulline surfaces. Large expansion of one grass beds and soft overal corum at various locations. References are given of known varieties types, on sup-

Since the 1980's various persons concerned that San Turtle my be evertished in Grande. This concern was generated from the observation unde that the meets of the turtles were being ever-emploited. A programs was lampahed in the late 1950's to generate more recruitment. The principal and most visible threat to the turtle is that of treamel note which are not un the roofs aspecially at times of meeting. The fisherous who engage in turtle fishing do not engage in turtle fishing containing in the precediating.

Mivers will shoot turtles while spear-fishing. Pursons above strong preferences for various types of turtle. The hauts bill and green turtles are the choice for must bet the laggerhead and lamtherbacks are after rejected because of the "typesty" fat. The heuts bill and green turtles are also prized for their backs, however, there is a marked preference for the headshills back.

By a purvey conducted through the 1961 period, it is estimated that about 1000 turtles are cought annually. Those turtles more than 50 pounds, the number is probably 300 with the Jumniador being juveniles.

There are no may beaches that are borning less and less necleded beace finking pressure on eggs have been serious. The fishing pressure by divers in not serious but the threat by transel (turtle) note in a serious one. Bispite this, through press) observations and intervious of divers and set except juvaniles are apolled at a rate of at least h = 6 or 7 a day on reefs.

#### STATUS OF ENGLISHED OF SEA TOUCLES:

No known objective and polarific observations have been under of Non-Turile populations in Grands. At Carriacou some work has assertedly been done in the past.

The exporms of finherion up to lately had been the responsibility of the Agriculture Ministry. Little perions action had been

-7-

seem out at one by fishermen. The turtles fishermen report that these are most frequent in the "rainy measur" show the outer in less smit. The logger head turtles have mever been reported as meating an banches. The fishermen either smitch them in dive; or in the set. Even when usught mear to show they have not been found to have eggs. Only smeetid a fishermen report having seen eggs in a loggerhead founds. Notably the fishermen do not eatth male loggerheads.

Through repeated intervious and probings the fishermen have indicated that only four types of turtles are abserved in Greands. These are Green Medichill laggerhood and leatherback. Reliable and been divers have reported that turtles having the appearance of "fistback" are often cought on the offshere inlands to the north of the Greands inland. The fishermen have said that they always call then a counies to the green turtles.

To the morth of the Broads island where there are a number of offshore islands, there are nignificant populations of turtles. Divers interviewed have indicated that Backstill and Broad Eartles separatrate in different aroun depending on the bottom types. He reportished the Backstills find an apongue and eart seed and occur principally along the London Bridge shaded area. The Broad-Turtles which out announces frequent the great body

taken by way of sementing these species. Pinheries in Greends is multispecies in nature and principally artismant. Legislation was past in 1997 in an effort to protect turtles, however, since turtles can be landed on any beach on the inland, it has been difficult to mention or control the emploitation of these species. Hence, knowledge of the present state of sea turtles populations in drawn from observations ands by local treamel finhermen, divers and boys who hunt the turtles and their eags.

The divery and fisherms reveal that although there are principal meetings at avaluand beaches and us the offshore undashabited inlands, there were no conventrated meeting alter. The turtime observed making creats and actual meetings were those of the green and heutabill turtime. Records were drawn from interviews with the three entageries of turtime producture. Moreover were the most helpful. A local diver in the contern part of Greenic observes green and beachetill turtime frequently. So reports that out of meeting encountry-leveniles of those species are observed freezing all along the grans beds which are prevailent in this area. Shore are many small method beaches in the area, he reports that whenever the turtime are found backing above the great beds in the day time they be sure they will seen in at might.

Leather-back turtles are the most infrequent and are more often

-8-

between the three eisters inlands and further morth of lair So Bonds. The Lantischnak though not very fragment around the inland make a favourite meeting site on the Lavers Sanch in painy season June - July. Only the femiles of lantischoule are sharred.

In the couthern offshore area of Grenda, Green and Englabilla are prevalent. Green turtles are superially prevalent around Rog Island where there are estempive areas of see grans beds. The fisherum reported that Green Turtles lay when larger than Solha and Seekabill lay when larger 50/50 lbs. Sewers, an reported that he had observed eggs in a 30/1b haskshill turtle. They also reported that heskshill are quite predictable since they lay in 15 days system several times a seemen and according to the mosm, when fresh tracks set sheared the fisherum know when to return for the subsequent cruel. They report also that haskshills lay furthest up the boach even under bushes in the highest sand.

Picherws report that "April, May is the principal acting time, when the tarties are seen charing each other and even disregarding divers. On the newthern portion of Grandh, a diver reports that October, Newsdor and December non the provident feeding times for the the Sandahill Turties.

Another seize-met finhermen diver reports that the juveniles are provident feeding on the "want" seamed (mans) in the early parts of the year shen the source are blosming. R.B. On the Lemmed state of the Greeness inland where seine not fishing is practiced tertile meetings are rare and Although commessionally note draw in small juyer (Scipe turbles ) are not frequent in this area.

With limited time and resources svallable for such a purvey in Greate, the nature of the research was very marrow. The study involved:-

- s. Visits to most beaches which were setmal and potential meeting sites of turtles;
- b. Bosensking Government records of turils ampagement and most importantly interviews and discussion with turtles fisherms, loss) one and divers;
- e. Observations of entches of turtles brought at the landing mitter

The ordinance survey supuns used extensively for back up studies on the locations for beaches in perspective. These maps were used also for brancheting data, collected in the field, to the smaller coals man.

#### MECONICHED TRATTONS:

The fundings of the purvey were limited but yielded much calumble information on the status of the sen turtles about Grounds. The following recommendations should be sunsidered:-

- 1. Repeat med effort in enforcing the regulations for the protection of turtles especially in the close season.
- 2. Houst a compaign against the use of textle sets or yesfa during close season.
- 3. Intebliah the presently excluded benches of the out foliands as exactuaries for meeting turtles.

	PFRCIIEATE LENGTE	AFFROXIMATE LENGTH
RAYS OF BAT OF 151:50	COASSIIRE(km)	
BLACE BAY	0.7	300
MARIGO:	0.7	, c
GRAND RCY	0.7	30C
DOTRUT	1.0	*70e
ILAMIETE	2.0	1,000
OCUTAVE	1.0	200
Miler	1.3	30↑
NARAN	1.1	100
MI. MORECLARA	1.2	0
M. KARPE	3.2	40"
CRATFISH BAY	1,5	100
MISTESIE	1.7	301
מניינס	3.6	701
EALTEUR?	2.0	2,010
I.7III	2.5	157
LUVITA PAT	1,0	ec.
GRETIEDI (Fethvey)	5.0	1.50:
KITCIKI KITCIKI	2.5	2.250
AL AK AHII OCKRZY YYDE <b>∦</b> GRZ#* "73 <b>V</b> ZR	- · ·	6.150
SABLALLIS S.A.	4.5	1.500
91 ANDOT'S	3.3	250
GREAT PROCEST	3.5	1,250
NAMES TO STATE	2.1	250
CBOCHL Habbers	1.6	250
LA TAITE	1.2	100
GAL BY	1.3	EC.
75CU1	1.9	700
LA FITTI TOUT	4.4	300
LA PAGESTE	1.9	BOC.
S. DAVIDS	1.5	C
LITTLE BACCLES	1.1	50C
PECIT PACAYE	1,4	200
NECT REPAIL	3.5	10C
CALIVIONY MAMOUR	2.8	D
CALIVIONY IELAND	3.0	400
POSURN SAT	6.0	•
BOO ISLATO	3.7	50¢
度,我想我"	3.5	° 3-

MANGE OF MAY OF ISLAND	APPROXIMATE LENGTH OF COASTLINE (No.)	APPECIANT LEMOTE OF SUTTABLE SEACE (PETELS)
LANCE ANY SPINIS ) PRICELY BAY )	4.5	<b>@</b> 000
THE MAIN BAYS	2.4	<b>600</b>
MAGADI	1.1	20C
BARDT BAT	1.0	0
WAND MI	1.2	600
CATO BAT	0,4	40C
HACK BAY	0.4	150
F7. SALINE TO )	4.0	600
HOURT BORGE	1.5	600
COLUMN ANGE	3.9	2900
MARTINS	0,6	•
AT. MICHOE'S	1.9	300
MAND HAL	2.6	1000
BRAGON	1.3	400
MARKEJ OUR	3.2	500
BALIFAI	2.5	50
MARIE BUSTONS LELATING	6.0	2000
IALI ME MANA	5.5	700
INII TE CAMBIE	2.0	300
LAGOON (CITY) MANDOUR	2.0	3000
944) · · · · · · · · · · · · · · · · · ·		

1

Seminary of total constitue of falteds and cays location in Semina Saway (not including Charleson, Putts Sertialons, and Randy Lained) and notiseties of total langth of beaches contable for one turile secting. Serimese mass from netural states to sejectly of beaches and by naing cetinance servey

The cotinating lengths of bays as allotment of ball distance between two adjoints beyn in used as limitation. The notinating small talet whole seems in estimated.

ADA	<b>3</b>		CETTORIE			Ma 202	
COUNTY GRENADA	Langth of Castline	ing of Conclusate) the1f Juga	Somere Erent of Jeri effetions:	Territoriel Sc	Ortanied Executive Done	fisterit. dinfesten	Other (Describe)

THE L. SEPREMIE INSTITUTE

Others .....

\* Countities length is the measurement of the nutional seasors beandary of a country; i.e., the distance from border to border for a costal country and the distance pround on island country.

24012	-	~	'n	•	•	•	9	=	12	<b>.</b>	91	-	2	ĸ	%	¥	2	98	\$	÷	
- The state of the	Introduction	The high contract the contract to the contract	Destiles and offshore areas	Mirtory of Sea Turtle in Granda	Status of knowledge of Sea turiles	Wathods	Becamendations	Til. 1 Summary of Countline	9.43.2 Srapkie Leventory	tab. 5 Marine Mabitat Inventory	243.44Cmartal Babitat Inventory	TAB.5 Besting Beach Investory	223.6 Supplementary Sata	243.7 Detimated Populations Secting Penales	\$12.6 Species Present on Peraging Areas	til.9 Lending Sites	"Lift Potal Amenal Landings	218 H Magloyment Department on further	92312 Esployment Depositest on Partice	Wild Life Protection Ordinance	 Paylonestary Mays/ Survey breasds Carriscos and Fetit Marialque

.

<del></del>	Ked OF HABITAT	KABI TAF
MORTAT BOTTON TRAES	INSIDE 25m (SHONDAAND)	OHTS106 25m (SEAMARD)
1. Sawl	ď	2
2. Pad	۵.	2
J, Aects	۵.	۵
4, Submerged Vegotation	۵.	ć
5. Reefs (Tatal)	250 Km2	R.
A. Fringing Reefs	20 Km2	d
D. Patch Neefs	60Km	2.
6. Other		

TABLE 29. MARINE MABITAT INVESTMY OF BOTTOM TYPES

	THE OF SHOWING	NO.				
MATINE SHORELINE CHARACTERISTICS*	HOCKELOPED JEVELOPED**		TOTAL	NAME OF BEACH	ENGTH EN ES	SPECIES NESTI (Use abbreviati
1. Send Beach (Total)	5.62	. ):S	3.98	67	,	'
A, Nigh Energy	6.51	· • ·/	15.9	1. (ALMISTI BAL)	2	5
B, Lou Energy	9 ±	3	18.7	1. STMAKETY.	0 ./	Š
2. Reef (exposed)	0.9			South Br	5.0	W W
3, Recks	£.0+	10.01	80.3	Gue we chilled	20	27
L. C11fts	7 42	3,5	38.0	Land War /		) 1
S. Vesstation (Total)	/of: 0	15.5	7.54	S. Broder Bry	1:0	F.C. C
A. Vines	<b>.</b>	٨.	A.	57: 24 vi 25	0.0	E Cm
1, Grass	•-	p.	F.	26	2.4	נים
C. Hangrovits	₽. 9.	•	0,1	" DESCRIPTION	2	2
D. Cocout Tres	( <u>se</u>	1	· 137/	S. M. S. L. L. S.	ارج	E.C.
E. Other Irees or Shrubs	(40.0	16.5	115.5	. DUQUENE BAY	5.0	E.Cm.
F. Harshes	·/	0.0	1.0	Jackenie Real		£ (m D
8061	15.0	١٠٠/	16.5	10. erf verus erry		
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A HOPFILS OF RECORDED MESTING

SPECIES NESTING (Use abbreviations)\*

Con Ce D Thay, Then, 74 Pag

Fin Tak

MANE IN AREA (or give coordinates)	APENY AREA (KMZ)	SPECIES FORMACIONS (Use abbreviations A approx. numbers)	NATURE OF EVIDENCE (Observation, fishery, incidental catch)
GAYS: PONTSHINE			divers observations
1. To sprak an Time	کم	E Con(all sees)	in topy lens.
Glovet 18140			divers observations
× , 50. //	20	E Creations	
		The and Sub A	divers', sune fishemen'
3. BAY	6	เล	in terviews
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LATHUTE BAY		E.C. 544	divors, natsetters
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	EAS THINENTORY			
	TABLE 7. FORAGING AREAS INVENTORY			
	TABLE 3		7	)
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divers, netsetters infervious.

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GREAT BACIST DAY

			•
NAME OF BEACH	LENGTH IN RM	SPECIES MESTING (Use abbreviations)*	MOITHS OF RECOMBED HESTI:
1. DAVID BAY	1.0	Cm. ED	April - Sept
2. IRVING BAY	1.5	ED	Harl - two
3. RATHIN ENT	0.5	Cm E D	April - Aug.
. LEVERA BENCH	7.7	Cm E D	1 Hpm1 - Sobt
GREAT RIVER.	5.2	Ch E D Ce	April - Saft
. Smor Elmo	2.0	Cn E	Abril - Aug.
1. Nach Bry	1.0	G. E	April - Aut.
(15/6 DE Lands)	9.7	Cn E	April - Aug
S. GRESTON SAY	2.0	Cm E D	April - Saft.
10. Asteine BAY	1.5	C. ED	1 Jes - 11-44
E 3. RESTING BEACH IN List backed in Fruite addition	INVENTORY security sequential sequents	ntari graphic sequence, infermation on following page.	S TOTAL SECTION OF THE SECTION OF TH

				MIC. OF. MACG. 3 S/87779 Js CANDS TELAND. CFR FON A DA
				W. BGY CLASSIFICATION OF BEACH(Carele) HIGH, MODERATE, LOW
				D. COLIFFICH OF BAND CHARACTERISTICS WHITE CAMESON AFF  AND SILICATE SANDS
				LEVEL OF BUMBL DEVELOPMENT AND/OR IMPACT: BONE, LIGHT, HODERATE, HEAVI
		SPECIES FORAGING (Use abbreviations	derive or situation	ACTIVATED MESTING ACTIVITY: MAJOR
MANE OF MEA (or give coordinates)	hPPR9X AREA {Km <sup>2</sup> }	·	HATURE OF EVENENCE (Observation, Elsiery, incidental	catch) INCIDENTAL
ISLE DE FONDE	25	E cm; alsues	divers , netsetters interviews:  divers , netsetters follower Intervi	all for speni of tartles which as absure
THREE BISTERS		all sizes, except for	doors, netse Hars	about the period
LEVERA	15	E, en, ce	-fisher - Interv	Isle De Ronde out 13 Land of
DAVID BAY		all sizes	divers, seine net	MANTE. TOT. BERGE
	10	E,em	ofisherman Contarvis	DEDICT CLASSIFICATION OF MINCH (CLIPAIN) BIGS, MERCHATE LOW
	<b></b>			Series on MORTH FOST and Black Volcanic on NOR
	}	B ¿	•	1.3V21 OF THRUM DEVELOPMENT AND/OR THRUST: HORE, 11010, HOREDATE, HEAVY
		f		SSTIMUTED MESTING ACTIVITY: MAJOR. MESTING ACTIVITY:
	•	3	entre a	MCTEMPAL
BLE 7. FORAGING AMEAS I	DUENTORY	•	Sproles (11 mewinhibans) Direction consider	
			Chaloila mider Company cortaces Explanathelys Imbricate	tolles fall the same the aren la
		•	<u>lepidochelys imbricata</u> <u>lepidochelys bampi</u> <u>Eteimochelys plivacea</u>	is forgy ares that ar sympions
			Lapitoscariya STIVACCA	- · · · · · · · · · · · · · · · · · · ·
	AT The by	LEGENTARY DATA ON SEACHS	<u>\$</u>	AND LEPENTRAY DATA, OH MEACHES
E. OF. BEACH	ANTE POL	L RAYS' 181AND	GRENADA	HOG FELMED SELMED THEM GRENADA
FIGHT CLASSIFICA		(Circle) WIGH, MCDENATE,	.¥ .toi	E"SET CLASSIFICATION OF MINCH(CLP-10) FIGH, HONDINGS, LOW
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WITH PA	CPFLATF	1920 PORTION #	E, LCorri	WELL SORTED CHEMISTRY
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INCIDENTAL	******			
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MAE. OF BLOS . A	LACK BA	75 <b>SELUID</b> .	*************************	MAR OF SEAS THUS THUS BAY SELAND GRENADA
MERCY CLASSIFICAT	ZON OF BEACH	(Circle) FIGH, HOUSE	T. 101	BEGGG GLASSIFICATION OF BRACK (Carele) - BIOS, NOOBNIT 100
". ACRIPTION OF MAN	D CHARACTERIS	nos WELL SORT	ED CATESONATE	TO SCRIPTION OF BAND CHARACTERISTICS VARIETY OF CARBONATE
ejlocen .	nd wh	re smo. High	PRO PERTION OF	SAWD. FINE TO COPPLE GRAINED
LOVEL OF MANUAL MENT	LONEN AM/	n 119457: HOE. 1	NOTE , POST PATE , NEAVY	12711 OF SCHAR SEVELOPIENT ARROYDE EMPAST: SCHE, LIGHT, MODERATE, MEAVY
CONVERT MESTRO A	KOTIVITY: SE	sa	TRAP	ATTIVATED MESTING ACTIVITY: MAJOR
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BART LEMENTERY DATA ON BEACHES	SUP-LIMENTARY DATA ON BEACHES
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HOW OF HEALTH PET IT BACKYE PAY! THATE GREN ADA	*
BORROT CLASSIFICATION OF BRANC (Carele) HIGH, MCGENATE, LOV	EMERGY CLASSIFICATION OF MACHICIPLE) TIGH, NODERATE LOW
DESCRIPTION OF EARD CHARACTERISTICS CARESON PATE SAND WELL	DESCRIPTION OF SAID CHARACTERISTICS ADMIXTURE OF VOLCANIC
SATED	CHEBONNIE SAHD
LEVEL OF HUMAN METRICOPHENT: AND/OR IMPACT: MORE, LIGHT, MODERATE, MEAVY	LEVEL OF RUMA:) DEVELOPMENT AND/OR IMPACT: BONE, LIGHT, NODERATE, SEAVY
RESTRUCTED MENTING ACTIVITY: MAJOR	ESTIMATED RESTING ACTIVITY: MAJOR MEGULAR
INCIDENTAL	EDUCAL COMENTS A SECLUDED BEACH MUCH VEGETATION
COURSE GOOD FORAGING OFFE HOLE	Fruch Forting AREA OFFSHORE, STREAM RUNS INTO
PLUCH VEGGET TON ON SHORE LINE	BAY.
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LASMARE LITTLE BOWLET GRENADA	CROCHY TO BAYE MAND CAFNADA
The second secon	MERGY CLASSIFICATION OF MACH (Carele) HIGH, MOMENATE LOW
EXECUTATION OF SAID CHARACTERISTICS	CONTROL OF SAND CHARACTERISTICS GALBY (BLACK SAND) OTHER BEACHED CORRESIONATE WELL SORTED
LOARSE TO FINE WELL GRADED	CHAPSHATE DELL SONTED
LEVEL OF BROME SEVELOPMENT AND/OR IMPAST: MORE, LIGHT, MORENATE, MEANY	LEVEL OF REMAIN DEVELOPMENT ARE/OR IMPAST: MONT, LIGHT, MODERATE, REAVY
ESTIMATED MERLING ACTIVITY: HAJOR	ESTIMATED RESTING ACTIVITY: MAKE
per la constant de la	INCIDENTAL.
Law anaro's banches hammed in by	METRAL COMERTS: SMALL BAYS WITH STREAMS RUNGING
Extensions for analy banches hammed in by Rosky boints wary much frequented by make but	IN TO THEM - SIGNIFIC ANT FORMANDE OFFERDA
and green turlles.	FOR BREEN and Howas BILLS., LOGGERHEADS
SUPPLEMENTARY DATA ON EXACTES	BUP LEMENTARY DATA ON BEACHES
NOW OF MACE ANTOINE BAY ISLAND GRENADA	MENT OF MENTS ST. MARKS BAY TELAND GRENADA
A	EMERGY CLASSIFICATION OF MEACH(Circle) SIGN, MODERATE, LOW
DERROY CLASSIFICATION OF BEACH (Carele) BIGH, NORTHATE, LON	DESCRIPTION OF SAND CHARACTERISTICS VOICANIE 6 lack Sand
DESCRIPTION OF SAID CHARACTERISTICS VOLEANIC WELL SORTED	Well Softed
LEVEL OF HUMA: BEVILOPHENT AND/OR IMPACT: SOME, LIGHT, MODERATE, HEAVY	LEVEL OF EUMA)) DEVELOPMENT AND/OR IMPACT: NODE, LIGHT, MODERATE, SERVY
DETINATED RESTING ACTIVITY: HAJOR MEGGLAR	ESTINATED NESTING ACTIVITY: NAJOR BEGULAR
	INCTURNIAL
EDUCATION Green and Hawkshill hosting area.	GENERAL CONCENTS. MONTHS WITH AND STATE OF THE STATE OF T
much vagetation onshore; excount trees mangrors	thest on the beach however human impact is significant
i i	
CONFERENCE GRENADA	MAR OF MACH PURESHE BAY MILATO GRENADA
ENGING CLASSIFICATION OF MEACH (Clicle) FIGH, MODERATE LOW	ENGRAL CLASSIFICATION OF SEACH (Circle) SIGH, NODERATE LOS
	DESCRIPTION OF SAID CHARGEDISTICS VOLC AVIC WITH CARRONATE
DESCRIPTION OF SARD CHARACTERISTICS SAND DUNES GENTLY SLING BLASSIC HIGH ENERGY BEACH GARBONATE SAND	SAND, WELL SORTED
LEVEL OF STOKE TENESCOPIEST AND/OR IMPLET: HOME, LITTLE, HOUSEATE, MEANY	LEVEL OF SUMM DEVELOPMENT AND/OR IMPAST: MORE, LIGHT, MODERATE, MEANY
1.0	ENTINATED MENTING ACTIVITY: MAJOR MEGULAR

A SHOW FICHNET MESTING SITE , AFFEHORE FORMANIC-

Common .

#### SUPTLEMENTARY DATA ON BEACHES

ME OF MACH DAVID BAY SHAPE GRENADA
DWESTY CLASSIFICATION OF MINCE(Circle) HIGH, MIDEMATE, LOW
WITE VINES and COMPONENT HOLES Stream runs into by
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LEVEL OF BUMAN SEVELOPHENT: AND/OR IMPACT: BONE, LIGHT, MODERATE, BEAVY
ESTIMATED MESTING ACTIVITY: MAJOR ENGILLAR
INCIDENTAL
COMES HAWKS BILLS AND GREEN TURTLES NETTING
FORMANIA ARRAS OUTSIDE REACH
•
MAR. CO. MARCH. SAUTEURS BAY MILAND GRENADA
BEENT CLASSIFICATION OF MACH (Carelo) Name (Wildelphia LOP
MESCHIPTION OF MAND CHARACTERISTICS PRINCIPALLY CARBONATE SAND
HOWEVER AN ADMITTURE OF VALCANIC POSSENATE EXIST
LEVEL OF STREAM DEVELOPMENT AND/OR PARAMET: MONEY, LIGHT, MONEY, REAVY
ENTINATED RESTRIC ACTIVITY: MAJOR MEDIDAR
DORESTAL.
SIGNIFICANT HOWEVER OFFSHAR IS A GOOD FIRE OFF
SETTLEMENTARY DATA ON BEACHTS.
WE G. BLC. PALMISTE BAY 181AND GRENADA
BRENST CLASSIFICATION OF BEACH (Carele) HIGH, HODERATE, LOW
WITH OCCUPANTEDISTICS fine Volcation Sand
LEVEL OF BUNK! HEVELOPHEN: AND/OR IMPACT: NORE, 116HT, HODENATE, REAVY

affect the beach; beach is used as source of sand gently sloping - profile

MIE. OF MICE GRY YAVE BAY MADE GRENADA

rescription or and commissions. Volcanic and Carbonate admixtu

heary profile of the beach is steep low energy sweets.

SMERGY GLASSIFICATION OF MEACH (Circle) HOSEMATE IN

ESTIMATED GESTIGG ACTIVITY: MAJOR...... MEGGLAN ....

LEVEL OF EMBLE DEVELOPMENT AND/OR DISPASET:

INCIDENTAL.

# BUT LEMENTARY DATA ON BEACHES

MINE OF MINES LEVERA RAY SELAND GZENADA	
BRINGS CLASSIFICATION OF BEACH (Circle) BIGH, HODERATE, LON	
SAND MUCH HIGH ENERGY SWELLS WITH RAND	π
CULLENT MOVEMENT	
LEVEL OF RUMAN DEVELOPMENT AND/OR IMPACT: BOME, LIGHT, MODERATE, MEAVY	
DESTINATED MESTING ACTIVITY: MAJOR	
INCIDENTAL	
COMENTS A MAJER NESTING AREA FOR ALL FOUR	
TUBLIPES OF TUTLES FURAVING BLEN OFFSMAE ARE	
SIGNI FEMT.	
MANE OF BEACH GRENADA BAY TELAND GRENADA	
BERGY CHARLIFICATION OF MINCH (CATCLE)	
WESCHIPTION OF BAND CHANCETERISTICS . NELL SORTED CARBONATE	
SAND SAND MOVEMENT & FREQUENT	
LEVEL OF BROKE REVELOPMENT AND/OR IMPART: MORE, LIGHT, MODERATE, REAVY	
ESTIMATED RESTING ACTIVITY: NAJOR BEGULAR	
INCIBROTAL	
TO SHAR AT CERTAIN BONTS	

#### SUPTLIBERTARY DATA ON BEACKES

WHE. OF MACE REAMS FOUR ISLAND GRENADA
BHIRIGY CLARSTYSCATION OF MEACH (Carele) BIGH, MODERATE, LOW
MESCRIPTION OF SAID CHAMCTERISTICS . AHAGH VRKEANIC SAND
WELL SERTED AND RETEN FINE
LEVEL OF STREET MEVELOPMENT AND/OR INDACT: SCHOOL LIGHT, HODERATE, SEAVY
ESTIMATED ARRIVES ACTIVITY: MAJOR BROWLER
INCIDENTAL.
BEACH ON QUICKLY GROWING BAY
SEA ENGROPHING ON THE LAND, SOURCE OF SAND
FOL COMMERCIAL PURPOSES.
HAR. OF MACH BLACK BAY MAIN GRENADA
BRENT CLASSIFICATION OF MINCE (CAPILA) SIGN, HOREWITE LOW
MECHIPTION OF MAIN CHARACTERISTICS . ELACK , VOLCANIC
. WELL SARTED
LEVEL OF STORM MOREOFFETT ARRAYS MONEY MORE LEGST, NODERATE, NEAVY
BETHERD HERTING ACTIVITY: MAJOR BENDAR
PAGE COMPTAIN OF PROPERTY.
Madente profile with much regardente. Hawkshill and green turtle nosting site.
Cardente profile with much recention.
Hawkshill and areen totale north-
J 181 1 2 112 119 2 1192 119 2 1192 119 2 1192 1192 1192 1192 1192 1192 1192 1192 1192 1192 1192 1192 1192

#### SUPPLEMENTARY DATA ON BEACHES

BELLE BARRE BARREN BAX TELAND GREMARA	
DEDGT CLASSIFICATION OF BEACH(Circle) SIGH, HODERATE, LOW	
BEICH PROFILE CHOPFERTELY STE	Ē
COARSE. TO ENGE MELL SOUTER SAND, BLACK WITH	-
LANGE OF BUMAN DEVELOPMENT AREA/OR IMPACT: MOME, LIGHT, MOMERATE, REAVY	
DEFINITION MENTING ACTIVITY: WAJOR	
INCHESTAL	
MINDLE COMMINS ACTIONET ARE HUMAN ACTIVITY, SEINE METE	
ETE HAVE LIMITED TURTLE MESTING	
MINE OF SEASON GARNE FOY BAY MAND GRENADA	
THE CASCIFICATION OF MICH. (CLICAL) MICH. HEATTER LOS	
BLACK VoleANIC SAND WELL	
SORTED, MOSTLY, EIGH, The FILE MODERATELY SLOPING	
LEVEL OF MORE MENTAPHENT AND/OF LIGHT: MORE, LIGHT, MORENATE, SEATY	
型工模型。型式可以 ACTIVITY:	
INCIDENTAL.	
ment comment. Moderate energy beach with gently	
Sloping headile only eccasional norther reported	

#### BOP LEMENTAPT DATA ON BEACHES

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CZHAD MAN BAV GRENADA:
GRENADA THAL BAY ISLAND GRENADA
The second secon
ENDERGY CLASSIFICATION OF MEADER(Carele) MIGH, MODERATE, LOS
CALBONATE WHILE STORE
MESCRIPTION OF SARD CHARACTERISTICS CALROMATE IN HITE SAND
WELL SOLTED
<b>★</b>
LEVEL OF STRAIN TEVELOPHENT AND/OR IMPACT: MORE, LIGHT, MODERATE, REAVY
TAKE CA BENEVI INACTURENT WHAT THE PROPERTY OF
ESTINATED NESTING ACTIVITY: WAJCR BEGULAR
ESTIMATED MESTING ACTIVITIES
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BERNAL DOMENTS Beach broken occasionally by rocks
a l'Indani accesionally 64 rocks.
manual program Deach program of the state of
6 1.1. 43 1. 4.
caine hate breakenth fish in this location
Low energy the state of the sta
All the ball to the beach
Low anergy, seine nots frequently fish in this location how keep I and green tuttles nest on this beach. Howkstill and green tuttles nest on this beach occasionally, fooding affshore by twetter is frequent
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energy the stolding altehore by Turney 17
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DOTHAN BAY GRENADA
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Extent Chicalification of Black (Carrie) Have the
Extent Chicalification of Black (Carrie) Have the
Extent Chicalification of Black (Carrie) Have the
ETTIS CLICELTICATION OF BLACK COLORED VOLENCE TO TAILED MITH. CARBONATE
ETTIS CLICELTICATION OF BLACK COLORED VOLENCE TO TAILED MITH. CARBONATE
ETTIS CLICELTICATION OF BLACK COLORED VOLENCE TO TAILED MITH. CARBONATE
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ESCRIPTION OF SAID CHARACTERISTICS . NO. C.
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ESTIMATED MESTING ACTIVITY: MAJOR.
DESCRIPTION OF BAND CHARACTERISTICS . VOLERAGE . TO LARD MITH CHARACTER SAND.  BEACH GENTLY SLOPING . TO LARD MITH CHARACTER STAND.  LEVEL OF BONAN DEVELOPMENT AND/OR IMPART: MATE. LIGHT. MODERATE, HEAVY  BESTIMATED MESTING ACTIVITY: MAJOR.  BEACH FREQUENTLY WEED BY SEINE-NET
DESCRIPTION OF BAND CHARACTERISTICS . VOLERAGE . TO LARD MITH CHARACTER SAND.  BEACH GENTLY SLOPING . TO LARD MITH CHARACTER STAND.  LEVEL OF BONAN DEVELOPMENT AND/OR IMPART: MATE. LIGHT. MODERATE, HEAVY  BESTIMATED MESTING ACTIVITY: MAJOR.  BEACH FREQUENTLY WEED BY SEINE-NET
DESCRIPTION OF BAND CHARACTERISTICS . VOLERAGE . TO LARD MITH CHARACTER SAND.  BEACH GENTLY SLOPING . TO LARD MITH CHARACTER STAND.  LEVEL OF BONAN DEVELOPMENT AND/OR IMPART: MATE. LIGHT. MODERATE, HEAVY  BESTIMATED MESTING ACTIVITY: MAJOR.  BEACH FREQUENTLY WEED BY SEINE-NET
ESTIMATED MESTING ACTIVITY: MAJOR.

#### SUP LIMENTARY DATA OF MEACHES

POUT SALMES TO GRENADA GRENADA
MERGY CLASSIFICATION OF MACHICEPOL») HIGH, MODERATE, LOS
ESCRIPTION OF SAID CHARACTERISTICS . CARROMATE MERIUM GRAIN
NELL SORTER
LEVEL OF HUMAN DEVELOPMENT AND/OR 116FACT: BOOK, 13GHT, MONEMATS, MEAVY
MATERIAL MESTING ACTIVITY: MAJOR MEGULAR
ENCLOSIVAL A FREQUENT MESTING SITE FOR
HANKERILL AND GREEN TURTLES
PHORNE ROUGE  BURGO CHANTINE: BELAND, GRENRAA.
ENTRY: CLASSIFICATION OF MACH (Circle) STON, MOMENATE LOW
MERCHIPTION OF BAND CHARACTERISTICS N. HITE , CARBONATE
. MALL SORTER
LEVEL OF BOMAS REVELOPMENT AND/OR LIGHT: MODE, 110ST, HOLERATE, STAVE
METANED MEETING ACTIVITY 18-JOR
THE TRANSPAL
CHALLOW APPLACH TO THE BEACH
Hawksbill and groom tuttle nost wig

SPECIES	2861	1961	300	1973	961	1161
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Eretmochelys imbricata

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Caretta caretta Chelonia eydes

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TABLE 6. ESTRATED FORMATIONS OF MEXIMS FEMALES.
Summerize the estimated number of nesting females
for the years indicated and describe methods of estimation
on the met page.

TABLE 8 - THATLE SPECIES PRESENT OF FORMATHE MARK.

Please complete non of them table for each of the areas identified in Table 7. Names each table as encountrated in Table 7. Names each table as encountrated in Table 7.

HOUSES OF -LABORS & STORTS	allyon februsts	2		at R	4			
FISHING GEAR USED	E, co. Nots and spare		i			NETS AND SPENCE		
SPECIES LAMOED Use abbrev)	E.C.	E.Cr.	Ejcne	5.5.E	Ec	E G.		
INNEE OF POST OR SITE	1. SAUTEUKS	2. GRENVILLE	3. CALLISTE	. BACOLET	s. WOBURN	6. CALIVIENY	€.	

TABLE 11. LANDING SITES FOR TUMPLES & TUMPLE PRODUCTS

METHOD OF DETENDIBATION	Bo-SD 30-SD 20-SD PARKET FROME, OBS., Interviews.			=						
	r Average	*					•	! ·	:	
₹ \$	4 18	1	300	ر-ره	*	ğ	5		i	<b>-</b> .
を置	8 - 8 6 - 8	C) B	256+	3	000	1	36		İ	
35	No. 640 1500	- Al   100 - 100   100 - 100	17500 ZSo , TSO	01-5. 01-5; 01-5	0001 0001	100 200 All the two rea-to-	See See See	-		_
TEAR SPECIES	Creite caratta	Chelenia grdas		Bernochelys cortaces	:	Erebaschelys Imbricata		Lepidochelys hampi		Lepidochelys alivacas

TABLE 12, TOTAL AMENIAL TRYILE LAMDINUS IN NUMBER AND WETHITS (NJEG)
Do not include buribe sergic incidental to abur.
fishing operations (e.g., shrimp transleg),

TABLE 1. COLOR TO CONTROLES OF TURBLES (C. 1)

in fulfor to work and products, it is estimated that the public this are taken countilly from beaches or at see for the following servers.

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1. Estimate m. M. of type: 6,000 - 10 000

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50 ± 10

Fishing

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Process in

income based or

CHITCHIS

EST, AMBUNE LACONE FROM TURTLES

TOTAL AMMINE RUMBERS NF PERSOMS

ACTIVITY

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Se111mg

In addition to the described fishery activities, control according to a families may be perfitted in recontrol according to accels from a markelloses at the cartain groups of people, in surviving section of people, in surviving accels to the activity accels file, beach lights, athric traditions, specific seasons of the year, special permiss, atc.).

B: Secial aspects

THE GRENADA SHELF - INDATH FATHOUS

\*

ARE AS FOLLOWS: LIVE WARDER (\$0.90, 16-1)

MAKET PRICES TOR TURTLE PRODUCTS IN GRENADA

MALE 16. EMPLOYMENT DEPENDENT ON TONTLES

Brds and other Wid Life (Protection of). [6]. 36 PREUNDA

Provided that the Covernor may from time to time by matter in the Constite appoint some other period or periods in the of the periods faced as storward, and after any such appointment the periods so appointed shall be the close season for the purpose of this Ordinance.

1. The Covernor may from time to time by notice in the Castric declare that, as to say of the wild block southerness member of the beared forbeits the by provisions of settien 4 shall case to apply, and may from time to time say or cancel any much alterations; and thereupon the previsions of the may much alteration; and thereupon the previsions of the case may is, with such variablem as by the feeduration may be provided; and the Covernor may also, by notice as aforested to be as to any after not numerated in the said schedule that it shall from the date of the notice be deemed to be included in the said Schedule for such close season as any be named in the notice is applicable to it, and may from the fact bad been continued in the date of the notice to the said and then the bird had been continuers do in the sane way as if the bird had been continuers do in the Gebedule; and thereupon the bird shall to all intents and purposes be desen-to be included in the Schedule for the close season satigmed it in the said notice.

(a) bill, would or take, or attempt to bill, woun or table, usy of the wild birds enumerated to liberand Schedule to this Ordinance or any turtle opposers, during the close season for the same; or and, easy person 4. Bergit as hardonites manda

(b) take the aggs or nest of any such bird during

(c) have in his possession any turtle, the eggs of any turtle or any oystern, during the close season for the same. shell be guilty of an edition against this Ordinano