THE NATIONAL REPORT EL REPORTE NACIONAL

FOR THE COUNTRY OF POR EL PAIS DE

BELIZE

NATIONAL REPRESENTATIVE / REPRESENTANTE NACIONAL

WINSTON MILLER



Western Atlantic Turtle Symposium Simposio de Tortugas del Atlantico Occidental 17-22 July / Julio 1983

San José, Costa Rica Belize National Report, WATS I Vol. 3, pages 41-48



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

NATIONAL REPORT FOR THE COUNTRY OF

BELIZE

NATIONAL REPORT PRESENTED BY

W.G. Miller

The National Representative

Address:

Fisheries Unit Lab
Princess Margaret Drive
Belize City, P.O. Box 146- Belize

NATIONAL REPORT PREPARED BY

W.G. Miller, Frederic Berry and John Fletemeyer

DATE SUBMITTED: 25 January 1984

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

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

Belize National Report, WATS I Vol. 3, pages 41-48





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.

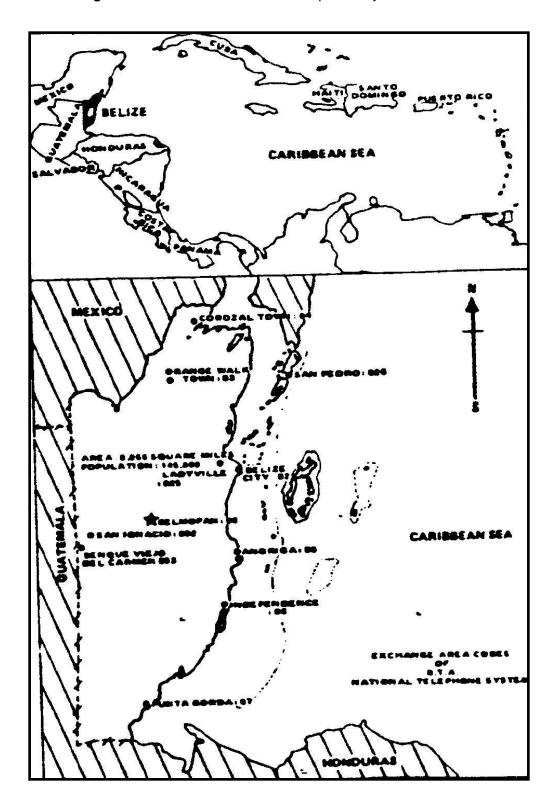
Despite the potential value of this information to agencies responsible for conducting stock assessments, monitoring recovery trends, and safeguarding critical habitat in the 21st century, the hand-written National Reports, largely illegible in the published proceedings, have slipped into obscurity. 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:

Miller, W.G., F. Berry and J. Fletemeyer. 1984. <u>National Report for Belize</u>, pp.41-48. *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

Figure 1. Belize – W.A.T.S. National Report Study Area.¹



¹ 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.

COUNTRY: BELIZE

TABLE 1. GEOGRAPHIC INVENTORY		
Length of Coastline*	250 Km**	
Continental Shelf Area	7,540 Km ^{2***}	
Seaward Extent of Jurisdictions		
Territorial Sea	4.8 Km	
Extended Economic Zone		
Fisheries Jurisdiction	4.8 Km	
Other (Describe)		

^{*} Coastline length is the measurement of 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.

^{***} Editor's note (2009): listed as 8,727.3 km² by World Resources Institute, 12 Nov 2008 (http://earthtrends.wri.org/text/coastal-marine/variable-62.html)

		Km of Shoreline	
Marine Shoreline Characteristics*	Undeveloped	Developed**	Total
Sand Beach (Total)	42.00	63.00	105.00
A. High Energy	16.00	5.00	21.00
B. Low Energy	26.00	58.00	84.00
2. Reef (exposed)	111.30	166.95	278.2
3. Rocks	14.85	1.65	16.50
4. Cliffs	0.10	1.90	2.00
5. Vegetation (Total)			
A. Vines			
B. Grasses	232.18		232.18
C. Mangroves	530.76	24.78	555.54 ***
D. Coconut Trees	11.25	53.15	64.40
E. Other Trees or Shrubs			
F. Marshes	8.04	24.15	32.19***
6. Mouths of lagoons, rivers, canals			
7. Total Shoreline	***950.48	335.58	***1286.06

^{*} Refer to Sea Turtle Manual (Aerial Survey)

^{**} Editor's note (2009): listed as 386 km by the World Fact Book (Central Intelligence Agency), 12 Nov 2008 (https://www.cia.gov/library/publications/the-world-factbook/geos/bh.html)

^{**} Human development or use (See Manual)

^{***} Editor's note (2009): Totals corrected from original to reflect accuracy in summed values

TABLE 3.1. NESTING BEA	CH INVENTORY		
List beaches in geographic	sequence. Provide	additional information on	following page.
Name of Beach	Length in Km	Species Nesting (Use Abbreviations)*	Months of Recorded Nesting
1. Ambergris	15	Cm, Cc	June, July
2. Half Moon	2	Cm, Cc	June, July
3. Long	5	Cm, E	June, July, August
4. Caulker	9	Cm, Cc	June, July
5. Chapel	5	Cm, Cc	June, July, August
6. Goff	1	E	June, July, August
7. Placencia	22	E, Cc	June, July
8. Ranguana	0.5	E, Cc	June, July, August
9. Lime	0.5	E, Cc	June, July, August
10. Hunting	0.5	E, Cc	June, July, August
*Species	Abbreviation		
Caretta caretta	Cc		
Chelonia mydas	Cm		
Dermochelys coriacea	D		
Eretmochelys imbricata	E		
Lepidochelys kempi	Lk		
Lepidochelys olivacea	Lo		

Name of Beach	Longth	Species Nesting	Months of Recorded
Name of Deach	Length In Km	Species Nesting (use abbreviations)*	Nesting**
 Nicholas 	0.2	E, Cc	June, July, August
2. Frank's	0.2	E, Cc	June, July, August
3. Pompion	0.1	E, Cc	June, July, August
4. Round	0.3		
5. Silk	0.2	Cm, E	
6. South Water	0.3		
7. Tobacco	0.9		
8. Sapodilla	2.0	E, C, Cm	June, July, August
9. Glovers	10.0	E, Cc, Cm	June, July, August
10. Turnette	20.0		
* Species	Abbreviation		
Caretta caretta	Сс		
Chelonia mydas	Cm		
Dermochelys coriacea	D		
Eretmochelys imbricata	E		
Lepidochelys kempi	Lk		
Lepidochelys olivacea	Lo		

TABLE 4.1. NESTING	CENSUS FOR	R BEACH: Ambergis

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

Species	Numbei	Dates of collection	
	Nest/Night (average)	Nest/Season (estimated)	
Caretta caretta		10	07 July, 1982
Chelonia mydas		6	07 July, 1982
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4.2. NESTING CENSUS FOR BEACH: Half Moon

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

Species	Number of Nests		Dates of collection
	Nest/Night (average)	Nest/Season (estimated)	
Caretta caretta		12 represents a combined estimate for	07 July, 1982
Chelonia mydas		Caretta caretta and Chelonia mydas	07 July, 1982
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4.3*. NESTING CENSUS FOR BEACH: Long

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

Species	Number of Nests		Dates of collection
	Nest/Night (average)	Nest/Season (estimated)	
Caretta caretta		7	12 June, 1982
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata		4	12 June, 1982
Lepidochelys kempi			
Lepidochelys olivacea			

^{*} *Editor's note (2009):* Original National Report listed this as TABLE 4.6. Editor relabeled it as TABLE 4.3 to provide a sequential numbering of all like tables.

TABLE 4.4*. NESTING CENSUS FOR BEACH: Placencia

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

Species	Species Number of Nests		Dates of collection
	Nest/Night (average)	Nest/Season (estimated)	
Caretta caretta		3	1979-1981
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata		1	1979-1981

TABLE 4.4*. NESTING CENSUS FOR BEACH: Placencia

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

Species	Numbe	r of Nests	Dates of collection
	Nest/Night (average)	Nest/Season (estimated)	
Lepidochelys kempi			
Lepidochelys olivacea			

^{*} *Editor's note (2009):* Original National Report listed this as TABLE 4.7. Editor relabeled it as TABLE 4.4 to provide a sequential numbering of all like tables.

TABLE 4.5*. NESTING CENSUS FOR BEACH: Ranguana

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

Species	Number of Nests		Dates of collection
	Nest/Night (average)	Nest/Season (estimated)	
Caretta caretta		3	1981-1983
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata		4	1981-1983
Lepidochelys kempi			
Lepidochelys olivacea			

^{*} *Editor's note (2009):* Original National Report listed this as TABLE 4.8. Editor relabeled it as TABLE 4.5 to provide a sequential numbering of all like tables.

TABLE 4.6*. NESTING CENSUS FOR BEACH: Lime

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

Species	Number of Nests		Dates of collection
	Nest/Night (average)	Nest/Season (estimated)	
Caretta caretta		3	1982-1983
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata		4	1982-1983
Lepidochelys kempi			
Lepidochelys olivacea			

^{*} *Editor's note (2009):* Original National Report listed this as TABLE 4.9. Editor relabeled it as TABLE 4.6 to provide a sequential numbering of all like tables.

TABLE 4.7*. NESTING CENSUS FOR BEACH: Pompion

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

Species	Number	Dates of collection	
	Nest/Night (average)	Nest/Season (estimated)	
Caretta caretta		3	1982-1983
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata		7	1982-1983

TABLE 4.7*. NESTING CENSUS FOR BEACH: Pompion

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

Species	Numbei	Dates of collection	
-	Nest/Night (average)	Nest/Season (estimated)	
Lepidochelys kempi			
Lepidochelys olivacea			

^{*} *Editor's note (2009):* Original National Report listed this as TABLE 4.13. Editor relabeled it as TABLE 4.7 to provide a sequential numbering of all like tables.

TABLE 4.8*. NESTING CENSUS FOR BEACH: Sapodilla

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

Species	Numbe	Dates of collection	
	Nest/Night (average)	Nest/Season (estimated)	
Caretta caretta		2	1981-1983
Chelonia mydas		5	1981-1983
Dermochelys coriacea			
Eretmochelys imbricata		6	1981-1983
Lepidochelys kempi			
Lepidochelys olivacea			

^{*} *Editor's note (2009):* Original National Report listed this as TABLE 4.18. Editor relabeled it as TABLE 4.8 to provide a sequential numbering of all like tables.

TABLE 4.9*. NESTING CENSUS FOR BEACH: Glovers

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

Species	Numbe	Dates of collection	
-	Nest/Night (average)	Nest/Season (estimated)	
Caretta caretta		3	1981-1983
Chelonia mydas		2	1981-1983
Dermochelys coriacea			
Eretmochelys imbricata		5	1981-1983
Lepidochelys kempi			
Lepidochelys olivacea			

^{*} *Editor's note (2009):* Original National Report listed this as TABLE 4.19. Editor relabeled it as TABLE 4.9 to provide a sequential numbering of all like tables.

TABLE 5. AERIAL BEACH SURVEY SUMMARY

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

Date	Beaches Surveyed			Numbers	of Nesti	ng Tracks	;	
		Сс	Cm	D	Е	Lk	Lo	No ID
01 July, 1982	Reef Point							3
01 July, 1982	Palmers Point							1
01 July, 1982	Grassy Caye							1

TABLE 5. AERIAL BEACH SURVEY SUMMARY

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

Date	Beaches Surveyed	Numbers of Nesting Tracks						
		Сс	Cm	D	Е	Lk	Lo	No ID
01 July, 1982	Three Corner Caye							1
01 July, 1982	Sandbore Caye							1
01 July, 1982	N.E. Caye, Glovers Reef							1
01, 02 August 1981	*							
25, 26 August 1980	*							

Abbreviation
Cc
Cm
D
E
Lk
Lo
-

^{*} All sand beaches and reefs and most of shoreline surveyed. No sea turtle tracks sighted

Table 5. AERIAL BEACH SURVEY SUMMARY (Supplementary page)

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

Refer to Map below for area covered during aerial survey.

Figure 2. Map showing Flight Path of Aerial Surveys conducted on June 6, 1982, July 1, 1982 and July 2, 1982. Total flight time was 7.1 hours.

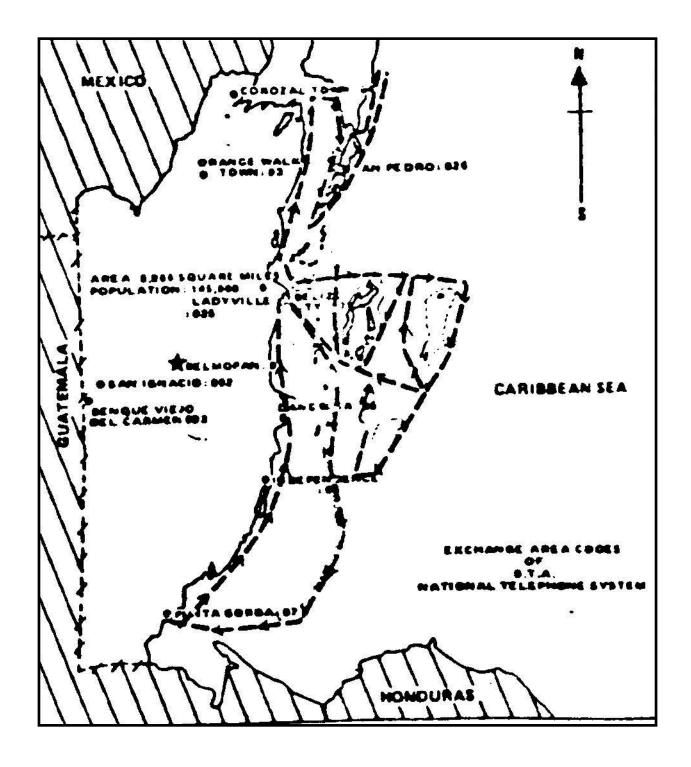


TABLE 6. ESTIMATED POPULATION SIZE OF NESTING FEMALES

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

Species					
	1982	1981	1980	1979	Average Year Estimates*
Caretta caretta					40
Chelonia mydas					19
Dermochelys coriacea					
Eretmochelys imbricata					31
Lepidochelys kempi					
Lepidochelys olivacea					

^{*} Mean estimate for recent years 1979 - 1982

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

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

An average year estimate is given in Table 6 that is based on the estimates by beach in Table 4. Those estimates were based on limited interviews with fishermen and beach residents and beach and aerial surveys.

	Species (Abbrev.)		Causes*	Extent of Mortality (% of Unit)
Nests/eggs			Human poaching, raccoons?	
Hatchlings			Birds, crabs, predatory reef fish (other?)	
Juveniles			Predatory fish	
Adults (in water)			?	
Nesting females			?	
Species		Abbreviation		
Caretta caretta		Сс		
Chelonia mydas		Cm		
Dermochelys coriacea	1	D		
Eretmochelys imbricat	ta	E		
Lepidochelys kempi		Lk		
Lepidochelys olivacea		Lo		

TABLE 11. LANDING	SITES FOR TU	RTLES AND TURTLE PROD	UCTS				
Name of Port or Site	Species Landed (Use Abbrev)	Fishing Gear Used	Months of Landings*	Numbers & Weights (Estimate) in Kg			
Belize City Market	Cc, Cm, E	Nets; infrequently taken incidentally when diving	Sep-Nov Feb-May	200/ 40,460			
2. Newtown Barracks	Cc, Cm, E	Nets	Sep-Nov Feb-May	50/ 8,800			
3. Corozal Town	Cc, Cm, E	Nets	Sep-Nov Feb-May	75/ 15,675			
4. Dangriga	Cc, Cm, E	Nets	Sep-Nov Feb-May	90/ 15,840			
5. Punta Gorda	Cc, Cm, E	Nets	Sep-Nov Feb-May	250/ 46,750			
6. San Pedro	E **	Nets	Sep-Nov Feb-May	180/ 14,300			
7. Caye Caulker	Е	Nets	Sep-Nov Feb-May	70/ 7,700			
8. Sarteneja	Е	Nets	Sep-Nov Feb-May	90/ 14,300			
Species	Abbrevia	ation					
Caretta caretta	Сс	Cc					
Chelonia mydas	Cm	Cm					
Dermochelys coriacea	D	D					
Eretmochelys imbricate	э Е						
Lepidochelys kempi	Lk						
Lepidochelys olivacea	Lo						
* Occasionally turtles	are landed in the	e months of December and Ja	nuary				
** There is a fairly hea	vy trade in juver	iles to satisfy tourist demand					

Do not include turtles cau	ight incid	dental to	other fis	shing operations (e.g., shrimp trawling)
	_			
Species		Year		Method of Determination
·	1982	1981	1980	
Caretta caretta	400	425	415	Market surveys and reports from fishermen
Chelonia mydas	280	325	350	Market surveys and reports from fishermen
Dermochelys coriacea				
Eretmochelys imbricata	325	370	360	Market surveys and reports from fishermen
Lepidochelys kempi				
Lepidochelys olivacea				

TABLE 13. ESTIMATED	INCIDE	NTAL T	URTLE	CATCH (Give estimated numbers and/or weights)
Species		Year		Type of Fishing Activity & Method of Estimation
	1982	1981	1980	
Caretta caretta				
Chelonia mydas				Incidental catch of juveniles by divers and fishermen
Dermochelys coriacea				
Eretmochelys imbricata				Incidental catch of juveniles by divers and fishermen
Lepidochelys kempi				
Lepidochelys olivacea				

TABLE 13A. ESTIMATED TURTLE CATCH BY FOREIGN FISHERMEN (Supplementary page)

Please describe the type of foreign fishing in your waters and provide estimates for:

- 1. Number of foreign vessels catching turtles
- 2. Number of foreign fishermen catching turtles
- 3. Year of estimate.

There is no direct evidence of foreign fishing. However, fishing floats floating ashore and secondary reports by fishermen of foreign fishing supports the belief that foreign fishing is being carried out off the coast of Belize. It is also believed that the Japanese are mainly responsible for this foreign fishing pressure. It is impossible to estimate the catch of turtles.

TABLE 16. EMPL	OYMENT DEPENDE	NT ON TURTLES	
Activity	Total Annual Numbers of Persons	Est. Annual Income From Turtles	Comments
Fishing	20-30	Unknown	This represents the estimate for full-time turtle fishermen.
Processing			
Selling			

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

1. Estimated number of eggs: 10,000

2. Estimated number of nesting females: 7

3. Number of turtles caught at sea: 7

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 18. PUBLIC AND PRIVATE IN CONSERVATION/MANAGEMENT/UT		ONCERNED WITH TURTLE
Institution or Organization Name and Address	No. of Active	Activities in Progress
name and Address	Members	
Fisheries Unit		Market surveys and enforcement of
Ministry of Health, Housing, & Coops	6	regulations

Indicate all entities with statutory re Coast Guard, etc.)	esponsibilities (e.g., F	isheries Departments ar	nd Ministries, Police,
Name and Address of Organization	Budget Allocation to Turtles	No. of Staff Assigned to Turtles	Comments on Levels of Enforcement
Ministry of Trade and Industry, Cooperatives and Consumer Protection Belmopan Belize*	NA	NA	Opportunistic

BELIZE

STATUTORY INSTRUMENT

No. 66 of 1977

REGULATIONS made by the Minister responsible for Fisheries in the exercise of the powers conferred upon him under section 9 of the Fisheries Ordinance, Chapter 133 of the Laws, and all other powers thereunto him enabling.

(Gazetted 1st October, 1977)

1. (1) These Regulations may be cited as the

FISHERIES REGULATIONS 1977

Short Title

(2) The Fisheries Regulations OF 1963 and the amendments thereto are hereby revoked.

PART I PRELIMINARY

2. In these Regulations:

"bonefish" means the fish commonly known in this country as macabi, the scientific name of which is Albula vulpes linne;

"cape length" means carapace measurements of crawfish determined at the most anterior edge of the grove between the horns directly above the eyes, then proceeding along the middle line to the edge of the carapace;

"closed season" means in relation to any kind or species of fish, a time or season during which the taking of that kind or species of fish is prohibited by these regulations;

"conch" means any mollusc of the species Strombus. Gigas;

"crawfish" means fish of the genus *Panulirus* which is commonly known as crayfish or spiny lobster;

"crustacean" includes marine and fresh water shrimp, crabs and crawfish;

"lobster trap" means any device that is designed for use, or is capable of being used for or in connection with the taking of crawfish;

"mesh size" means the measurement from knot to knot across the diagonal of the tightly stretched wet mesh;

"scale fish" means all members of the class Pisces:

"seine" means a net of any description used for taking fish by drawing along the bottom of the sea or fresh water (whether drawn on the beach or otherwise);

"shellfish" means any mollusc, specifically including oysters, clams, mussels, scallops, and snails, including members of the genus *Strombus*;

"to buy" means to come into possession or attempt to possess property in fish by means of an offer or exchange for money or other valuable consideration;

"to sell" includes an exchange or an offer or attempt to sell or exchange for money or for any other valuable consideration or an agreement to sell and any exposition of the goods in association with a mark indicating a price shall be deemed to be an offer to sell;

"to take" includes all operation (preparatory, and subsequent attempt whether successful or notto capture, kill, pursue, or otherwise harm or reduce to possession any fisheries resource;

"turtle" means a marine as distinguished from a terrestrial or fresh water species of tortoise.

PART II GENERAL

- 3. No person shall take in the waters of Belize or buy, sell or have in his possession crawfish-
 - (a) if the cape length is less than 31/4 inches or the tail weight is less than 4 ounces;
 - (b) between the 15th day of March and the 14th day of July inclusive in any year
 - (c) that is buried, has egg, or spawn;
 - (d) that has had the berries, eggs or spawn removed;
 - (e) that is moulting or has a soft shell.
- 4. No person shall detach or otherwise remove from any female lobster any eggs or spawn or the setae or fibre to which any eggs or spawn are or have been attached.
- 5. No person shall take any soft shelled crustacean.
- 6. No person shall take conch in the waters of Belize during the mouths of July, August and September is any year.
- 7. No person shall take scale fish In the waters of Belize using Scuba' equipment except under special permit from the Fisheries Administrator.
- 8. In all areas; outside the barrier reef and within a radius of two mile of the mouth of the Belize River, Haulover Creak and Sibun River, no person shall take fish by means of any beach seine, trap, weir or stop net.
- 9. No person shall buy or sell bonefish after the 31st of December 1977.
- 10. No parson shall take or have is his possession any turtle during the period from the first day of June to the thirty first day of August inclusive in an year, or take any turtle at any time when the same shall led' found on the shores of Belize and adjacent cays thereof.
- 11. No person shall take or have in his possession of turtle eggs.
- 12. No person shall set or attempt to set within one hundred yards of the shores of Belize or of the adjacent eyes thereof any net or seine, or other instrument whatsoever for the purpose or with the intent of taking turtles. .
- 13. No person shall, take, buy, sell or have in his possession any turtle of the following description: -
 - (a) green turtle (Chelonia mydas) less than 50 pounds in weight;
 - (b) hawksbill turtle (Eretmochelys imbricata) less than 50 pounds in weight;
 - (c) loggerhead turtle (Caretta caretta) less than 30 pounds in weight.

- 14. No person shall after the 30th day of June 1977 export or attempt to export any turtle or any articles made from any part of a turtle otherwise than under a license granted by the Minister.
- 15. (1) Subject to paragraph (2) of this regulation, no person shall capture any fish in the waters of Belize with a net constructed of a natural or artificial fibre the mesh size of which is less than 3 inches.
 - (2) The prohibition in paragraph (1) of this Regulation shall not apply to-
 - (a) throw or cast nets;
 - (b) the holder of a special licence for a scientific investigation who maybe permitted to use webbing of a smaller mesh provided that such devices be of am approved pattern and that the written authority of the Fisheries Administrator is obtained and entered on the licence at the time of issue
 - (c) trawl or seine nets the mesh size of which is not less than 1½ inches.
 - (3) The provision of this regulation shall not apply to the meshes of a device constructed of materials other than synthetic or natural fibre webbing, where the design conforms to specifications laid down for that device for the purpose of releasing the fish or for the escape of such fish.
- 16. No person shall capture a fish of such a variety or in such quantities as would result in wanton waste and any fish captured as aforementioned shall be released immediately.
- 17. No beach seine, trap, weir, or stop act shall be set, hauled or otherwise used for the purpose of taking fish at any place situated within a distance of half a mile from any city, township, village, settlement or other inhabited locality in Belize.
- 18. No person shall use anaesthetics, in the water of Belize except under special permit from the Fisheries Administrator,
- 19. (1) No person shall take, buy, or sell any coral;
- 20. (1) No person shall
 - (a) have in his possession or buy, sell, export or attempt to export any raw, or unprocessed black coral:
 - (b) buy, sell; export or attempt to export black coral in any form.

except under a licence obtained therefore from the Fisheries Administrator under the Regulation.

EL REPORTE NACIONAL THE NATIONAL REPORT





NATIONAL REPRESENTATIVE/REPRESENTANTE

WINSTON MILLER



Simposio de Tortugas del Atlantico Occidental Western Atlantic Turtle Symposium



MESTERN ATLANTIC TURTLE SYMPOSIUM

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

NATIONAL REPORT PRESENTED BY

W. G. Miller The National Representative

Address: Fisheries Unit Lab

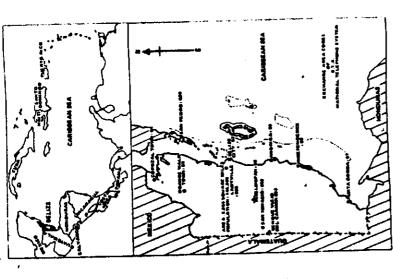
Belize City, P.O. Box 148-Belize Princess Margaret Drive

NATIONAL REPORT PREPARED BY

W.G. Miller, Fredrick Berry, and John R. Fletemeyer

DATE SUBMITTED: January 25, 1984

Figure 1: Belize--M.A.T.S. Mational Report Study Area.



	2	January de da	
MATINE SHORTELINE CHARACTERISTICS*	NOEVEL OPED	INDEVELOPED DEVELOPER-	TOTAL
1. Send Desch (Total)	42.0	5-63	105.0
!	16.0	5.3	0. LZ
La Corre	3. %	17 28	90.
	111.3	¥	278.25
	14.85	\$ 9	16.5
	0.30	1	2
<u>6. Clims</u>	!	!	
5, Togetation (folul)	1	:	1
A, Tiens		;	!
	232.18	i	232.18
	530.76	2	25:55
C. Nangrows		1	
8, Cocont Trees	n.8	- i	3
E. Other Irees of Shrubs		-	
	8	5.	32.0
6. Nexths of lappons, rivers, canals		1	
2 Total Shoreline	982.48 8	58 20 20 20 20 20 20 20 20 20 20 20 20 20	1,381.06

* Refer to SEA TUBILS WALLA (Merial Survey)
THELE 2. CONSTAL IMMENTAL OF WALKE SHORELIME ** Number development or six (See Mountal)

waty kills	Langth of Cassillant	Total Continental Shalf Area2450 FD	Somera Extent of Arrisdictions:	Territorial Sea	Extended Exemple Bee	Plakering dertadiction	Other (Nucries)	TABLE 1, RECEIMANCE SHEETSHIP
T COMMON	Lesgis of	Ent of Cont	Seeman Co	i i	1	Z.	Other	TABLE 1.

 Countiline length is the ensurement of the nutional sensorid boundary of a country; i.a., the distance from bender to bender for a cosstal country and the distance areand on island country.

HORSO DE DESCH	וא ומן ונאפגא	SPECIES NESTINE (Use abbreviations)*	NORTHS OF RECORDED RESTING
1, Ambergels	18	3 5	Alac July
2, Half Hoon	7	3 5	June, July
3, long		fe. f	June, July, Apquist
4, Caller	6	3 S	June, July
s, Olivei	-	3 3 1	tione, July, August
		1	Dune, July, August
7, Placencia	æ	η-1, f. α	Jene, Jaly
B. Ranguana	6	2)-1	June, July, August
9,1100	9.6	£, \$	Jone, July, August
10. Henting	0.5	£, cc	June, July, August
	VENTORY programs to se	ESTING BEKOM EMPERIORY State Becken in Negoraph's Segments. State Andrews Information and full paring good.	Species Abbreviations: Co Largills carells Co Chelonis mydas

INNE DF REACH	LEMETH IN ION	SPECIES MESTING {Use abbreviations}*	HONTHS OF RECONDED RESTING
1, Kichales	9.2	2, 2	June, July, August
2, Frank's	2.0	ε, α	Ane, July, August
3, Pamplon		£., Cc	June, July, August
d, Round	0.3		
8, Silk	0.2	. 9. E.	
6, South Water	0.3		
7. Tabacco	. 6.0		
B. Sapodille	2.0	e) '23 '3	June, July, August
9. Slovers	16:0	E. S. G.	June, July, August
16. Turnette	9.0		

DATES OF DATA COLLECTION

Mests/Season (Estimated)

Mests/Right (Average)

SPECIES

MANGEL OF RESTS

5/5/t

2

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.

Frovide additional information on fellowing maps.

Chicking Chickin

Species Abbraviations: C. C. Constitutions: C. C. Constitution of the Constitution of

Lendenchalts eltraces
That: 4 - 1 willing cinius for beach

2

Eretmochelys tearlests

Legidochelm templ

Demochelys curincas

Geretta caratta Gelenia meta Please complete see of these tables to summarize consus data for each beach listed in Toble 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

ĵ

	139m)	NUMBER OF HESTS	,
SPECIES	Mests/Hight (Average)	Mests/Seeson (Estimated)	DATES OF DATA COLLECTION
े काश्य काश्य		12 (Represents & com	29/82/1
्रकृष्ट ग्राह्म		Vined estimate for Corrects coretts and Chelenia mydas	
Demochalys cerfaces			
Entracteirs Intricate	:		
Lapidechelys hangt			
Lepidechelys eliverse	•		

THULE 4 - 2 MESTING CENSUS FOR BEACH FAIT FROM

Floats complets one of these tables to summerize consus data for each beach listed in Table 1. Number tables sequentially (4-1, 4-2, 4-3, etc.) as memorrated in Table 3.

These complete one of these tables to summerize consus data for each heach listed in Table 3. Number tables sequentially [4-1, 4-2, 4-3, wite,) as ensumerated in Table 3.

TABLE 4 L MESTING CINGUE FOR BOOK LAND

CATES OF DATA CRELECTION ! 20/2t/9 \$12.W Nests/Season (Estimated) _ 'i'____ Apreca OF NESTS Mests/Hight (Average) *j* frequencial merigin Legidechelm of fraces Darmachelys cartecus Legidochelys basel 2002 Grette cortte Chelonia ments

3-43

	13944	NAMER OF MESTS	•		•
SPECIES	Bests/Night (Avarage)	Hests/Seeson (Estimated)	DATES OF DATA COLLECTION	SPECIES	Mests/Night (Average)
Gentle corette			1971-01	Gretta ceretta	
Dalanta sydes				Quelente arten	
Bermchelys cartees				Bermechelys corlecte	
Eretmechelys Imbricyta		-	1979-61	Erstmedhelry impriests	i
Lepidochelys kent				Lep i deche lys heap!	-
Lepidochelys offivecas				Lepidechely: eliveces	

DATES OF DATA COLLECTION

Month of Mests Mestalfanna (Estimated)

1961-03

27

ĵ	Please complete one of these tables to summerize consus data for each back listed in Table 3. Amber tables sequentially
	ĵ.

	ASSE	NAME OF MESTS	•	
SAGIES	Rests/Right (Average)	Mests/Seeson (Estimated)	DATES OF DATA COLLECTION	
Gentle certte		c.	1962-80	
Chelmia men				
Dermechelys corfeces		•		
Eretmochelys Intricate		•	1942-63	
Legifectelys Lane!				
Legidechelrs elivaces				

(Auna) (Auna)
--

	MPBER .	MOMER OF NESTS	·
SPECIES	Mests/Night (Average)	Mests/Seeson (Estimated)	DATES OF BATA COLLECTION
 नाधन नाधन			1962-63
Chetenia sydas r			·
Darmachelys, cariecea		1	
Erebmechelys tampfeata	1 1	-	1962-63
 Leyidochelys tempi			
Legidechelys elivaces			

TABLE 4 - 13 MESTING CENSUS FOR BEACH Pumpion (Amme)

Please complete one of these tables to summerize consus data
for moch beach listed in Table 3, Number tables sequentially

(4-1, 4-2, 4-3, etc.) as enumerated in Table 3,

Please complete and of these tables to summarize census data for each beach listed in Table 3, Number tables sequentially (4-1, 4-2, 4-3, etc.) be enumerated in Table 3,

TABLE 4 - 7 .. RESTING CINGUS FOR BEACH PLACEMEDA.

	, vjans	MANDEN OF HESTS	•
SPECIES	Mests/Hight (Average)	Nests/Season (Estimated)	DATES OF DATA COLLECTION
Caretta coretta		2.	13-1361
Chelonie sydet	•		1961-63
Dersachelys certaces	:	•	
Eretmochelys tearigits		•	1961-63
Legidochelys Lempi	,		
Leptdochelys of twoces			

ONTES OF DATA COLLECTION

Number of Wills | Nettinested

Masts/Might (Average)

SPECIES

Grette cerette . Onlante grate

1961-63 1961-63

TABLE 4 - 18 HESTIME CENSUS FOR BEACH SAPERTIES

Please complete one of these tables to summerize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as memorated in Table 3.

		-	
			ACK Glovers
Lepidochelys elivaces		•	TABLE A 19 METTYNE CENTINE FOR ACACH GIOVERS
_	1		

7

Dermechelys certains Erstmethelys tabricate Lesidochelys kempi Planse complete one of these tables to summerize census data for each beach listed in lable 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as commerated in Table 3.

TABLE 6. AERIAL BEACH SHRVEY SUPPART (Supplementary page)

Give any additional information available from merial surveys. Information should factude ground truth observation if conducted.

shefor to the below for area covered dering soriel surrety.

NUMBERS OF NESTING TRACKS

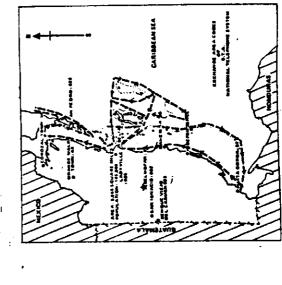


Figure 2: Map abouring Flight Path of Aerial Surveys conducted on June 6, 1862, July 1, 1962 and July 2, 1962. Jotal Flight fine was 7.1 hours.

				I				
DATE.	BEACHES SUMYEYED	ន	8	•	ſ	114	3	9 ·
1/07/20								-
								_
		-						
								-
26/2/2	Ensity Care			1				-
	Three Cerest Cays			<u> </u>	<u> </u>	1	<u> </u>	-
	Surbors Cays			1			1	<u>- </u>
	H.E. Caye, Glovers Reaf				<u> </u>			-
				-		<u> </u>	1	
8/25/80	=							
6/26/80		<u> </u>	<u> </u>					
1/81£ \$.	ACRIAL BEACH SURVEY SUPPLANT Give any additional information available from earlal surveys. Information showld include ground truth ebservation (? conducted.		1	정말(왕말) 글 -	Contaction of the state of the	Species Abbreviations: Species Abbreviations: Che foots myds. Damoche 15 correct Epidoche 15 inercata tendache 15 inercata tendache 15 inercata tendache 15 inercata tendache 15 inercata	835,44	•

					1	
YEAR SPECIES	2861	1961	1980	1939	1	Average Year Estimate /1
				,	٠	O)
Chelenia gress	!					2
Dermachelys Confeces	!	تنفسين	1	İ		
Entractelys interlects	· •		!	ļ	1	=
	!	•	:	!	-	
Iduarenta senti	•	:	:	1		1
Letpdochelys olivaces						

As average year estimate is given in Table,6, that is based on the estimates by beach is Table 4.. These estimates were based on Timited interview with fisherms and beach residently/beach and serial surveys.

Finese give briof details on methods of estimation for Table 6.

THEE 6. ESTIMATE POPULATIONS OF MESTING PENALES. (Supplementary page)

ESTEMATED POPULATIONS OF MESTING FEMALES.
Simplifies the estimated number of mesting females for the years indicated and describe methods of estimation on the mest pays. THEFE S.

[] New estimate for recent years (1979-1982).
There is not sufficient data to make a precise estimate by year.

LIFE STARE WILT	SPECIES (abbrev.)	CHISES	EXTENT OF MONTALITY (\$ of unit)
Nea to/opps		Numen Posching, Reccouns, 7	
Netch lings	;	Birds, Crabs, Predatory Reef Fish (other?)	
derent les		Predatory Fish	
Abits (in nator)			
Mesting females		-	

Ratural mortality causes may include: Geeth revelon of fortist each individual animals, see birds, etc.; discuss that a harts end other predators at seas etc. MATURAL MORTALITY

TABLE 10.

858253 Species Abbreviations:
Cretists activities
The losts sydes
The

250/46,750kg 90/14,300kg 180/14,300kg 70/7,700kg 90/15,840kg 75/15,675kg 200/40.460kg LANGINGS OF Feb. -Hay Sept.-Nov Mets (infragantly taken incidentally when diving FISHING GEAR USED SPECIES
LAMBED
Use abbrev) S. Ca. f. • 9.0 LUNE OF PORT OR SITE 1. Delize City Merket 2. Newtown Berraks 7. Caye Caulter 1. Ceretal Team S. Penta Garda 8. Sarteneja f. Sen Podra 4. Dengrige

"There is a fairly heavy trade in Juveniles to satisfy tourist deman. +Occasionally turtles are landed in the months of DEC. and JMK. TABLE 11. LANGING SITES FIN TURTLES & TURTLE PRODUCTS

Species Abbrevistoms:
Constitute constitute
The lond a gradia.
The month of constitute of the constitu

3-46

YEAR SPECIES	1942	1961	1910	METHNO OF DETERMINATION .
Caretta caretta	\$	425	SI\$	Market Surveys and Deports From Fisherman
Chelenia mydas	8	322	380	Martet Surveys and Neports From Fishermen
Dermochelys cortacos	·	•		
Eretmochely: impricate	8	8	98	Market Surveys and Reports from Fishermen
Lepidochelys tempi	· :			·
Lepidochelys offwaces	1	'	<u>.</u>	

THALE 12. TOTAL AMBAIL THETHE LANDINGS IN MANBERS AND WEIGHTS (M/Kg)
To not include tarelies caught incleantal to other
fishing aperations (e.g., shrings transing).

TABLE 18. ESTIMATED TURTLE CATCH BY FOREIGN FISHCOMEN (Supplementary page) Please describe the type of foreign fishing in your waters and provide estimates for:

- 1. Number of foreign vessels catching turtles.
- 2, Number of foreign fishermen catching turties.

3. Year of estimate.

"There is no direct evidence of foreing fishing. However fishing floats floating ashore men secondary reports by fishermen of foreign fishing supports the belief that foreign fishing is being cerried of of the capports the belief that foreign fishing its being cerried of of the capports the belief that foreign fishing pressure. It is impossible to estimate the catch of turiles.

ACTIVITY	TOTAL AMENA MINNERS OF PERSONS	THEORE FROM	CIPPENTS
Fishing	20-30	Unknown	This represents the estimate for full-time turile fisherman.
Processing	*.		
Selling			

TABLE 16. DIPLOTHENT DEPENDENT ON TURTLES

SPECIES TEM	1962	1961	1940	TIPE OF FISHING ACTIVITY & METHOD OF ESTINATION
Carta canta				7
Orderla mile	!	, ,		Incidental Catahof Ser. by Divers and Fisherman
Dermachelys certaces	-	-	İ	
Eretmechelys impricate		:		Incidental Catch of Juv. by Divers and Fisherman
tepidochelys tempi	• • •	!	ł	
Lapidochelys elivaces				

TABLE 13. ESTIMATED INCIDENTAL TURILE CATCH GIVE estimated numbers and/ar weights.

TABLE 16. EPPLOYENT DEPENDENT ON TURTLES (Supplementary page)

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

- A: Subsistence exploitation
- 1. Estimated number of eggs: 10,000
- 2. Estimated mumber of nesting fumales: 3
 - 3. Aumber of tartles caught at sea:
 - Other:

B: Sectal aspects

In addition to the described fishery activities, maploistion of facilies may be prefitted in some countries according to special rights or privileges extended to cartain groups of maples. It such specialized turite ampliation testing, please give details (i.e., beach rights, ethnic traditions, special countries, ethnic traditions, special parefect, etc.).

HETTERTON OR CHEANTALION HAVE AND ADDRESS	NO. OF ACTIVE PEDECKS	ACTIVITIES IN PROGRESS
Figheries UnitWinestry of Health, Musing & Co-Ope	•	Morket Surveys and Enforcement of Regulations
1		
-		

TABLE 18. PUBLIC AND PRIVATE INSTITUTIONS CONCE

Section of the control of the contro	ACTIVE	ACTIVITIES IN PROGRESS	NAME AND ADDRESS OF ORGANIZATION TO TURILES TO TURILES	TARF MED FLES COWENTS ON LEVELS OF ENFONCEMENT
THE STREET HOLD TO STREET THE STR			Ministry of Trace and Lodwetry, MA Cooperatives and Consumer	
Meditativity infinity without the following many of the following many of the following problems and selected			Protection Palespee, Palise othe Fiberies and attached	
Selection Sele	-			
The control of the co		D PRIVATE INSTITUTIONS CONCERNED WITH THRILE CONSERVATION/MANAGEMENT/UTILIZATION	•	omibilities (a.g., fisheries Departments and
The control of the co	1	Patrick.		(2. The person that as or extensity to see which one bender you of the between Childs or of the appearance of the control of the control of the control of the control of the control of the person of the first section of the control of the person of the first section of the control of the person of the first section of the control of the person of the first section of the control of the person of the first section of the control of the person of the first section of the control of the person of the first section of the control of the person of the first section of the control of the person of the first section of the control of the person of the first section of the control of the person of the person of the control of the person of th
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The proof of the control of the cont	322	adams responsible for Palmers in the ca- gons does notice to of the Palmers form, and of other powers incomes the	•	
The first contains and the first contains a managed to the contains of the first contains and the first contains a		(Comment In Country, 1977)	•	7. No person shall after the lates the of all least, 1977 agent as a great statement of the
Fig. 11—CORRECTEDA. So the parameter control of the control of th		n and to that or the	•	(1.—() Marie to prospect () of the lighters, so present the same of the same to a commercial of particular filters that the same to a commercial of particular filters that the same to a commercial of particular filters that the same to a commercial or same to be s
(i) The present which is made to take the side of the	A Three se		PART II—OWERAL, S No person and has been used of 186	Ch. The production is prospected (1) of the Baggarden of the Charles of the Charl
Constitution of the second control of the se	•	PART 5-PRESENTATIV	And the property and the second of the secon	the being of a second beam for commute investigated by the property of the pro
	44.	And the second s	8 3:	that the values controlly of the Thirston Addeditions is desired and excepted on the linear of the first of the (A) went or when and the excel due of which is not limited
	1,711	and the section which is the section of the section	A second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section of the second section	(3) The provisions of the Banghause should not update to the married of a decision assembled of measures of a decision assembled of the statement of measures to enter them symbols are about the statement of the
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			Annual of his Annual and Residents in now your. 7. He parties that has noted by it to expect of fairs wing flows.	17. No bands with free, one of the band to see, bands of the bands of
Head to be a second to provide the provide that the provide the pr	F		E. In all none could be beauty order of widom a notice of two mins of no could be below lives the could be set the state of the could be set the set of th	the big press deal has securities in the same of Man on
18. He present shall that we have a thing present and the pres	12		in the part of the	19(1) he passes that the beg or all my could
State of the state			16. He present that the prison on he promesses may write during the other first the first few of home to the chiefty from they of August he	S. Lee, in the parameter, or the state of th
	. 11	nde fight makes and manches de ten blens frame; describints o an effect of the second	American spiritures and makes and makes and market and the spiritures of the spiriture of the spiritures of the spiritur	and described has to Sharts Admits