

WATS II REPORT / DATA SET

National Report for Belize Vincent Gillete 16 October 1987

WATS2 091





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 sizes and trends, 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.

Despite the potential value of this information to agencies responsible for conducting stock assessments, monitoring recovery trends, safeguarding critical habitat, and evaluating conservation successes in the 21st century, the National Reports submitted to WATS II were not included in the published proceedings and, until now, have existed only in the private libraries of a handful of agencies and symposium participants. To help ensure the legacy of these symposia, we have digitized the entire proceedings – including National Reports, plenary presentations and panels, species synopses, and annotated bibliographies from 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 can be cited (with the number of pages based on the layout of the original document) as:

Gillete, V. 1987. <u>National Report to WATS II for Belize</u>. Prepared for the Second Western Atlantic Turtle Symposium (WATS II), 12-16 October 1987, Mayagüez, Puerto Rico. Doc. 091. 46 pages.

Karen L. Eckert WIDECAST Executive Director June 2009

WESTERN ATLANTIC TURTLE SYMPOSIUM II

NATIONAL REPORT FOR THE COUNTRY OF

BELIZE

VINCENT GILLETE

NATIONAL REPRESENTATIVE

THE NATIONAL REPORT FOR WATS II

Belize has a relatively extensive coastline of about 250 km and a barrier reef system that extends along the length of the country. Together, these two factors provide an extensive foraging habitat within which marine turtles are found. Our most important nesting beaches for sea turtles are located along the reef system that has hundreds of sand cays of various sizes. Nevertheless, of these hundreds of cayes, only twenty-four (24) are known or were reported to be areas of marine sea turtle nesting activity. Below is a list of known turtle beaches and areas of sightings. These are by no means the only areas where turtles have been seen, but rather where they are reportedly always seen in "large numbers".

Ambergris Caye Big Caye Carrie Bow Caye Caye Caulber Caye Chapel Cockroach Caye Frank Caye Glover's Reef Goff Caye Half Moon Cayes Hunting Caye Light House Reef Lime Caye Long Caye Nicholas Caye NO'D East Caye North East Sapodilla Caye Northern Two Cayes Pompion Caye Ranquana Caye Rendezvous Caye Round Caye South Water Caye South West Caye Tom Owens Caye Turneff Island others

Two (2) other nesting sites are located on the mainland coast. The first is on the Placencia Peninsula and the second, still further south at a village called Punta Negra. Our Survey therefore took us from the extreme Northern trip of the country to the Southernmost region, both along the mainland coast and to the cayes on the reef.

The loggerhead *Caretta caretta*, the hawksbill turtle *Eretmochelys imbricata*, and the green turtle *Chelonia mydas* are still nesting in Belize, though in reduced numbers. But, no evidence of nesting concentrations have been found anywhere except on one of our southernmost cayes, Nicholas Caye, where a total of sixteen nesting sites were seen scattered over the island.

Throughout the survey, only six (6) beaches were found to have nesting sites with a total of thirty-three (33) turtle nest. Surprisingly, the Placencia Peninsula and Punta Negra, renowned for their tradition as turtle beaches, had only two (2) and four nests (4) turtle nests respectively. Most of the nests, seventeen (17) were observed on the southern reef sections on the remote isolated cayes. In the other extreme, the most popular nesting beach at Rocky Point on Ambergris Caye had about ten (10) nests. However, the extent of human exploitation is more evident as the island is inhabited as a major tourist centre. Reports suggest that during the nesting season the locals comb the beach and raid the nest of their eggs. Turtle nest are also known to be dug up by raccoons who feed on the eggs.

Throughout the survey, it became apparent that turtles were being exploited for their eggs, meat and shell. Turtles are being netted by local fishermen and a considerable trade in turtle egg and turtles are allegedly being conducted by illegal fishermen, from those countries south of our borders. These activities and the extent to which they exploit the resource are not known as they do operate from the southern cayes, which are mostly uninhabited and isolated.

Although, our traditional national fishermen are not solely dependent on these catch of turtle for their livelihood, there is a thriving trade in turtle products. Other lobster and conch fishermen do take turtles when available as incidental catch. Marine turtles are also being caught in the nets of the shrimp trawlers operating in our water. However, there are no reports of turtles being washed up on shore.

In Belize, apart from the obvious education programme, two management options are open to us if we wish to conserve our marine turtles:

The first is to have the facilities in place to enable us enforce our existing laws. Strong laws to protect and conserve the turtles have existed since 1977 and there is a closed season, but enforcement is difficult. Our enforcement capabilities must be upgraded especially in light of the continuous illegal activities taking place in the south.

Secondly, we need to carry out some comprehensive research activities to help us to devise a management programme to determine the best way of utilizing the resource or to stop its exploitation.

Finally, there is an economic need to improve our fishing industry. We believe this can be attained through diversification of the products harvested. In addition, the Government is pursuing the scuba diversification policy. Consequently, our shrimping fleet has grown form seven (7) to eleven (11). It is known that turtles are being caught in the nets, and conservative estimates suggest that at least 700 turtles may be caught in these nets over a season by these trawlers. The Government should be encouraged to consider insisting that Turtle Excluded Devices be deployed on these boats if we are serious about saving the turtles.

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 386 km by the World Fact Book (Central Intelligence Agency), 12 Nov 2008 (<u>https://www.cia.gov/library/publications/the-world-factbook/geos/bh.html</u>)

^{***} 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)

TABLE 2. COASTAL HABITAT INVENTORY OF MARINE SHORELINE *				
Marina Sharalina Characteristics		Km of Shoreline		
	Undeveloped	Undeveloped	Undeveloped	
1. 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	278.25	
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	554.54	
D. Coconut Trees	11.25	53.15	64.00	
E. Other Trees or Shrubs				
F. Marshes	8.04	24.15	32.00	
6. Mouths of lagoons, rivers, canals				
7. Total Shoreline	982.40	398.58	1,381.00	
* Refer to SEA TURTLE MANUAL (Aeri	al Survey)			

** Human development or use (See MANUAL)

TABLE 3. NESTING BEACH INVENTORY

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

Name of Beach	Length in Km	Species Nesting (Use Abbreviations) *	Months of Recorded Nesting **
Ambergris	15	Cc, Cm, E	June, July, August
Caulber	9	Cm	June, July
Chapel	5	Cc, Cm	June, July, August
Goff	1	E	June, July, August
Placencia	22	Cc, Cm	June, July
Ranguana	0.5	Cc, E	June, July
Hunting	0.5	Cm, E	June, July, August September
Nicholas	0.2	Cc, Cm, E	June, July, August, September
Tom Owen	0.1		
Punta Negra	4	Cc, E	June, July, August
Carrie Bow	0.2	Cm, E	June, July
South Water	0.3		
Species *	Abbreviations *		
Caretta caretta	Сс		
Chelonia mydas	Cm		
Dermochelys coriacea	D		
Eretmochelys imbricata	E		
Lepidochelys kempi	Lk		
Lepidochelys olivacea	Lo		

** June, July, and August represent the months with most sea turtle nesting activity.

TABLE 4.1. NESTING CENSUS FOR BEACH Ambergis 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		2	23 September 1987
Chelonia mydas		3	23 September 1987
Dermochelys coriacea			
Eretmochelys imbricata		5	23 September 1987
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4.2. NESTING CENSUS FOR BEACH Caulker

I able summarizes census data for	each beach liste	d in Table 3. Tables	numbered sequentially
Species	Number of Nests		Dates of Collection
	Nest/Night (Average)	Nest/Season Estimated	
Caretta caretta			
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

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TABLE 4.3. NESTING CENSUS FOR BEACH Chapel

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

Species	Number of Nests		Dates of Collection
	Nest/Night (Average)	Nest/Season Estimated	
Caretta caretta			
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4.4. NESTING CENSUS FOR BEACH Goff Table summarizes census data for each beach listed in Table 3. Tables numbered sequentially Species **Dates of Collection** Number of Nests Nest/Night Nest/Season (Average) Estimated Caretta caretta Chelonia mydas Dermochelys coriacea Eretmochelys imbricata Lepidochelys kempi Lepidochelys olivacea

TABLE 4.5. NESTING CENSUS FOR BEACH Placencia

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

Species	Number of Nests		Dates of Collection
	Nest/Night (Average)	Nest/Season Estimated	
Caretta caretta			
Chelonia mydas		1	27 September 1987
Dermochelys coriacea			
Eretmochelys imbricata		1	27 September 1987
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4.6. 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			
Chelonia mydas		2	26 September 1987
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4.7. NESTING CENSUS FOR BEACH Hunting Table summarizes census data for each beach listed in Table 3. Tables numbered sequentially Species **Dates of Collection** Number of Nests Nest/Night Nest/Season (Average) Estimated Caretta caretta Chelonia mydas 1 26 September 1987 Dermochelys coriacea Eretmochelys imbricata Lepidochelys kempi Lepidochelys olivacea

TABLE 4.8. NESTING CENSUS FOR BEACH Nicholas

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		4	26 September 1987
Chelonia mydas		8	26 September 1987
Dermochelys coriacea			
Eretmochelys imbricata		2	26 September 1987
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4.9. NESTING CENSUS FOR BEACH Tom Owen

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

Species	Number of Nests		Dates of Collection
	Nest/Night (Average)	Nest/Season Estimated	
Caretta caretta			
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4.10. NESTING CENSUS FOR BEACH Punta Negra Table summarizes census data for each beach listed in Table 3. Tables numbered sequentially Species **Dates of Collection** Number of Nests Nest/Night Nest/Season (Average) Estimated Caretta caretta 26 September 1987 1 2 Chelonia mydas 26 September 1987 Dermochelys coriacea Eretmochelys imbricata 1 26 September 1987 Lepidochelys kempi Lepidochelys olivacea

TABLE 4.11. NESTING CENSUS FOR BEACH Carrie Bow

			, ,
Species	Numbe	Number of Nests	
	Nest/Night (Average)	Nest/Season Estimated	
Caretta caretta			
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

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

TABLE 4.12. NESTING CENSUS FOR BEACH South Water Table summarizes census data for each beach listed in Table 3. Tables numbered sequentially

Table Summanzes census data for each beach listed in Table 5. Tables numbered sequentially

Species	Number of Nests		Dates of Collection
	Nest/Night (Average)	Nest/Season Estimated	
Caretta caretta			
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

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		Ye	ear		Average Year
-	1986	1985	1984	1983	Estimate *
Caretta caretta				40	
Chelonia mydas				19	
Dermochelys coriacea					
Eretmochelys imbricata				31	
Lepidochelys kempi					
Lepidochelys olivacea					
· · ·					
		`			

* Mean estimate for recent years (1979-1982)

TABLE 10. NATURAL MORTALITY Life Stage Unit Species Causes ** Extent of (abbrev.) * Mortality (% of Unit) Nests/eggs Human poaching, raccoons? Hatchlings Birds, crabs, predatory reef fish (other?) Juveniles Predatory fish ? Adults (in water) ? Nesting females Species * Abbreviations * Caretta caretta Сс Chelonia mydas Cm Dermochelys coriacea D Eretmochelys imbricata Е Lepidochelys kempi Lk Lepidochelys olivacea Lo

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

TABLE 11. LANDING SITES FOR TURTLES AND TURTLE PRODUCTS

Name of Port or Site	Species Landed (use abbrev)	Fishing Gear Used	Months of Landings **	Numbers & Weights in Kg (estimate)
1. Beliz City Market	Cc, Cm, E	Nets; infrequently taken incidentally when diving	Sep-Nov, Feb-May	280 / 11,454
2. Newtown Barraks	Cc, Cm, E	Nets	Sep-Nov, Feb-May	28 / 1,654
3. Cerozal Town	Cc, Cm, E	Nets	Sep-Nov, Feb-May	
4. Dangriga	Cc, Cm, E	Nets	Sep-Nov, Feb-May	90 / 6,545
5. Punta Gorda	Cc, Cm, E	Nets	Sep-Nov, Feb-May	250 / 18,181
6. San Pedro	Cc, Cm, E ***	Nets	Sep-Nov, Feb-May	200 / 15,888
7. Caye Caulker	Cc, Cm, E	Nets	Sep-Nov, Feb-May	15 / 1,073
8. Placencia	Cc, Cm, E	Nets	Sep-Nov, Feb-May	116 / 10,545
<u>Species</u> Caretta caretta Chelonia mydas Dermochelys coriacea Eretmochelys imbricata Lepidochelys kempi Lepidochelys olivacea	Abbreviatio Cc Cm D E Lk Lo	<u>ons</u>		

* Occasionally turtles are landed in the months of December and January.

** There is a fairly heavy trade in juveniles to satisfy tourist demand.



Figure. Map showing route taken during survey September 1987; total days: 4.

Editor's note (2009): Maps and figures are reprinted exactly as they appear in the original document; we regret the poor quality exhibited in some cases.

TABLE 12. TOTAL ANNUAL TURTLE LANDINGS IN NUMBERS

Do not include turtles car	ught inc	idental t	o other	fishing	operations (e.g., shrimp trawling)
Species		Ye	ear		Method of Determination
	1987	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					
Total	979	1005	1120	1125	

TABLE 13. ESTIMATED INCIDENTAL TURTLE CATCH

(Give estimated numbers and/or weights)

Species		Year		Type of Fishing Activity & Method of Estimation
	1982	1981	1980	
Caretta caretta				
Chelonia mydas				Incident catch of juveniles by divers and fishermen
Dermochelys coriacea				
Eretmochelys imbricata				Incident catch of juveniles by divers and fishermen and shrimp trawlers
Lepidochelys kempi				
Lepidochelys olivacea				

TABLE 13. ESTIMATED INCIDENTAL TURTLE CATCH (supplementary page)

The shrimp fleet which presently consists of some 7 vessels (1986/1987) season are known to collect turtles in their nets. A conservative estimate puts these incidental catch at about seven hundred (700); mostly hawksbills and green turtles over a season.

ESTIMATED TURTLE Give numbers and/or est	CATCH stimated	BY FOF weights	REIGN F	TISHERMEN
Species	Year			Type of fishing activity and method of estimation
	1987	1986	1985	
Caretta caretta				
Chelonia mydas				
Dermochelys coriacea				
Eretmochelys				
imbricata				
Lepidochelys kempi				
Lepidochelys olivacea				

TABLE 14. ESTIMATED TURTLE CATCH BY FOREIGN FISHERMEN (supplementary page)

Allegations are repeatedly made of foreign Japanese and Central American nations south of Belize's border operating in our territorial waters. Reports of shrimping activity are certainly consistent. It is impossible to estimate the catch of turtles here but at least once per boat per night is possible.

TABLE 16. E		DEPENDENT ON	TURTLES
Activity	Total Annual Numbers of Persons	Est. Annual Income from Turtles	Comments
Fishing	15-20	Unknown	This represents the estimate for full-time turtle fishermen
Processing			
Selling			

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

Institution or Organization Name and Address	No. of Active Members	Activities in Progress
Fisheries Department: Ministry of Agriculture, Forestry and Fisheries	8	Market Surveys and Enforcement of Regulations
Audubon Society	?	
SPEC: San Pedro Environmental Committee	?	Monitoring
BTIA: Belize Tourism Industry Association	?	Monitoring

TABLE 20. REGULATORY AUTHORITY *

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

Name and Address of Organization	Budget Allocation to Turtles	No. of Staff Assigned to Turtles	Comments on Levels of Enforcement
Ministry of Agriculture, Forestry and Fisheries Belmopan Belize	NA	NA	Opportunistic

* The Fisheries Regulations 1963 are attached for sea turtles, p 1-3.

Fisheries

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 1-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*;

STATUTORY INSTRUMENT, continued

"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 not--to 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: -

STATUTORY INSTRUMENT, continued

- (a) green turtle (Chelonia midas) 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 an 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 this Regulation



WATS II REPORT/DATA SET

National Report to WATS II for Belize.

Vincent Gillete.

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16 October 1987.

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WATS2 091

WESTERN ATLANTIC TURTLE SYMPOSIUM II NATIONAL REPORT FOR THE COUNTRY OF BELIZE

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NATIONAL REPRESENTATIVE

VINCENT GILLETE

THE NATIONAL REPORT FOR WATTS II

Belize has a relatively extensive coastline of about 250km and, a Barrier Reef system that extends along the length of the country. Together, these two factors provide an extensive foraging habitat within which marine turtles are found.

Our most important nesting beaches for sea turtles, are located along the reef system which has hundreds of sand cays of various sizes. But of these hundreds of cayes, only twenty four (24) are known or were reported to be areas of marine sea turtle nesting activity.

Below is a list of known turtle beaches and areas of sightings. These are by no means the only areas where turtles have been seen, but rather where they are reportedly alway seen in "large numbers".

Ambergris Caye Caye Caulber Caye Chapel Coff Caye Rendezvous Caye Long Caye Lime Caye Hunting Caye Nicholas Caye North East Sapodilla Caye Tom Owens Caye

Pompion Caye	
Round Caye	
Carrie Bow Caye	
South Water Caye	
Frank Caye	
Northern Two Cayes	Ticht Neuro Poof
Half Moon Cayes	Light-House Reel
South West Caye	Clavaria Poof
NO'D East Caye	Clovel & Keel
Cockroach Caye	
Big Caye	Turneff Islands
others	

Two (2) other nesting sites are located on the mainland coast. The first is on the Placencia Peninsula and the second, still further south at a village called Punta Negra.

Our Survey therefore took us from the extreme Northern trip of the country to the Southermost region, both along the mainland coast and, to the cayes on the reef.

The Loggerhead <u>Caretta caretta</u>, the Hawk's bill turtle <u>Eretmochelys</u> <u>imbricata</u>, and the green turtle <u>Chelona mydas</u> are still nesting in Belize, though in reduced numbers. But, no evidence of nesting concentrations have been found anywhere except on one of our Southernmost Cayes'Nicholas Caye' where a total of sixteen nesting sites were seen scattered over the island.

Throughout the survey, only six (6) beaches were found to have nesting sites with a total of thirty three (33) turtle nest.

Surprisingly, the Placencia Peninsula and Punta negra, reknowed for their tradition as turtle beaches, had only two (2) and four (4) turtle nest respectively.

Most of the nest seventeen (17) were observed on the southern reef sections on the remote isolated cayes.

In the other extreme, the most popular nesting beach at "Rocky Point" on Ambergins caye had a total of about ten (10) nests. But here, the extent of human exploitation is more evident as the island is inhabited as is a major tourist centre. Reports suggest that during the nesting season, the locals comb the beach and raid the nest of their eggs. Turtle nest are also known to be clug up by racoons who feed on the eggs.

Throughout the survey, it became apparent that turtles were being exploited for their eggs, meat and shell. Turtles are being netted by local fishermen and a considerable trade in turtle egg and turtles is allegedly being conducted by illegal fishermen, from those countries south of our borders. These activity, and the extent to which they exploit the resource is not known as they do operate from the southern cayes which are mostly uninhabitat end isolated.

Although, our traditional national fishermen are not solely dependent on these catch of turtle for their livelyhood, there is a thinving trade in turtle products. Other lobster and conch fishermen do take turtles when available as incidental catch.

Marine turtles are also being caught in the nets of the shrimp trawlers operating in our water. However, there are no reports of turtles being washed up on shore.

In Belize, apart from the obvious education programme, there are two management options that are open to us if we wish to conserve our marine turtles. The first is to have the facilities in place enable us enforce our existing laws. Strongest laws do exist, since 1977, to protect and conserve the turtles and, there is a closed season but, enforcement is difficult. Our enforcement capabilities must be upgraded especially in light of the continuous illegal activities taking place in the south.

Secondly, we need to carry out some comprehensive research activities to help us to devise a management programme so as to determine the best way of utilizing the resource or to stop it exploitation.

Finally, there is a need to economically improve and fishing industry. This we believe can be attained through diversification of the products harvested. And, scuba diversification policy is being pursued by the Government. Consequently, our shrimping fleet has grown form seven (7) to eleven (11). It is known that turtles are being caught in the nets. And consecutive estimates suggest that at least 700 turtles may be caught in these nets over a season by these trawlers. Government will be encouraged to look seriously at insisting that Turtle Excluded Devices be deployed on these boats if we wish to seriously consider saving the turtles.

NATIONAL REPORT FOR THE COUNTRY OF BELIZE

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NATIONAL REPRESENTATIVE NINCENT GILLETT

THE NATIONAL REPORT FOR WATS 11

Belize has a relatively extensive constline of about 250 km and, a Barrier Recef system that extends the along the length of the country. Together, these two factors provide an extensive foraging Shabitat within which marine turtles are found Our most important nesting beaches for sea turtles, are located along the reef system which have hundreds of sand cays of various sizes. But if these hundreds of caryes, only twenty four (24) are known or være reported to be areas of marine sea turille nesting activity Below is a lest of known turtle beaches and areas of sightings. These are by no means the only areas where Turtles from been seen, but rather where they are reportedly alway seen in large numbers.

Ambergris Caye Caulder Caulder Carje Chapel yoff Caye Rendezvous Eauje Long Caye Lime Caye Hunting Caye Micholas Caye North East Scipodilla cuije Toin Dwens Caye Ranquana Caye Pompion Cine Round Caye Carrie Dow Caye South Water Carje Frank Caye Northern Two Cayer? Light-House Reef Half Moon Cayes Sou West Carge J GLOVE's Reef V NOD East Carge J GLOVE's Reef V Nous Cockroach Carre Turneff Islands.

Two (2) other nesting sites are located on the mainland coust. The first is on the Rlacencia Reninsola and the second, still further south at a village called Runta Megre Our Survey therefore took as from the extreme Northern tip of the country to the Southermost reason, both along the mounland coast and, to the causes on the ract. The boggerhead Carretta carretta, the Hawk's bill turtle Eretmochetys imbridite, and the green turtle Cheloria mydas an still nesting in Belige, though in reduced number But, no eudence of nesting concentrations have been found anywhere except on one of our Southernmost carpes 'Michilas Carpe' where a total of sixteen nesting sites were seen scattered over the island. Throughout the survey, only Six (6) beacher were found to have nesting sites with a total of there thinks Alree (33) turtle rest. Surprissingling, The Placencia Peninsula and Runta negra, reknowed for their tradition as turdle beaches, had only two as and four (4) turtle nest respectively. Most of the nest succenteen (17 wore observed on the southern rect sections on the remote volated cargos

In the other extreme, the most popular nesting beach at "Rocky Point" on Ambergins carge hand a total of about ten (10) heste. But here, the extent of human explicit. is more evident as the island is intribited as is a major tourist centre. Reports sugge that during the resting season, the bocals comb the beach and would the nest of their eggs. Turdle nest are also known to be dug up by raccous who feed on the eggp. Throughout the survey, it became apparent that turtles were being explicited for their eggs, meat and shell. Turtles are being netted by local fishermen and a considerable trede in turtle egg and turtles is allegedly being conducted by illegal fisherman, front from those countries south of our birders they activity, and the extent to which they explort the resource is not known in they do operate from the southern carges which one mostly unenhabitat and isolated. although, our draditional rational Fishermen one not solely dependent on Their catch of teatle for their Ruelyhir. there is a thinning trade in turtle products. and, other lobster and conch

and conch festermen do take turilles when available as incidental catch. 1 Manne Turtles are disc being operating in ous water. However, there are no reports of turtles being washed up in shine. In Belize, apart from the obvicues education programme, there are two manages options that are open to us if we wish the conserve our monne turfles. The first is to have the faulities in place to anoble us enforce our existing laws. Stringent laws do exist, since 1977, to product and conserve the tudles and, there is a closed senson but, enforcement is difficult. Our enforcement capabilities must be operation especially in light of the continous allegal activities taking place in the South. Secondly, we need to carry out some comprehensive research activities to help us to devise a management programme so as to determine the best way to I utilizing the resource or to stop texploitation. allto Finally, there is a need to economically improve out fishing whichting This we believe can be attained Abrough diverse ficiention of the padarta

hanesded. and, such a diversification piling is being passed by the Government. Consequently, our shamping fleck hers groun from Seven(7) to eleven (11). It is brown that turtles are being cought in the neto. and conservatione estimates Suggest that at least 700 tutles may be cought in these nets one c servin by these transless. Government will be services encouraged to look senously et insisting that Turtle Excluder Derves be deployed on these boats if we wish to sensely concider saving the twilles.

country BEL	12E			
				7.50 Km
Length of Coastline*				
Km ² of Continental She	lf Area 🔒			7.4.50 Km
Seaward Extent of Juri	sdictions:			
Territorial Sea .	• • • • • • •		,	<u>4.8</u> Km
Extended Economic	Zone •••			• K M
Fisheries Jurisdic	tion	• • • • • • •		. <u>4.8</u> Km
Other (Describe)	and and the second s			• <u>-</u> 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.

	د لا	NE SHORELINE	
MARINE SHORELINE CHARACTERISTICS*	UNDEVELOPED)EVELOPED**	TOTAL
			105.0
1. Sand Beach (Total)	0.27	0	
	16.0	2.0	21.0
A. HIGH Ellergy	26.0	58.0	84.0
8. Low Energy	111.3	166.55	12.272
2. Reef (exposed)	14.85	و ک ب	١٢.٦
3. Rocks	07.0	5.1	2.0
4. Cliffs			
5. Vegetation (Total))		
A. Vines	232.18		f1 ~ 52
B. Grasses		20.00	アンシン
C. Mangroves	2 20 /6	- 17- V	(1.0)
D. Coconut Trees		2.00	0
E. Other Trees or Shrubs			- - - -
F. Marshes	10.8	51.20	\$ 1.0
in the of lacone rivers. canals			1241 4
	982.4	PC 365	6.10c/
7. Total Shøreline * Daf	** +^ SFA TURI	TE MANUAL (A	erial Survey

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TABLE 2. COASTAL HABITAT INVENTORY OF MARINE SHORELINE ** Human development or use (See MANUAL)

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NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
	ļ		tword, pus, was
1. Ambergin	c].		The Sulting
2. Caulber	5	C M	(
	لر	ب ب ن	Jun / July , thugan
3. Chapel)		June, Thy, Rugad
+ 40 F			Fur July
5. Macencia	, ,,		Sun Suly.
6. Demeprena			Sun July, August, Scool.
7. Hunting		L C.	Thur July Huguet Lyn
8. WILCHUSTOS	0.0	Σ	
		Contraction of the second s	Fund Plus mut
10. VUNTE MERICE			Species Abbreviations:

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

Species Abbreviations: Caretta caretta Chelonia mydas Dermochelys coriacea Eretmochelys imbricata Lepidochelys kempi

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NAME OF BEACH	MX NI IN KM	SPECIES NESTING (Use abbreviations)*	* MONTHS OF RECORDED NESTING
	2.0	لم.	- the ma
Series With	. Q		
3.			
5.			
6.			
ſ			
Ď			
6			
10.			
TABLE 3. NESTING BEACH IN List beaches in Provide addition	WVENTORY geographic so hal informati	equence. on on following page.	Species Abbreviations: Cc Caretta caretta Ca Chelonia mydas Cm Dermochelys coriacea D
June , June ,	NUC 451 6 6 901	esents the Maulto	Eretmochelys imbricata E Lepidochelys kempi Lepidochelys kempi

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Sure Sury, Ducust corrections the Mouths i large rank a churt

Eretmochelys imbricata Lepidochelys kempi

		•	
	NUMBER O	e NGST	
.	NEST / NIGHT	NOTARY / LSON	DATES OF COLECTION
	(masout)	CSTIMATED	
SPECIES			53/9/50
CARETTO CORNTE			A second s
		ß	23/5/22
CHELONIA MYDRY			
READENCISS CORINED			
		'n	23/5/52
NEW CHAINS CHAINS			
1 GOIDDLHOLLYS KEMPI			
LEPIDO CHARYS OLIVACUA			

(NAME) AMBERCRIV TABLE 4: INESTINE CENSUS FOR BEACH ----

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LISTED IN TABLE 3. TABLES NUMBERED SEQUENTIRLY. TABLE SUMMARIES CENSUL DATA FOR EACH SEARH

ates 22 Correction									ch bearth D SEQUENTIMELY.
E NEST	Kerl / Journal							LER omor)	CENSUL DATA FUR ER
N UMBER OF	NGST / NI ENT (AVERACY)			Ū. M	เลี้ยงเร		1CCB	NS FOR BEACH CAULY	TABLE SUMMARIES
	SPECIES	aerra caette	CHELONIA MYDRS	DERMECHCITS CORING	Lezzapochers 1mbe	LEPIDOLHOLYS KEMPI	LEPIDO LAPAS OLWA	1BLE 4.2 NESTINE CENSU	· …

	N UMBER O	JF NEST	
	NGST / NIGHT	Hest / reparan	DATES OF LOLECTION
CPFCIES	(wreach)	ES TUMATED	
			
CARETTO CORRE			
		de o Sanda	
CHELONIA MYDAS		!	•
DERMOCHELYS CORINED			
L			
Lettopocherds indering			
LEPIDDIHOLYS KEMPI			
LENDO CHERYS OLUNGUA			
TAR LANGE LANGE LANGE	05 9	naper	;
laise 4. Jule 1 min course .		(x am c)	

LISTED IN TABLE 3. TABLES NUMBERED SEQUENTIRLY. TABLE SUMMARIES CENSUS DATE FOR EACH SEALH

	NUMBES O	F NEST	
.	Nest / HIGHT	Nest / Septem	DATES OF LOLECTION
SPECIES	(sovazny)	19	
CARTTO CURRITE			
CHELONIA MYDAS		!	
DERMECHELYS CORNED		1 *	
LERETROCHELYS IMBERED			
LEPIDOLHULY KEMPI			
LEPDUCHERYS OLWACKE			
	GOF 1-		
TABLE 4.4 NESTINE CENSUS HE	17 DEIX 6 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	ć	Harry Kisht H

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ר האצוני א טאפישעם גר קטניארואי r Ş TABLE SUMMARIES CENTUS PARE FOR EACH

LISTED IN TABLE 3.

	N UMBER O	JE NEST	
j	Nest / NIGHT	NEST / GERSON	DATES OF COLLECTION
SPECIES	(ENASAND)	62 IMM1 5-1	
Lagerra , a wette			
			21/61/61
CHELONIA MYDRS		1	
DERMECHELYS CORINER			73/6/12
F. CF. TRAD CHULLS IN BEING			
LEPIDDLHULYS KEMPI			
LEPDO CHERYS OLWACUA			
Alessive (event for	лг улжн Бгасн	4132	
luste d'i transfer		í	Server Report

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3. TAPSLES NUMBERED SEQUENTIALLY. LABLE SUMMARIES CENSUS DATA The EACH SEATH LISTED IN TABLE

	NUMBER	NEST	
	NEST / NI CHT	NEST / Sepson	DATES OF COLECTION
SPECIES	(Hveraur)	CHMATED	
Contra conte			
CHELONIA MYDRS		2	26 19 187
DERMECHELYS CORINER			
ELETADOCHULLYS INBRIDE			
LEPIDOLHOLYS KEMPI			
LEPIDO CHERYS OLWACUA			
TABLE 4.6 NESTINE CENSUS FO	יחשא אייי אאשא צע	a ve	ſ
Tan Tan	צריב צח מאמשוק בא	CENSUL DATA FOR	Esten Berry
	TABLY IN TABLY	3. TARLES NUME	ירואינו איז

LISTED IN TABLE 3.

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- •	NUMBER 0	F NEST	
.	NGST / NIGHT	Nest / reprov	DATES OF LOLLECTION
SPECIES	(espeasive)	ES UMATED	
Lagreen casette			
			2619181
CHELONIA MYDRS		•	
DERMECHELYS CORINED			
ERTRADCHULLS IMBRING			
EPINON HELYS KEMPI			
LEPIDE CHERYS OLWACKA			
TABLE 4.7 NESTINE CENSUS 100	-HULL	1.NG	T.
	CUMMMUS SUN	CENSUS DATA 176	EACH BEACH

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ר אצרעיז א טאפידעים גר קטניארואי . M LISTED IN TABLE 1 41261

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	NUMBER 0	F NEST	
.	NGST / NI GHT	Nest / rispach	DATES OF LOLLECTION
SPECIES	(Averaca)	ES TIMATED	
Caritta capette		h	34/9/87
CHELONIA MYDAS		т. С	20/5/20
DERMOCHCUYS CORINGED			
- FLEETRODCHELAS INBEILOT		N	67/5/20
LEPIDOLHULYS KEMPI			
LE PIDO CHERYS OLWACUM			
Table 4.8 NESTINE CENSUS FO	MICHAIN NICHAI	5 W J	
Tas	Caliston no Suss	CENSUL DATA (The	האב זי קפטרא האב זי קפטרא

2 TABLES NUMBER . m LISTED IN TABLE

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		- Net	
	N UMSES OF		
	NGST / NIGHT	NEST / TERSON	DATES OF COLORIAN
SPECIES	(Inverse)	1414177	
11 a L II KKIM			
ELONIA MYDAS			
RMECHELYS CORNED			
WWW BEHAND SFIAND O CHIER			
PIDDLHTOLYS KOMPI			
BUDU SKITAN SUNAND			

1- . ч. К 1157 MI CARLY

· · ·	N UMBER O	F NEST	1
4 · ·	Nest / NIGHT	Nest / reprove	DATES OF COLLECTION
SPECIES	(swaznt)	67 actual 2	
:			2619187
LARTTA LARTE			
		2	
CHELONIA MYDAS		-9	
(
VERMECHCINS CORINCO			
Elerrosochulds indeliven			11/4/22
LEPIDOLHELYS KIEMPI			
LE PIDU CHERYS OL WACH		· · · · · · · · · · · · · · · · · · ·	
TABLE 4.10N/ESTINE CENSUS P.	איטל אאפע צני	ra Negan	ŗ
, ,	עזיצ צח עז עז נאביז ג א	CENSUL DATA FOR	Parch Beach
			- へい るいどとじそう/

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Ļ TARLES NUMBURNO . ო 17861 MI CELSIT

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	DATES OF COLLECTION						-	÷	e ench benth	18rman
f NEST	NEST / Sepson ESTIMATED	Second data	!	•				reve soul	census para ra	3. TABLES NUM
N UMBER O	NGST / NI LIT (Neserver)							שיש האבוע בנו	; (7 LINNNU 2 215	NI CERT
	SPECIES	CARTTO CARNTE	CHELONIA MYDRS	DERMOCHELYS CORINED	MENINEWI SKARACONT	LEPIDOLHULY KEMPI	LEPIDUCHERYS OLWACUA	TABLE 4.11 NESTINE CENSUS FE	Tae	

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	N UMBER O	TE NEST	
₽ • • • •	Nest / NI ENT	Nest / reprov	DATES OF LOLLECTION
SPECIES	(trovasal)	65 TIMATED	
CARTTO CORNTE			
CHELONIA MYDAS			
DERMECHEUXS CORINER			
L			
LEVERDOCHELLS INBEILE			
LEPIDOLHELYS KEMPI			
LEPIDUCHERYS OLWACUA			
TABLE 4. INNESTINE CONSUL 10	on Berku Sou	th WATER	1
		i	2 . 574 []

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3. TARLES NUMBERED SEQUENTIALLY. TABLE SUMMARIED CENSUS PATA FOR EACH BEACH LISTED IN TABLE

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					••	8 8 8
YEAR SPECIES	1986 :	1985	7.961	19 43	1	Average _. Year ^{s.} Estimate /1
Caretta caretta				07		
Chelonia mydas		Contract for BACK		0		
Dermochelys corfacea						
Eretmochelys imbricata				3		· · ·
Lepidochelys kempi		, , ,			and the second	
Leipdochelys olivacea	1					
TABLE 6. ESTIMATED POPULATIONS OF Summarize the estimated for the years indicated	NESTING FE number of n and describ	MALES. esting femal e methods of	es estimation		how an	A.

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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. TABLE 6.

/1 Mean estimate for recent years (1979-1982).

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	K SBR			-988-32-6		122333	72555	.		DE BERRINS			<pre>^</pre>	
HINOH			Σ	<	series Σ				S.	C	Z	0	GREATEST ACTIVITY	
SPECIES							╡	ੑੑੑੑ [ੑ] ਙॼ	(. 239274	Distance .		XIX.534		
<u>Caretta</u> <u>caretta</u>	i		<u>*11_2:=>@\$\$</u>	. ,				794238 ⁹ 992						T.C. MILLION
Chelonia mydas			1						 	ļ				
Dermochelys corfacea	i		1					ļ		İ		Ì		
Eretmochelys imbricata	:		1			i	!	:			:			PETER N
Lepidochelys kempi					:		!	:						
Lepidochelys olivacea				SHORE AND					7 7 002 0000			REAL PROPERTY		
			-				-							

TURTLE SPECIES PRESENT ON FORAGING AREAS. Please complete one of these tables for each of the areas identified in Table 7. Number each table as enumerated in Table 7 (7-1, 7-2, etc.). ~ 1 TABLE 8 .

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LOCATION Location & Long coordinates)	DATE	SPECIES AND EST. NOS. Abbreviations)	COMMENTS
· · · · · · · · · · · · · · · · · · ·			
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•			
BLE 9. NON-FOPAGING TURTLES AT Please provide any info incidence of turtles ir	r SEA. ormation n offshor	available on the e areas.	Species Abbreviations: Caretta caretta Chelonia mydas Chelonia mydas Dermochelys coriacea Eretmochelys imbricata Lepidochelys olivacea Lepidochelys olivacea

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LIFE STAGE UNIT			
	PECIES bbrev.).	CAUSES*	EXTENT O MORTALIT (X of un ¹
Nes ts/eqds		Human Poaching, Raccoons, ?	
		Birds, Crabs, Predatory Reef Fish (other?)	
Juveni les		Predatory Fish	
Adults (in water)		C-+	<u>*************************************</u>
		~	CREMENTAL PROPERTY AND
TABLE 10. NATURAL MCRTA	, , ,	 * Natural mortality causes may include: Species Abb Boach erosion of nests: egg and/or 	reviations: etta
· ·		nestling predation by crabs, wild Chelonia my nestling predation by crabs, wild <u>Uermochely</u> animals, sea birds, etc.; disease; <u>Uermochely</u> sharks and other predators at sea; <u>Lepidochely</u> etc. <u>Lepidochely</u>	rdas <u>coriacea</u> <u>rs imbricata</u> <u>rs kempi</u>

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NAME OF PORT OR SITE	SPECIES LANDED Use abbrev)	FISHING GEAR USED	MONTHS OF LANDINGS	ر JUMBERS & WEIGHTS (Estimate
1. Belize City Market	Cc, Cm, F	Nets (infrequently taken	SeptNov. FebMay	280/11,454 Kg
Ž. Newtown Barraks	Cc, Cm, E.	Nets	=	38/1,654 Kg
3 Corozal, Town	: =	: :		
4. Dangriga	=	2		20/ 2/26
5. Punta Gorda	= ,	- -	•	250/ 78,1 8 1-
6. San Pedro	- * - -			200/ 15, 868
7. Caye Caulker	• د •	-	= =	15/1,0732
8. PLACEN CIR	: - - 	=		
TABLE 11. LANDING SITES I	FOR TURTLES &	TURTLE PRODUCTS	Speci Caretta	es Abbreviations: caretta
*There is a fairly heavy	rtrade in Juv	reniles to satisfy tourist demand	Cheloni Dermoch	a mydas elys corfacea helvs imbricata
+Occasionally turtles ar	e landed in 1	the months of DEC. and JAN.	Lepidoc	helys kempi helys olivacea

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FIL. MAP CHOWING ROUTE TAKEN DURING SUEVEY SEPT. 1487. TOTOL DOYS N

LE AR					
SPECIES	1987	1982	1991	1960	METHOD OF DETERMINATION
Сакктта сдеетта		H 6D	425	415	MARKET SURVEYS AND REPORTS FROM FISHERMON
CHELONIA MYDAS		28 D	325	350	MARKET SURVEYS HAND REPOSEDS
DERMOCHELYS CORIACHE					
ERETROUCHERYS IMERICON		કાર	370	360	MARKET SURVEYS AND REPEAD
СЕРІДОСНЕТУ КЕНРІ					
LEPIDO CHELYS OLIVACED					
10792	979	1005	1120	1125	

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TO OTHER FULLING OPERATIONS (25, Shrimp TIGWINS) DO Not INCLUDE TURTED CARLHT INCIDENTER

TOTAL ANNUAL TUERE LANDINGS IN NUMBERS Table 12.

 \sum

YEAR	1982	1981	1980	<pre>type of fishing activity & method of estimation</pre>
Caretta caretta				
Chelonia mydas				Incidental Catbhof Juv. by Divers and Fishermen
Dermochelys corfacea				
Eretmochelys Imbricata				Incidental Catch of Juv. by Divers and Fishermen
Lepidochelys kempi		nauna di su chi di su chi di su chi		
Leptdochelys olfvacea				

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TABLE 13. ESTIMATED INCIDENTAL TURTLE CATCH Give estimated numbers and/or weights.

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TABLE 1.3. ESTIMATOD INCIDENTRE TURTLE CATCH (Supplementary page)

THE SHEIM? FLOFF, JULLA RESENTLY CONSIST OF SOME SEVEN VETSELS (1968/57 SERION) PROF KNOWH TO COLLECT TURLES IN THORN NETS. A CONSERVATIVE ESTIMATE PUTS THESE INCLIDENTIA CARTER AT ABOUT BEVEN HUMDRED (700); MOSTLY HAWKSBUL AND GROEN WETLE OVER A SERION



ESTIMATED TURTLE CATCH BY FOREIGN FISHERMEN Give numbers and/or estimated weights. TABLE 14.

ESTIMATED TURTLE CAPELY BY FOREIGN FIGHTERFA TABLE 14. (Supplementary page)

Allegations are repeatedly made of foreign, Jap Sapanes and Central American nations, south of Eletype's border = operating in our territorial waters. Reports of shringing activity is certainly consistent. It is impossible to estimate the edch of furthers have but at least oness per mold per board during the season is possible.

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		ΥEARS		CHODENT	
	500,	1981	1980	MARKET Price/Unit	METHODS OF DATA COLLECTION
TURTLE PRODUCT	1985			2000	•
No. of eggs			1		
Meat (Kg)					
Shell No./Wt.			:		
Skins No./Wt.	. •				
, Stuffed Juveniles	•		-	CENTRON DUSING CONTROL	
0ther					
SPECIES					
TARI F 15. 0F	FICIAL S	TATISTICS	OF TURTLE	PRODUCTION for each spec	les taken in the fishery.
	omplete 0	ne of thes	CDINDI O		

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This represents the estimate for full-time turtle fishermen. comments EST. ANNUAL INCOME FROM TURTLES Unknown TOTAL ANNUAL NUMBERS OF PERSONS 15-20 ACTIVITY Processing Selling Fishing

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TABLE 16. EMPLOYMENT DEPENDENT ON TURTLES

-1 PUBLIC AND PRIVATE INSTITUTIONS CONCERNED WITH TURTLE CONSERVATION/MANAGEMENT/UTILIZATION Market Surveys and Enforcement of Regulations ACTIVITIES IN PROGRESS MONITORING MOMI TORZING NO. OF ACTIVE MEMBERS 6. ი 00 BRIJUT HOURISM MILLING scuperior and are those in our len viran mental Envatisis (ind halsage) Fisheries Department INSTITUTION OR ORGANIZATION NAME AND ADDRESS ~ AUBORDON SOCIUTRY LOMMINTES ASSOCI D TOW 31-12 san poved SPEC

TABLE 18.

		COMMENTS ON LEVELS OF ENFORCEMENT	Opportunistic				j	te and
135	A COLUMN	.a. of STAFF ASSIGNED TO TURTLES	NA					
		BUDGET ALLOCATION TO TURTLES	NA		m			
		NOTTATING CO	NAME AND ADDRESS OF UKUMINIAN	Ministry of Horicours	Belmopan, Belize *The Fisheries Regulations 196.	are attacted . 1-3).		•

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REGULATORY AUTHORITY Indicate all entities with statutory responsibilities (e.g., Fisheries Departm Ministeries, Police, Coast Guard, etc.) 1 ABLE 20-

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Fisheries

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 The.

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

PART 1-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 carapáce measurement of crawfish determined by beginning at the most anterior edge of the groove between the horns directly above the eyes, then proceeding along the middorsalline to the rear 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 molluse of the species Strombus gigas Linne; "crawfish" means fish of the genus Panulirus which is commonly known as crayfish or spiny lobster; Art of a

"crustacea" includes marine and fresh water shrimp, crabs, 30 . . and crawfish:

"Iobster 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 scroes

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the diagonal of the tightly stretched wet mesh; <u>, 1</u> "scale fish" means all members of the class Pisces;

. Constitution used for taking fish by drawing along the bottom of the sea or fresh water (whether drawn on the beach or otherwise);

clams, mussels, scallops, and snails, including mombers of the genus Strombus; "to buy" means to come into possession or attempt to possess property in flah by means of an offer or exchange for money or other valuable consideration; "to scil" 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	 12. No person shall set or attempt to set within one hundred ye ds of the shores of Belize or of the adjacent cayes 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:
 croccation with a mark increasing a price strain or control to be an offer to solir. to take includes all operations preparatory, and subsequent to an attempt—whether successful or not—to capture, kill, pursue, or otherwise harm or reduce to possession any fisherics resource; "turtle" means a marine as distinguished from a terrestrial or fresh water species of tortoise. 	 (c) loggerhead turtle (<i>Caretta caretta</i>) 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 licence granted by the Minister. 15.—(1) Subject to paragraph (2) of this Regulation, no person shall take any fish in the waters of Belize with a net constructed of a patural or articles there the mech size of when the person of which is less than three inches.
 PART II-GENERAL No porson shall take for the waters of Belize or buy, sell or have in his possession crawfish (a) If the cape length is less than 3 1/4 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 berried, has sees or spaws removed; (d) that has had the berries, eggs or spaws removed; 	 artificial fibre the mesh size of which is less than three mana. (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 scientific investigation who may be permitted to use webbing of smaller mesh provided that such device be of an approved pattern and that the written authority of the Fisherles Administrator is obtained and entered on the licence at the time of issue; (c) trawf or scine net the mesh size of which is not less than 1/2 inches.
 (c) that is moniton or otherwise remove from any formalo any eggs or spawn formalo any eggs or spawn or the sected or fibre to which any oggs or spawn have been attached. No person shall take any soft shelled crutacean. No person shall take couch in the waters of Belize during the of July, Kugust and September in any year. No person shall take scale fash in the waters of Belize using Scube of July, Kugust and September in any year. 	(3) The provisions of this Kegulztion shall not apply to the mature 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 of for the escape of such fish, 16. No person shall capture any fish of such a variety or in such quantities as would result in wanton waste and any fish captured as afore suid shall be released immediately. 17. No beach scine, trap, wier, or stop net shall be set, hauled or otherwise used for the purpose of taking fish at any place situated within a distance of a mile from any city, township, village, sottlement of a distance of the purpose of taking fish at any place situated within a distance of the purpose of taking fish at any place substantion.
In all areas outside the barrier reaf and within a radius of two af the mouth of the Belize River, Haulover Creok and Sibun River, and shall pake flah by measus of any basch seine, trap, woir or stop No person shall buy or sell boneflah, after the 31st day of Docom- fl. No person shall take or have in his possession any turtle during the from the first day of June to the thirty first day of August in-	 other inhabited locality in Belizz. 18. No person shall use anaestletics in the water of Belize encounder special permit from the Fishuries Administrator. 19. (1) No person shall take, buy, or sell any coral. 20. (1) No person shall. 20. (1) No person shall. (a) have in his pessession, or buy, sell, export or situated to export or situated to buy, sell, export or situated to form. (b) buy, sell, export or attempt to export black coral form.