SPC-NMFS/Turtles/WP.4 25 October 1979

ORIGINAL : FRENCH

SOUTH PACIFIC COMMISSION

JOINT SPC-NMFS WORKSHOP ON MARINE TURTLES

IN THE TROPICAL PACIFIC ISLANDS

(Noumea, New Caledonia, 11 - 14 December 1979)

TAGGING AND REARING OF THE GREEN TURTLE CHELONIA MYDAS CONDUCTED IN FRENCH POLYNESIA BY THE DEPARTMENT OF FISHERIES

SUMMARY

The following is a preliminary report based on the observations made on Chelonia mydas in 1972, 1973, and 1979 by officers from the Department of Fisheries of French Polynesia. Most tagging was done on adult females on the atoll of Scilly. Rearing trials were run, and observation of eggs and hatchlings brought to light some of the difficulties associated with aquaculture of this species.

ORIGINAL: FRENCH

SOUTH PACIFIC COMMISSION

JOINT SPC-NMFS WORKSHOP ON MARINE TURTLES IN THE TROPICAL PACIFIC ISLANDS (Noumea, New Caledonia, 11 - 14 December)

TAGGING AND REARING OF THE GREEN TURTLE CHELONIA MYDAS, CONDUCTED IN FRENCH POLYNESIA BY THE DEPARTMENT OF FISHERIES

INTRODUCTION

The Department of Fisheries' involvement with protection of the green turtle <u>Chelonia mydas</u> goes back to 1972. Tahitians, like all South Pacific islanders, are extremely fond of this meat from the sea.

The atoll of Scilly or Manuae, longitude 1540 40 W, latitude 160 40 S (Fig. 1), is one of the favourite nesting areas in French Polynesia for the green turtle, which is why research, and protective operations, were first started on this island. Scilly was declared a "protected area" on 28 July 1971 and the one family living there was appointed to watch over it.

The scientific data recorded since 1972, when the turtle programme began, were unfortunately dispersed, and to reassemble them was a difficult task indeed; much information is therefore missing. A modest study was nevertheless undertaken and comparisons made with other areas in the world where Chelonia mydas is found.

A small-scale green turtle rearing trial was undertaken in Rangiroa. In the absence of marine phanerogamia the hatchlings were experimentally fed on fish scraps and, especially, on Tridacna (Clam) flesh. It very quickly became apparent however that once they had reached a certain size, the young turtles developed deficiency symptoms due to the lack of plant materials in their diet. Attempts to feed them with land plants or algae were unsuccessful. The turtles finally had to be released and the programme remained confined to natural protection measures. This type of protection has proved positive since one of the turtles released from the Rangiroa farm weighing about 6.7 kg was recaptured almost 3,500 miles from the place of release.

I. TAGGING

1) Scilly, privileged nesting area in French Polynesia

Commonly eaten and much likely by the local population, the green turtle is becoming scarcer in French Polynesia, as in the rest of the world. Intensive exploitation has decimated green turtle populations in the Mascarene Islands, the Seychelles, Aldabra,

Chagos and the Maldive Islands. One commercial fishery is still operating in the Saint Brandon group and supplies around 50 tonnes of turtle meat to Mauritius (Hugues 1972). In French Polynesia, green turtles used to be extremely abundant in the whole of the Tuamotu island group, but due to the presence of man nesting is now restricted to the uninhabited areas, in particular Scilly atoll which is a privileged nesting place in French Polynesia, as are Europa and Tromelin in the Indian Ocean. Tagging was mainly carried out from Scilly, situated on the westernmost boundary of French Polynesia, very difficult of access, and far from any sea route, which is no doubt why it is still regarded as safe for nesting by the green turtle.

Tagging operations

The turtles tagged by the Department of Fisheries were thus primarily females that had come to lay their eggs on the beach. After the eggs are laid, the nests are carefully guarded during the period of incubation which can be anywhere from 49 to 65 days long. When the baby turtles hatch, they work their way out of the sand and head for the sea. Some of the hatchlings chose the night to emerge totally from the nest; the officers doing turtle research in French Polynesia were surprised to see the instinct of self-preservation function from the time of hatching. Unfortunately a majority of the hatchlings fall prey, in the daytime, to the frigate bird (Fregata minor) and, at night, to the hermit crab (Coenobita sp.).

Considering that the estimated survival rate is less than 1%, collection of eggs for hatching and rearing of hatchlings in captivity for at least one year may constitute one of the best methods of protection.

There is a very well defined nesting season from September to December, but even in the off-season females regularly land on the beaches to lay their eggs. A major tagging effort was made during the peak season in 1972 (c.f. detailed results in Annex).

Methods

Most of the turtles observed were captured on Scilly by the family that lives there. In 1972, 364 females, and very recently 42 more, were observed and tagged. After the females have laid their eggs, which they usually do at night, they are turned over on to their backs and left till the morning, when another team takes their body measurements. Slide calipers and a compass are used for measuring (c.f. length/weight graph in Fig.2).

4) The green turtle Chelonia mydas in Scilly

Scilly has probably received more turtle visits than any other atoll in French Polynesia. People who used to live there say that not very long ago (20-30 years) it was not unusual to turn over 100 to 150 turtles in a single night. The population had dwindled considerably, as would seem to be borne out by the small size of the individuals now seen (the largest turtles were about 106 cm long, and a great majority

of females had carapace lengths ranging from 93 to 97 cm), as compared with those found at Aldabra where the majority of females have a carapace length between 100 and 110 cm (Frazier 1971).

Eggs are laid all the year round on the sandy beaches of the atoll, but the largest numbers of females are seen from October till the end of December. During this period, while most of the females are busy nesting, the males stay outside the atoll (c.f. map).

The initial purpose of the studies done at Scilly on Chelonia mydas was to define the sites with the largest number of nests and those where turtles most often landed. Very quickly investigations were focused on the southwesterly portion of the atoll, particularly the islets Motu Rahi, Motu Oia and Motu Honu.

Measurements taken on more than 90 young turtles on Scilly will permit very interesting comparisons to be made with other young turtles studied by the Department of Fisheries, in particular on Rangiroa (studies in progress). Observation of the feeding patterns of young turtles on Scilly will improve our knowledge of food conversion ratios.

In addition, nearly 70 adult females were caught and observed during night outings and their meristic characters determined. Preliminary results showed that the very large turtle specimens (200 kg and over) that were still seen a few years ago have become virtually extinct, since the largest on record weighed only 175 kilos. On the first few evenings of our visit we saw large numbers of females crawling along the beach to lay their eggs, but subsequently they became more suspicious, especially those that were in the lagoon. The presence of man appears to greatly influence the turtles' choice of a nesting beach, where alternative beaches are available. The females have to swim over the outer reefs for a long distance (200-300 metres) under conditions that are always extremely difficult on account of the breakers and the undertow. When they get to the beach, they reach a stage where the nesting instinct overcomes their fear and they start digging in spite of the light from the torches. They usually come up from the sea in a straight line, but occasionally a female will cover more than 100 metres in her search for a suitable nesting place. After measurements had been taken, all the turtles were tagged and released. Two recaptures were made of females that had come in to lay for a second time, 9 days after the first, on the very same beach, only a few dozen metres from their first nest.

During each nocturnal search for females, the tracks made the previous night were measured and recorded. They showed that the most frequently visited site was the east coast beach on the ocean side of the atoll, where up to 14 tracks a night were counted.

About 10 nests were found, 5 of which were examined to establish the relationship between size and number of eggs laid and body weight of the female.

From Motu Rahi to Motu Oia on the ocean side (over a distance of 3-3.5 km), the number of tracks counted on the beach did not significantly vary during our visit (8-13 tracks/night).

At Motu Honu, the sandy lagoon beach was much favoured at the beginning of our stay (8-10 tracks/night), but gradually fell into disuse (1-3 tracks/night) because of our too frequent visits there.

The size of the females has appreciably declined in the last 10 years, evidence that man's predatory action has been too strong.

Rate of growth appears to be quite as high as in Rangiroa turtles, since the mean weight of Scilly turtles was 150 grams at 8 months.

Because of its scientific usefulness, particularly as regards observation of <u>Chelonia mydas</u>, the atoll of Scilly was scheduled as a protected area on 28 July 1971.

II. REARING

1) Turtle rearing on Scilly

The family living on the atoll started a very small-scale rearing operation in floating cages. Each cage is $2 \times 1.5 \text{ m}$. in size and attached to a post standing in 50 cm of water. Being made entirely of wood the cage floats, half of it immersed and the other half constantly exposed to sunlight.

The eggs collected are buried and, on hatching, the baby turtles are put into a cage and left without food of any kind for three days. Subsequently they are fed mainly on clam and fresh fish.

This rearing experiment, though very small, has nevertheless enabled hundreds of releases to be made, when, 9 to 12 months after hatching, the little turtles were strong enough to survive. However, since this trial, which is still continuing, was not conducted on a scientific basis, it has not yielded much information.

2) Rearing on Rangiroa

Rearing of <u>Chelonia mydas</u> was conducted by the Fisheries Department on scientific lines from 1971 to 1972.

It involved about 50 turtles and yielded data on food consumption, rate of growth in first year, and food conversion ratio.

Growth studies showed that over the first 12 months, consumption of food (mainly clam and fresh fish) increased rapidly and irregularly.

Table 1 - Average quantity of food absorbed by a turtle during the first 12 months of life

Month	Average daily quantity	Average monthly quantity
1	25 g/d a y	775 g/month
2	50 g	1,400 g
3	65 g	2,015 g
4	65 g	1,950 g
5	70 g	2,170 g
6	70 g	2,100 g
7 .	75 g	2,225 g
8	80 g	2,480 g
9	100 g	3,000 g
10	120 g	4,720 g
11	, 120 g	3,600 g
12	150 g	4,650 g
		31,085 g/year

At birth, average weight of the hatchling was 19 grams, average carapace length 4.0 cm and average carapace width 2.9 cm.

Average weight gain after one year was slightly over 5,600 grams (5.6 kilos), at which time the carapace length was 33.6 cm and its width 28.6 cm.

Figures 3 and 4 show how the meristic characters of a turtle vary from birth to the age of 12 months.

CONCLUSION

The protection of the endangered turtle species <u>Chelonia mydas</u> can no longer remain the concern of one country or territory, but requires the cooperation of all the countries in the Pacific. In addition, rearing of this species in captivity appears to be an efficient and not very costly method of conservation.

To sum up:	average weight of a turtle r	reared in captivity after
	one year	5,620 g
	average length of shell	
	(carapace)	33.6 cm
	average width of shell	
	(carapace)	28.8 cm
	total food consumption of a	
	turtle during the first	
	12 months of life	31 kg.

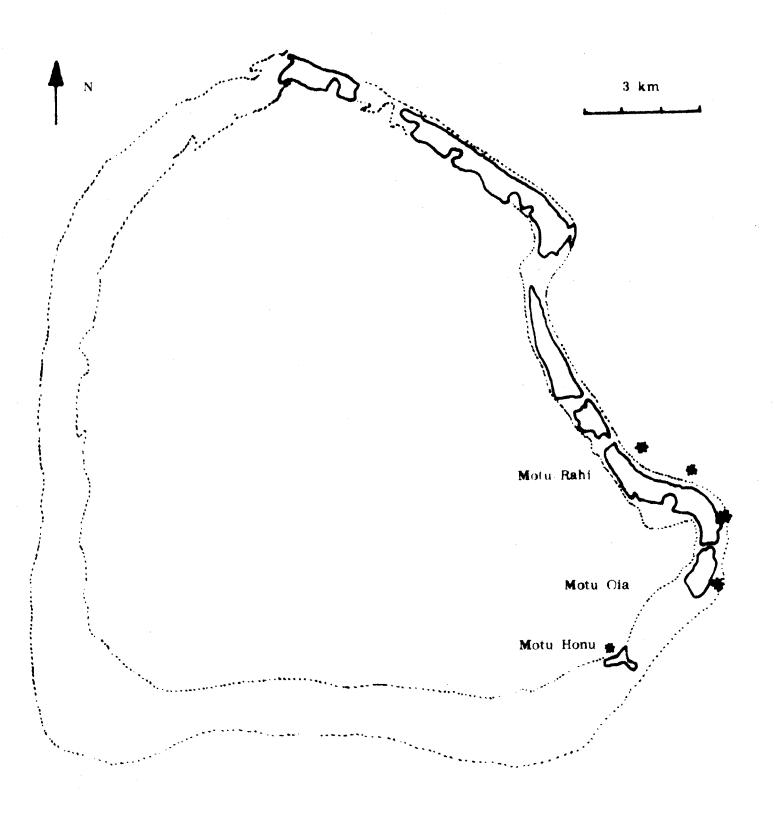


Fig.1 : Scilly Atoll

★ High concentrations of green turtle nesting.

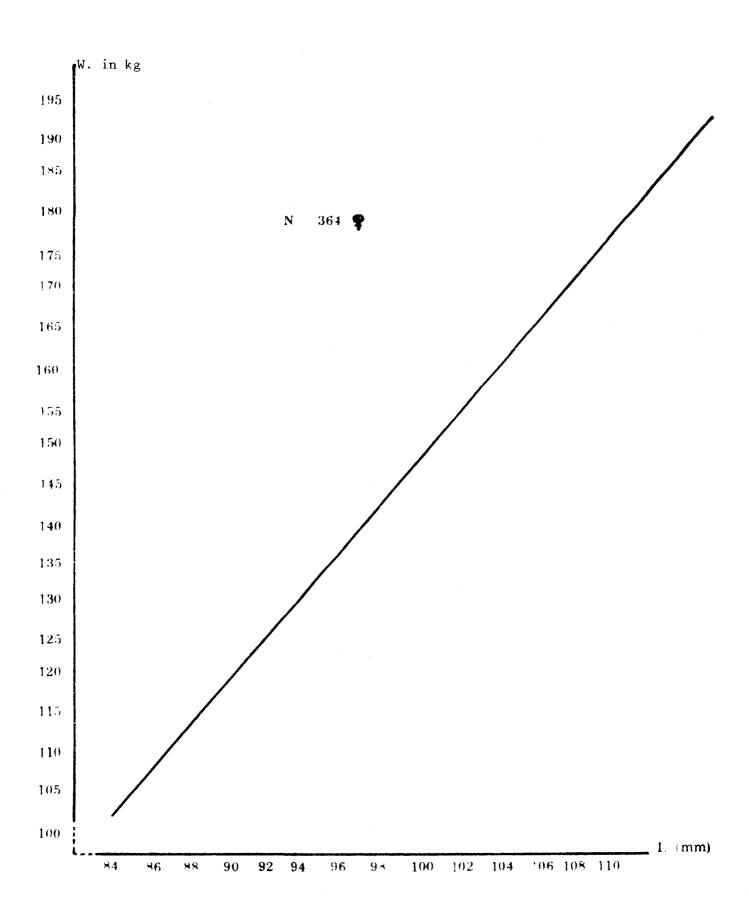


Fig.2: Length/Weight ratio for 364 females
(Scilly Atoll)

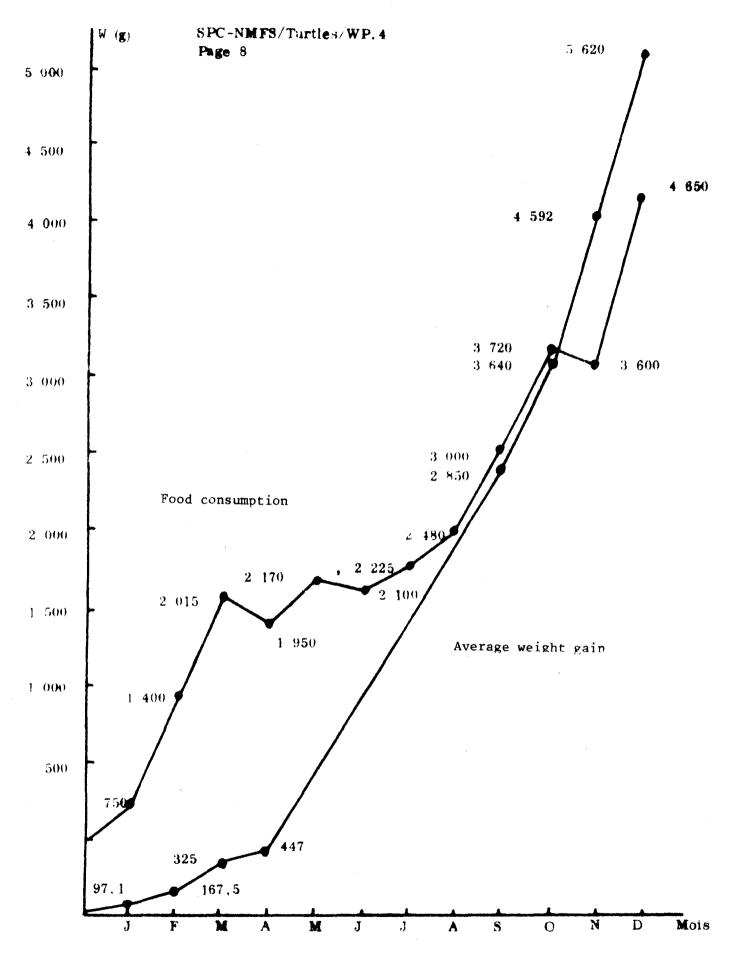


Fig. 3: Growth over 12 months (16/12/71-16/12/72)

(Avatoru, Rangiroa, Tuamotu)

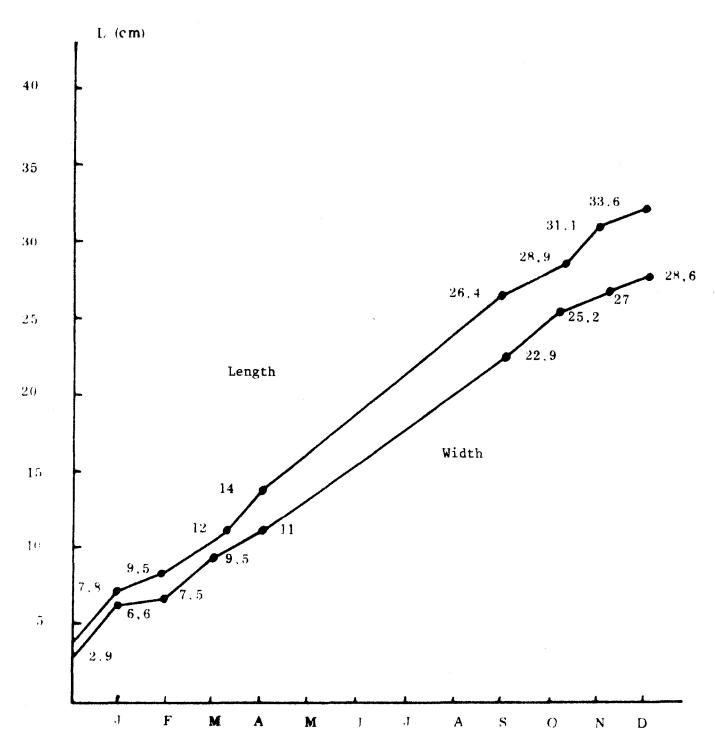


Fig.4: Growth of shell over 12 months
(Avatoru, Rangiroa, Tuamotu)

ANNEX: TURTLE TAGGING

DATE: 30/04/72

No. Sex	Sex	Cara			Head	Weight	Tagging	Comments
		length	width	length	width	kg	place	Continents
13	F	98	69	76	15		SCILLY	
14	F	98	70	77	14		**	
15	F	99	75	79	13		**	•
16	F	102	78	85	15		11	
7	F	92	74	79	1.1			
8	F	101	77	84	14		***	*1
9	F	101	72	78	12			
20	F	97	68	74	11		***	
21	F	96	72	77	12		11	
22	F	93	70	74	12		**	
13	. F	99	75	82	12		11	
4	F	97	72	76	12		"	
5	F	106	82	82	12		**	
16	F	102	71	77	14			* 2
7	F	101	74	74	12		**	
8	F	94	69	78	12		**	
9	F	101	73	77	12		**	
0	F	98	79	82	11		78	
11	F	92	74	73	13		**	
2	F	104	73	82	12			
3	F	103	85	85	13		11	
4	F	102	80	75	14		17	
5	F	98	72	73	13		11	
6	F	93	8 0	74	12		f1	
7	F	101	77	82	11		11	
8	F	94	73	75	12		**	
9	F	9 3	72	79	12		11	* 3

 $^{^{\}frac{1}{2}}$ l - Captured in Tonga on 9/08/72 - Vavau Islands (2,760 km - Weight 127 kg).

^{2 -} Captured at Rabi (Fiji) on 26/07/72 (2,091 km - Weight 114 kg).

^{*3 -} Captured Maskeline Islands (New Hebrides) on 14/09/73 (length 140 cm).

No. Sex	Carapace		Plastron		Weight Tagging	Comments		
		length	width	length	width	kg	place	Commence
0	F	97	79	74	12		SCILLY	
1	F	98	74	79	12	* •	11	
42	F	93	72	72	12			
3	F	104	73	77	12		**	
44	F	96	70	75	13		11	
5	F	94	74	80	13		11	
46	F	100	80	78	11		11	
7	F	105	74	83	12		11	
8	F	101	77	80	13			
9	F	94	76	78	11		11	
0	F	105	82	86	13			* 4
51	F	101	69	79	13		11	
52	F	89	69	77	13		**	
3	F	92	76	79	13		11	
4	F	98	75	79	14		11	
5	F	95	78	80	13		**	
6	F	101	78	82	14		11	
7	F	101	84	86	11		**	
8	F	94	79	74	13		11	
9	F	99	75	80	13		7*	
0	F	104	72	79	11		***	
1	F	92	72	70	11		11	
2	F	93	71	82	12		11	
3	F	99	75	73	13		11	
4	F	99	74	82	13		**	
5	F	102	79	77	13			
6	F	95	71	76	10		**	
7	F	102	72	76	12		11	
8	F	103	74	81	11		n	
9	F	102	76	77	12		11	
0	F	94	72	76	10		11	
1	F	96	73	75	12		11	
2	F	104	78	79	11		11	
3	F	94	76	78	1.3		11	

^{±4 -} Carapace broken; had knit again.

SPC-NMFS/Turtles/WP.4 Page 13

No.	Sex	Caraj lengti	oace n width	Plastron length	Head width	Weight Tagging kg place	Comments
74	F	97	74	78	12	SCILLY	
75	F	98	69	75	12	**	
76	F	8 8	72	75	13	11	
77	F	100	78	82	14	"	
78	F	94	74	7 6	12	ţī	
98	F	95	73	77	12	11	

All these turtles, from number 13 to number 98, are females captures on the beach in the previous 4 months. During their captivity they were fed on green leafy plants. After tagging, they were all released in the lagoon. A few of the turtles attempted to reach the open sea by crawling right across the coconut plantation.

DATE : 5/12/72

No.	Sex	Carar length		Plastron length	Head width	Weight kg	Tagging place	Comments
101	F	102	79	85	13	132	SCILLY	
102	F	92	69	70	12	75	11	
103	F	99	76	81	12	129	11	* 5
104	F	100	73	77	13	134	11	
105	F	107	74	78	13	135	11	
106	F	97	73	83	12	123	**	
107	F	103	76	82	13	129	11	,
108	F	103	71	83	12	139	11	·
109	F	98	73	78	13	127	11	·
110	F	104	74	79	12	123	11	
111	F	100	74	80	13	117		
112	F	96	67	69	11	9 5	11	
113	F	108	82	90	13	160		
114	F	84	64	74	11	94	11	Cut to the bone
115	F	97	66	77	12	116		
116	F	104	82	86	12	147	**	
117	F	94	74	78	13	142	11	
118	F	88	70	72	10	92	* ***	•
119	F	93	64	69	12	90	**	
120	F	98	75	79	12	128	***	
121	F	92	69	75	11	98	**	
122	F	82	65	72	12	84	***	
123	F	96	72	81	12	120	11	
124	F	100	74	80	13	124	11	
125	F	98	73	77	12	108	11	
126	F	101	77	84	12	140	11	
127	F	99	75	78	13	136	†1	
128	F	96	75	80	13	132	**	
129	F	102	86	88	13	135	**	
130	F	100	76	80	13	120	***	
131	F	97	77	83	13.	130	*1	
i 3 2	F	100	76	82	12	134	17	
133	F	92	65	72	12	95	11	
134	F	97	72	75	12	113	**	

[★]5 - New Caledonia, 15/01/7**5**

No.	Sex		pace width	Plastron length	Head width	Weight kg	Tagging place	Comments
135	F	93	72	76	12	115	SCILLY	
136	F	103	83	8€	13	141	11	
137	F	98	82	81	13	147	**	
138	F	88	67	7 3	12	106	**	* 6
39	F	93	72	78	12	110	***	
40	F	89	72	76	12	110	"	
41	F	102	76	84	12	150	*1	
42	F	108	84	94	14	200	**	
43	F	83	69	76	11	95	11	
44	F	90	67	72	11	94	**	
45	F	102	73	81	13	130	rt	
46	F	101	86	82	12	136	**	
47	F	98	. 75	78	13	147	9.0	
48	F	98	74	80	12	116	14	
49	F	100	76	83	13	135	**	
50	F	92	69	76	11	94	1 f	
51	F	86	68	75	12	104	**	* 7
52	F	90	68	66	12	98	11	
53	F	98	76	80	13	130	1+	
54	F	84	65	68	12	95	11	
55	F	95	74	77	12	124	11	
56	F	103	77	82	13	145	v	
57	F	98	75	81	13	135	*1	
58	F	92	70	73	12	105	11	
59,	F	96	78	76	12	105	tı	
60	F	97	75	78	12	116	11	
61	F	90	70	72	12	100	11	
62	F	101	79	83	13	152	11	
53	F	106	82	88	13	153	**	
54	F	85	69	72	11	93	11	
5	F	100	81	86	12	158	H	
6	F	102	77	85	12	161	**	

^{*6 -} July 1974, captured in the New Hebrides, Malekula.

[★]7 - Captured on 15/05/75 in New Caledonia, Baie de Gomen.

No.	Sex	Cara length	pace width	Plastron length	Head width	Weight kg	Tagging place	Comments
167	F	103	80	86	13	138	SCILLY	
168	F	106	78	85	13	178	54	
169	F	93	67	72	11	108	11	
170	F	97	72	75	12	131	**	
171	F	92	65	84	11	101	11	
172	F	98	74	78	12	116	n ,	* 8
173	F	98	74	80	12	121	11	* 9
174	M	88	66	70	10	85	11	•
175	F	78	68	70	11	100	11	
176	F	9 0	75	79	12	115	11	-
177	F	101	69	78	13	145	11	* 10
178	F	95	75	77	12	137	**	
179	M	95	69	72	12	110	11	
180	M	183	72	73	12	105	**	* 11
181	F	102	80	81	13	155	fŧ	* 12
182	F	100	79	78	12	140	11	
183	F	92	72	81	12	115		
184	F	93	68	78	11	110	**	
185	F	99	70	82	12	120	it.	
187	F	93	72	81	12	140	18	
188	M	96	71	74	11	120		± 13
189	F	97	74	80	12	135	tŧ	± ₁₄
190	F	91	69	72	12		11	
191	F	90	69	72	12	105	**	
192	F	102	77	81	13	150	94	
193	F	96	77	80	12	125	11	
194	F	92	78	70	12	117	11	
195	F	100	75	78	12	145	**	± 15

^{★ 8 -} Bite scar on both front flippers

^{9 -} Captured in the New Hebrides, Anatom, in October 1973

^{±10 -} Plastron misshapen

^{±11 -} Captured on 3/10/74, in Fiji, Kandavu Island

¹2 - Captured on 15/10/74, " " "

¹3 - Plastron misshapen

[★]14 - Right front flipper missing

å 15 - Plastron injured

No.	Sex	Cara length		Plastron length	Head width	Weight kg	Tagging place	Comments
196	F	93	72	74	12	120	SCILLY	
197	F	100	75	78	12	137	**	
198	F	98	71	77	12	155	**	
199	F	86	63	71	12	105	H	
200	F	105	79	82	13	143	rt	
201	F	97	75	81	12	118	**	
202	F	92	74	79	12	115	11	*.
203	F	89	69	74	12	120	11	
204	F	98	69	80	12	140	11	* 16
205	M	85	63	66	1.3	95	11	
206	F	94	71	75	12	110	11	* 17
208	F	90	63	70	12	107	11	
209	F	93	71	75	12	125	**	
210	F	97	75	79	13	145	11	
211	F	93	73	81	13	135	tr	
212	F	9 5	72	76	12	142	11	
301	F	102	69	77	12	130	11	
302	F	92	75	79	12	142	11	
303	F	94	74	76	12	140	**	
304	F	93	69	73	11	120	**	* 18
305	F	108	81	86	13,	183	11	
306	· F	97	76	80	12	155	11	
307	F	86	70	76	11	105	11	
308	M	91	65	66	11	90	11	
309	M	90	66	74	11	105	11	
310	F	102	83	84	[^] 13	140	11	* 19
311	F	103	79	83	13	150	17	
312	F	89	63	72	10	90	11	
313	F	98	77	83	13	139	"	
314	F	96	75	77	12	125	**	

å 16 - Right front flipper missing

^{🛕 17 -} Plastron misshapen, scar

^{*18 -} Left front flipper missing

^{19 -} Carapace split, right front flipper missing

No.	Sex	Cara _l length	width	Plastron length	Head width	Weight kg	Tagging place	Comments	······································
1315	F	91	68	7 2	12	110	SCILLY		
1316	F	94	94	76	12	123	F T		
1317	F	100	79	80	12	140	**		
1318	F	101	80	84	13	145	11		
1319	F	97	77	82	12	140	11	* 20	
1320	F	100	88	88	12	140	11		
1321	F	91	70	72	11	110	*1		
1322	F	93	76	82	12	140	17		
1323	F	93	75	76	12		11		
1324	F	94	72	76	11		**		
1325	F	92	70	75	12		11		
68	F	109	84	92	13		11		
69	F	94	71	80	11		11		
70	F	98	75	78	12		**		
71	M	86	68	70	11		**		
72	F	92	69	74	1 1		11		
73	M	90	67	70	11		17		
74	F	95	75	74	11		1f		
75	F	96	75	78	11		11		
1326	F	100	80	85	12		**		
1327	F	106	78	85	13		11		
1328	F	95	93	80	12		11		
1329	M	87	68	70	11		11		
1330	М	102	79	78	12		If	± 21	
1331	M	90	69	75	11		11		
1332	M	95	71	72	12		11		
1333	F	. 105	81	85	12		11		
1334	F	101	80	81	12	160	u·		
1335	F	92	72	74	12	110	17		
1336	F	94	74	83	12	140	**		
1337	F	105	76	84	14	165	11 .		
1338	F	93	69	76	11	103	11		
1339	F	96	74	78	11		11		
1340	F	97	69	76	12		**		

[★]26 - Plastron abraded

 $^{^{\}begin{subarray}{c} \begin{subarray}{c} \b$

SPC-NMFS/Turtles/WP.4 Page 19

No.	Sex		apace h width	Plastron length	Head width	Weight kg	Tagging place	Comments
1341	F	90	65	66	11		SCILLY	
1342	Ŧ	95	75	90	13		**	
1343	F	94	75	77	13		**	
1344	F	99	72	79	13	137		•
1345	F	98	77	81	12	140	**	
1346	F	96	73	77	13	145	17	
1347	F	91	71	76	11	105	11	
1348	F	95	72	77	12	110	**	
1349	F	102	83	9 5	13	140	+1	
1350	F	92	70	74	12	135	11	
1351	F	98	76	78	12	145	•	
1352	F	98	76	77	13	150	11	
1353	F	101	76	80	12	125	11	
1354	F	91	73	82	1.2	115	tt	
1355	F	90	81	78	12	123	11	
1356	F'	80	75	78	11	101	**	
1375	F	100	72	75	12	128	***	
1357	F							
135 8	F	104	79	82	13	170	**	
1359	F	90	72	73	11	110	**	
1360	F	93	71	73	11	105.	**	
1361	F	87	68	75	12	95	**	
1362	F	104	75	83	13	140	11	

DATE: 19/2/73

No.	Sex		apace h width	Plastron length	Head width	Weight kg	Tagging place	Comments
1363	F	103	74	85	13	143	SCILLY	
1364	F	104	73	81	13	125	ff	
1365	F	85	68	72	11	103	**	
1366	F	97	74	80	14	105	11	
1367	F	102	78	81	13	140	11	
1368	F	91	71	74	12	115	##	
1369	F	94	72	78	12	120		
1370	F	86	68	70	11	86	**	
1371	F	88	61	64	11	105	***	
1372	F	95	75	74	12	110	**	
1373	F	105	89	99	13	150.	17	
1374	F	98	75	93	12	120	†1	
1375	F	93	74	81	12	108	11	
1376	F	98	74	92	12	140	tt	
1377	F	99	7 9	81	12	132	11	
1378	F	9 2	72	77	12	120	11	
1379	F	95	73	78	12	131	11	
1380	F	80	65	69	11	8 5	**	
1381	F	93	73	81	12	110	11	
1 38 2	F	96	73	76	10	105	11	
1383	F	100	83	78	14	145	11	
1384	F	101	74	80	12	130	ti	
1385	F	94	72	75	12	120	, 11	
1386	F	99	81	87	12	140	11	
1387	F	97	74	78	12	130	**	
1388	F	98	79	80	12	110	11	•

DATE: Février 1973

No.	Sex	Carap length		Plastron length	Head width	Weight kg	Tagging place	Comments
1437	F	100	79	8 5	13	160	SCILLY	
1438	F	93	74	74	11	102	**	
1439	F	92	74	77	12	103	11	
1440	F	90	75	7 7	12	112	**	
1441	F	95	72	77	12	122	**	
1442	F	97	74	8 (·	13	125	51	
1443	F	97	81	80	13	135	11	
1444	F	97	75	77	13	125	**	
1445	F	88	65	73	10	96	**	
1446	F	97	75	77	12	120	**	
1447	F	89	68	78	11	102	11	
1448	F	102	78	86	13	130	**	
1449	F	104	78	89	13	150	rt	
450	F	104	78	82 .	13	150	**	
451	F	80	69	74	11	99	**	
452	F	90	72	73	11	105	. III	
453	F	98	75	82	12	125	**	
454	F	80.	65	67	11	80	***	
455	F	90	67	70	1 1	97	**	
456	F	89	64	69	12	110	н	
457	F	100	78	84	13	145	11	
458	F	102	82	89	13	170	11	
45 9	F	99	77	79	14	135	11	
460	F	87	70	72	10	110	••	
461	F	94	74	77	12	118	**	
462	F	98	74	77	13	150	**	
463 -	F	96	67	75	12	110		
464	F	90	68	74	10	96	•	
465	F	95	74	76	11	130	*1	
466	F	88	69	72	12	105	*1	
467	F	86	65	72	11 .	90	11	
468	F	100	78	82	12	117	ft	

DATE: 7/12/74

No.	Sex F	Carapace length width		Plastron length	Head width	Weight kg	Tagging place	Comments
		102	78	80	12	130	SCILLY	± 22
1503	F	86	75	76	-12	115	***	* 23
1504	F	97	71	81	115	115	**	2 4
1505	F	94	67	72	11	120	MOTU ONE	
1506	F	95	70	75	11	106	***	
1507	F	95	72	78	11.5	105	+1	
1508	F	96	75	77	12.5	125	***	* 25
1509	F	97	76	77	11	110	**	* 26
1510	F	94	75	78	12	115	11	2 7
1511	F	105	83	84	16	167	**	
1512	F	102	78	85	12	142	SCILLY	
513	F	89	68	76	11	102	**	
1514	F	95	73	78	11.5	120	***	* 28
1515	F	93	72	74	11	110	11	
1517	F	99	72	79	12	125	**	
1518	F	102	75	80	i 1	120		
1519	F	95	77	80	11.5	140	11	
1520	F	94	70	76	11	110	***	
1521	F	99	79	82	12	. 145	τt	
1522	F	101	77	79	11.5	155	11	* 29
1523	F	90	70	74	11	100	**	* 30
1524	F	90	72	75	12	9 0	t1	
1525	F	90	72	73	11.5	100	17	
1526	F	100	80	85	12	110		

^{★22 -} Carapace split; left rear flipper missing

^{±23 -} Carapace split, right rear flipper missing

[≜]24 - Left side broken

 $^{^{\}bigstar}25$ - Right rear flipper missing

[★]26 - Right rear flipper missing

^{\$27 -} Parasite on plastron, scar tissue on left side of carapace

^{*28 -} Injury on left side of carapace

^{*29 -} Enclosure

[★]30 - Right front flipper missing