

# THE NATIONAL REPORT EL REPORTE NACIONAL

FOR THE COUNTRY OF  
POR EL PAIS DE

UNITED STATES VIRGIN ISLANDS  
ISLAS VIRGENES ESTADOUNIDENSES

NATIONAL REPRESENTATIVE / REPRESENTANTE NACIONAL

RALPH BOULON JR.

Western Atlantic Turtle Symposium  
Simposio de Tortugas del Atlantico Occidental

17-22 July / Julio 1983

San José, Costa Rica

USVI National Report, WATS I Vol 3, pages 489-499





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

**NATIONAL REPORT FOR THE COUNTRY OF**

**US VIRGIN ISLANDS**

NATIONAL REPORT PRESENTED BY

**Ralf Boulon Jr.**

The National Representative

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NATIONAL REPORT PREPARED BY

Ralf Boulon Jr., Division of Fish and Wildlife

With assistance from Evonne Small, National Park Service

DATE SUBMITTED: 27 June 1983

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

IOC Assistant Secretary for IOCARIBE

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San José, Costa Rica



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:*

Boulon, R. Jr. 1984. National Report for the U.S. Virgin Islands, pp.489-499. *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: U.S. VIRGIN ISLANDS**

Length of Coastline*	277.9 Km
Km <sup>2</sup> of Continental Shelf Area	1,972 Km
Seaward Extent of Jurisdictions	
Territorial Sea	4.83 Km
Extended Economic Zone	< 321.8 Km
Fisheries Jurisdiction	321.8 Km
Other (Describe) Custom Zone	19.3 Km
Endangered Species Importation	4.83 Km
Marine Mammals Jurisdiction	321.8 Km
* Coastline length is the measurement of the national seaward boundary of a country; i.e., the distance from border to border for a coastal country and the distance around an island country.	

Marine Shoreline Characteristics*	Km of Shoreline		
	Undeveloped	Developed**	Total***
1. Sand Beach (Total)			80
A. High Energy (seasonal: November to March)	11.50	1.75	
B. Low Energy	47.75	19	
2. Reef (exposed) (not included in total shoreline)	23.75		23.75
3. Rocks	****131.9	****25.00	****164.1
4. Cliffs			
5. Vegetation (Total)			
A. Vines			
B. Grasses			
C. Mangroves	33.8		33.8
D. Coconut Trees			
E. Other Trees or Shrubs			
F. Marshes			
6. Mouths of Lagoons, Rivers, Canals	6.55		6.55
7. Total Shoreline***	232.15	45.75	277.9
* Refer to SEA TURTLE MANUAL (Aerial Survey)			
** Human development or use (See MANUAL)			
*** <i>Editor's note (2009):</i> Constituent parts do not necessarily sum to total values			
**** Combined values for "Rocks" and "Cliffs" categories			

**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	3	90.0
2. Mud	0.2	5.0
3. Rocks	0.75	3.0
4. Submerged Vegetation	0.6	90.0
5. Reefs (Total)	0.2	188.0
A. Fringing Reefs		17.0
B. Patch Reefs	0.2	70.0
6. Other: Coral & Rocks, vegetation mixed		101.0
* This information is sketchy at present. An overall review of habitat bottom types on the insular shelves of the U.S. Virgin Islands is unobtainable at the present time.		

**TABLE 3.1. NESTING BEACH INVENTORY St. Croix and offshore cays**  
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. Buck Island	1.2	Cm, D, E	May-October
2. New Fort Beach	0.2	Cm**	May-October
3. Shoy's Beach	2.1	Cm**, D, E	May-October
4. Green Cay Beach	0.2	D, E	May-October
5. Prune Beach	0.8	D, E	May-October
6. Coakley Bay	0.6	D, E	May-October
7. Teague Bay	0.7	E	May-October
8. Smuggler's Cove	0.2	Cm**, E	May-October
9. Knight Bay	0.4	Cm**	May-October
10. Boiler Bay	0.3	E	May-October
11. Teytaud's Beach	0.4	E	May-October
12. East End Bay	0.3	E	May-October
13. Isaac Bay	0.7	D, E	May-October
14. Jacks Bay	0.7	D, E	May-October
15. Grapetree Bay	0.2	Cm**, E	May-October
16. Turner Hole	1.1	Cm**, E	May-October
17. Rod Bay	0.8	Cm**, E	May-October
18. Robin Bay	1.7	Cm**, E	May-October
19. Halfpenny Bay	0.8	E	May-October
20. Manchioneal Bay	2.1	Cm**, D, E	May-October
21. Can Garden Bay	1.7	E	May-October
22. Manning's Bay	0.7	Cm**	May-October
23. Sandy Point	5.4	Cm**, D, E	May-October
24. La Grange	0.7	Cm**, E	May-October
25. Sprat Hole	1.1	E	May-October
26. Butler Bay	0.2	E	May-October
27. Ham's Bay	0.3	E	May-October
28. Maroon Hole	0.1	Cm**, E	May-October
29. Davis Bay	0.3	Cm**, D, E	May-October
30. North Star	0.3	E	May-October

<b>TABLE 3.1. NESTING BEACH INVENTORY St. Croix and offshore cays</b>			
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
31. Cane Bay	0.9	E	May-October
32. Rust Op Twist	0.2	E	May-October
33. Salt River (West)	0.2	Cm**, E	May-October
Species *	Abbreviation		
<i>Caretta caretta</i>	Cc		
<i>Chelonia mydas</i>	Cm		
<i>Dermochelys coriacea</i>	D		
<i>Eretmochelys imbricata</i>	E		
<i>Lepidochelys kempfi</i>	Lk		
<i>Lepidochelys olivacea</i>	Lo		
** Report questionable. Species ID on basis of crawl size.			

<b>TABLE 3.2. NESTING BEACH INVENTORY. St. Thomas and offshore cays</b>			
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. Neltieberg Bay	1.2	D, E	June-November
2. Little Hans Lollik	0.04	D, E	July-November
3. Coconut Bay, Hans Lollik	1.00	E	June-November
4. Dry Bay, Hans Lollik	0.04	D, E	July-November
5. Little Bay Hans Lollik	0.04	E	October
6. Sandy Bay, Inner Brass	0.08	E	June-November
7. Penn Bay	0.07	E	July-November
8. Caret Bay	0.08	E	July-November
9. Botany Bay	0.06	D, E	July
10. Santa Marie Bay	0.06		July-October
11. Bordeaux Bay	0.05	E	July-September
12. West Cay Bay	0.05	E	July
13. Mandahl Bay	0.07	E	July
14. Hull Bay	0.04	E	August-September
15. Clucluse Bay	0.04	E	August
16. Dog Island	0.03	E	November
17. Great St. James Island	0.04	E	November
Species *	Abbreviation		
<i>Caretta caretta</i>	Cc		
<i>Chelonia mydas</i>	Cm		
<i>Dermochelys coriacea</i>	D		
<i>Eretmochelys imbricata</i>	E		
<i>Lepidochelys kempfi</i>	Lk		
<i>Lepidochelys olivacea</i>	Lo		

<b>TABLE 3.3. NESTING BEACH INVENTORY. St. John and offshore cays</b>			
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. Caneel Hawksnest	0.208	E	August-October
2. Jumbi Bay	0.101	E	August-October
3. Trunk Bay	0.439	E	July-September
4. Windswept	0.176	E	June-August
5. Maho Bay	0.214	E	September
6. Francis Bay	0.499	E	July and August
7. Salt Pond Bay	0.208	E	June-December
8. Greater Lameshure Bay		E	July and August
9. Little Lameshure Bay	0.184	E	May-August
10. Europa Bay		E	September
11. Eastern Reef Bay	0.245	E	June-September
12. Genti Bay	0.558	E	July-December
13. Western Reef Bay	0.544	E	June-November
14. Cocoloba Point	0.13	E	June-November
Species *	Abbreviation		
<i>Caretta caretta</i>	Cc		
<i>Chelonia mydas</i>	Cm		
<i>Dermochelys coriacea</i>	D		
<i>Eretmochelys imbricata</i>	E		
<i>Lepidochelys kempfi</i>	Lk		
<i>Lepidochelys olivacea</i>	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.

All sand beaches in the Virgin Islands are white carbonate sands composed primarily of *Halimeda* plates, mollusk shell fragments, echinoderm test fragments and coral skeletal fragments. Terrigenous materials are insignificant. Particle sizes almost all fall within the range of 1 to 4 phi. Beach profiles are fairly consistent with some change on the north shore beaches during the winter (Nov. to Mar.) when storm[s] in the North Atlantic produce sea swells of 1 to 3 meters. Beach profiles become steeper in this wave regime and many late nests are subject to inundation.

Backbeach vegetation is also quite uniform throughout the Virgin Islands. The most common vegetation elements are listed below in order of descending commonality:

1. *Cocoloba uvifera*
2. *Thespesia populnea*
3. *Conocarpus erectus*
4. *Portulaca oleraceae*
5. *Suriana maritima*
6. *Acacia macracantha*
7. *Elaeodendrum xylocarpum*
8. *Guilandia crista*
9. *Sporobolus virginicus*

\* As the number of beaches in the U.S. Virgin Islands is extremely high, this section is discussed in terms of generalities rather than specifics. Artificial lighting and boating activities may be a problem in the following:

**St. John**

1. Caneel Hawksnest: lights
2. Trunk Bay: boats
3. Maho Bay: boats and lights
4. Francis Bay: boats
5. Salt Pond Bay: boats
6. Chocolate Hole: boats and lights

**St. Thomas**

1. Mandahl Bay: lights
2. Hull Bay: boats and lights
3. Great St. James Island: boats

**St. Croix**

1. New Fort Beach: lights
2. Shoy Beach: lights
3. Teague Bay: lights and boats
4. Smugglers Cove: lights
5. Boiler Bay: lights
6. Grapetree Bay: lights
7. Turner Hole: lights
8. Rod Bay: lights
9. Halfpenny Bay: lights
10. Mannings Bay: airport
11. La Grange: lights (Hess)
12. Sprat Hole: lights and boats
13. Butler Bay: lights
14. Ham's Bay: lights
15. Cane Bay: lights
16. Rust-Op-Twist: lights
17. Turquoise Bay: lights
18. Judith's Fancy: lights

Beach	Dates of Data Collection	<i>Dermochelys coriacea</i>	<i>Eretmochelys imbricata</i>	<i>Chelonia mydas</i> **
1. Buck Island	1980-1982	1982: 2	1980: 45 1981: 35 1982: 40-45	
2. New Fort Beach	1976-1978	2-3		3
3. Shoy's Beach	1976-1978	1-2	2-3	
4. Green Cay Beach	1976-1978	2	15	
5. Prune Beach	1976-1978	9	2-3	
6. Coakley Bay	1976-1978	15-20	5-10	
7. Teague Bay	1976-1978		2-3	
8. Smuggler's Cove	1976-1978		2-3	2-3
9. Knight Bay	1976-1978			3-5
10. Boiler Bay	1976-1978		1-3	
11. Teytaud's Beach	1976-1978		1-3	



**TABLE 4.1. NESTING CENSUS FOR EACH VIRGIN ISLAND NESTING BEACH. St. Croix \***

Beach	Dates of Data Collection	<i>Dermochelys coriacea</i>	<i>Eretmochelys imbricata</i>	<i>Chelonia mydas</i> **
12. East End Bay	1976-1978		3	
13. Isaac Bay	1976-1978	1-2	7-8	
14. Jacks Bay	1976-1978	1-2	25	
15. Grapetree Bay	1976-1978		3-5	3-5
16. Turner Hole	1976-1978		1-2	1-2
17. Rod Bay	1976-1978		5	
18. Robin Bay	1976-1978		5	
19. Halfpenny Bay	1976-1978		5	
20. Manchioneal Bay	1976-1978	10	10	10
21. Cane Garden Bay	1976-1978		4-5	
22. Manning's Bay	1976-1978			1-2
23. Sandy Point ***	1981 1982	26+ 19		
24. La Grange	1976-1978			3-5
25. Sprat Hole	1976-1978		1-2	
26. Butler Bay	1976-1978		1-2	
27. Ham's Bay	1976-1978		1-2	
28. Maroon Hole	1976-1978		5	5
29. Davis Bay	1976-1978	3	3	4
30. North Star	1976-1978		5	
31. Cane Bay	1976-1978		3	
32. Rust Op Twist	1976-1978		3	
33. Salt River (West)	1976-1978		3-5	
34. Turquoise Bay	1976-1978		5	
35. Judith's Fancy	1976-1978		5	
36. Little Bay	1976-1978		?	

\* Figures for St. Croix may indicate total number of nests due to observers not able to determine number of renestings

\*\* All *Chelonia mydas* identifications are based on crawl width

\*\*\* Sandy Point figures for *Dermochelys coriacea* are the result of intensive DWF studies

**TABLE 4.2. NESTING CENSUS FOR EACH VIRGIN ISLAND NESTING BEACH. St. Thomas**

Beach	Dates of Data Collection	<i>Dermochelys coriacea</i>	<i>Eretmochelys imbricata</i>	<i>Chelonia mydas</i> *
1. Neltieberg Bay	1979-1981	1979: 1	1979: 4 1980: 3 1981: 1	
2. Little Hans Lollik	1979-1981	1980: 1	1979: 5 1980: 13 1981: 6	
3. Coconut Bay, Hans Lollik	1979-1981		1979: 8 1980: 10 1981: 3	
4. Dry Bay, Hans Lollik	1979-1981		1979: 15 1980: 23 1981: 12	

5. Little Bay Hans Lollik	1979-1981		1979: 2 1980: 0 1981: 0	
6. Sandy Bay, Inner Brass	1979-1981		1979: 8 1980: 8 1981: 6	
7. Penn Bay	1979-1981		1979: 3 1980: 3 1981: 3	
8. Caret Bay	1979-1981		1979: 8 1980: 2 1981: 6	
9. Botany Bay	1979-1981	1980: 1	1979: 0 1980: 0 1981: 2	
10. Santa Marie Bay	1979-1981		1979: 1 1980: 1 1981: 0	1980: 2
11. Bordeaux Bay	1979-1981		1979: 3 1980: 8 1981: 6	
12. West Cay Bay	1979-1981		1979: 0 1980: 2 1981: 2	
13. Mandahl Bay	1979-1981		1979: 0 1980: 4 1981: 0	
14. Hull Bay	1979-1981		1979: 0 1980: 0 1981: 1	
15. Clucluse Bay	1979-1981		1979: 4 1980: 0 1981: 2	
16. Dog Island	1981		5	
17. Great St. James Island	1979		6	
* All <i>Chelonia mydas</i> identifications are based on crawl width				

Beach	Dates of Data Collection	<i>Dermochelys coriacea</i>	<i>Eretmochelys imbricata</i>	<i>Chelonia mydas</i> *
1. Caneel Hawksnest	1980-1982		1980: 2 1981: 1 1982: 0	
2. Jumbi Bay	1980-1982		1980: 5 1981: 0 1982: 4	
3. Trunk Bay	1980-1982		1980: 0 1981: 6 1982: 0	
4. Windswept	1980-1982		1980: 0 1981: 7 1982: 0	

Beach	Dates of Data Collection	<i>Dermochelys coriacea</i>	<i>Eretmochelys imbricata</i>	<i>Chelonia mydas</i> *
5. Maho Bay	1980-1982		1980: 0 1981: 1 1982: 0	
6. Francis Bay	1980-1982		1980: 0 1981: 3 1982: 0	
7. Salt Pond Bay	1980-1982		1980: 0 1981: 11 1982: ?	
8. Greater Lameshure Bay	1980-1982		1980: 0 1981: 0 1982: 1	
9. Little Lameshure Bay	1980-1982		1980: 0 1981: 1 1982: 4	
10. Europa Bay	1980-1982		1980: 0 1981: 0 1982: 1	
11. Eastern Reef Bay	1980-1982		1980: 2 1981: 1 1982: 3	
12. Genti Bay	1980-1982		1980: 0 1981: 3 1982: 0	
13. Western Reef Bay	1980-1982		1980: 0 1981: 1 1982: 10	
14. Cocoloba Point	1980-1982		1980: 5	
* All <i>Chelonia mydas</i> identifications are based on crawl width				

**TABLE 5A. AERIAL BEACH SURVEY SUMMARY (supplementary page)**

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

See enclosed copy of:

Boulon, Jr., R.H. and D.A. Olsen. 1981. Virgin Islands turtle resources: Aerial census results 1979-1980. Final report to: NMFS NA-79-GA-A-00133 and NA-80-GA-A-00055. 23 pp.

<b>TABLE 6. ESTIMATED POPULATION SIZE OF NESTING FEMALES</b>						
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
<i>Caretta caretta</i>						
<i>Chelonia mydas</i>						
<i>Dermochelys coriacea</i>	19 Sandy Point	26 Sandy Point				
<i>Eretmochelys imbricata</i>	10 (St. John) 15 (Buck Island)	14 (St. John) 10 (Buck Island)	7 (St. John) 14 (Buck Island)			
<i>Lepidochelys kempfi</i>						
<i>Lepidochelys olivacea</i>						

**TABLE 6A. ESTIMATED POPULATION OF NESTING FEMALES (supplementary page)**

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

Records were kept for all crawls on beaches on St. John and Buck Island, St. Croix showing the number of nests and the time intervals between crawls. Beaches on St. John are short, ranging from 101 m to 558 m and nesting was sparse enough that by tabulating the number of days between nestings (i.e. two versus 16), one could reasonably estimate the number of nesting females per individual beach. Figures in the table represent totals for each year.

On Sandy Point, nearly total number of leatherbacks were actually observed nesting and tag monitoring gave almost precise number of nesting females per individual beach.

<b>TABLE 7. FORAGING AREAS INVENTORY</b>			
Name of Area (or give coordinates)	Approx. Area (Km <sup>2</sup> )	Species Foraging (use abbreviations & approx. numbers)	Nature of Evidence (observation, fishery, incidental catch)
1. Francis Bay, St. John	1.5	Cm: 6-7; E: 4-5	Direct weekly observation from a boat and beach.
2. Maho Bay, St. John	1	Cm: 3-4; E: 3-4	Direct weekly observation from a boat and beach.
3. Caneel Bay, St. John	2	Cm: 1-2; E: 4-5	Direct weekly observation from a boat and beach.
4. Cruz Bay, St. John	1	E: 4-5	Direct weekly observation from a boat and beach.
5. Brown Bay, St. John	1	E: 2-3	Direct weekly observation from a boat and beach.
6. Hawksnest Bay	1	Cm: 7; E: 4-5	Direct weekly observation from a boat and beach.
7. Salt Pond Bay, St. John	0.75	E: 3-4	Direct weekly observation from a boat and beach.
8. Magens Bay	4	Cm: 107; E: 57	Mark and recapture estimates using Schnabel population estimator

9. Red Hook , St. Thomas	1.5	Cm: 47	Mark and recapture estimates using Schnabel population estimator
10. Thatch Cay, St. Thomas	1	Cm: 33	Mark and recapture estimates using Schnabel population estimator
11. Little St. James Island	1	Cm: 59	Mark and recapture estimates using Schnabel population estimator
12. Smith Bay, St. Thomas	0.5	Cm: 18	Mark and recapture estimates using Schnabel population estimator
Species	Abbreviation		
<i>Caretta caretta</i>	Cc		
<i>Chelonia mydas</i>	Cm		
<i>Dermochelys coriacea</i>	D		
<i>Eretmochelys imbricata</i>	E		
<i>Lepidochelys kempfi</i>	Lk		
<i>Lepidochelys olivacea</i>	Lo		

<b>TABLE 8. TURTLE SPECIES PRESENT ON FORAGING AREAS.</b>														
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	M	A	M	J	J	A	S	O	N	D		
<i>Caretta caretta</i>														
<i>Chelonia mydas</i>														Approximately equally distributed
<i>Dermochelys coriacea</i>														
<i>Eretmochelys imbricata</i>														Approximately equally distributed
<i>Lepidochelys kempfi</i>														
<i>Lepidochelys olivacea</i>														

\* Based on a combination of periodic observations and sporadic sampling the overall numbers of turtles present on each foraging area at any one time are approximately the same. No clear peaks in activity are apparent.

<b>TABLE 9. NON-FORAGING TURTLES AT SEA.</b>			
Please provide any information available on the incidence of turtles in offshore areas.			
Location (Give Lat. & Long. Coordinates)	Date	Species and Est. Nos. (Abbreviations)	Comments
64° 54' W, 18° 26' N	5/8/1979	D: 2	Seen swimming at the surface
Species		Abbreviation	
<i>Caretta caretta</i>		Cc	
<i>Chelonia mydas</i>		Cm	
<i>Dermochelys coriacea</i>		D	
<i>Eretmochelys imbricata</i>		E	
<i>Lepidochelys kempfi</i>		Lk	
<i>Lepidochelys olivacea</i>		Lo	

<b>TABLE 10.1. NATURAL MORTALITY</b>			
Life Stage Unit	Species (abbrev.)	Causes *	Extent of Mortality (% of Unit)
Nests/eggs	E	Buck Island, St. Croix (1980-1981): mongoose predation	50-60% of all nests
	E	St. John (1980-81): mongoose, wild dog and beach erosion	23% of the total
Hatchlings	E	St. John (1981): beach erosion during emergence	2.70%
	E	St. John (1981): <i>Ocypode quadrata</i> ** predation on one hatchling	
Juveniles	E	Found dead on St. Thomas (1974): cause of death unknown	
Adults (in water)	E	Scutes from an approximately 28 kg hawksbill turtle were found in the stomach of a 4 m tiger shark	
Nesting females		None	
Species		Abbreviation	
<i>Caretta caretta</i>		Cc	
<i>Chelonia mydas</i>		Cm	
<i>Dermochelys coriacea</i>		D	
<i>Eretmochelys imbricata</i>		E	
<i>Lepidochelys kempfi</i>		Lk	
<i>Lepidochelys olivacea</i>		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.			
** <i>Editor's note (2009)</i> : This binomial was spelled " <i>Ocypode quachatus</i> " in original National Report.			

TABLE 10.2. NATURAL MORTALITY			
Life Stage Unit	Species (abbrev.)	Causes**	Extent of Mortality (% of Unit)
Nests/eggs	D	Sandy Point, St. Croix (1981-1982): beach erosion	1981: 34 % of nests 1982: 23% of nests
Hatchlings	D	Sandy Point, St. Croix (1982): crabs, night herons, mongoose;	6%
		Vehicular compaction	2%
Juveniles			
Adults (in water)			
Nesting females			
Species		Abbreviation	
<i>Caretta caretta</i>		Cc	
<i>Chelonia mydas</i>		Cm	
<i>Dermochelys coriacea</i>		D	
<i>Eretmochelys imbricata</i>		E	
<i>Lepidochelys kempi</i>		Lk	
<i>Lepidochelys olivacea</i>		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.			

**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.

#### St. John Hawksbill Nests

Numbers of undeveloped or sterile eggs ranged from 0-37 and represented 5.9 percent of the eggs in the nests. No distorted, undersized yolkless eggs were found in any of the nests; shells of yolkless eggs were the same size as shells of fully developed eggs.

#### Mongoose Predation

A total of 15 nests were raided by the exotic mongoose *Herpestes auro-punctatus* during the 1980 and 1981 season. Upon physical inspection of the nest area, an estimate was made of the total number of eggs or hatchlings that had been taken by mongooses in 10 of the 15 predations. The total from those 10 nests was at least 663. Contents of the other five nests were completely destroyed by the mongoose, making two counts impossible. If clutch in the five nests was typical of all nests, mongooses took an additional 710 eggs (average clutch size of 142 x 5 nests). The best estimate of total eggs laid in 1980 and 1981 was 8,789. Mongooses, therefore, took 23 percent of the total egg production.

Mongooses dug into nests at three different phases of the nesting cycle: within two to three days of egg deposition, at the time of hatching in the nest cavity, and during the emergence of hatchlings from the sand's surface. Mongooses in the Virgin Islands are predominantly nocturnal feeders; the majority of the predation occurred the morning after the nocturnal primary emergence of the hatchlings. The late emergent or straggler hatchlings still in the nest cavity are probably the usual prey of the mongoose. If a

mass emergence were to occur after dawn, mongoose could consume most, if not all, of the hatchlings from that nest.

Dog Predation

In 1980 protective six-inch-square wire mesh was placed over eight nests on beaches where three nests had been previously totally destroyed by feral and/or domestic dogs. One of the three nests was destroyed 29 days after the eggs were laid indicating that dogs are quite perceptive of turtle scent. Therefore, the enclosures were left in place until after hatching emergence was noted. The wire did not inhibit the emergence of hatchlings.

Meteorological Sources of Mortality

Turtle nest habitats on St. John are narrow strips of sandy land nearly at sea level. These habitats are thus particularly vulnerable to strong sea swells associated with tropical storms during August to November and northern winter storms from November to April. Four nests were inundated and lost in 1980 and one in 1981.

See also report by E. Small on St. John Hawksbill turtle nesting.

For leatherback turtle information, see enclosed report on Leatherback Sea turtle Research in the Virgin Islands.

The remains of a hawksbill turtle were recovered from the stomach of a 12-foot tiger shark caught in 300 fathoms of water off the south coast of St. Thomas. The post vertebral scute measures 15.88 cm.

<b>TABLE 17.1. TURTLE MARICULTURE OPERATIONS. 1981</b>								
This table quantifies activities concerned with turtle culture for either conservation, population enhancement experiments, or commercial use. Activities to be included are "headstarting", re-nesting, incubation and release, etc. Prepare separate table for each year of available data.								
Species	Hatchery Operations					Holding Live Turtles		
	Eggs Collect.	Eggs Hatch	No. Release	Age at Release	No. Retain	No. of Juvs.	Adult Females	Adult Males
<i>Caretta caretta</i>						1		
<i>Chelonia mydas</i>						20		
<i>Dermochelys coriacea</i>								
<i>Eretmochelys imbricata</i>						7		
<i>Lepidochelys kempfi</i>								
<i>Lepidochelys olivacea</i>								



<b>TABLE 17.2. TURTLE MARICULTURE OPERATIONS. 1982</b>								
This table quantifies activities concerned with turtle culture for either conservation, population enhancement experiments, or commercial use. Activities to be included are "headstarting", re-nesting, incubation and release, etc. Prepare separate table for each year of available data.								
Species	Hatchery Operations					Holding Live Turtles		
	Eggs Collect.	Eggs Hatch	No. Release	Age at Release	No. Retain	No. of Juvs.	Adult Females	Adult Males
<i>Caretta caretta</i>						1		
<i>Chelonia mydas</i>						26		
<i>Dermochelys coriacea</i>								
<i>Eretmochelys imbricata</i>						7		
<i>Lepidochelys kempfi</i>								
<i>Lepidochelys olivacea</i>								

<b>TABLE 18. PUBLIC AND PRIVATE INSTITUTIONS CONCERNED WITH TURTLE CONSERVATION / MANAGEMENT / UTILIZATION</b>		
Institution or Organization Name And Address	No. of Active Members	Activities in Progress
Division of Fish and Wildlife Service 101 Estate Nazareth St. Thomas U.S. Virgin Islands 00802	6	1. Leatherback nesting biology, Sandy Point, St. Croix 2. In-water hawksbill and green mark and recapture population study
Virgin Islands National Park P.O. Box 7789, St. Thomas U.S. Virgin Islands 00802	2	1. Hawksbill nesting biology, St. Croix 2. Hawksbill nesting biology, Buck Island

<b>TABLE 19. SANCTUARIES AND REFUGES</b>			
Name and Location	Area Km <sup>2</sup>	Reason(s) for Protection	Type and effectiveness of Enforcement
Virgin Islands National Park St. John U.S. Virgin Islands (Includes beaches and adjacent waters)		U.S. National Park Service	Routine patrols. British V.I. fishermen still occasionally take turtles near St. John
Buck Island Reef National Monument, St. Croix U.S. Virgin Islands (Includes beaches and adjacent waters)		U.S. National Park Service	Routine patrols. Poaching of nests is still a problem.
Proposed St. Thomas Marine Sanctuary (Includes beaches and adjacent waters)		To preserve an area of diverse marine communities	To be patrolled by Department of Conservation and Cultural Affairs enforcement personnel

<b>TABLE 20. REGULATORY AUTHORITY</b>			
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
National Marine Fisheries Service U.S. V. I. Law Enforcement Division Room 140A Federal Building St. Thomas U.S. Virgin Islands 00801	None specifically identified	1	Highest level in the U.S. Virgin Islands
National Marine Fisheries Service U.S. V. I. Law Enforcement Division Room 140A Federal Building St. Thomas U.S. Virgin Islands 00801	None specifically identified	1	Highest level in the U.S. Virgin Islands
Department of Conservation and Cultural Affairs Bureau of Environment Enforcement No. 86 Estate Frydenhoj St. Thomas U.S. Virgin Islands 00802	None specifically identified	None specifically identified	
Buck Island National Monument P.O. Box 160, Christiansted St. Croix U.S. Virgin Islands 00802	\$4,000	0.3	

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

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

1. U.S. Endangered Species Act of 1973. To conserve species of fish, wildlife and plants that are in danger of extinction.
2. Virgin Islands Code, Chapter 9A, Title 12, Section 318. To contribute to the preservation of marine turtles in the Caribbean area.

#### CONSERVATION

§ 315 Ch. 9A  
to the Commissioner. Such report shall contain the number of pounds and the value of each kind of edible seafood caught by him with such boat or devices for the twelve (12) months ending on the preceding June 30, and the number and value of the devices , if any, used in such catching or taking and the number of persons employed therein. The Commissioner shall annually, on or before August 15, provide such owner or licensee, upon his application with suitable blank forms for such reports so arranged that each month's catch may be separately recorded thereon; and in filling out such reports, such owner or licensee shall give, so far as practicable , the required results of each month's fishing.

- (b) In lieu of said annual report, the commissioner may require any owner or licensee to submit a monthly report of such facts listed herein as the commissioner may deem advisable.
- (c) The license and/or vessel registration of any person who willfully fails to make a report or willfully makes a false report shall be suspended and a new license or registration shall not be issued until such report is made.

- (d) Any person who willfully violates any provision of this section shall be punished by a fine of not less than ten ((\$10) dollars nor more than one hundred (\$100) dollars-Added Nov. 21, 1972. No. 3330, § 2, Sess. L. 1972, p. 496.

§ 316. Closed seasons

- (a) The Commissioner shall announce, at least forty-five (45) days in advance, the beginning of each of the closed seasons prescribed in the regulations issued pursuant to this chapter for the protection of one or more species of fish as herein defined.
- (b) The transportation and sale of a species of fish which is the subject of a closed season shall be allowed up to the seventh day after the commencement of the closed season in order to permit the liquidation of stock caught before the beginning of such closed season.
- (c) The fishing, sale, transportation and utilization of all species not expressly included in the closed season established by rules and regulations hereunder shall be permitted at any time throughout the year. The sale and transportation of canned or otherwise preserved species which have been caught before the beginning of the respective closed season is also permitted -Added Nov. 21, 1972. No. 3330, § 2, Sess. L. 1972, p. 497.

COMMERCIAL FISHING

Ch. 9A

T.12 § 319

§ 317. Fish for scientific, educational and breeding purposes

The Department and any other person or organization with the written permission of the Commissioner, may catch or cause to be caught, for scientific or educational purposes or for fish culture, any fish or marine organism, at any time from the Jurisdictional waters of the Territory, and may sell or cause to be sold when not otherwise prohibited by law, all or such part of the catch that has been taken and as may not be necessary for scientific or educational purposes or for fish culture. The proceeds, if any, from these sales shall be deposited in the Fisheries and Wildlife Fund -Added Nov. 21, 1972. No. 3330, § 2, Sess. L. 1972, p. 497.

§ 318. Protection of marine turtles, nests and eggs; penalties

- (a) It is the intent of the Legislature of the Virgin Islands to contribute to the preservation of marine turtles in the Caribbean area, said turtles now being close to extinction.
- (b) It shall be unlawful for any person to take, kill, possess, mutilate or in any way destroy loggerhead, leatherback, hawksbill, ridley or green turtle or any other sea turtle, or take or possess any part thereof while such turtle is on the beaches of the Territory at any time, or to take or to possess any such turtle in the Territorial waters during the months of May through September, inclusive, of each year and at such other times as the Commissioner may by rule and regulation prescribe. It shall be unlawful to import, trade, sell or in any way deal in young sea turtles of any kind; Provided, however, that the Commissioner may issue written permission to any licensed or publicly owned zoo or exhibition of marine life to capture such young turtles for purposes of live exhibition.
- (c) No person may take, possess, disturb, mutilate, destroy, cause to be destroyed, sell, offer for sale, transfer, molest or harass any sea turtle nest or eggs at any time.
- (d) Any person violating any provision of this section is guilty of a misdemeanor and shall upon conviction therefore be punished by a fine not less than one hundred (\$100) dollars nor more than six hundred (\$600) dollars, or by imprisonment for a period not to exceed one (1) year, or by both such fine and imprisonment -Added Nov. 21, 1972. No. 3330, § 2, Sess. L. 1972, p. 498.

§ 319. Lobsters: regulations; penalties

(a) It is the intent of the Legislature of the Virgin Islands to place

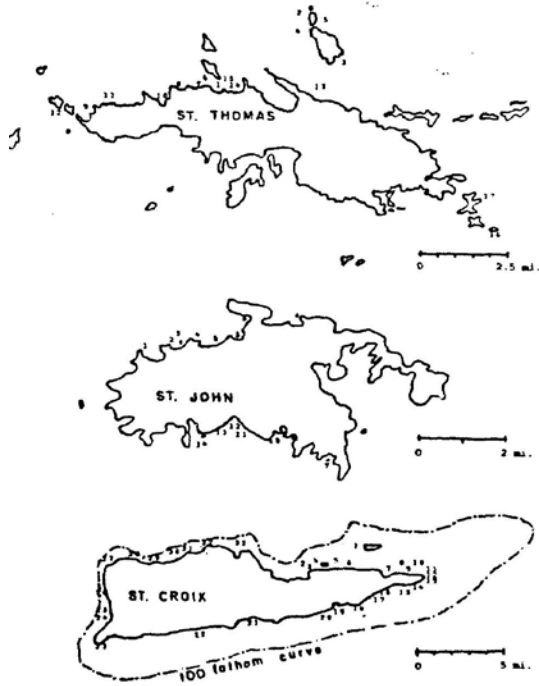
<b>TABLE 21. NATIONAL RESEARCH PROJECTS</b>			
List turtle research activities funded within your country.			
Project Title	Date		Name and Address of Institution & Chief Investigator
	Start	End	
Leatherback Turtle Nesting Biology, Sandy Point, St. Croix	1981	Ongoing	Division of Fish and Wildlife Service 101 Estate Nazareth St. Thomas U.S. Virgin Islands 00802 Ralf Boulon, Jr.
In-water Hawksbill and Green Turtle Population Dynamics Study	1981	Ongoing	Division of Fish and Wildlife Service 101 Estate Nazareth St. Thomas U.S. Virgin Islands 00802 Ralf Boulon, Jr.
Sea Turtle Nesting at the V.I. National Park and Buck Island Reef National Monument	1980	Ongoing	Virgin Islands National Park 1300 Cruz Bay Creek St. John U.S. Virgin Islands 00830 Evonne Small

**REPORTS AND PUBLICATIONS**

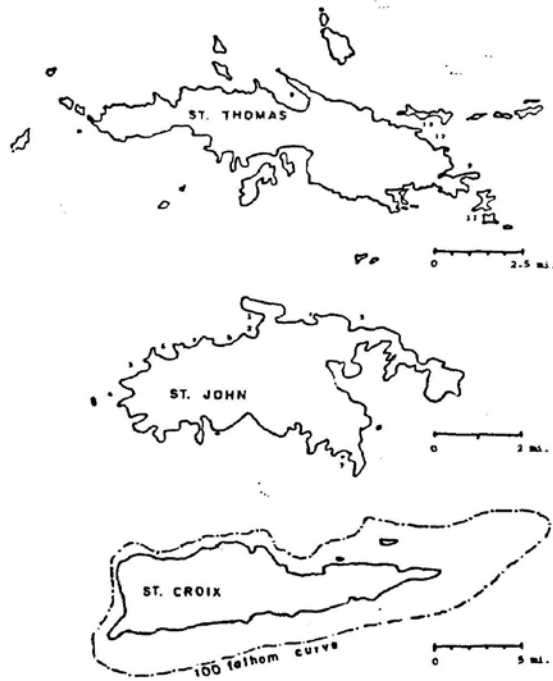
The following is a list of the major reports and publications concerned with national turtle resources (list author, date, title, and publisher).

1. Carr, D. and P.M. Carr. Undated. Survey and reconnaissance of nesting shores and of coastal habitats of marine turtles in Florida, Puerto Rico and the U.S. Virgin Islands. Report to National Marine Fisheries Service.
2. Boulon, R.H., Jr. and D.A. Olsen. 1982. Virgin Islands Turtle Resources: Aerial census results 1979-1989. Report to National Marine Fisheries Service. 23 pp.
3. Boulon, R.H., Jr, H.O. Hillestad and K. Eckert. 1982. Leatherback sea turtle research in the Virgin Islands: A preliminary analysis of data. Report to U.S. fish and Wildlife Service. 7 pp.
4. Boulon, R.H., Jr. ad D.A. Olsen. In prep. Population Biology of Green and Hawksbill turtles in the U.S.V.I based on an in-water tagging study. Report to USFWS-Endangered Species Program.
5. Small, E. 1982. Sea turtle nesting at Virgin Islands National Park and Buck Island Reef National Monument, 1980 and 1981. U.S. Department of the Interior, National Park Service, NPS-SER Research/ Resource Management Report. 54 pp.
6. Baker, G.S. 1981. Recovery plan for St. Croix population of the Leatherback turtle (*Dermochelys coriacea*). U.S. Fish and Wildlife Service. 20 pp.
7. Philibosian, R. 1975. Disorientation of Hawksbill turtle hatchlings, *Eretmochelys imbricata* by stadium lights. Copeia No. 4:824.
8. Ogden, J.C. et. al. In Press. Diel foraging patterns in juvenile Green turtles (*Chelonia mydas*) in St. Croix. J. Exp. Mar. Biol. Ecol.
9. Towle, E.L. 1978. Report on sea turtle nesting, sighting, eggs and hatchlings for 1978 in the U. S. Virgin Islands and a recommended research methodology for dealing with hatchling disorientation on the beach (with specific reference to Leatherback nests at Sandy Point, St. Croix). Report to National Marine Fisheries Service. 29 pp.

Map A: Country map showing nesting sites described in Table 3.



Map B: Country map showing foraging areas described in Table 7.



Map D: Country map showing sanctuaries and refuges described in Table 19.



Clockwise from top left: **Map A.** Country map showing nesting sites described in Table 3. **MAP B.** Country map showing foraging areas described in Table 7. **MAP D** (sic). Country map showing sanctuaries and refuges described in Table 19.<sup>1</sup>

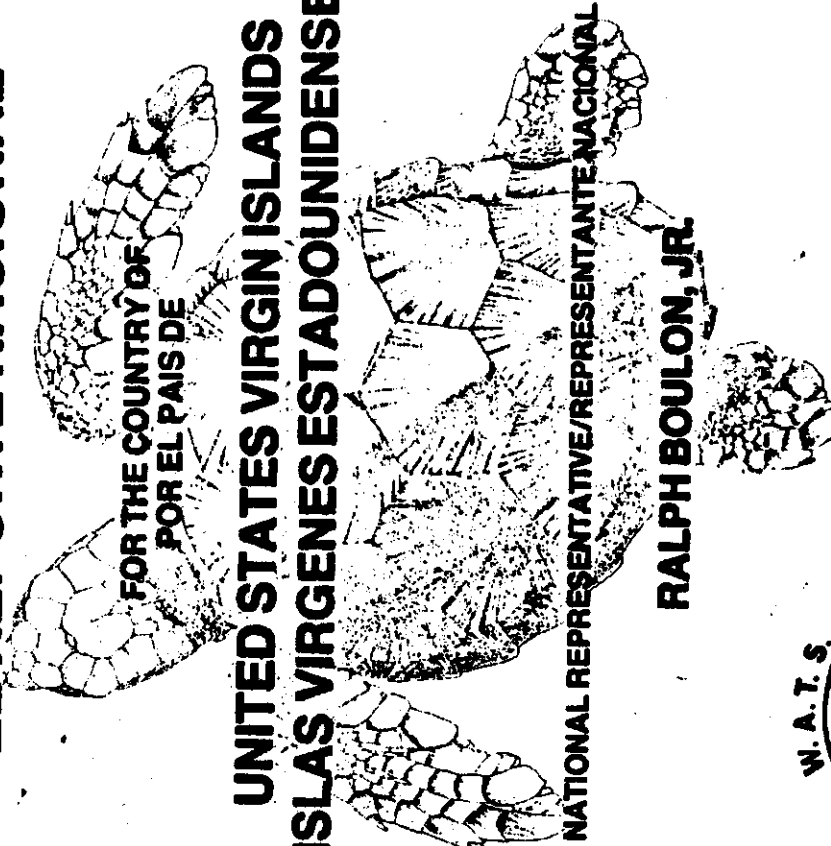
<sup>1</sup> Editor's note (2009): Maps and figures are reprinted exactly as they appear in the original WATS I Proceedings (Bacon et al. 1984); we regret the poor quality exhibited in some cases.

# THE NATIONAL REPORT EL REPORTE NACIONAL



FOR THE COUNTRY OF  
POR EL PAIS DE

## UNITED STATES VIRGIN ISLANDS ISLAS VIRGENES ESTADOUNIDENSES



NATIONAL REPRESENTATIVE/REPRESENTANTE NACIONAL

### RALPH BOULON, JR.



Western Atlantic Turtle Symposium  
Simposio de Tortugas del Atlantico Occidental

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

W. A. T. S.



2881 NOV 24 1983  
S. T. A. O.

WESTERN ATLANTIC TURTLE SYMPOSIUM

San Jose, Costa Rica

July 1983

NATIONAL REPORT FOR THE COUNTRY OF

D.S. Virgin Islands

NATIONAL REPORT PRESENTED BY

Ralf Boulon, Jr.  
The National Representative

Address: Division of Fish and Wildlife

101 Estate Mesareth

St. Thomas, U.S. Virgin Islands 00802

NATIONAL REPORT PREPARED BY

Ralf Boulon, Jr., Division of Fish and Wildlife  
with assistance from  
Svenne Small, National Park Service

DATE SUBMITTED: November 15, 1982

Please submit this NATIONAL REPORT no later than 1 December 1982  
to: IOC Assistant Secretary for IOCARIBE, 3 UNDP, Apartado 4540,  
San Jose, Costa Rica.

Country U.S. Virgin Islands, St. Thomas, St. Croix, St. John, and Offshore Cays

Length of Coastline 277.9km

sq² of Continental Shelf Area 1,972km

Seaward Extent of Jurisdiction:

Territorial Sea 4.83km

Extended Economic Zone Less than 321.8km

Fisheries Jurisdiction 321.8km

Other (describe) Customs Zone 19.3km

Endangered Species Importation 4.83 km

Marine Mammals Jurisdiction 321.8 km

TABLE 1. GEOGRAPHIC INVENTORY

\* Coastline length is the measurement of the national seaward boundary of a country i.e., the distance from border to border for a coastal country and the distance around an island country.

HABITAT BOTTOM TYPES	sq² OF HABITAT	
	INSIDE 2km (SHOREWARD)	OUTSIDE 2km (SEAWARD)
1. Sand		
2. Mud		
3. Rocks		
4. Submerged Vegetation		
5. Reefs (Total)		
A. Fringing Reefs		
B. Patch Reefs		
6. Other		

TABLE 2A. MARINE HABITAT INVENTORY OF BOTTOM TYPES

This information is sketchy at present. An overall review of habitat bottom types on the insular shelves of the U.S. Virgin Islands is undecidable at the present time.

MARINE SHORELINE CHARACTERISTICS*	km OF SHORELINE	
	UNDEVELOPED	TOTAL
1. Sand Beach (Total)		60.0
A. High Energy (Seasonal: November to March)	11.50	1.75
B. Low Energy	47.75	19.00
2. Reef (exposed) (Not included in total shoreline)	23.75	23.75
3. Rocks	33.9	35.0
4. Cliffs		164.1
5. Vegetation (Total)		
A. Vines*		
B. Grasses†		
C. Mangroves	33.0	33.0
D. Coconut Trees†		
E. Other Trees or Shrubs†		
F. Herbs*		
6. Mouths of lagoons, rivers, creeks, shoals, atollineal	(Not included in total shoreline)	
7. Total Shoreline	6.55	5.55
	212.15	277.9

TABLE 2. COASTAL HABITAT INVENTORY OF MARINE SHORELINE \* Refer to SEA TURTLE MANUAL (Aerial Survey) or Human development or use (See MANUAL)

St. Croix and Offshore Cays

NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. Buck Island	1.2	Cm, D, E	May to October
2. New Port Beach	.2	D, Cm*	May to October
3. Shoy's Beach	2.1	D, E, Cm*	May to October
4. Green Cay Beach	.2	E, D	May to October
5. Prune Beach	.8	E, D	May to October
6. Cookley Bay	.6	E, D	May to October
7. Teague Bay	.7	E	May to October
8. Smuggler's Cove	.2	E, Cm*	May to October
9. Knight Bay	.4	Cm*	May to October
10. Boiler Bay	.3	E	May to October

TABLE 3. NESTING BEACH INVENTORY  
List beaches in geographic sequence. Provide additional information on following page.

\*Report questionable. Species id on basis of crown size.

Species Abbreviations:  
 Cc = CAROLINA CURLEW  
 Cm = COMMON MURLET  
 D = DOMINANT SPECIES  
 E = ENDANGERED SPECIES  
 L = LAYSAN ALBATROSS  
 S = STURGEON BILLBOOB

NAME OF BEACH	LENGTH IN MI	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
11. Toyneud's Beach	.4	E	May to October
12. East End Bay	.3	E	May to October
13. Isaac Bay	.7	E, D	May to October
14. Jack Bay	.7	E, D	May to October
15. Grapevine Bay	.2	E, Cw*	May to October
16. Turner Hole	1.1	E, Cw*	May to October
17. Red Bay	.8	E, Cw*	May to October
18. Robin Bay	1.7	E, Cw*	May to October
19. Halfpenny Bay	.8	E	May to October
20. Neochimuel Bay	3.1	E, D, Cw*	May to October

TABLE 3. NESTING BEACH INVENTORY  
List beaches in geographic sequence.  
Provide additional information on following page.

Species Abbreviations:  
Cc Cuckoo  
Dm Doves  
E Frigatebird  
Lk Lark  
Lo Lark

NAME OF BEACH	LENGTH IN MI	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
31. Cane Bay	.9	E	May to October
32. Mast Op Twist	.2	E	May to October
33. Salt River (West)	.2	E, Cw*	May to October
34.			
35.			
36.			
37.			
38.			
39.			
40.			

TABLE 3. NESTING BEACH INVENTORY  
List beaches in geographic sequence.  
Provide additional information on following page.

Species Abbreviations:  
Cc Cuckoo  
Dm Doves  
E Frigatebird  
Lk Lark  
Lo Lark

NAME OF BEACH	LENGTH IN MI	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
21. Cabergarden Bay	1.7	E	May to October
22. Manning's Bay	.7	Cw*	May to October
23. Sandy Point	5.4	D, E, Cw*	May to October
24. Le Grange	.7	E, Cw*	May to October
25. Sprat Hole	1.1	E	May to October
26. Butler Bay	.3	E	May to October
27. Man's Bay	.3	E	May to October
28. Maroon Hole	.1	E, Cw*	May to October
29. Devils Bay	.3	E, D, Cw*	May to October
30. North Star	.3	E	May to October

TABLE 3. NESTING BEACH INVENTORY  
List beaches in geographic sequence.  
Provide additional information on following page.

Species Abbreviations:  
Cc Cuckoo  
Dm Doves  
E Frigatebird  
Lk Lark  
Lo Lark

NAME OF BEACH	LENGTH IN MI	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. Hattibery Bay	1.2	E, D	June to November
2. Little Mans Lollik	.06	E, D	July to November
3. Coconut Bay, Mans Lollik	1.0	E	June to November
4. Dry Bay, Mans Lollik	.04	E	June to November
5. Little Bay, Mans Lollik	.04	E	October
6. Sandy Bay, Inner Braes	.08	E	June to November
7. Penn Bay	.07	E	June to November
8. Carot Bay	.08	E	July to November
9. Botany Bay	.06	E, D	July
10. Santa Maria Bay	.06		July to October

TABLE 3. NESTING BEACH INVENTORY  
List beaches in geographic sequence.  
Provide additional information on following page.

Species Abbreviations:  
Cc Cuckoo  
Dm Doves  
E Frigatebird  
Lk Lark  
Lo Lark



NAME OF BEACH	LENGTH IN MM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. Caneel Haulmeat	.208	A	August to October
2. Jumbi Bay	.101	E	August to October
3. Trunk Bay	.639	E	July to September
4. Handwept	.176	E	June to August
5. Naho Bay	.214	E	September
6. Francis Bay	.499	E	July and August
7. Salt Pond Bay	.208	E	June to December
8. Greater Lamahure Bay	-	E	July and August
9. Little Lamahure Bay	.184	E	May to August
10. Europa Bay	-	E	September

Species Abbreviations:  
 Cc *Chelonia carolinensis*  
 Gc *Gerrhonotus carolinensis*  
 Dc *Dipsosaurus dorsalis*  
 E *Eumeces*  
 Lk *Lepidochelone*  
 Ls *Lissolepis*

TABLE 3. NESTING BEACH INVENTORY  
 List beaches in geographic sequence.  
 Provide additional information on following page.

TABLE 3. 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.

\* All sand beaches in the Virgin Islands are white carbonate sands composed primarily of Halimeda plates, mollusk shell fragments, echinoderm test fragments and coral skeletal fragments. Terrigenous materials are insignificant. Particle sizes almost all fall within the range of 1 to 4 phi. Beach profiles are fairly consistent with some change on the north shore beaches during the winter (Nov. to Mar.) when storm in the North Atlantic produce sea swells of 1 to 3 meters. Beach profiles become steeper in this wave regime and many late nests can be subject to inundation.

Beach vegetation is also quite uniform throughout the Virgin Islands. The most common vegetation elements are listed below in order of descending commonality:

1. *Coccoloba uvifera*
2. *Theopasia populnea*
3. *Conocarpus erectus*
4. *Portulaca blaccaria*
5. *Suriana maritima*
6. *Acacia macrocarpa*
7. *Elaeodendrum mylocarpum*
8. *Guilandina cista*
9. *Sporobolus virginicus*

\*As the number of beaches in the U.S. Virgin Islands is extremely high, this section will be discussed in terms of generalities rather than specific.

NAME OF BEACH	LENGTH IN MM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
11. Bordeaux Bay	.05	E	July to September
12. West Cay Bay	.05	E	July
13. Mandahl Bay	.07	E	July
14. Bull Bay	.10	E	July
15. Clucluse Bay	.04	E	August to September
16. Dog Island	.03	E	August
17. Great St. James Island	.04	E	November
18.			
19.			
20.			

Species Abbreviations:  
 Cc *Chelonia carolinensis*  
 Gc *Gerrhonotus carolinensis*  
 Dc *Dipsosaurus dorsalis*  
 E *Eumeces*  
 Lk *Lepidochelone*  
 Ls *Lissolepis*

TABLE 3. NESTING BEACH INVENTORY  
 List beaches in geographic sequence.  
 Provide additional information on following page.

NAME OF BEACH	LENGTH IN MM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
11. Eastern Reef Bay	.245	E	June to September
12. Genti Bay	.538	E	July to December
13. Western Reef Bay	.544	E	June to November
14. Coccoloba Point	.130	E	June to November
15.			
16.			
17.			
18.			
19.			
20.			

Species Abbreviations:  
 Cc *Chelonia carolinensis*  
 Gc *Gerrhonotus carolinensis*  
 Dc *Dipsosaurus dorsalis*  
 E *Eumeces*  
 Lk *Lepidochelone*  
 Ls *Lissolepis*

TABLE 3. NESTING BEACH INVENTORY  
 List beaches in geographic sequence.  
 Provide additional information on following page.

Table 4. Nesting census for each V.I. nesting beach.

TABLE 3. 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.

Artificial lighting and boating activities may be a problem on the following:

A. St. John:

1. Caneel Haulanest - lights
2. Trunk Bay - boats
3. Maho Bay - boats and lights
4. Francis Bay - boats
5. Salt Pond Bay - boats
6. Chocolate Mole - boats and lights

B. St. Thomas:

1. Mandahl Bay - lights
2. Hull Bay - boats and lights
3. Great St. James Island - boats

C. St. Croix:

1. New Port Beach - lights
2. Shoy Beach - lights
3. Teague Bay - lights and boats
4. Smugglers Cove - lights
5. Boiler Bay - lights
6. Grape Tree Bay - lights
7. Turner Mole - lights
8. Red Bay - lights
9. Halfpenny Bay - lights
10. Mannings Bay - airport
11. Le Grange - lights (Hess)
12. Sprat Mole - lights and boats
13. Butler Bay - lights
14. Hans Bay - lights
15. Cane Bay - lights
16. Rust-Op-Twist - lights
17. Turquoise Bay - lights
18. Judith's Fancy - lights

Table 4 (Con't.)

Beach	Dates of Data Collection	<u>Dermochelys</u> <u>coriacea</u>	<u>Eretmochelys</u> <u>imbricata</u>	<u>Chelonia</u> <u>mydas</u>
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St. Croix:

1. Duck Island	1980 to 1982	1982-2	1980-65 1981-35 1982-40 to 45	3
2. New Port	1976 to 1978	2-3		
3. Shoy Beach	1976 to 1978	1-2	2-3	
4. Green Cay	1976 to 1978	2	15	
5. Prune Bay	1976 to 1978	9	2-3	
6. Coakley Bay	1976 to 1978	15-20	9-10	
7. Teague Bay	1976 to 1978		2-3	
8. Smugglers Cove	1976 to 1978		2-3	2-3
9. Knight Bay	1976 to 1978			3-5
10. Boiler Bay	1976 to 1978		1-3	
11. Teyland Beach	1976 to 1978		1-3	
12. East Red Bay	1976 to 1978		3	
13. Isaac Bay	1976 to 1978	1-2	7-8	
14. Jacks Bay	1976 to 1978	1-2	25	
15. Grape Tree Bay	1976 to 1978		3-5	3-5
16. Turner Mole	1976 to 1978		1-2	1-2
17. Red Bay	1976 to 1978		5	
18. Robin Bay	1976 to 1978		5	
19. Halfpenny Bay	1976 to 1978		5	
20. Munchkin Bay	1976 to 1978	10	10	10
21. Cane Garden Bay	1976 to 1978		4-5	
22. Mannings Bay	1976 to 1978			1-2
23. Sandy Point	1981 1982	36+ 19		
24. LeGrange	1976 to 1978			3-5

Beach	Dates of Data Collection	<u>Dermochelys</u> <u>coriacea</u>	<u>Eretmochelys</u> <u>imbricata</u>	<u>Chelonia</u> <u>mydas</u>
<u>St. John:</u>				
1. Caneel Haulanest	1980 to 1982		1980-2 1981-1 1982-0	
2. Jumbi Bay	1980 to 1982		1980-5 1981-0 1982-4	
3. Trunk Bay	1980 to 1982		1980-0 1981-6 1982-0	
4. Windswept	1980 to 1982		1980-0 1981-7 1982-0	
5. Maho Bay	1980 to 1982		1980-0 1981-1 1982-0	
6. Francis Bay	1980 to 1982		1980-0 1981-3 1982-0	
7. Salt Pond Bay	1980 to 1982		1980-0 1981-11 1982-7	
8. St. Lameshure	1980 to 1982		1980-0 1981-0 1982-3	
9. Little Lameshure	1980 to 1982		1980-1 1981-0 1982-4	
10. Europa Bay	1980 to 1982		1980-0 1981-0 1982-3	
11. Eastern Reef Bay	1980 to 1982		1980-2 1981-1 1982-3	
12. Genti Bay	1980 to 1982		1980-0 1981-3 1982-0	
13. Western Reef	1980 to 1982		1980-0 1981-1 1982-10	
14. Coccoloba Pt.	1980 to 1982		1980-5	

Table 4 (Con't.)

Beach	Dates of Data Collection	<u>Dermochelys</u> <u>coriacea</u>	<u>Eretmochelys</u> <u>imbricata</u>	<u>Chelonia</u> <u>mydas</u>
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St. Croix (con't.)

25. Sprat Mole	1976 to 1978		1-2	
26. Butler Bay	1976 to 1978		1-2	
27. Hans Bay	1976 to 1978		1-2	
28. Maroon Mole	1976 to 1978		5	5
29. Davis Bay	1976 to 1978	3	3	4
30. North Star	1976 to 1978		5	
31. Cane Bay	1976 to 1978		3	
32. Rust-Op-Twist	1976 to 1978		3	
33. Salt River	1976 to 1978		3-5	
34. Turquoise Bay	1976 to 1978		5	
35. Judith's Fancy	1976 to 1978		5	
36. Little Bay	1976 to 1978		7	

St. Thomas:

1. Hultjeborg Bay	1979 to 1981	1979-1	1979-4 1980-3 1981-1	
2. Little Hans Lollik	1979 to 1981	1980-1	1979-5 1980-13 1981-6	
3. Coconut Bay, Hans Lollik	1979 to 1981		1979-8 1980-10 1981-3	
4. Dry Bay, Hans Lollik	1979 to 1981		1979-15 1980-23 1981-12	
5. Little Bay, Hans Lollik	1979 to 1981		1979-2 1980-0 1981-0	

Table 4 (Con't.)

Beach	Dates of Data Collection	<u>Dermochelys</u> <u>coriacea</u>	<u>Eretmochelys</u> <u>imbricata</u>	<u>Chelonia</u> <u>mydas</u>
St. Thomas (con't.)				
6. Sandy Bay, Inner Brass	1979 to 1981		1979-8 1980-8 1981-6	
7. Poth Bay	1979 to 1981		1979-3 1980-3 1981-3	
8. Carol Bay	1979 to 1981		1979-8 1980-2 1981-6	
9. Botany Bay	1979 to 1981		1979-0 1980-7 1981-2	
10. Santa Maria Bay	1979 to 1981	1981-1	1979-1 1980-1 1981-0	1980-2
11. Bordeaux Bay	1979 to 1981		1979-1 1980-8 1981-7	
12. West (a) Bay	1979 to 1981		1979-0 1980-2 1981-2	
13. Mandahl Bay	1979 to 1981		1979-0 1980-4 1981-0	
14. Bull Bay	1979 to 1981		1979-0 1980-0 1981-1	
15. Clucluse Bay	1979 to 1981		1979-4 1980-0 1981-2	
16. Dog Island	1981		5	
17. Gr. St. James Island	1979		6	

TABLE 5. AERIAL BEACH SURVEY SUMMARY (Supplementary page)

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

See enclosed copy of

Boulton, Jr., R.H. and D.A. Olsen. 1981. Virgin Islands Turtle Resources: Aerial Census Results 1979-1980. Final Report for NMFS Grants NA-79-GA-A-00133 and NA-80-GA-A-00055, 23 pp.

- \* - All C. mydas identifications are based on crawl width.
- † - Figures for St. Croix may indicate total number of nests due to observers not able to determine number of re-nestings.
- ‡ - Sandy Point figures for Leatherbacks are the result of intensive DFM studies.

SPECIES	YEAR					
	1982	1981	1980	1979	1978	1977
<u>Caretta caretta</u>						
<u>Chelonia mydas</u>						
<u>Dermochelys coriacea</u>	19 (Sandy Pt.)	26 (Sandy Pt.)				
<u>Eretmochelys imbricata</u>	10 (St. J) 15 (Buck I)	14 (St. J) 10 (Buck I)	7 (St. J) 14 (Buck I)			
<u>Lepidochelys kempi</u>						
<u>Lepidochelys olivacea</u>						

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

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

Records were kept for all crawls on beaches on St. John and Buck Island, St. Croix, showing the number of nests and the time intervals between crawls. Beaches on St. John are short, ranging from 101 m to 558 m, and nesting was sparse enough that by tabulating the number of days between nestings (i.e. two versus 16) one could reasonably estimate the number of nesting females per individual beach. Figures in the table represent totals for each year.

On Sandy Point, nearly total number of Leatherbacks were actually observed nesting and tag monitoring gave almost precise number of nesting females.

TABLE 6. ESTIMATED POPULATIONS OF NESTING FEMALES. Summarize the estimated number of nesting females for the years indicated and describe methods of estimation on the next page.

NAME OF AREA (or give coordinates)	APPROX. AREA (km <sup>2</sup> )	SPECIES FRANKING (Use abbreviations approx. numbers)	NATURE OF EVIDENCE (Observation, fishery, incidental catch)
1. Francis Bay, St. John	1.5	C.M. - 6-7 E - 4-5	Direct weekly observation from a boat and beach.
2. Mabo Bay, St. John	1	C.M. - 3-4 E - 3-4	Direct weekly observation from a boat and beach.
3. Cabool Bay, St. John	2	C.M. - 1-2 E - 4-5	Direct weekly observation from a boat and beach.
4. Cross Bay, St. John	1	E - 4-5	Direct weekly observation from a boat and beach.
5. Brown Bay, St. John	1	E - 2-3	Direct weekly observation from a boat and beach.
6. Westmeat Bay, St. John	1	C.M. - 7 E - 4-5	Direct weekly observation from a boat and beach.

Species Abbreviations:  
 Cc Caretta caretta  
 Cm Chelonia mydas  
 E Eretmochelys imbricata  
 Lk Lepidochelys olivacea  
 Lu Lepidochelys olivacea

TABLE 7. FRANKING AREAS INVENTORY

NAME OF AREA (or give coordinates)	APPROX. AREA (km <sup>2</sup> )	SPECIES FRANKING (Use abbreviations approx. numbers)	NATURE OF EVIDENCE (Observation, fishery, incidental catch)
7. Salt Pond Bay, St. John	.75	E - 3-4	Direct weekly observation from a boat and beach.
8. Regens Bay, St. Thomas	4	C.M. - 107 E - 57	Mark and recapture estimates using Schnabel Population Estimator formula.
9. Red Hook, St. Thomas	1.5	C.M. - 47	Mark and recapture estimates using Schnabel Population Estimator formula.
10. Hatch Cay, St. Thomas	1	C.M. - 33	Mark and recapture estimates using Schnabel Population Estimator formula.
11. Little St. James Island	1	C.M. - 59	Mark and recapture estimates using Schnabel Population Estimator formula.
12. Smith Bay, St. Thomas	.5	C.M. - 18	Mark and recapture estimates using Schnabel Population Estimator formula.

Species Abbreviations:  
 Cc Caretta caretta  
 Cm Chelonia mydas  
 E Eretmochelys imbricata  
 Lk Lepidochelys olivacea  
 Lu Lepidochelys olivacea

TABLE 7. FRANKING AREAS INVENTORY

SPECIES	MONTH												HOURS OF GREATEST ACTIVITY	
	J	F	M	A	M	J	J	A	S	O	N	D		
<u>Caretta caretta</u>														Approximately equally distributed.
<u>Chelonia mydas</u>														Approximately equally distributed.
<u>Eretmochelys imbricata</u>														Approximately equally distributed.
<u>Lepidochelys olivacea</u>														
<u>Lepidochelys olivacea</u>														

TABLE 8 - TURTLE SPECIES PRESENT ON FRANKING AREAS.  
 Please complete one of these tables for each of the areas identified in Table 7. Number each table as enumerated in Table 7 (1-1, 1-2, etc.).  
 Based on a combination of periodic observations and sporadic sampling, the overall numbers of turtles present on each foraging area at any one time are approximately the same. No other peaks in activity are apparent.

LOCATION (Give Lat. & Long. coordinates)	DATE	SPECIES AND EST. NOS. (Abbreviations)	COMMENTS
64° 54' N, 10° 26' W	5/8/79	D - 2	Seen swimming on surface.

Species Abbreviations:  
 Cc Caretta caretta  
 Cm Chelonia mydas  
 E Eretmochelys imbricata  
 Lk Lepidochelys olivacea  
 Lu Lepidochelys olivacea

TABLE 9. NON-FORAGING TURTLES AT SEA.  
 Please provide any information available on the incidence of turtles in offshore areas.

LIFE STAGE UNIT	SPECIES (abbrev.)	CAUSES*	EXTENT OF MORTALITY (% of unit)
Nests/eggs	E	Buck Island, St. Croix (1980-81): mongoose predation.	10-60% of eggs
Hatchlings	E	St. John (1980-81): mongoose, wild dog and beach erosion	23% of total
Juveniles	E	St. John (1981): beach erosion during emergence.	2.2%
Adults (in water)	E	St. John (1981): <u>Oxygaster nuchatus</u> predation on one hatchling.	
Nesting females	E	Found dead on St. Thomas beach (1976). Cause of death unknown.	
	E	Scutes from an approximately 20 kg. Hawksbill turtle were found in the stomach of a 4 meter tiger shark (1982).	
		None.	

TABLE 10. NATURAL MORTALITY

\* Natural mortality causes may include:

- Beach erosion of nests; egg and/or nestling predation by crabs, wild animals, sea birds, etc.; disease; sharks and other predators at sea; etc.

Species Abbreviations:

- CC SACILLA SACILLA
- CE CHELONIA MYDAS
- DE DERMACHELUS SPINOSA
- EE EREMOCHELYS IMBRICATA
- EE EREMOCHELYS IMBRICATA
- LI LEPIDOCHELYS SPINOSA
- LS LEPIDOCHELYS SPINOSA

TABLE 10. NATURAL MORTALITY (Supplementary note for additional biological data)

Please report below, and on additional notes 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 hatching, etc.

St. John, Hawksbill Nests:

Numbers of undeveloped or sterile eggs ranged from 0-37 and represented 5-9 percent of the eggs in the nests. No distorted, undersized yolkless eggs were found in any of the nests; shells of yolkless eggs were the same size as shells of fully developed eggs.

Mongoose Predation:

A total of 15 nests were raided by the exotic mongoose Hesperetes euponctatus during the 1980 and 1981 season. Upon physical inspection of the nest area, an estimate was made of the total number of eggs or hatchlings that had been taken by mongooses in 10 of the 15 predations. The total from those 10 nests was at least 662. Contents of the other five nests were completely destroyed by the mongoose, making two counts impossible. If clutch size in the five nests was typical of all nests, mongooses took an additional 710 eggs (average clutch size of 142 x 5 nests). The best estimate of total eggs laid in 1980 and 1981 was 9,789. Mongooses, therefore, took 2) percent of the total egg production.

Mongooses dug into nests at three different phases of the nesting cycle: within two to three days of egg deposition, at the time of hatching in the nest cavity, and during the emergence of hatchlings from the sand's surface. Mongoose in the Virgin Islands are predominantly diurnal feeders; the majority of the predation occurred the morning after the nocturnal primary emergence of the hatchlings. The late emergent or straggler hatchlings still in the nest cavity are probably the usual prey of the mongoose. If a mass emergence were to occur after dawn, mongooses could consume most, if not all, of the hatchlings from that nest.

Dog Predation:

In 1980 protective six-inch-square wire mesh was placed over eight nests on beaches where three nests had been previously totally destroyed by feral and/or domestic dogs. One of the three nests was destroyed 24 days after the eggs were laid indicating that dogs are quite perceptive of turtle scent. Therefore, the enclosures were left in place until after hatching emergence was noted. The wire did not inhibit the emergence of hatchlings.

LIFE STAGE UNIT	SPECIES (abbrev.)	CAUSES*	EXTENT OF MORTALITY (% of unit)
Nests/eggs	D	Sandy Point, St. Croix (1981-82): Beach erosion; 1981-1982-	14% of nests 23% of nests
Hatchlings	D	Sandy Point, St. Croix (1982): Crabs, night herons, mongoose -	6%
Juveniles		Vehicle's compaction	1%
Adults (in water)			
Nesting females			

TABLE 10. NATURAL MORTALITY

\* Natural mortality causes may include:

- Beach erosion of nests; egg and/or nestling predation by crabs, wild animals, sea birds, etc.; disease; sharks and other predators at sea; etc.

Species Abbreviations:

- CC SACILLA SACILLA
- CE CHELONIA MYDAS
- DE DERMACHELUS SPINOSA
- EE EREMOCHELYS IMBRICATA
- EE EREMOCHELYS IMBRICATA
- LI LEPIDOCHELYS SPINOSA
- LS LEPIDOCHELYS SPINOSA

TABLE 10. NATURAL MORTALITY (Cont.)

(Supplementary note for additional biological data)

Please report below, and on additional notes 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 hatching, etc.

Meteorological Sources of Mortality:

Turtle nest habitats on St. John are narrow strips of sandy land nearly at sea level. These habitats are thus particularly vulnerable to strong sea swells associated with tropical storms during August to November and northern winter storms from November to April. Four nests were inundated and lost in 1980 and one in 1981.

See also report by E. Small on St. John Hawksbill turtle nesting.

For Leatherback turtle information, see enclosed report on Leatherback Sea Turtle Research in the Virgin Islands.

The remains of a Hawksbill turtle were recovered from the stomach of a 12-foot tiger shark caught in 100 fathoms of water off the south coast of St. Thomas. The post vertebral scute measured 15.88 cm.

US VIRGIN IS.

SPECIES	HATCHERY OPERATIONS					HOLDING LIVE TURTLES	
	EGGS COLLECTED	EGGS HATCHED	NO. RELEASED	AGE AT RELEASE	NO. RETAINED	NO. OF ADULT TURTLES	ADULT MALES
<i>Caretta caretta</i>						1	
<i>Chelonia mydas</i>						26	
<i>Dermochelys coriacea</i>							
<i>Eretmochelys imbricata</i>						7	
<i>Lepidochelys kempi</i>							
<i>Lepidochelys olivacea</i>							

YEAR 1982

TABLE 17 - TURTLE HATCHERY OPERATIONS

This table quantifies activities concerned with turtle culture for either conservation, population enhancement, experimental, or commercial use. Activities to be included are "hatchling", re-nesting, incubator and release, etc. Prepare separate table for each year of available data.

SPECIES	HATCHERY OPERATIONS					HOLDING LIVE TURTLES	
	EGGS COLLECTED	EGGS HATCHED	NO. RELEASED	AGE AT RELEASE	NO. RETAINED	NO. OF ADULT TURTLES	ADULT MALES
<i>Caretta caretta</i>						1	
<i>Chelonia mydas</i>						20	
<i>Dermochelys coriacea</i>							
<i>Eretmochelys imbricata</i>						2	
<i>Lepidochelys kempi</i>							
<i>Lepidochelys olivacea</i>							

YEAR 1981

TABLE 17 - TURTLE HATCHERY OPERATIONS

This table quantifies activities concerned with turtle culture for either conservation, population enhancement, experimental, or commercial use. Activities to be included are "hatchling", re-nesting, incubation and release, etc. Prepare separate table for each year of available data.

INSTITUTION OR ORGANIZATION NAME AND ADDRESS	NO. OF ACTIVE REQUIS	ACTIVITIES IN PROGRESS	AREA	AGENCIES FOR PROTECTION	TIPO Y EFECTIVIDAD DE LA VIGILANCIA Y CUMPLIMIENTO DE LA LEY
Division of Fish and Wildlife 161 Beale Research St. Thomas, U.S. Virgin Islands 00002	Six	1. Leatherback nesting biology, Sandy Point, St. Croix. 2. Diver Markham and Green mark and recapture population study.	Virgin Islands National Park St. John, U.S. Virgin Islands (Includes beach and adjacent waters)	U.S. National Park Service	Boating patrols. British V.I. fishermen still occasionally take turtles near St. John
Virgin Islands National Park P.O. Box 7789 St. Thomas, U.S. Virgin Islands 00001	Two	1. Markham nesting biology, St. Croix. 2. Markham nesting biology, Buck Island.	Bank Island Reef National Monument St. Croix, U.S. Virgin Islands (Includes beach and adjacent waters) Prepared St. Thomas Marine Sanctuary (Includes vessels and coastline)	U.S. National Park Service	Boating patrols. Positioning of nests is still a problem.
				To preserve an area of diverse marine communities.	To be patrolled by Department of Conservation and Cultural Affairs enforcement personnel.

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

TABLE 19. SANTUARIOS Y REFINIOS

NAME AND ADDRESS OF ORGANIZATION	BUDGET ALLOCATION TO TURTLES	NO. OF STAFF ASSIGNED TO TURTLES	COMMENTS ON LEVELS OF ENFORCEMENT
National Marine Fisheries Service U.S. Fish and Wildlife Administration Room 1409-A, Federal Building St. Thomas, U.S. Virgin Islands 00801	None Specifically identified.	One	Highest level in the U.S. Virgin Islands
Virgin Islands National Park Box 7789, Charlotte Amalie St. Thomas, U.S. Virgin Islands 00801	\$14,000	One	
Department of Conservation and Cultural Affairs Bureau of Environmental Enforcement No. 86 Estate Frydenberg St. Thomas, U.S. Virgin Islands 00802	None Specifically identified.	None	
Beck Island Reef National Monument P.O. Box 100, Christened St. Croix, U.S. Virgin Islands 00820	\$4,000	0.3	

TABLE 20. REGULATORY AUTHORITY  
Indicate all entities with statutory responsibilities (e.g., Fisheries Departments and  
Ministries, Police, Coast Guard, etc.)

TABLE 20. REGULATORY AUTHORITY  
(Supplementary page)

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

- U.S. Endangered Species Act of 1973. To conserve species of fish,  
wildlife and plants that are in danger of extinction.
- Virgin Islands Code, Chapter 9A, Title 12, Section 118. To contribute  
to the preservation of marine turtles in the Caribbean area.

§ 315 CONSERVATION

to the Commissioner. Such report shall contain the number of  
specimens and the value of each kind of wildlife captured, the  
time with each boat or device for the entire (12) month ending  
on the preceding June 30, and the number and value of the devices  
if any, used in such catching or taking, and the number of persons  
employed therein. The Commissioner shall annually, on or before  
August 15, provide each owner or lessee, upon his application,  
with suitable identification forms for such reports, and each  
owner or lessee shall file such reports with the Commissioner  
not later than the date specified therein, and in filing  
such reports, such owner or lessee shall give, for each  
particular, the above required results of such month's fishing.  
(b) In lieu of said annual report, the Commissioner may require  
an owner or lessee to submit a monthly report of such facts  
related hereto as the Commissioner may deem advisable.  
(c) The license and/or vessel registration of any person who  
willfully fails to make a report or willfully makes a false report  
shall be suspended and a new license or registration shall not be  
issued until such report is made.  
(d) Any person who willfully violates any provision of this sec-  
tion shall be punished by a fine of not less than ten (\$10) dollars  
nor more than one hundred (\$100) dollars.—Added Nov. 21, 1972,  
No. 3330, § 2, Sec. 1, 1972, p. 496.

§ 316. Closed seasons

(a) The Commissioner shall announce, at least forty-five (45)  
days in advance, the beginning of each of the closed seasons pre-  
scribed in the regulations issued pursuant to this chapter for the  
protection of one or more species of fish as hereto defined.  
(b) The transportation and sale of a species of fish which is the  
subject of a closed season shall be allowed up to the seventh day  
after the commencement of the closed season in order to permit  
the liquidation of stock caught before the beginning of such  
closed season.  
(c) The fishing, sale, transportation and utilization of all species  
not extremely included in the closed seasons established by rules  
and regulations hereunder shall be permitted at any time through-  
out the year. The sale and transportation of crabs or other  
preserved species which have been caught before the beginning of  
the respective closed seasons is also permitted.—Added Nov. 21,  
1972, No. 3330, § 2, Sec. 1, 1972, p. 497.

Ch. 9A COMMERCIAL FISHING 7:12 § 319

§ 317. Fish for scientific, educational and breeding purposes  
The Commissioner, and any other person in cooperation with the  
written permission of the Commissioner, may catch or cause to be  
caught, for scientific or educational purposes, or for fish culture,  
any fish or marine organisms at any time, from the jurisdiction  
waters of the Territory, and may sell or cause to be sold when not  
otherwise prohibited by law, all or such part of the catch that was  
lawfully taken and sold. The proceeds of such sale shall be used  
for the maintenance of the Fish and Wildlife Fund.—Added Nov. 21,  
1972, No. 3330, § 3, Sec. 1, 1972, p. 497.

§ 318. Protection of marine turtles, nests and eggs; penalties

(a) It is the intent of the Legislature of the Virgin Islands to  
contribute to the preservation of marine turtles in the Caribbean  
area, said turtles now being close to extinction.  
(b) It shall be unlawful for any person to take, kill, possess,  
harass, ride, or grossly disturb any hawksbill, leatherback,  
person may not feed, while such turtle is on the beaches of the  
Territory at any time, or to take or possess any such turtle in the  
Territorial waters during the months of May through September,  
inclusive, of each year and at such other times as the Commis-  
sioner may by rule and regulation prescribe. It shall be unlawful  
to import, trade, sell or in any way deal in young sea turtles of any  
kind. Provided, however, That the Commissioner may issue  
written permission to any licensed or publicly owned zoo or ex-  
hibitor of marine life to capture such young turtles for purposes  
of live exhibitions.  
(c) No person may take, possess, deliver, maintain, deal in,  
cause to be destroyed, sell, offer for sale, transfer, import or  
harass any sea turtle nest or eggs at any time.  
(d) Any person violating any provision of this section is  
guilty of a misdemeanor and shall, upon conviction therefor, be  
punished by a fine not less than one hundred (\$100) dollars nor  
more than six hundred (\$600) dollars, or by imprisonment for a  
period not to exceed one (1) year, or by both such fine and im-  
prisonment.—Added Nov. 21, 1972, No. 3330, § 2, Sec. 1, 1972,  
p. 498.  
(e) It is the intent of the Legislature of the Virgin Islands to place  
§ 319. Endangered vertebrates; penalties

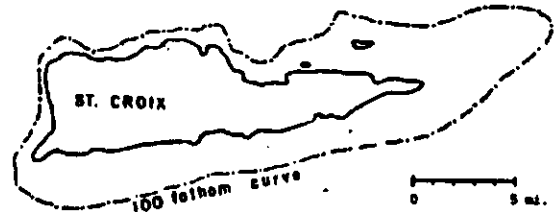
PROJECT TITLE	DATES		NAME & ADDRESS OF INSTITUTION A CHIEF INVESTIGATOR
	START	END	
Leatherback Turtle Nesting Biology, Sandy Point, St. Croix	1981	Ongoing	Division of Fish and Wildlife 101 Prince Street St. Thomas, U.S. Virgin Islands 00802 Ralf Beaman, Jr.
In-water Hawkbill and Green Turtle Population Dynamics Study	1981	Ongoing	Division of Fish and Wildlife 101 Prince Street St. Thomas, U.S. Virgin Islands 00802 Ralf Beaman, Jr.
Sea Turtle Nesting at the U.I. National Park and Buck Island Reef National Monument	1980	Ongoing	Virgin Islands National Park Box 117, Cruz Bay St. John, U.S. Virgin Islands 00830 Eugene Small

TABLE 20. NATIONAL RESEARCH PROJECTS  
List turtle research activities funded within your country.

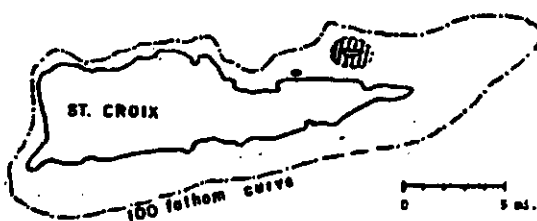
Map A: Country map showing nesting sites described in Table 3.



Map B: Country map showing foraging areas described in Table 7.



Map D: Country map showing sanctuaries and refuges described in Table 19.



#### REPORTS AND PUBLICATIONS

The following is a list of the major reports and publications concerned with national turtle resources (list author, date, title, and publisher).

1. Carr, D. and P.W. Carr. Undated. Survey and reconnaissance of nesting shores and coastal habitats of marine turtles in Florida, Puerto Rico and the U.S. Virgin Islands. Report to National Marine Fisheries Service.
2. Boulon, R.H., Jr. and D.A. Glenn. 1982. Virgin Islands Turtle Resources: Aerial census results 1979-1980. Report to National Marine Fisheries Service. 23 pp.
3. Boulon, R.H., Jr., W.O. Millspott, K. Echert. 1982. Leatherback sea turtle research in the Virgin Islands: A preliminary analysis of data. Report to U.S. Fish and Wildlife Service. 7 pp.
4. Boulon, R.H., Jr. and D.A. Glenn. In Prep. Population Biology of Green and Hawksbill turtles in the U.S.V.I. based on an in-water tagging study. Report to USFWS - Endangered Species Program.
5. Small, Evonne. 1982. Sea turtle nesting at Virgin Islands National Park and Buck Island Reef National Monument, 1980 and 1981. U.S. Department of the Interior, National Park Service, WPS-REN Research/Resource Management Report No. \_\_\_\_\_. 54 pp.
6. Baker, G.S. 1981. Recovery Plan for St. Croix population of the Leatherback turtle (*Dermochelys coriacea*). U.S. Fish and Wildlife Service, 20 pp.
7. Philboean, S. 1975. Disorientation of Hawksbill turtle hatchlings, *Eretmochelys imbricata*, by stadium lights. Copeia No. 4:824.
8. Ozyen, J.C., et al. In Press. Diel foraging patterns in juvenile Green turtles (*Chelonia mydas*) in St. Croix. J. Exp. Mar. Biol. Ecol.
9. Towle, S.L. 1978. Report on sea turtle nesting, sighting, eggs and hatchlings for 1978 in the U.S. Virgin Islands and a recommended research methodology for dealing with hatchling discrimination on the beach (with specific reference to Leatherback nests at Sandy Point, St. Croix). Report to National Marine Fisheries Service, 29 pp.