HAWAU-T-83-004 C2

CIRCULATING COPY Sea Grant Depository

NOAA Technical Memorandum NMFS

LOAN COPY ONLY



RECOVERY RECORDS OF ADULT GREEN TURTLES OBSERVED OR ORIGINALLY TAGGED AT FRENCH FRIGATE SHOALS, NORTHWESTERN HAWAIIAN ISLANDS

GEORGE H. BALAZS

NATIONAL SEA GRANT DEPOSITORY PELL LIBRARY BUILDING URI, NARRAGANSETT BAY CAMPUS NARRAGANSETT, RI 02882

NOAA-TM-NMFS-SWFC-36

August 1983

U.S. DEPARTMENT OF COMMERCE National Oceanic and Atmospheric Administration National Marine Fisheries Service Southwest Fisheries Center



NOAA Technical Memorandum NMFS

The National Oceanic and Atmospheric Administration (NOAA) was organized in 1970. It has evolved into an agency which establishes national policies and manages and conserves our oceanic coastal, and atmospheric resources. It provides managerial, research, and technical expertise to produce practical services and essential information for the programs concerned with such resources.

The National Marine Fisheries Service (NMFS) provides the United States with an integrated program of management, research, and services concerned about the protection and rational use of living marine resources for their aesthetic, economic, and recreational value. NMFS determines the consequences of the naturally varying environment and human activities on living marine resources. NMFS provides knowledge and services to foster the efficient and judicious use of those resources. NMFS provides for domestic and for international management and conservation of these living resources of the sea.

To carry out its mission, the organization also provides for communication of NMFS information. In addition to its formal publications, NMFS uses the NOAA Technical Memorandum series for informal scientific and technical publications. These documents are specialized reports that require multiple copies when complete formal review and editorial processing are not appropriate or feasible. The management and control of Technical Memorandums has been delegated to the Research Centers, Regional Offices, and corresponding staff offices within NMFS. Therefore, requests for copies of Technical Memorandums should be sent to the author or to the originating office for the material.

Hawau-T-83-004 c2

CIRCULATING COPY Sea Grant Depository

NOAA Technical Memorandum NMFS

This TM series is used for documentation and timely communication of preliminary results, interim reports, or special purpose information, and have not received complete formal review, editorial control, or detailed editing



LOAN COPY ONLY

RECOVERY RECORDS OF ADULT GREEN TURTLES OBSERVED OR ORIGINALLY TAGGED AT FRENCH FRIGATE SHOALS, NORTHWESTERN HAWAIIAN ISLANDS¹

GEORGE H. BALAZS

Southwest Fisheries Center Honolulu Laboratory National Marine Fisheries Service Honolulu, Hawaii 96812

> NOAA-TM-NMFS-SWFC-36 NATIONAL SEA GRANT DEPOSITORY PELL LIBRARY BUILDING URI, NARRAGANSETT BAY CAMPUS NARRAGANSET, RI 02882

August 1983

U.S. DEPARTMENT OF COMMERCE Malcolm Baldrige, Secretary National Oceanic and Atmospheric Administration John V. Byrne, Administrator National Marine Fisheries Service William G. Gordon, Assistant Administrator for Fisheries

¹ This is Sea Grant Cooperative Report UNIHI-SEAGRANT-CR-83-03

TABLE OF CONTENTS

Page

Introduction																										-	1
History of tagging	ng													÷		-			Ţ	Ĩ		Ţ		Ţ		•	1
Recovery data .								Ì				Ĩ	Ż		Ī												2
Long-distan	ce	mi	iġı	ca(tie	on.												:					:	:	:	•	3
Reproductive	e (cyc	:Ī(28				•						•			÷			÷	÷	÷					4
Site fixity	•				•					•	•	•						•	•	•		•	•	•	÷	•	4
Longevity .		٠	•	•	•		•		•		•																4
Frequency of	E 1	tag	5 1	cė(CO1	/e	rie	2 S			•						•	•			•						4
Tag loss .	٠	٠	•	•				•	٠		•	•				•	•	•	•	•		•		•			5
Key to abbreviat:	Loi	38	•	•	٠	•		•	٠	•	•	•		•	•		•					•			٠		5
Acknowledgments	•				•		٠			•		٠	•	•				•		•	•		•			•	7
Literature cited	٠	٠	٠	•	•	٠	٠			٠	•	•	•	•		•	•		•	•		•	•				8

LIST OF TABLES

Ι.	Expeditions to tag green turtles at French Frigate Shoals made	
	during the 10-year period, 1973-82	10
2.	Recovery data for male green turtles observed or originally tagged	
	at French Frigate Shoals	11
3.	Recovery data for female green turtles observed or originally	
	tagged at French Frigate Shoals	20
4.	Shedding rates of Inconel tags: 59 recoveries of double-tagged green turtles at French Frigate Shoals during the 1981 and 1982	
	breeding seasons (analysis by J. A. Wetherall)	38

LIST OF FIGURES

1.	French Frigate Shoals and the Hawaiian Archipelago				•				39
2.	East Island, French Frigate Shoals								40
3.	Adult green turtles basking on East Island								40
4.	Adult male green turtle basking on East Island	•	•		•	•		•	41
5.	Adult female green turtle nesting on Bast Island .			•		•			41
6.	Adult female green turtle swimming near bottom	÷		•		•	•		42
7.	Front flipper showing standard placement of tag .	•			•		•	•	42

The National Marine Fisheries Service (NMFS) does not approve, recommend or endorse any proprietary product or proprietary material mentioned in this publication. No reference shall be made to NMFS, or to this publication furnished by NMFS, in any advertising or sales promotion which would indicate or imply that NMFS approves, recommends or endorses any proprietary product or proprietary material mentioned herein, or which has as its purpose an intent to cause directly or indirectly the advertised product to be used or purchased because of this NMFS publication.

INTRODUCT ION

This report presents a complete and concise record of tag recoveries for the adult Hawaiian green turtle, <u>Chelonia mydas</u>, made from 1973 through 1982 in association with the breeding colony of French Frigate Shoals (FFS). During this 10-year period, the author has systematically monitored and tagged green turtles that assemble each summer at FFS as migrants originating from foraging pastures throughout the Hawaiian Archipelago. Visits to this site have also been made during other times of the year to tag and observe turtles present outside the breeding season. A list of all expeditions is presented in Table 1. A total of 385 research days and nights has been spent at this location.

At least 90% of the reproduction by green turtles in the Hawaiian Islands takes place within the Hawaiian Islands National Wildlife Refuge at FF8. This crescent-shaped atoll is located at about the midpoint of the archipelago and contains 11 sand islets extending over 26 km of reef (Fig. 1). Most nesting occurs on East (4.0 ha) and Whale-Skate (6.8 ha) Islands; nesting activity is lower on Trig, Tern, Gin, and Little Gin. East Island has been the major site of tagging over the past 10 years.

A rare terrestrial basking habit is displayed by green turtles at FFS and several other isolated sites in the Northwestern Hawaiian Islands (NWHI). Males and females regularly haul out to rest along the shoreline during the daytime and also occasionally at night. This behavior has allowed relatively easy tagging of adult males, a segment of sea turtle breeding colonies in other geographical areas that is not usually accessible. Due to the unique basking behavior and the isolated position of FFS in the North Pacific, this breeding colony was one of eight designated for high priority by the World Conference on Sea Turtle Conservation (1982).

A synopsis of biological information to June 1979 has already been prepared on the Hawaiian green turtle (Balazs 1980a). The tag recoveries given in this present report serve to complement the data in the synopsis. Other recent publications available on the Hawaiian green turtle have dealt with natural growth rates (Balazs 1982b), habitat usage at FFS (Dizon and Balazs 1982), and the ecology of basking (Whittow and Balazs 1979, 1982; Sheekey 1982). Overall accounts of the population that have appeared since the synopsis was issued include those by Balazs (1980b, 1982c, 1982e). A popular article by Wexler (1983) contains an array of color photographs showing Hawaiian green turtles.

HISTORY OF TAGGING

Tagging was begun at FFS in June 1973 using No. 49 and No. 681 Monel² alloy flipper tags made by the National Band and Tag Company of Newport, Kentucky. In September 1976, the use of these tags was discontinued after detection of excessive corrosion. A total of 310 adult turtles had been

²Reference to trade names does not imply endorsement by the National Marine Fisheries Service, NOAA.

marked with these tags between 1973 and 1976. Since then, No. 681 flipper tags made of Inconel 625 alloy have been the principal means of marking turtles. The dimensions of these tags are 25 x 8 x 9 mm, and up to four tags have been applied to each turtle. The No. 49 tags were somewhat larger, measuring 40 x 10 x 11 mm. No signs of corrosion have been seen to date in the Inconel tags. Corrosion and various other factors affecting the retention of flipper tags have been discussed in Balass (1982a). At the end of 1982, a total of 605 adult turtles had been tagged at FFS with Inconel tags.

Prior to 1973, the tagging of green turtles in the NWHI was initiated in the early 1960's by the Hawaii State Division of Aquatic Resources (formerly Division of Fish and Game). Shortly thereafter, personnel of the U.S. Fish and Wildlife Service (known then as Bureau of Sport Fisheries and Wildlife), and the Pacific Ocean Biological Survey Program (Smithsonian Institution), began tagging turtles during intermittent survey and inspection visits to the area. By 1972, approximately 800 adults had been tagged as a result of these combined efforts. All turtles were tagged with No. 49 Monel tags bearing three different return addres-The exact wording of these inscriptions is presented in the Key to ses. Abbreviations. Amerson (1971) gives a historical overview of tagging and turtle observations at FFS until 1969. This present report also includes tag recoveries made between 1973 and 1982 of turtles that were initially tagged before June 1973. However, tag recoveries made before 1973, but not resighted between 1973 and 1982, are not reported here. These earlier records are fewer in number, due at least in part to excessive corrosion and tag loss. Some, but not all, of the pre-1973 tag recoveries are contained in unpublished trip reports of the U.S. Fish and Wildlife Service. The titles, dates, and authors of these reports are listed in Balazs (1980b). A card catalog of pre-1973 taggings and tag recoveries is on file at the Honolulu office of the U.S. Fish and Wildlife Service. A future report will be prepared to summarize the contents of this card catalog so that the basic results of this past work will also be readily accessible.

RECOVERY DATA

Over the 10-year period, 294 tagged turtles have been resighted either at FFS or at other localities after they were originally tagged at FFS. This total consists of 87 males (Table 2) and 207 females (Table 3). In most cases, the minimum interval between tag recoveries is the time between expeditions undertaken by the author to FFS (as shown in Table 1). Short-term recoveries, such as those that frequently occur within a single expedition (i.e., internesting-interval recoveries), are not presented as part of this report.

Forty-eight of the 87 males shown in Table 2 were recovered only once, whereas the remaining 39 (44.8%) were each seen on two or more occasions. The male resighted the greatest number of times (10) appears as Entry No. 9 in Table 2. For the females, 147 of the 207 individuals were recovered only once. The other 60 (29.0%) were resighted on two or more occasions. Entry No. 24 in Table 3 lists the female seen most often (nine times).

Long-Distance Migrations

Migrations by males have been documented by tag recoveries on nine occasions during the 10-year period. Two of these resightings constituted a round-trip voyage by the same male traveling from Pearl and Hermes Reef to FFS and back again (Entry No. 21 in Table 2). The other movements by males are as follows:

No. of turtles	Migration	Table 2 Entry Nos
2	Oahu to FFS	24. 61
1	Pearl and Hermes to FFS	26
3	FFS to Pearl and Hermes	55, 60, 77
1	FFS to Lisianski	78

Migrations by females have been documented on 39 occasions and include 6 round trips (Entry Nos. 11, 39, 41, 101, 104, and 159 in Table 3). Two of these were between Pearl and Hermes and FFS, two between Lisianski and FFS, one between Laysan and FFS, and one between Oahu and FFS. The remaining 27 one-way migrations recorded from tag recoveries consisted of the following:

No. of turtles	Migration	Table 3 Entry Nos.
6	FFS to Pearl and Hermes	105, 106, 151, 153, 204, 205
2	FFS to Lisianski	147. 206
3	FFS to Laysan	156, 157, 158
2	FFS to Oshu	5, 150
1	PFS to Maui	16
1	FFS to Kauai	17
1	FFS to Hawaii	53
1	FFS to Molokai	207
6	Pearl and Hermes to FFS	12. 14. 37 47 43 103
1	Lisianski to FFS	10
1	Oahu to FFS	28
1	Havaii to FFS	76
1	Niihau to FFS	13

Prior to 1973, 32 long-distance migrations were documented from tag recoveries made in earlier tagging efforts (see Balazs 1980a). Consequently, a total of 80 migrations (32 + 48 shown in this report) has been recorded in the Hawaiian Islands. Of these, 36 are between FFS and the main islands located at the southeastern end of the chain, and 44 are between FFS and the northwestern sites of Laysan, Lisianski, and Pearl and Hermes Reef. When compared with other tagging studies of the green turtle, the evidence for migrations from tag returns in the Hawaiian Islands is among the best gathered anywhere (Meylan 1982).

The known migrations documented from tagging at other islands in the Pacific have been summarized by Balazs (1982d).

Reproductive Cycles

Reproductive cycles, as measured by remigration intervals, have been documented in 52 males and 130 females. For males, 42.3% displayed a 1year cycle, 32.7% a 2-year cycle, and 25.0% a 3-year cycle. For the females, 36.2% showed a 2-year cycle, 43.1% a 3-year nesting cycle, 7.7% a 4-year cycle, and 12.2% nested at intervals ranging from 5 to 8 years. In addition, a single female nested again after an interval of only 1 year. All of these intervals are undoubtedly affected to some degree by tag shedding rates.

Site Fixity

A total of 383 tag-recovery data can be used to determine the degree of site fixity turtles display for particular islets at FFS. For the 139 resightings of males, 86.3% occurred on the same islet where they were previously seen. For the 244 resightings of females, 90.6% occurred on the same islet. Females nesting and basking on East Island showed the greatest site fixity; 94.4% of the resightings occurred at this same location.

Longevity

The longevity and duration of reproductive life for green turtles in the wild are presently unknown. Long-term tag recoveries can, however, help to answer these important questions. The longest recovery interval thus far recorded for a male in the Hawaiian Islands is 17 years, 8 months (Entry No. 21 in Table 2). The longest for a female is 18 years, 3 months (Entry No. 11 in Table 3). Both of these turtles were originally tagged as adults in 1964 while they were basking at Pearl and Hermes Reef.

Frequency of Tag Recoveries.

The percentage of previously tagged turtles seen mesting each summer at FFS has increased considerably over the 10-year period:

1973 - 10.02	1978 - 7.7%
1974 - 11.9 %	1979 - 19.22
1975 - 2.2%	1980 - 46.7%
1976 - 17.4 %	1981 - 36.72
1977 - 2.6%	1982 - 41.17

The reasons for these higher recovery rates most likely include 1) a reduced tag loss from using No. 681 Inconel tags, 2) the practice of applying more tags on each turtle, 3) greater survival of turtles in resident foraging pastures since they became legally protected in late 1978 under the Endangered Species Act, and 4) the greater percentage of the adult population tagged at the end of each successive year over the 10-year period. The frequency of tag recoveries at FFS during recent years is markedly higher when compared with long-term tagging projects at other breeding colonies. For example, only approximately 20% of the Caribbean green turtles nesting each summer in Costa Rica bear tags that were applied during previous years (Meylan 1982).

Tag Loss

Attaching two or more tags to each turtle increases the chances for future recognition. It also provides a basis for measuring rate of tag shedding. During the 1981 and 1982 breeding seasons at FFS, 59 nesting females were recovered that had previously been double tagged with Inconel tags (one on each front flipper). The recovery intervals for these turtles ranged from 2 to 5 years. Table 4 presents the estimated probability of tag shedding and the 95% confidence limits for each of these time intervals. A cumulative shedding rate of 30% after 4 years is indicated by these data. Consequently, there is a 9% chance (0.30 x 0.30) that a double-tagged turtle will lose both of its tags in 4 years. Tag recoveries anticipated during the 1983 and 1984 breeding seasons will help to determine if the rate of tag loss changes after 5 to 6 years. Forthcoming recoveries at FFS will also include a number of recoveries of turtles originally receiving three and four tags.

The shedding rates shown in Table 4 are the first values of this kind to be computed and published for sea turtles. Double tagging conducted elsewhere, as analyzed and discussed by Mrosovsky and Shettleworth (1982), has confounded variables such as tag type (metal versus plastic), tag color, front or hindflipper placement, sex, and size class (adult versus immature).

KEY TO ABBREVIATIONS

The following abbreviations identify the agencies that tagged turtles in the Hawaiian Islands.

- FG Tags bearing a return address of the State of Hawaii, Division of Fish and Game (now the Division of Aquatic Resources). Exact inscription: "RETURN TO FISH & GAME STATE OF HAWAII." The letters FG do not actually appear on the tags, but are used in the data tables as an abbreviation.
- FW Tags bearing a return address of the U.S. Fish and Wildlife Service. Exact inscriptions: "U.S. WILDLIFE HONOLULU" or "NOTIFY U.S. WILDLIFE HONOLULU, USA" or "BUREAU WILDLIFE KAILUA, HAWAII." The letters FW do not actually appear on the tags, but are used in the data tables as an abbreviation.
- T Tag number prefix present on tags used by the U.S. Fish and Wildlife Service bearing the inscription "BUREAU WILDLIFE KAILUA, HAWAIL."

Tag numbers shown in the data tables that do not have an FG or FW abbreviation all bear one of the following return address inscriptions: "UNIV. HAWAII No. 49 Monel tags numbered 601-900 HIMB BOX 1346 KANEOHE, 96744" "NOTIFY UNIV. HAWAII No. 49 Monel tags numbered 901-1400 MARINE LAB, BOX 1346 KANBOHE, HAWAII USA" "NOTIFY UNIV. No. 681 Monel tags numbered 1401-1900 HAWAII HIMB KANEOHE, 96744" "NOTIFY HIMB Fearing "Tuff-Tex" plastic tags 2001-2015 UNIVHAWAII" (blue) and 2026-2050 (black) WRITE HIMB No. 681 Inconel tags numbered 2051 and UNIVERSITY higher HAWAII, 96744" Letters and abbreviations refer to the following: A Plastic "Allflex" tags (not inscribed with a return address) F Fearing "Tuff-Tex" plastic tags () Numbers in parentheses indicate additional tags that were applied when a previously tagged turtle was recovered. FFS French Frigate Shoals SE Southeast Island at Pearl and Hermes Reef N Nesting В Basking on shore 0 Offshore - turtle recaptured or resighted in the ocean С Copulating RC Released from captivity after being held for an extended period D Dead A-D meter Small depth meter attached to the carapace (see Balazs

1980ъ).

Freq. Frequency and turtle identification number of radio transmitters used in a telemetry study at FFS (see Dizon and Balazs 1982).

The following abbreviations are used at various places in the data tables to show the person responsible for making a tag recovery or, in some cases, initially tagging a turtle. All taggings and tag recoveries that bear an expedition number were carried out by the author working at FYS (Table 1). In certain instances, the author's initials are given for tagging and tag recoveries made at sites away from FFS where expedition code numbers do not apply.

> AK. Alan Kam BG Brent Geizentanner BP **Bill Puleloa** BS Bob Schulmeister CH Craig Harrison GB George Balazs JÅ John Andre JH John Henderson JL Jerry Ludwig RÏ Ruth Ittner RS Robert Shallenberger RW Ronald Walker 88 Sheridan Stone

ACKNOWLEDGMENTS

In addition to the persons listed above, I want to acknowledge and thank the following individuals and organizations for assistance, support, and advice in various forms provided over the past 10 years: John Bardach, Robert Brick, Randall Chau, Richard Coleman, William Coops, John Corbin, Andrew Dizon, William Gilmartin, Richard Grigg, Philip Helfrich, Robert Justman, Eugene Kridler, Fredrick Lighter, Gary Naftel, David Olsen, Mark Rauzon, Palmer Bekora, Richard Shomura, John Wheeler, G. Causey Whittow, Fredrick Yap, Fredrick Zeillemaker, the New York Zoological Society, National Geographic Society, U.S. Fish and Wildlife Service, University of Hawaii Sea Grant College Program, Hawaii Division of Aquatic Resources, Hawaii State Office of the Marine Affairs Coordinator, Fourteenth U.S. Coast Guard District, U.S. Navy, Federal Aviation Administration, and the Hawaii Air National Guard. I am grateful to Jerry Wetherall for analyzing the tag loss data presented in Table 4.

This work is, in part, the result of research ("Survey and Assessment of the Green Sea Turtle Resource of the Northwestern Hawaiian Islands" project, NI/R-5) sponsored by the University of Hawaii Sea Grant College Program under Institutional Grant Nos. 04-6-158-4414, 04-7-158-44129, and 04-8-MO1-178 from NOAA Office of Sea Grant, Department of Commerce.

LITERATURE CITED

Amerson, A. B., Jr. 1971. The natural history of French Frigate Shoals, Northwestern Hawaiian Islands. Atoll Res. Bull. 150:1-383.

- Balazs, G. H.
 - 1980a. A review of basic biological data on the green turtle in the Northwestern Hawaiian Islands. <u>In</u> R. W. Grigg and R. T. Pfund (editors), Proceedings of the Symposium on Status of Resource Investigations in the Northwestern Hawaiian Islands, April 24-25, 1980, University of Hawaii, Honolulu, Hawaii, p. 42-54. Bea Grant Misc. Rep. UNIHI-SEAGRANT-MR-80-04.
 - 1980b. Synopsis of biological data on the green turtle in the Hawaiian Islands. U.S. Dep. Commer., NOAA Tech. Memo. NMFS, NOAA-TM-NMFS-SWFC-7, 141 p.
 - 1982a. Factors affecting the retention of metal tags on sea turtles. Mar. Turtle News1. 20:11-14.
 - 1982b. Growth rates of immature green turtles in the Hawaiian Archipelago. <u>In</u> K. A. Bjorndal (editor), Biology and conservation of sea turtles, p. 117-125. Smithson. Inst. Press, Wash., D.C.
 - 1982c. Hawaii's fishermen help sea turtles. Hawaii Fish. News 7(11):8-9.
 - 1982d. Sea turtles: A shared resource of the Pacific Islands. South Pac. Comm. Fish. Newsl. 23:22-24.
 - 1982e. Status of sea turtles in the Central Pacific Ocean. In K. A. Bjorndal (editor), Biology and conservation of sea turtles, p. 243-252. Smithson. Inst. Press, Wash., D.C.
- Dizon, A. E., and G. H. Balazs. 1982. Radio telemetry of Hawaiian green turtles at their breeding colony. Mar. Fish. Rev. 44(5):13-20.

Meylan, A.

- 1982. Sea turtle migrations Evidence from tag returns. <u>In</u> K. A. Bjorndal (editor), Biology and conservation of sea turtles, p. 91-100. Smithson. Inst. Press, Wash. D.C.
- Mrosovsky, N., and S. J. Shettleworth. 1982. What double tagging studies can tell us. Mar. Turtle Newsl. 22:11-15.
- Sheekey, E. A. 1982. Green turtles basking on Tern Island, French Frigate Shoals. 'Elepsio 43(6):45-47.

Wexler, M.

1983. Treasured islands. Natl. Wildl. 21(2):4-13.

Whittow, G. C., and G. H. Balazs.

1979. The thermal biology of Hawaiian basking green turtles (<u>Chelonia mydas</u>). (Abstr.) Am. Zool. 19:981.

1982. Basking behavior of the Hawaiian green turtle (<u>Chelonia</u> <u>mydas</u>). Pac. Sci. 36:129-139.

World Conference on Sea Turtle Conservation, 1979.

1982. Sea turtle conservation strategy, action plan, and action projects. <u>In</u> K. A. Bjorndal (editor), Biology and conservation of sea turtles, p. 565-583. Smithson. Inst. Press, Wash., D.C.

and the second s

· .

Expedition No.	Duration (days)	Dates
1	48	1 June-19 July 1973
2	6	11-17 October 1973
3	21	30 May-20 June 1974
4	21	27 June-18 July 1974
5	20	26 July-15 August 1974
6	21	19 September-10 October 1974
7	7	13-20 February 1975
8	6	16-22 May 1975
9	20	6-26 June 1975
10	20	18 July-7 August 1975
11	2	26-28 August 1975
12	3	1-4 December 1975
13	7	15-22 January 1976
14	11	8-19 April 1976
15	6	7-13 May 1976
16	14	28 June-12 July 1976
17	5	18-23 November 1976
18	13	20 June-3 July 1977
19	6	22-28 September 1977
20	7	1-8 December 1977
21	16	5-21 June 1978
22	5	2-7 May 1979
23	20	10-30 June 1979
24	25	6 June-1 July 1980
25	3	5-8 September 1980
26	4	15-19 December 1980
27	23	25 May-18 June 1981
28	1	15-16 November 1981
29	1	14-15 April 1982
30	21	5-26 June 1982
31	1	3-4 August 1982
32	1	3-4 September 1982

.

Table 1.--Expeditions to tag green turtles at French Frigate Shoals made during the 10-year period, 1973-82. Table 2.--Recovery data for male gramm turtles observed or originally tagged at French Frigate Shoals (F7S).

.

Kotry No.	Tag No.	unte tagged/ expedition Mo.	Location tagged and status	Location recovered and status	Interval years/months	Date recovered/ expedition No.
-	74 £ W	29 August 1965	Trig, 778-3	Trig, 178-B	- - - - - - - - - - - - - - - - - - -	14 February 1975
	74 FW			Whale-Skate, FFS-3	2-2	7. 9 April 1977
7	759	17 February 1975 7	Whale-State, FFS-5	Mhale-Skate, FFS-3	0-1	19 May 1975 B
~	956, 957, 958	19 February 1975 7	Whale-Skate, FFS-B	Whale-Skate, FFS-B	4-0	21 June 1975
	957	•		Whale-State, FFS-8	1-5	9 19 November 1976
	956, 957, 958			Whale~Skate, FFS-B	3~7	17 30 June 1980
	957			Whale-Skate, FFS-B	1	24 7 September 1980 25
	633	14 February 1975	Whale-Skate, FFS-B	Whate-Skate, FPS-3	4-0	18 June 1975
	663			Whale-Skate, FFS-B	0-1	9 20 Jul y 1975 10
	953	18 February 1975 7	Whale-Skate, FF3-B	Whale-Skate, FFS-B	4-0	9 June 1975
	953			Whale-Skate, FFS-0	0-2	9 I August 1975 10
	974	12 June 1975 9	Trig, FI S-B	Trig, FFSB	0-2	6 August 1975 10
	1160	31 Jul y 1975	Whale-Skate, FPS-8	Whale-Skate, PPS-B	6-0	12 April 1976
	1160 (2400, 2401)	10		Whale-Skate, FFS-B	1-5	14 25 September 1977
	2400, 2401		·	Whale-Skate, FFS-B (Freq. 351)	2-9	19 30 June 1980 24
	1200	17 January 1976	Mullet, FFS-B	Shark, FFS-B	0-3	13 April 1976
	1200	3		East, FFS-8	1-0	14 10 April 1977

Entry No.	Tag Ro.	Date tagged/ expedition No.	Location tagged and status	Location recovered and status	Interval years/months	Date recovered/ expedition Mo.
147	2	14 Juae 1968	East, 178	Trig, 178-5	4	15 October 1071
747	24			Trig, 778-3	1	2 14 Vehenen 1075
1442	2			Trig, 778-B	4	
7471	2			Trie WS-A		
7471	W (1214)					18 July 1975
7471	2				6-6	ll April 1976 14
4.774	1 (2616 3192)			Trig, FFS-B	1-8	7 December 1977 20
	1707 '0707 L M	_		Trig, FFG-B	9-6	12 June 1978
7471 747P	W 2616			Trig, FFS~B Trig, FFS~B	6 9 8 4 9 4	21 February 1979 17 Tume 1979
1214				Trig, FF3-B	3-0	23 6 June 1962
046		17 February 1975	Whale-Skate, 778-B	Whale-Skate, FFS-B	4-0	3 0 11 Time 1876
940		٢		Whale-Skate, 778-8	0-2	1 1.1- 1975
940				Whale-Skate, 175-3	8-0	10 11 Abril 1976
076	(2825)			Wbale-State, 279-B	2-2	20 June 1978
948		18 February 1975	Trie, PPS-B	Trie EPC-a		
948		, L	- 	Challanghata WPC_D		8 8 8
948				Whate-state, rea-o Whate-Skate, F59-6	7 4	19 July 1975 12 Acres 1975
948					х Э	44 APTLL 17/0 14
4 4 4 6 7 6 7 6 7 6 7 6 7 6				Whale-Skate, 775-3 Whele-Skate, 775-5 with the state, 775-5	111	9 Maruh 1977 9 April 1977
948				LT16, FFS-6	0-3	2 July 1977 17
				Whale-Skate, F25-B	Ĩ	27 September 1977 19
Ř.				Trig	0-1	3 December 1977 20
L 69 1	<i>i</i> (1790, 1791)	14 March 1967	Trig, Ff S-B	Trig, 773-B	1-6	12 April 1976 14

.

.

Table 2.--Recovery data for male green turtles observed or originally tagged at French Frigate Shoals (FFS).--Continued.

Ruth Jag Res Data i tagged Location tagged <thlocation tagged<="" th=""> <thlocation tagged<="" th=""> <th< th=""><th></th><th></th><th></th><th></th><th>TTTT TTREET ST TTENCO</th><th>1) stoute studie ()</th><th>rs)Continued.</th></th<></thlocation></thlocation>					TTTT TTREET ST TTENCO	1) stoute studie ()	rs)Continued.
13 456W (123A) 13 March 1967 Walle-Shate, 775-3 Walle-Shate, 775-3 Walle-Shate, 775-3 9-1 12 April 1976 14 930 13 February 1973 Tria, 175-3 Walle-Shate, 775-3 0-2 20 Jane 137 930 13 February 1973 Tria, 175-3 Walle-Shate, 775-3 0-3 16 April 1976 15 13 April 1976 Tria, 175-3 Walle-Shate, 775-3 0-3 16 April 1976 15 1200 13 April 1976 Tria, 175-3 Tria, 175-3 0-1 10 May 1976 15 1200 13 April 1976 Tria, 175-3 Tria, 175-3 0-1 10 May 1976 12130 13 April 1976 Tria, 175-3 Tria, 175-3 2-3 25 May 2019 12130 13 April 1976 Tria, 175-3 Tria, 175-3 2-3 20 May 1976 12130 11 April 1976 Tria, 175-3 2-3 <t< th=""><th>Entry No.</th><th>Tag No.</th><th>Date tagged/ expedition No.</th><th>Location tagged and status</th><th>Location recovered and status</th><th>Interval years/months</th><th>Date recovered/ erpedition No.</th></t<>	Entry No.	Tag No.	Date tagged/ expedition No.	Location tagged and status	Location recovered and status	Interval years/months	Date recovered/ erpedition No.
14 910 13 February 1915 Tria, FF5-5 Waie-State, FF5-1 0-10 3 Becombar 1913 920 93 93 Waie-State, FF5-1 0-13 10 3 Becombar 1913 930 13 14 April 1916 Tria, FF5-1 Waie-State, FF5-1 0-11 10 May 1916 13 1243 13 April 1916 Tria, FF5-1 Tria, FF5-1 0-1 10 May 1916 1330 134 13 April 1916 Tria, FF5-1 Tria, FF5-1 0-1 10 May 1916 1330 1330 13 April 1916 Tria, FF5-1 Tria, FF5-1 0-1 10 May 1916 1330 1330 Tria, FF5-1 Tria, FF5-1 Tria, FF5-1 0-1 10 May 1916 1330 134 Tria, FF5-1 Tria, FF5-1 Tria, FF5-1 0-1 10 May 1916 1330 134 Tria, FF5-1 Tria, FF5-1 Tria, FF5-1 0-1 10 May 1916 1331 11 145 Tria, FF5-1 Tria, FF5-1 0-1 10 May 1916 1331 124 14 May 1976 Tria, FF5-1 11 10	13	456 FV (1224)	13 March 1967	Whale-Skate, 778-5	Whale-Skate, 779-5	9-1	12 April 1976 14
910 920	14	930	15 February 1975	Trig, <i>F</i> 78-B	Whale-Skate, FFS-B	0-10	3 December 1975
910 910 910 9111 911 911 <td< td=""><td></td><td>930</td><td>4</td><td></td><td>Whate-Skate, 775-B</td><td>0-2</td><td>12 20 January 1976</td></td<>		930	4		Whate-Skate, 775-B	0-2	12 20 January 1976
13 1243 14 April 1976 Tria, 175-5 Wale-State, 75-5 -1 10 Wale-State, 75-5 -1 10 Wale 13 130 13 714, 775-5 Tria, 775-5 Tria, 775-5 -1 10 Wale -1 10 Wale 130 130 13 -1 -1 -1 -1 -1 -1 -1 10 <td></td> <td>930</td> <td></td> <td></td> <td>Whale-Skate, FFS-B</td> <td>0-3</td> <td>13 1976 14</td>		930			Whale-Skate, FFS-B	0-3	13 1976 14
16 130 13 April 1976 Trig, TFS-3 Trig, TFS-3 Trig, TFS-3 $0 - 1$ $0 -$	15	1243	14 April 1976 14	Trig, FFS-5	Whale-Skate, 773-5	0-1	10 May 1976 15
1230 Tria, TFb-3 2-9 23 Rebury 197 1230 Tria, TFb-3 2-0 29 Ray 199 1230 Tria, TFb-3 2-0 29 Ray 199 1230 Tria, TFb-3 2-0 29 Ray 199 1230 II April 1976 Tria, TFb-3 2-0 29 Ray 199 17 1215 II April 1976 Tria, TFb-3 0-1 10 Ray 1976 18 1215 II April 1976 Tria, TFb-3 0-1 10 Ray 1976 19 123 II April 1976 Tria, TFb-3 0-1 10 Ray 1976 19 2002, 1717 3 December 1975 Tria, TFb-3 0-4 14 April 1976 2002 121 3 December 1975 Tria, TFb-3 0-4 14 April 1976 2002 121 3 December 1975 Tria, TFb-3 0-4 14 April 1976 2003 122 2004 1195 Tria, TFB-3 0-4 14 April 1976 2005 122 1060 0-3 10.1197 10.1197 2005 2004 122 11.110 0-4 14 April 1976 2004 122 2004 0-3 10.1197 10.1197 2005 1004 10.1197 10.1197 10.1197<	16	1230	l3 ≜pril 1976	Trit, 175-B	Trig, 775-3	1-0	10 May 1976
120 121 111 April 1976 Trig, TFS-18 Trig, TFS-18 20 20 $\frac{123}{15}$ 17 1215 11 April 1976 Trig, TFS-18 Trig, TFS-18 0-1 10 $\frac{123}{15}$ 18 1241 14 April 1976 Trig, TFS-18 Trig, TFS-18 0-1 10 $\frac{123}{16}$ 19 2002, 1717 3 Becember 1975 Trig, TFS-18 Trig, TFS-18 0-4 14 $\frac{14}{16}$ 2002 1024, 1108 3 December 1975 Trig, TFS-18 Trig, TFS-18 0-4 14 $\frac{14}{16}$ 2002 2004, 1108 3 December 1975 Trig, TFS-18 Trig, TFS-18 0-4 14 $\frac{14}{16}$ 2005 2004, 1108 3 December 1975 Trig, TFS-18 0-4 14 $\frac{14}{16}$ 2005 2004, 1108 3 December 1975 Trig, TFS-18 0-4 14 $\frac{14}{16}$ $\frac{16}{16}$ 2005 2004, 1108 3 December 1975 Trig, TFS-18 0-4 14 $\frac{16}{16}$ $\frac{16}{16}$ $\frac{16}{16}$ </td <td></td> <td>1230 1230</td> <td>*</td> <td></td> <td>Trig, 778-5 Trig, 778-3</td> <td>2-9 0-2</td> <td>15 25 February 1979 6 May 1979</td>		1230 1230	*		Trig, 778-5 Trig, 778-3	2-9 0-2	15 25 February 1979 6 May 1979
17 123 11 April 1976 Trig, 778-18 Trig, 778-18 Trig, 778-18 11 July 1976 18 1241 14 April 1976 Trig, 775-18 Trig, 778-18 Trig, 178-0 0-3 11 July 1976 19 2002, 1717 3 December 1975 Trig, 775-18 Trig, 778-18 Trig, 778-18 14 April 1976 2002, 1717 3 December 1975 Trig, 778-18 Trig, 778-18 0-4 14 April 1976 2002 1717 3 December 1975 Trig, 778-18 Trig, 778-18 0-4 14 April 1976 2003 110 3 December 1975 Trig, 778-18 Trig, 778-18 0-4 14 April 1976 2004, 1198 3 December 1975 Trig, 778-18 Trig, 778-18 0-4 14 April 1976 2005 2004, 1198 3 December 1975 Trig, 778-18 0-4 14 April 1976 2004 102 1196 Trig, 778-18 Trig, 778-18 0-4 14 April 1976 2005 2004 1035 2004 175 0-4 14 April 1976 2004 2004 106 10141 101 0-3 101		1230			East, <u>77</u> 3-3	5-0	28 May 1981
1241 14 April 1976 Trig, 775-8 Tern, 775-0 0-3 11 July 1976 9 2002, 1717 3 December 1975 Trig, 775-8 Trig, 775-8 0-4 14 April 1976 12 2002 1717 3 December 1975 Trig, 775-8 Trig, 775-9 0-4 14 April 1976 2002 1004, 1196 3 December 1975 Trig, 775-8 Trig, 775-9 0-3 10 July 1976 10 2004, 1196 3 December 1975 Trig, 775-8 Trig, 775-9 0-4 14 April 1976 2005 12 Trig, 775-8 Trig, 775-8 Trig, 775-8 0-4 14 April 1976 2004 2005 Trig, 775-8 Trig, 775-8 Trig, 775-8 0-3 10 July 1976 2004 2005 Trig, 772-2011 6 June 1964 Easel and 2-10 9 July 1976 1 106075 16 September 1964 Easel and Easel and 10 11/110 4 July 1976 1 105007 101 10 10 10 10 10 10 1 105007 10 10 Easel and	1	1215	11 April 1976 14	Trig, FF5-B	Trig, TF 8-B	1-0	10 May 1976 15
19 2002, 1717 3 December 1975 Trig, FFB-D Trig, FFB-D 0-4 14 April 1976 2002 2002 12 12 Trig, FFB-D 0-4 14 April 1976 2002 2004, 1198 3 December 1975 Trig, FFB-B Trig, FFB-B 0-4 14 April 1976 2003 2004, 1198 3 December 1975 Trig, FFB-B 0-4 14 April 1976 2005 2005 12 Trig, FFB-B Trig, FFB-B 0-4 14 April 1976 2005 2004 3035 2004 0-3 10 July 1976 1975 2004 3035 2004 5 Fearl and Trig, FFB-B 2-10 3 May 1976 3035, 2004 10 152 Trig, FFB-B 2-10 3 May 1976 202 11 1060F Fearl and Ret. FFB-B 3-10 6 June 1982 30 11 1060F FFF Fearl and 2-10 4 July 1976 11 10 Fearl and Ret. FFB-B 1-0 14 July 1977 2011 11772, 2011 FFF FFF FFF <td>8</td> <td>1241</td> <td>14 April 1976 14</td> <td>Tris, 776-8</td> <td>Tern, 773-0</td> <td>0-3</td> <td>11 Jul<mark>y</mark> 1976 16</td>	8	1241	14 April 1976 14	Tris, 776-8	Tern, 773-0	0-3	11 Jul <mark>y</mark> 1976 16
2002 2004, 1198 3 December 1975 Trig, FFB-B 0-3 10 July 1976 10 2004, 1198 3 December 1975 Trig, FFB-B 0-4 14 April 1976 2005 3 December 1975 Trig, FFB-B 0-4 14 April 1976 2005 3 December 1975 Trig, FFB-B 0-4 14 April 1976 2005 3035 2004 3035 10 July 1976 2004 3035 2004 3035 2-10 3 May 1979 2005 3035 2004 3035 2-10 3 May 1976 2005 3035 2004 3035 2004 3 May 1976 1 1060FG 16 September 1964 SE Fearl and Fast, FFB-B 11-10 4 July 1976 1 1060FG 16 September 1964 SE Fearl and Fast, FFB-B 11-10 4 July 1976 2011 1 1060FG 11-10 4 July 1976 2011 1 10 11-10 4 July 1977 2011 1 1 10 1/11 2011 1 1 0 1/11 2011 1 1 0 1/11 2011 1 1 1 0 2011 1 <td< td=""><td>6</td><td>2002, 1717</td><td>3 December 1975 15</td><td>Trig, 778-6</td><td>Trig, 778-B</td><td>1</td><td>14 April 1976</td></td<>	6	2002, 1717	3 December 1975 15	Trig, 77 8-6	Trig, 778- B	1	14 April 1976
00 2004, 1196 3 Becember 1975 Trig, FFB-B C-4 14 April 1976 2005 12 12 Trig, FFB-B C-4 14 April 1976 2005 2004 3035 Trig, FFB-B C-4 14 April 1976 2005 2004 3035 Trig, FFB-B C-10 3 May 1997 2004 3035 2004 3035 Trig, FFB-B 2-10 3 May 1997 2004 3035 2004 April 1976 Trig, FFB-B 2-10 3 May 1997 3035 2004 April 1976 Trig, FFB-B 2-10 3 May 1997 20 11 1060FG 16 September 1964 SE Fearl and Least, FFB-B 111-10 4 July 1976 1272, 2011 May May SE Fearl and 1-0 July 1977 1272, 2011 SE Fearl and 1-0 July 1976 10 10 May 1982 1272, 2011 SE Fearl and 1-0 July 1977 SE Fearl and 1-0 July 1977		2002	9		Teru, FFS-0	0-3	14 10 July 1976 16
2005 2005 Terr, FF8-0 0-3 10 July 1976 2004 (3035) 2004 (3035) Trig, FF8-3 2-10 3 May 1979 2004 (3035) 2004 (3035) Trig, FF8-3 2-10 3 May 1979 2005 22 3035, 2004 3-1 6 June 1962 22 3015, 2004 16 September 1964 SE Fearl and Least, FF8-3 3-1 6 June 1962 1 1060FG 16 September 1964 SE Fearl and Least, FF8-3 11-10 4 July 1976 2011 2011 SE Fearl and Least, FF8-3 11-10 4 July 1976 2011 2011 SE Fearl and Least, FF8-3 1-0 July 1976 2011 2011 SE Fearl and Least 4-10 10 May 1982	8	2004, 1198	3 December 1975 17	Trig, FF8-B	Trig, 778-3	1	14 April 1976
2004 (3035) 2004 (3035) Trig, FFS-B 2-10 3 May 1979 3035, 2004 Trig, FFS-B 3-1 6 June 1982 1 1060FG 16 September 1964 SE Fearl and Leat, FFS-B 11-10 4 July 1976 1 1060FG 16 September 1964 SE Fearl and Leat, FFS-B 11-10 4 July 1976 2011 2011 SE Fearl and Least, FFS-B 11-10 4 July 1976 2011 2011 SE Fearl and Least, FFS-B 1-0 July 1977 2011 2011 SE Fearl and Least, FFS-B 1-0 July 1977 2011 2011 SE Fearl and Least 1-0 July 1976 2011 2011 SE Fearl and Least 1-0 July 1977 2011 2011 SE Fearl and Least 1-0 July 1977		2005	•		Tern, 178-0	0-3	14 10 July 1976
3035, 2004 Trig, FFS-5 3-1 6 June 1982 1 1060FG 16 September 1964 SE Fearl and Kast, FFS-5 11-10 4 July 1976 1 1060FG 16 September 1964 SE Fearl and Kast, FFS-5 11-10 4 July 1976 2011 2011 FF Fearl and Kast, FFS-5 11-10 4 July 1976 2011 1072, 2011 FF Fearl and Kast and 1-0 July 1977 2011 52 Fearl and 1-0 July 1977 2011 52 Fearl and 1-0 July 1977 1272, 2011 52 Fearl and 6-10 10 May 1982		2004 (3035)		-	Trig, 77 3-1	2-10	16 3 May 1979
1 1060FG 16 September 1964 5E Past and Last, FTS-B 11-10 4 July 1976 16 (1272, 2011) 16 September 1964 5E Fearl and 1-0 July 1977 2011 2011 1-0 July 1977 Earnes-B 5E Fearl and 1-0 July 1977 2011 1272, 2011 1272, 2011 1-0 July 1977 Bernes-B 5C		3035, 2004			Trig, ??\$~5	1-1	22 6 June 1982 30
2011 52 Fearl and 1-0 July 1977 Bermes-3 1272, 2011 55 Fearl and 4-10 10 May 1982	-	1060FG (1272, 2011)	l6 September 1964 Bur	SE Pearl and Hereco.1	Kast, 775-3	11-10	4 July 1976
1272, 2011 SE Perf and 4-10 10 May 1982		2011	I		SE Pearl and Tonnesse	<u>9</u>	16 July 1977
		1272, 2011			SE Peerl and	4-10	ыс 10 Мау 1982

-Continue Table 2.---Recovery data for male green turtles observed or originally tagged at French Frigate Shoals (FFS).

.

-

				1		
Katı No.	cy Tag No.	Date tagged/ expedition No.	Location tagged and status	Location recovered and status	Interval years/months	Date recovered/ expedition %0.
22	959, 960	19 February 1975	Whale-Skate, 773-5	Whale-State, 775-5	0-5	2 August 1975
	959	•		Whale-Skate, 773-5	0-11	10 10 July 1976
	959			Whale-Skate, FFS-B	7	16 23 November 1976
	959, 960			Whale-Skate, 773-8	4-7	17 13 June 1981
	960			Whale-Skate, TS-B		25 June 1982 30
23	1212	10 April 1976	Whale-Skate, 175-5	Whale-State, 225-B	1-0	16 April 1977
	1212	5		Whale-Skate, 775-B	0-S	23 September 1977
	1212			Whale-Skate, FFS-B	0-2	19 6 December 1977
	I212 (2824)			Whale-State, 778-8	9-0	20 20 June 1978
	2824			Whale-State, 775-8	0-10	21 2 May 1979
	2824			Musle-State, 173-5	4	22 7 September 1980 25
54	2411	13 October 1977	Vaikiki, Oabu-RC	Last, FFS-B	8 - 0	11 June 1978 21
5	1233 (2593)	13 April 1976	Tris, 775-3	East, 778-3	1-1	11 June 1975
	2593 (3131, 25A)	4		Trig, FF S-B	91	21 17 June 1979
	2593, 3131, 25A (2579)			East, 775-5	2-0	23 3 June 1981 27
প্ন	122FV (2594)	20 September 1966	Pearl and Herman-B	E44t, FF3- B	11-9	11 June 1978
	122PV			Kast, FF6-5	I-0	21 18 June 1979 23
27	1282 (2655)	6 July 1976	Last, 775-B	E4st, 173-8	11-1	11 June 1978
	2653 (5070, 5147)	0		Res t, 178 B	5	27 May 1981 27 May 1981
28	1210	10 April 1976 34	Trig, 778-3	Trig. 778-8	2-2	12 June 1978
	1210	t		Irig, I7 9-8	4-0	21 6 June 1982 30

Table 2.---Recovery data for male green turtles observed or originally tagged at French Frigate Shoals (FFS).---Continued.

14

,

Table 2.--Recovery date for male green turtles observed or originally tagged at French Frigate Shoals (FFS).--Continued.

Entry		Date tagged/	Location tagged	Location Tecovered	[atarea]	
2	Tag No.	expedition No.	and status	and status	years/months	utte recovered/ expedition Mo.
53	1220 (2618, 2619)	12 April 1976 14	Trig, FFS-B	Trig, FPS-B	2-2	12 June 1978
	2618	1		Trig, FR-C	3-10	21 15 April 1982 29
90	2001, 1197 (2829)	3 December 1975 12	Trig, 175-6	Trig, 778-3	2-6	20 June 1978
	2829	1		Trig, #78-5	0-10	21 4 May 1979 22
16	T127FW (2828)	8 -1	6	Iri g, 77 8-5	r.	20 June 1978
	2826		ï	Trig, 778-5	0-11	21 6 May 1979
	2828 (3132)			Tri t , ?? \$-\$	0-I	22 17 June 1979 23
32	2659, 2600	13 June 1978	Zest, 775-3	East, 773 -3	0-11	3 May 1979
	2600 (6105, 6198)	7		Last, 775-3	3-1	22 11 Jane 1982 30
::	2710	15 June 1978 21	Whale-State, FFS-3	Trig, 178-5	0-11	3 May 1979 22
*	2614 (3032)	12 June 1978 21	Trig. 778-8	Trig, Frs-B	011	3 May 1979 22
35	2397 2398, 2399	25 Sept em ber 1977 19	Whale-Skate, 175-5	Mhale-Skate, FFS-B	19	16 June 1979 23
36	3063 (3169)	5 May 1979	Bast, 77 8-B	Gast, 728-B	10	16 June 1979
	3063, 3169	7		Last, 77 5-B	0-11	23 26 May 1981 27
. /6	3059	5 Kay 1979	East , 778-8	Bast, 175-8	6- 1	17 June 1979
	3059 (5140; 5334)	1		5mst, 773-3	11-11	23 29 May 1961 27
10	3058	5 May 1979	Redt , - 775-3	Lest, 773-3	0 -1	18 June 1979
	3058 (3769)	1		Last, J79-3	1	23 10 June 1980
	3058 (3741)			Lest, 175-B	t1-0	24 26 Kay 1981 27

•

					•	
Katry No.	fag No.	Date tagged/ expedition No.	location tagged and status	Location recovarad and statua	Interval years/months	Date recovered/ expedition No.
39	2668 (3225)	19 June 1978	East, 775-00	East, 278-B	9-1	15 June 1979
	3225 (5374)	7		East, JPS-8	2-0	9 June 1981
7	3028 (3153)	3 May 1979	Rest, 175-6	East, FTS-3	1-0	2/ 18 Tume 1070
	3028, 3153 (5078)	77		Rast, 178-6	1-11	27 May 1981
41	3041	4 May 1979	Whale-Skate, 175-3	Wbale-Skate, FFS-B	1-0	19 Jime 1979
	(855E) THOE	2		Whale-Skate, 173-5	-1	8 June 1980
	3041 (6164)			Whale-Skate, 779-3	2-0	24 17 June 1982 30
42	3018	2 May 1979 22	Whale-State, F75-B	Whale-Skate, 228~5	0-1	19 Jume 1979 23
E 4	3077	6 May 1979 22	Whale-State, 779-3	Mbale-Skate, 778-5	1-0	19 June 1979 23
\$	2597, 2598	11 June 1978 21	Bast, 178-B	East, FFG-B	1-0	19 June 1979 23
45	9606	4 May 1979 22	Whale-Skate, 725-5	Whale-State, FFS-B	0-2	26 June 1979 23
\$	2663	13 June 1978	Zast, 775-B	Whale-Skate, 778-B	P -1	29 June 1979
	2663	4		Whale-State, FFS-B	0-11	23 9 June 1960 24
47	2756 (3276)	17 June 1978	Whale-Skate, FFS-B	Whale-State, 775-B	1-0	29 June 1979
	27 56	12		Whale-Skate, 775-5	11-1	23 8 June 1981 27
4-B	I 20 5 (3277)	21 January 1976	Trig, 175-3	Tri t, 77 5-8	2-5	29 June 1979
	1205, 3277	3		Trig, PB-B	1-11	23 11 June 1981 27
49	3274 (3629)	29 June 1979 23	Whale-Skate, 775-3	Last , 77 3-8	1-0	20 June 1980 24

ģ į arie inel 5 Table 2.---Recovery data for male green turtles observed

Table 2.--Racovery data for male green turtles observed or originally tagged at French Frigate Shoals (FfS).--Continued.

latry Ro.	Tat No.	Date tagged/ erpedition Mo.	Location tagged and status	Location recovered and statum	Intervel years/months	Date recovered/ expedition No.
8	2399 (3551)	11 June 1976 21	Bast, 778-B	Bast, 178-5	3-0	7 June 1980 24
15	2576 (3582)	10 June 1978 21	Last, 17 8-3	Rest, 175-16	2-0	10 June 1980 24
22	3075 (3556)	6 May 1979 .22	Whale-Skate, 73-5	Whele-State, 775-b	1-I	8 Jane 1980 24
23	3215 (3559)	23 June 1979 23	Whale-State, F25-3	Whale-Skate, 773-3	Ĩ	8 June 1980 24
x	3069	5 May 1979	Tri t, 77 8-3	Whele-State, 179-5	1-1	8 June 1980
	3069	a		Muale-Skate, 778-5	P 1	24 13 June 1981 27
23	3047	4 May 1979	Whale-Skate, 775-3	Whale-Shate, 175-3	1-1	9 June 1980
	3047	t .		Motth I., Pearl and Mermes-1	2-5	24 30 October 1982 AK
*	3031 (3762)	3 Nay 1979 22	Tris, Fsa.	Whale-Shate, FF3-3 (Freq. 541)	I-1	9 June 1980 24
57	3234 (3765)	26 Jame 1979 23	Whele-State, 178-5	Whale-State, 175-5	0-11	9 June 1980 24
2	2712	15 June 1978 21	Whele-State, 175-5	Male-Skate, FFS-B	2-0	9 June 1980 24
5	1204, 1749 (3647, 3648)	21 January 1976 13	trig, 278-1	Irig, 173-B	4-5	23 June 1980 24
3	948 7 W	14 May 1971	Whele-Shate, 175-3	Worth Island, Pearl and Hernes-B	1-6	18 June 1980 JL/CH
19	2279, 2280 (5446)	6 July 1977	Kansohe Bay, Dahu-D	Zast, 779-3	3-11	17 June 1981 27
62	2586 (3740)	14 Jane 1978 21	Kast, 775-3	Last, 175-8	2-11	26 Hay 1981 27
63	2668, 2669 (5267)	13 June 1978 21	6ast, <i>1</i> 75-3	Little Gin, ?? S-B	6	1981 amnt C
		1		Tri g , 175-1	0-10	27 15 April 1982 29

				ALLY LAKEGA AL FIEDCD F	rigate Shoals (F)	PS)Continued.
Ko.	Tag No.	Date tagged/ expedition No.	Location tagged and status	Location recovered and status	Interval years/months	Date recovered/ expedition No.
6 4	2810, 2811 (5260)	19 June 1978 21	East, 175-3	Kast, 7PS-B	9-6	3 June 1981 27
65	3053	5 May 197 9 22	Kast, J73-B	Kast, FFS-B	1-11	
66	3062 (5073)	5 May 1979 22	Kast, 178-5	Last, 775-B	11-1	27 May 1981 27 May 1981
67	3065 (5398)	5 May 1979 22	Trig, 276-5	Trig, F 8-3	11-11	27 11 Junne 1981 27
89	3236, 3237 (5295)	26 Juanae 1979 23	Whale-Skate, 175-5	Kest, 77 8-3	1-11	4 June 1981 77
69	3637	22 June 1980 24	East, 778-5	Bant, 775-3	1-0	-/ 26 Junte 1981 27
70	2038, 3588, 3673	13 June 1980 24	Kast, 175-3	Last, 778-3	1-0	
11	3117, 3118, 2029	15 June 1979 23	Trig, PPS-B	Trig, 178-1	2-11	15 May 1982 29
72	MAGII	May 1972	Trig, PPS-B	Whale-Skate, 773-D	10-0	18 May 1982 JA
53	3066	5 May 1979 22	Trig, 776-8	Trig, 77 3-5	2-11	14 April 1982 29
42	5159	30 May 1961 27	Whale-Skate, FFS-B	Whale-State, 775-5	11-0	15 April 1982 29
75	3563	8 June 1980 24	Whale-Skate, FFS-B	Fhale-Skate, 773-5	1-9	15 ≜pril 1982 29
76	(2781)	11 June 1981 27 ·	Trig, FFS-B	Trig, 778-6	11-0	15 ≜pril 1982 29
11	52PW (97PW) 97PW -	lé Auguat 1965	Tris, 178-b	Irig, 778-3 North I., Pearl and Bermes-3	0-7 15-5	22 March 1966 7 August 1981 GB
78	465EV	l3 Merch 1967	Trig, F FS-B	Lieisnaki-B	1-51	Z April 1982
	465 FN (5940, 6327)			Lisianski-B	0-2	JN 6 June 1982

•

é Table 2.---Recovery data for male green turtles observed or originally tagged at French Frigate Shoals (FFS).

Table Z.--Recovery data for male green turtles observed or originally tagged at French Frigate Shoals (FFS).--Continued.

-

le ti	Tag No.		Date tagged/ expedition No.	location tagged and status	Location recovered and status	Interval years/months	Date recovered/ expedition No.
61	(0665) OHOE		4 May 1979 22	Whale-Skate, FFS-5	Whale-Skate, 178-5	3-1	6 June 1982 30
8	3052 (6106,	6197)	5 Hay 197 9 22	Kest, 776-B	34 8t, 77 8-3	3-1	18 June 1982 30
61	3216 (6018)		23 June 1979 23	Zast, 778-3	Kast, 178-B	2	7 June 1982 30
82	3674 (5987, (5987, 5988)	5968)	29 June 1980 24	Tris, T7 8-B	Whele-State, 775-5	5 70	6 June 1982 30
8	3758		9 June 1980) 24	Whale-State, 178-3	Whalt-State, 179-5	2-0	17 June 1982 30
3	5084, 5085,	5086	27 May 1981 27	6ast, 77 5-3	Bast, 778-6	0-1	13 Jume 19 6 2 30
3	5257 (6016)		3 June 1981 29	Kast, 77 8-8	Last, 178-8	1-2	7 June 1962 30
2	5784 (6237)		15 April 1982 29	Whale-Skate, 173-B	Whele-State, 778-5	0-2	21 June 1982 30
87	2664 (5839) 2664, 5839		13 June 1975	Lest, 77 8-1	Lisianaki-B Lisianaki-B	11	6 Juna 1982 4 November 1982 55

i		usta tot Ichale gree	D tuttles observed or o	riginally tagged at Frenc	h Frigate Shoa	la (FFS).
Entry No.	Tag No.	Date Lagged/ expedition No.	Location tagged and status	Location recovered and status	Interval years/months	Date recovered/ expedition No.
	TZ53 <i>FW</i> (636)	26 April 1973	Last, MS-B	East, 175-1	1-0	8 June 1973
7	T254#W (649)	26 April 1973	Last, 778-8	5aet, 175-1	0-I	I 14 June 1973
m	(2 1 9) Mž669	ll June 1968	Whale-Skate, 775-5	54st, 776-11	<u>5-0</u>	1 10 June 1973
-4	372 FH (641)	10 July 1970	Eest, 178-A	Kest, <u>?78-</u> #	11-2	ل 10 June 1973 1
ş	362 T W(648)	10 July 1970	East , F7 3-B	Last, FFS-N	2-11	د 17 June 1973
	36274, 648			Kailua Bay, Oahu-OD	0-3	I I2 September 1973
æ	464EH (679, 699)	16 March 1967	Trig, F 79-B	Whate-State, 179-5	6-7	lé October 1973
	679, 699 (5986)			Whale-Skate, 273-3	e #	2 6 June 1982 30
٢	391.FW (779, 797)	13 July 1970	East , FF 8-8	Kast, 278-X	3-11	2 June 1974
6 0	T60PH (723, 728, 789)	7 May 1972	Zast, FI3-B	Baat, 779-M	2-1	3 June 1974
on.	976 F W (763)	18 May 1971	Gin, 775-B	Zast, 77 5-8	1-E	11 June 1974
10	655 F W (758, 828)	20 March 1968	Lisianski–B	Lest, F75-H	6-3	4 June 1974
	758, 828 (3586)			5a4t, 775-4	1-9	3 28 June 1980 24
11	1048FG (749)	13 March 1964 Bo	Pearl and Hermen-B	East, FF5-W	10-3	2 June 1974
	749, 3641, 3642	1		Kast, 778-6	6-1	3 23 June 1980
	749, 3641, 3642			SE, Pearl and Hermes-B	11-1	24 7 Kay 1982 88
			•			

Teble 3.--Recovery data for female green turtles observed or originally tagged •

ti e
Ş
1
15)
3
ي م
Ĩ,
ř.
BC Å
F re
at.
1 ed
2
11
ior
orig
5
/ed
L .
4
t lei
tur!
5
ž,
a le
Ĵ.
for
åt a
р f;
over
Ĵ,
1
1
1ª1

CI.

.

Latry Xo.	Tag No.	Date tagged/ expedition No.	Location tagged and status	Location recovered and status	Interval years/monthe	Date recovered/ expedition No.
13	440FW 440FW (742)	21 March 1967	Pearl and Rermes-5	-Fearl and Hermes-5 Baat, 775-1	4-1-1-	27 April 1971 30 June 1974 3
13	T216FW (816, 818)	24 March 1973	Mžibea-RC	Emt, 778-1	1-2	3 Jume 1974 3
14	167FW (794, 795)	26 September 1966	SE, Pearl and Hermes-B	East, <i>fi</i> \$-1	7-9	30 June 1974 4
15	370FH (3 567, 3568)	10 July 1970	Zant, 778-8	East, 725-2	9-4	5 July 1974
	3567, 3568			Whale-Shate, 775-B	5-11	4 9 June 1980
	3567, 3568			(Freq. 450) East, FFB-M	9	24 2 June 1981
	3568			Trig, 779-5	0-10	27 14 April 1962 29
¥6	672	9 July 1973 1	last, 775-1	Maslees Bay, Hawi-OD	1-1	31 July 1974
17	853	15 July 1974 4	Whale-State, 729-N	Princeville, Kauai-ÖD	0-1	15 August 1974
16	473 FU	14 March 1967	Trig, 77 8-3	Trig, 778-6	7-11	19 Tebruary 1975 7
19	T22FU (963)	5 May 1972	Trig, 77 8-b	Trig, 128- 3	2-9	19 February 1975 7
20	156	18 february 1975	Trig, 778~3	Trig, F79- 3		20 Mary 1975
	951_(3067)	•		Trig, F25-5	Ţ	5 May 1979
	, 129			Trig. 778-b	2-11	22 14 April 1982
	951, 3067	.		Bast, 173-N	9-7	29 8 Jume 1962 30
21	ai 1 56	15 May 1971	Tris, 178	Trig, 178-B	7	6 June 1975 9
77	n2656	16 May 1971	Last, J78	Best, 775-11	I-	10 Junie 1975

Batry Ko.	Tag No.	Date tagged/ expedition No.	Location tagged and statue	Location recovered and status	Interval years/months	Date recovered/ expedition No.
5	650 (1075, 1076)	4 June 1973 1	Last, PPS-F	644t , 775-1	3-0	18 June 1975
24	942FV	May 1971	Trig, FFS	Trig, 173-3	[]	, 25 Jame 1975
	942FH (1226)			Trig, 776-5	0-10	9 13 April 1976
	94.2.FH			Trig, 7PS-B	1-0	14 1976
	427W			Trig, 175-b	1-1	15 3 December 1977
	942FH (2731, 2732)			East, 778-H	6-1	20 16 June 1978
	1226			Whale-State, 778-B	3-5	21 15 November 1981
	1226, 2731, 2732			Whate-State, 778-5	0-5	28 15 April 1982
	1226, 2731, 2732 (61	(10)		Last, 175-1	1	29 11 June 1087
	1226, 2731, 2732, 61	10		Eest, f?\$-H	2	21 1982
ង	964, 1141	19 February 1975	Trie. 778-A		8-0	11 1
	(6613) 1411					01 - 11 01 - 11
				5 6 86., F72-1	11-9	19 June 1982 30
5	643	17 Zebruery 1975 7	Trig, 778-1	Trig, 773-1	11-0	21 January 1976
	646			Trig, FF3-5	2-5	13 12 June 1978
	543			Trig, FF8-B	1-0	21 17 June 1979
	543			Trig, 275-5	1-0	23 9 June 1980 76
27	9611	2 December 1975 12	Trig, 775-5	Tri s , 77 8-8	4	12 April 1976 14
28	702	6 December 1973	Макарии, Оаћи-КС	Whale-Skate, FPS-5	2-1	16 January 1976
				Whate-Skate, 778-B	5	13 10 April 1976 14

fable J.---Racovery date for female green turtles observed or originally tagged at French Frigate Shoals (FFS).---Courinued

n

22

-.

.

Entry Ko.	Tag No.	Date tagged/ expedition No.	Location tagged and status	Location recovered and status	Interval years/months	Date recovered/ expedition No.
29	IEIT	21 June 1975	East, 778-J	Trig. 778-b	6-0	12 April 1976
	1131, 1093	•		Trig, FFS-3	0 ¥	14 14 April 1982
	1131, 1093 (6159, 6162)			East, 778-8	0-2	29 17 June 1982 30
9	962	19 Pebruary 1975 7	Trig, 77 8-8	Trig, 776-6	1-2	13 April 1976 14
16	632 (1798, 1235)	4 June 1973	East, FFS-M	Tris, F8-5	2-9	13 April 1976
	1235	-		Trig, 775-5	9-0 9	14 14 April 1982
	1235, 1796, 632 (6034)			East, 775-8	02	29 B June 19\$2 30
32	985 FW	18 May 1971	Little Gin, 773-5	Whale-Siste, 175-3	ž	10 May 1976 15
55	96 F M 96 F M (1120, 1121)	22 March 1966	Trig, 178	Irig, 178 Trig, 178-B	6 -0 -0	10 June 1966 26 June 1975
	96 FL			Trig, 77 3-8	9 2	9 3 December 1975
	96 m			Trig, 173-5	0-5 2-0	12 10 May 1976
	96 Fri (2416)			Trig, 778-1	1-7	15 4 December 1977
	1120, 2416			Trig, 77 8–8	4-7	20 25 Junia 1982 30
Ť	945, 947	17 February 1975	tri t, FF 8-B	Trig, TT 8-B	1-2	10 April 1976
	945	~		Trig, 178- 8	6-1	10 May 1976
	945			Trig, F 1 8–B	2-I	20 Jume 1978
	945			Trig, 77 3-3	2-0	21 9 June 1980
	945, 947 (5399)			Trig, (7 8-B	0-1	24 1861 amp 11 72
33	1219	12 April 1976 14	č ast, 17 5-8	540t, 77 8-M	0-3	6 July 1976 16

Table 3...-Recovery data for female green turtles observed or originally tagged at French Frigate Shoals (FFS).--Continued.

4

.

Entry No.	Tag No.	Date tagged/ expedition No.	Location tagged and status	Location recovered and statue	Interval Tears/months	Date recovered/ erredition Eo.
36	1039	13 June 1975				
	1420	6		ITIE, EFO-D	0-1-0	13 April 1976 14
	6F01			Trig, 778-B	02	30 June 1976
37	663ry (1291)	April 1969	Pearl and Mermes-5	E46t, 775-N	1-J	7 July 1976 16
38	719 (1294, 1295)	2 June 1974 3	Kest , 778-11	Kas t, 77 8-2	2- I	8 July 1976 16
39	66024 66024 (1298, 1299)	20 March 1968	Lisianaki-B	Zast, 778-11 East, 778-11	242	16 May 1971 9 July 1976
	1 298, 1299, (3585)			Last, 779-1	0- 4	16 27 June 1980
	1298, 1299			Lisianski-B	1-9	24 l April 1982 88
\$	985FW (1280, 1281)	18 May 1971	Little Gin, FFS-3	Male-State, 75-5	5-2	6 July 1976 16
14	132 FF (1303, 1304)	20 September 1966	Pearl and Harmes-B	Trig, 778- 8	9-10	9 July 1976
	1303, 1304 (5560)			SE Pearl and Barmes-5	5-1	16 8 Augnet 1981
	1303, 5560			52 Fearl and Hermes-B	1-3	GB 28 October 1982 AE
42	9952W	27 April 1971	Pearl and Hermes-B	Whale-Shate, IfS-5	ĩ	10 July 1976 16
£4	152mk (1209m) 152m (1306)	23 September 1966	Pearl and Hermes-B	Pearl and Bermee∽B East, FFS-N	60 3-10	8eptember 1972 12 July 1976 16
\$	1221	12 April 1976	Trig, PP S-B	Trig, 778-3	1-0	28 March 1977
4 5	842	ll August 1974 E	Eest, 275-3	East, 175-3	2-9	11 May 1977
	842 (2269, 2270)	•		Sast, 175-0	9-2 1	2 July 1977
	2269, 2270 (3181)			East, 778-5	1-10	7 May 1979
	2270, 3181			Bast, 773-8	1-0	22 21 Jume 1979
	3181 (3794, 5339)			Gast, 775-X	2-0	23 8 Junie 1981 27

Table 3.--Recovery data for female green turtles observed or originally tagged at French Frigete Shoals (FFS).--Continued.

ŝ

24

.

•

-

•

Batry No.	tag No.	Date tagged/ expedition No.	Location tagged and status	Location recovered and statue	Interval years/months	Date recovered/ expedition No.
*	947	17 February 1975 7	Irig, 119-3	Trig. 779-3	2-5	2 July 1977 18
£4	1746, 1203 (2304, 2305)	21 January 1976 13	Whale-Skate, 772-0	Wale-State, 775-3	P	26 September 1977 19
84	1229 (2417, 2418)	13 April 1976	Trig, 778-3	Trig, 77 8-8	1-8	4 December 1977
	1229	5		Tris. 778-00	1-5	2 May 1979 22
6	958PH (2787, 2766)	16 May 1971	East, 776-8	Bast, 779-8	6-1	19 June 1978 21
2	1063	16 June 1975 a	East, FFG-3	Male-Shate, 775-5	0-E	15 June 1978
	1063 (3663, 3664)	•		Rast, 178-W	2-0	21 26 June 1980 24
51	1029, 987 (2605, 3404)	24 July 1975 10	Éast, 773-1	East, 779-11	11-2	12 June 1978
	2606 (5088, 5089, 5401)	4		East, FFS-M	0 - E	21 11 June 1981 27
52	1047 (2729, 2730)	21 June 1975	žast, 178−N	Bast, 775-#	9	16 June 1978
	2729 (5331, 3786)	•		Last, /75-3	P m	21 7 June 1981 27
8	1219	27 June 1977	East, 778-2	Bilo Bay, Mawaii-O	<u>1</u>	2 July 1978
st.	2259, 2260	2 July 1977	Bast, 178-3	Kast, <u>17</u> 5-3	1-10	5 Kay 1979
	2259, 2260	0		East, 778-3	01	24 June 1979
	2259, 2260 (6067)		·	Last, 775-3	9	10 June 1982 30
55	1237, 1799 (3033)	13 April 1976 14	Tri s, 778-3	Trig, TB-B	3-1	3 May 1979
	1237	1		Trig, 19-3	0-I	15 June 1979 23

Considered Triests thele 1.00 ł ŝ 1 1 orieinelle ł ٦ ohee Table 3, --Recovery data for female green turtles

-

ø

		I	1			
Ratry No.	Tag Ko.	Date tagged/ expedition No.	Location tagged and status	Location recovered and status	Interval years/months	Date recovered/ expedition No.
\$	1239	14 April 1976 14	Trig. 178-3	Trig, 778-1	3-1	3 May 1979 22
22	2003 (1718, 1719) 2003 (3034)	3 December 1975 12	Tris, 7 75-5	Irig, F78-5 (C-meter) Whale-State, F78-5	1 1	3 May 1979 22 16 June 1979
8	941 (3083, 3084) 941	17 Tebruary 1975 7	Trig, 179-8	Trig, 179-5 (D-mter) Trig, 175-5	4- 3 D-2	23 6 May 1979 29 June 1979
23	1202 (3057) 1202, 3057 (6067)	20 J anuary 1976 13	Mullet, J75-B	Edat, 779-B East, 775-N	1 1	23 5 May 1979 9 Juna 1962
60	1255	10 May 1976 15	Trig, WS-B	Irig, 778-1	5-5	30 18 Pebruary 1979
61	1231	13 April 1976 14	Tris, 778-b	Tri s, 178-1	3-1	2 May 1979 22
62	1201 (3129, 2032)	17 Japuary 1976 13	Irig, 778-8	Trig, FFS-B	3-5	17 June 1979 23
3	3062 (3130) 3062 3130	6 May 1979 22	Trig, 77 8-5	Trig. 178-8	0-1	9701 amit 11
3	3076	6 NLY 1979 22	Whale-State, 7 2-3	Whate-Skate, 778-1	0-5 0-5	26 Jane 1979 26 Jane 1979
65	3019	2 May 1979 22	Whale-Skate, 115-5	Whale-State, 178-5	0-2	29 Junne 1979 23
ç	1268	2 July 1976	Lest, 778-1	Test, 778-B	1	24 June 1979 23
67	2232 (3248)	26 J une 1977 18	Sast, F78-M	Kast, FF3-5	2-0	26 June 1979 23

Table 3.--Recovery data for female green turtles observed or originally tagged at French Frigate Shoals (FFS).--Continued.

r.

26

,

.

Table 3.--Escovery data for female green turtles observed or originally tagged at French Frigate Shoals.--Continned.

.

	tag Ilo.	Date tagged/ empedition No.	Location tagged and status	Location recovered and status	Taterval yaars/months	Date recovered/ expedition No.
÷	2236, 2239	1977 annis († 1977)	Lut, 778-1	Last, 771-3	9	27 June 1979
	2238, 2239 (5 5442)	441, ¹⁰		Lat, 779-8	9 7	23 17 June 1981
	2238 (6061, 61	068)		East, 778-3	1 1	22 11 Jume 1982 26
69	1216, 2217	26 June 1977	Kast, 775-11	Lut, 773-8	2-0	
	2216, 2217 (N 5348)	147, L8		Last, 175-H	3-1 0	23 1981 auni 8 77
2	2235, 2237 (31	(45) 28 June 1977	Kest , FPS-N	Gatt, 779-1	2-0	1979 amit 81
	3145 (2002)			Best, 775-#	2 -0	23 6 June 1981
Ľ	2209, 2210	25 June 1977	Last, 773-H	Bast, 773-11	Å	24 June 1979
	2209, 2210 (53 3846)	19, 16		Last, 775-4	2-0	25 6 Jana 1981
72	223, 2254 (32	28) 2 July 1977	Zast, 775-2	Bast, 775-6	2-0	24 June 1979
	2233, 2254, 32 (5409)	28 28		Lust, 778-H	11-1	23 12 June 1981 27
2	2240 (3231)	7791 amui 825	Last, 771-1	Rest, 777-1	7 7	25 June 1979
	2240, 3231 (53 5411)	1 4, 18		Leac, 778-1	3 -0	23 13 Jume 1981 27
*	2268 (3257)	2 July 1977 18:	Last, 773-1	Lat., 77-1	3-0	28 June 1979 21
52	2255 (3266)	2 July 1977 18	Last, 775-1	Lett, 775-R	2-0	28 June 1979 23
22	5016, 5018	8 May 1977	Laslualu, Namaii-O	Lat, Mi-I	2-I	23 June 1979
	5016 (5185, 51) 5187)	B 6,		Let, J'B-I	11-11	23 30 key 1981 27

•

•

.

27

Table 3.--Recovery data for female green turtles observed or originally tagged at French Frigate Shoals (FFS).--Continued.

Kintry No.	Tag No.	Date tagged/ expedition No.	Location tagged and status	Location recovered and statue	Interval years/months	Data recovered/ expedition No.
F	651 (3264, 3265)	18 J une 1973 I	Sast, FFS-J	Bast, 178-3	9	28 June 1979 23
78	3054 (3160)	5 May 1979 22	Last, 225-5	Kast, 228-M	0-1	19 June 1979 23
7 9	3055 (3163)	5 May 1979 22	Las t, 77 9-3	Last, 775-W	1-0	19 June 1979 23
8	3006 (3206)	2 May 1979 77	Trig, 778-5	Kest, ?? 8-3	0-2	23 June 1979
	3006	1		Whale-State, 773-5	11-1	23 6 June 1981
	3008 (6064, 6065)			Tern, 175-5 Lest, 273-1	1-10 0-1	27 30 April 1982 9 June 1982
. 81	2652 (3653, 3772)	13 June 1976	East, <u>FP</u> S-H	Kast, 179-1	7 7	05 0961 ammi 11
	2632, 3772 (6161)	ត		Bast, 278-8	2-0	24 17 June 1982 30
5 2	2690 (3590, 3669)	15 June 1978	Best, 778-H	Last, 173-1	2-0	14 June 1980
	2690, 3590 (6130)	1		見ねまし、 丁丁二二 一	7-0	24 12 June 1982 30
3	2805, 2806 (3656)	19 June 1978 23	Last, 175-3	East, 773-11	2- 0	24 June 1980
	2805, 2806 (6228)	1		Bast, 128-M	2-0	24 8 June 1982 30
	2805			Rest, 223-5	0-2	3 August 1982 31
3	2589, 2590 (3672).	11 June 1978 21	East, 278-3	East, 175-1	2-1	29 June 1980
	2589, 2590 (6262, 6263)	1.	•	氏山と、「宇治一派	5 -0	24 12 June 1982 30
5	2218, 2219	2 July 1977 18	Lest, 778-H	žast, 778-0	2-11	10 June 1980 24
2	2257 (3584)	2 July 1977 12	Zast, 378-1	East, 775-2	2-11	13 Jume 1980
	2257, 3584 (6121)	1		Last, 779-5	2-0	12 Ju ne 1982 30

28

•

·

bt i nued
i (FSS
Shoald
Frigate
French
Ħ
tagged
11,
rigina
5
ę
observ
turtles
green
era le
DL E
ज च
đ
Recovery
le J
Tab

Entry		Date transit/				
що.	tag Ho.	expedition No.	Location Cagged and status	Location recovered and status	Interval years/months	Date recovered/ expedition No.
87	2249 (3594)	30 June 1977 18	East, FPS-H	Etet, 770-X	2-11	14 June 1980
	2249, 3594 (6141)	8		L ast, 775-3	2-0	24 14 June 1982 30
8 8	2227 , 2228	27 June 1977 18	1987 , 17 9-1	East, 775-X	3-0	17 June 1980 24
68	2222 (3612, 3613)	27 Jume 1977 18	Zest, FFS-H	Rast, 275-H	<u>5</u> -6	19 June 1980
	2222, 3612 (6215, 6227)	2		Bast, 275-H	2-0	24 19 June 1982 30
8	2245, 2246 (3634, 3645)	30 June 1977 18	East, FFS-A	Zast, PIS⊷K	Ĩ	23 June 1980
	2246, 3634, 3645	2		Bast, FFS-K	2-0	24 20 June 1982 30
16	2233, 223 4,	28 June 1977	Last, 775-H	Last, 178-11	ц Ц	22 June 1980
	2233, 2234 (6123)	9		月46日, 176-1 5	2-0	24 12 June 1982
92	2212 (3643, 3644)	25 June 1977 18	East, F73-H	East, 779-2	3-0	23 June 1980 24
53	1058 (3619, 3635)	16 June 1975 9	Rast, 778-0	Gast, FFG-H	9 -0	22 Juma 1980 24
2	751 (3622, 3623)	30 June 1974 3	5ast, 775-1	西南省亡。 建学货一员	6-0	20 June 1980 24
55	802 (3659, 3660)	16 July 1974 4	Bast, 778-A	East, 775-M	5-11	25 June 1980 24
96	859 (3591)	l August 1974 5	Zast, 773-0	544 t, 773-1	5-10	14 June 1980 24
97	677 (3592, 3593)	13 July 1973 1	5est, 779-X	E4st, 776-3	6-11	16 June 1980
	3593 (6225, 6226)	I		East, 778-3	2-0	24 6 June 1982 30
86	956FH (3773, 3774)	16 May 1971	Lest , 72 5-3	54st, 775-11	1-6	11 June 1980 24

No.	Tag Io.	Date tagged/ expedition No.	Location tanged and status	Location recoverad and status	Interval years/months	Date recovered/ expedition No.
8	3164 (3760)	19 June 1979 23	Whale-State, 775-5	Whale-State, 775-B (Freq. 491)	0-1	9 June 1980 26
100	2716, 2717	15 June 1978	Whale-Shate, 778-5	Whale-State, FFS-B	2-0	8 June 1980
	2716, 2717 (6172)	7		Whale-State, 778-3	2-0	24 17 June 1982 30
101	115 PH, 98 6	Ł7 September 1966	Layeen-B	Whale-Skate, 175-5	8-9 -9	21 May 1975
	115 TV, 98 6			Whale-State, 178-5	1 -5	8 30 June 1980
	115 F 4, 986 (3678)			Laysan-2	1-10	24 22 April 1982 Ar
102	1247	17 April 1976 14	Trig, 778-8	Trig, 778-3	4-2	9 June 1980 24
103.	665PH (3570, 3571)	22 March 1968	Pearl and Hermes-B (Freq. 200)	trig, 228-1	12-3	9 June 1980 24
104	3182, 3183	20 June 1979 25	Kast, 778-W	Chum's Reef, Oshu-O	6-1 6-1	20 Mærch 1981
	3182 (3723, 5281)	9		East, 778-2	0-2	4 June 1981 27
105.	3636	22 June 1980 24	Lest, 778-5	िक्ताो स्वयं विक्तांकक⊨ि	Ĵ	28 March 1981 16
106	2758	17 June 1978 21	žast, 178-5	Pearl and Kernes-5	2-9	28 March 1981 18
107	2207, 2208 (5145, 5412, 3707)	25 June 1977 18	Lat, 77 8-2	Gast, 79 2-2	4-0	13 June 1981 27
108	2223, 2224, 2225 (5320)	27 June 1977 18	Ka t, 77 6+3	Last, 179-1	0 m	6 June 1981 72
109	2241, 2242 (5296, 5378, 3800)	28 June 1977 18	Lut, 11%-1	Rest, 175-1	9 H	10 June 1981 27
110	2271, 2272 (5276, 393)	3 July 1977 18	lest, 175-X	. Last, 775-3	ł	16 June 1961 27

. Table 3.---Recovery data for feasie green turtles observed or originally tagged at French Frigate Shoals (FFS).---Continued.

11

80

. . .

ł

Rotry No.	Tag No.	Date tagged/ erpedition No.	Location tagged and status	Location recovered and statue	Intervel years/months	Date recovered/ expedition Ho.
tu	2577 (5076, 5077)	11 June 1978 21	Keet, 778-#	Sast, 775-1	6	16 June 1981 27
112	258 4, 2 585	10 June 1978 21	Baat, FFS-E	Eest, 778-8	2	10 June 1981 27
113	2587, 2588 . (3385)	11 June 1978 21	Last , 77 8-6	Цанк, 77 8-Ж	r F	10 Jame 1964 27
114	2603, 2604	12 June 1978 21	<u> Kast, 77</u> 9-3	Rast, 773-8	Û	26 May 1981 27
511	2244 (5299, 3778)	29 June 1977 18	Kast, 779-N	Bast, J78-6	4	16 J ame 1981 27
116	2607 (5249, 5250)	12 June 1978 21	Kast, 179-N	But, 123-2	0 1	14 June 1981 27
117	2653, 2654 (5091)	14 June 1978 21	Last, 775-2	546 t, 278-1	9-E	8 J une 198 1 27
116	2666, 2678 (5372)	14 June 1978 21	Lut, 175-11	East, 178-3	0-E	15 June 1981 27
611	2692, 2693 (5072, 5243, 5244)	15 June 1978 21	Sast, J79-N	Las t, 7 79- H	3- 0	16 J ume 1981 27
120	2694, 2677 (5191, 5424)	15 June 1976 21	Last, 775-11	Last, FFS-A	30	14 June 1981 27
121	2696, 2697 (5146, 5204)	20 June 1978 21	Zast, 773- 2	East, FS-M	3-0	18 June 1981 27
121	2705 (5434)	15 June 197 5 21	Whale-State, IFS-5	Whale-State, FFS-B	Ĩ	16 June 1981 27
12	2767, 2768 (5341, 5342)	16 June 1978 21	Kaot, 77 9-11	Last, 179-1	3-0	8 June 1981 27
124	27 69, 2770(5130, 5287)	18 June 1978 21	346t, 773-8	Lest , 17 5-3	0-6	16 June 1981 27
125	2775	18 June 1978 21	Gin, 779-3	6.n. 713-3	5	3 June 1964 27

Table 3.- Recovery data for female green tuttles observed or originally tagged at Franch Frigate Shoals (FFS).- Continued.

,

12

.

(FFS)Continued.
Shoals
Prigate
French]
ų
tagged
originally
H
observed (
turtles
Втеец
female
b
44
det
3Recovery
e
3

ព

Entry No.	Tag No.	Date tagged/ ezpedition Mo.	Location tagged and status	Location recovered and atatua	Interval years/months	Date recovered/ expedition No.
126	2740, 2741 (3802, 5379)	17 June 1978 21	Rast, 278-4	Last, FTS-H	3-0	6 June 1981 27
12)	2785,2786 (3798, 5346)	18 June 1978 21	East, ff5-N	East, FFS-H	3-0	8 June 1981 27
128	277L(3750, 5094, 5095)	18 June 1978 21	5ast, 778-8	East, 775-X	3-0	11 June 1981 27
129	(0065) 9922	18 June 1978 21	Kast, 175-H	East, FZS-M	0-6	5 June 1981 27
130	2794 (3803, 5063, 5137)	19 June 1978 21	Esst, 178-B	East, FFS-A	0 F	10 June 1981 27
131	2803 (3783, 5316)	19 June 1978	Kast , J7 8-8	East, 27 8-H	3-0	1861 anni è
132	2807 (5283, 5284)	24 19 June 1978 21	Bast, 775-B	East, 77 8-6	30	27 4 June 1981 27
133	2808	19 June 1978 21	3ee t, 77 5-0	Last , 175-8	30	10 June 1981 27
134.	2815, 2816 (5438)	20 June 1978 21	Last, FFS-M	East, FFS-H	9-E	18 June 1981 27
135	2817 (5157)	20 June 1978 21	Whale-Skate, 773-B	Whale-Skate, FFS-B	2-11	30 May 1981 27
136	(ST N S) /IOE	2 May 1979 22	Whele-State, 175-B	Whale-Skate, FFS-5	2-1	13 June 1981 27
137	3029 (5383)	3 May 1979 22	Bast, 773-B	Baut, 775-8	2-1	10 June 1981 27
861	3140, 3141 (5214, 5230)	18 June 1979 23	But, <i>1</i> 78-1	548 L, 178-N	2-0	15 June 1981 27
661	3087 (5156)	21 June 1979 23	Wuele-State, Fis-B	Hhale-Skate, 775-3	1-11	30 May 1981 - 27
140	3213, 3214 (3837, 5420)	23 June 1979 23	East, 728-3	5440, 773-H	2-0	16 June 1981 27
141	3232 (3827, 5375)	23 June 1979 23	Zust, 779-8	East, 775-5	7 -0	14 June 1981 27

Entry No.	Tag No.	Date tagged/ expedition No.	Location tagged and status	Location recovered and status	Interval years/months	Date recovered/ expedition No.
142	3254, 3255	28 June 1979 23	Last, 278-H	Eut, 173-1	11-1	30 May 1981 27
143	3157, 3178 (5368)	20 June 1979 23	Bast, MS+H	Bast, 273-3	2-0	8 June 1981 27
Ŧ	1019, 1020 (5184, 5241, 5242)	25 July 1975 10	Gast , 77 5-X	Last, 77 3-#	5-11	16 June 1981 27
145	645 (3701, 3810, 5139)	12 June 1973 1	Jast, jf 3∽K	East, 273-2	0 -	11 J une 1981t 27
146	830 (5138, 5194)	7 August 1974	Š ast, 7 73-N	34st, 775-9	6-10	14 J ume 198 1 27
141	1292, 1293 (3748, 5090)	8 July 1976 16	医血血化。 正空场一顿	Rast, FTS-II	4-11	15 June 1981
	1292, 1293, 5090	2		Lis <mark>tant</mark> i-3	0-10	27 22 April 1982 JR
148	3703	30 May 1961 27	Kast, 278-3	Tere, 77 8-N	02	31 July 1981 35
149	1206	10 April 1976 14	Trig, 179-8	Tere, 173-M	1	31 July 1981
150	2761, 2763 (5515, 5516)	18 June 1978 21	Euct, 178-11	Ala Waí, Oahu-O	3-2	3 Augmet 1981 CB
151	3473 (5522)	7 September 1980 25	Whale-Skate, 778-5	Little Morch Is., Pearl and Hermes-B	0-11	7 Angret 1981 G1
152	123	13 April 1976 14	Trig. 778-B	Irig, J73-b	9 9	14 April 1982 29
153	9[1]FW (2968, 2969, 2970, 2024) 2968, 2969, 2970, 2024, 2969, 2970, 2024, 2969, 2970, 2024	March 1966	8-51	BE, Pearl and Earnes-B SE, Pearl and BErmas-B BErmas-B	12-7 2-6 04	5 October 1978 GB March 1981 28 March 1981 8 August 1981 Ca
154	1983	11 June 1981	Tri t, 178-B	Tris, 778-5	0-10	14 April 1982
	5397 (6179)	4		Male-Skate, FF5-5	0-2	

.

Table 3.--Recovery data for feaste green turtles observed or originally tagged at French Frigate Shoals (FFS).--Continued.

14

.

	Tet No.	Date tagged/ expedition No.	Location tagged and status	Location recovered and status	Interval yeare/months	Date recovered/ expedition tHo.
155	3167	19 June 1979 23	Whate-Skate, FF8-B	Whele-Skate, 778-5	2-10	15 April 1982
	3167 (6238)			Whale-Skate, 773-3	0-2	29 21 Jume 1982 30
1%	3579, 3580	25 June 1980 24	East, 728-1	Layean-B	1-9	20 March 1982 AK
157	5096, 5182	6 June 1981 27	Bast, 77 3-8	Leysen-B	1-10	3 April 1982 Ar
158	(161) (2013)	8 June 1981 27	Mhale-State, 178-5	Laysen-B	11-1	18 May 1982 AK
159	43[1]7V (3554, 3555)	March 1967 (1)	Lisianski-B	Whale-State, PFS-B	13-3	8 June 1980
	3554			Lieisnski-B	6- 1	24 28 March 1982 28
160	2251, 2252 (6115, 6116)	1 Jul y 1977 18	East, 279-3	Esst, 275-8	ĩ	11 June 1982 30
161	2580, 2581 (6032, 6033)	10 June 1978 21	Čest, 779∽W	Kast, 775-11	4	20 June 1982 30
162	2651,2671 (5994, 6129)	16 June 1978 21	54st, 775-11	Last, 778-1	4-0	24 June 1982 30
163	2791, 2792 (6118, 6119)	19 June 1978 21	Gant, 278-W	Bast, 778-9	4-0	25 Junie 1982 30
164	2742, 2743 (6184)	17 June 1978 21	East , 778-M	Baut, 178-1	4-0	18 June 1982 30
165	2591, 2812 (6026)	20 June 1978 21	Lest, 775-W	Bast, ITS-I	0-4	24 June 1982 30
166	2804 (6000, 6210)	19 J une 1 978 21	Last, 178-8	Zast, 773-3	4	20 June 1962 30
167	2015	20 June 1975 21	Whale-Shate-778-5	Whate-Skate, 178-5	4	25 June 1962 30
168	3137, 3138 (6138)	17 June 1979 23	Zest, 228-5	Last, 779-2	3-0	16 June 1982

đ 1 2 2 Þ Table 3.--Escovery data for female green turtles observed or originally tagge

15

84

•

Table 3.--Recovery data for female green turtles observed or originally tagged at French Trigate Shoals (FTS).--Continued.

.

Katry No.	Tag No.	Data tagged/ expedition No.	Location tagged and status	Location recovered and status	Interval years/monthe	Date recovered/ erpedition Ho.
169	3142, 3143 (6153)	18 June 1979 23	Last, 778-1	Last, 175-1	9	16 June 1982 30
170	3151, 3158 (6163)	19 June 1979 23	L at, //5- 1	₿₼₽ ₽, 7 28~6	2	17 June 1982 30
171	3146, 3147 (6211)	18 June 1979 23	Last , 173-11	Sast, MS-2	9	20 June 1982 30
172	3149 (6187, 6203, 6204)	18 June 1979 23	Lest, 779-1	East, 778-1	.	19 J une 1982 30
E71	3139, 3161 (620 8 , 6209)	19 June 1979 23	Kaat, 773-X	Lat, W-I	9	19 June 1982 30
174	3155 (6216)	19 June 1979 23	Šast, 773∼8	East, 175-1	9-6	20 Jume 1982 30
175	3165	19 Jame 1979 23	Whale-State, 728-5	Mult-State, 175-3	9	17 June 1982 30
176	3129, 3124	16 June 1979 23	Whale-Skate, 775-3	Wale-State, 173-5	7	17 June 1982 30
111	3243, 3244 (6029)	29 June 1979 23	Bast, 128-3	Kast, 775-3	9 M	19 June 1982 30
178	3201, 3202 (6255)	21 June 1979 23	Bast, <u>22</u>5-0	Rast, 778-H	•	23 Jume 1982 30
179.	3211, 3212 (6189, 6190)	24 June 1979 23	Bast, 178-1	East, 275-3	5	18 June 1982 30
	0619	Ì		B461, <i>11</i> 8-5	6-2	4 August 1982 31
100 ·	3220, 3221	24 June 1979 23	Zast, 77 6- H	kut, 775-9	9 6	20 June 1982 30
181	3226, 3227 (6251, 6252, 6253)	25 June 1979 23	Kest, 779-8	Last, 775-X	9	23 June 1982 30

.

85

16

Matry No.	Tag No.	Date tagged/ expedition Mo.	Location tagged and status	Location recovered and status	Interval years/months	Date recovered/ expedition No.
182	3246, 3247	27 June 1979 23	Lwt, <i>1</i> 78-3	East, 775-5	P m	8 June 1982 30
183	3595, 3596 (6094, 6099, 6100)	28 June 1980 24	Bast, <u>F</u> S-N	<u> 546</u> t, 77 8-H	70	22 June 1982
	609	Ì		East, 775-5	0-1	JU 3 August 1982 31
184	3587, 3597	27 June 1980 24	East, FES-M	East, 779-1	2-0	23 June 1982 30
185	3632, 3633 (6135, 6259)	21 June 1980 24	Kant, 175-I	Lat, 775-1	2-0	25 June 1982 30
186	3602, 3603 (6209)	29 June 1980 24	East, 778-11	East, 728-E	2-0	19 June 1982 30
187	3606	29 June 1980 24	East, FFS-A	Whele-Skate, 775-3	2-0	17 June 1982 30
186	5453	September 1981 BS	Tern, 173-3	Tem, 178-1	6 -0	10 June 1962 30
189	5454 (6218)	Артіl 1982 З а	Tern, 173-b	East, 179-11	0-2	19 June 1982 30
8	5458	16 May 1982 Ja	Tern, 178-5	Trig, 275-8	6-1	25 June 1982 30
191	4951, 5782	L5 April 1982 29	Whale-Skate, 778-5	Mule-State, 175-3	0-1	17 June 1982 30
192	7 80, 815 (6035, 6036)	16 June 1974 3	Last, 198-M	E4st, 773-3	8-0	25 June 1982 30
193	1286 (6095, 6096)	7 July 1976 16	Last , 178-8	344t, 77 5-3	6-0	24 Junha 1982 30
194	3600, 3601 (6256)	29 June 1980 24	Last, 179-F		2-0	23 June 1962 30
195	6126 (5472)	12 June 1982 30	Last, 775-H	Kast, 779-X	0-2	3 Augmat 1982 31
196	6219, 6220, 6230	21 June 1982 30	Latt, JT5-K	Bast, 779- H	9-1	3 August 1982 31

Table 3.---Recovery data for female green turtles observed or originally tagged at French Frigate Shoals (F7S).---Continued.

17

86

•

														•••.	• • • •	•	
	Date recovered/ expedition No.	3 Андинс 1982 31	3 August 1982 31	3 Андтыс 1982 Зі	14 July 1982 RL	3 September 1982 32	3 September 1982 32	16 May 1982	JA 19 October 1982	LI Bovember 1982 21	2 July 1982	AK 29 October 1982 AK	30 October 1982 AK	5 November 1962	17 Jappary 1983 BP		1
	Interval Pears/months	6-7	0-2	1-0	0-I	0-1	2-2	9 -0	0-5	0-1	2-0	Ĩ	1	1-5	3-7		
	Location recovered and status	Rest, PPS-H	East, 795-8	East, 775-M	Whale-State, ffS-N	5444, 775-H	544t, 27 5-8	Tera, 77 5-b	Tern, 773-B	Tera, FFS-B	SE, Pearl and Hermes-b	SE, Pearl and Hermes-B	Horth I., Pearl and Eermes-3	Lisieneki-5	No lokai-Ob		
•	Location tagged and status	Last, 778-1	Čast, 773⊷K	Lest, FTS-N	Zeac, 273-M	East, 275-5	Gast, YTS-M	Tern, FFS			East, FFS-W		East, 775-3	East, 775-16	Whale-Skate, 778-5		
	Date tegged/ expedition No.	8 June 1982 30	17 June 1982 30	25 June 1982 30	22 June 1982 30	3 August 1982 31	24 June 1980 24	September 1981 20	6		29 June 1980	3	20 June 1982	14 June 1981 27	21 June 1979 23		
	Tag No.	6015, 6031	6185	6182 , 6242, 6260	6 010, 6011	5471 (5475, 6351)	3654, 3655	5452	54.52	5452	3604, 3 6 05, 3672	3671	6156, 5992	5200, 5201 3707, 3830	3188° 3269		
	Entry No.	197	196	661	200	201	202	203			204		205	206	207		

Table 3.- Recovery data for female green turtles observed or originally tagged at French Frigate Shoals (FTS).- Continued

-

Table 4.--Shedding rates of Inconel tags: 59 recoveries of double-tagged green turtles at French Frigate Shoals during the 1981 and 1982 breeding seasons (analysis by J. A. Wetherall).

Recovery interval	No. of turtles	No. of turtles	Estimated probability of tag	95% confidence limits on (1-K ₁)		
(1)	with no	with one	shedding	Lower	Upper	
	tags shed	tag shed	(1-K _i)	limit	limit	
2 ·	12	5	0.17	0.02	0.32	
3	17	10	0.23	0.09		
4	7	6	0.30	0.07		
5	1	ĩ	0.33	0.00	0.53	

$$\hat{K}_{i} = \frac{\frac{2r_{di}}{r_{si} + 2r_{di}}}{\frac{r_{si} + 2r_{di}}{r_{si} + 2r_{di}}}$$

where;

 \hat{K}_{i} = Probability of tag retention from the time of tagging until the midpoint of the recapture period i years later.

r = Number of turtles recovered with two tags i years after tagging.

r = Number of turtles recovered with one tag i years after tagging.





Figure 2. --- East Island, French Frigate Shoals.



Figure 3.--Adult green turtles basking on East Island.



Figure 4.--Adult male green turtle basking on East Island.



Figure 5.---Adult female green turtle nesting on East Island.



Figure 6.--Adult female green curtle swimming near bottom.



Figure 7.--Front flipper showing standard placement of tag.

RECENT TECHNICAL MEMORANDUMS

-

Copies of this and other NOAA Technical Memorandums are available from the National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22167. Paper copies vary in price. Microfishe copies cost \$3.50. Recent issues of NOAA Technical Memorandums from the NMFS Southwest Fisheries Center are listed below:

NOAA TM-NMFS SWFC	26	"Possible effects of sampling biases on reproduction rate estimates for porpoise in the eastern tropical Pacific." T. POLACHECK (January 1983)
	27	"Reports of porpoise experiment testing detection of on-track schools (pet dots), March 7-April 5, 1981 " R. S. HOLT (February 1983)
	28	"Two computer programs to project populations with time-varying vital rates." T. GERRODETTE, D. GOODMAN & J. BARLOW (February 1983)
	29	Report of eastern tropical Pacific research vessel marine mammal survey, May 15-August 3, 1982. R. S. HOLT (March 1983)
	30	Estimating age of spotted and spinner dolphins <i>(Stenella attenuata</i> and <i>Stenella longirostris)</i> from teeth. A. C. MYRICK, JR., A. A. HOHN, P. A. SLOAN, M. KIMURA and D. D. STANLEY (April 1983)
	31	Re-estimation of three parameters associated with anchovy egg and larval abundance: Temperature dependent incubation time, yolk-sac growth rate and egg and larval retention in mesh nets. N. C. H. LO (May 1983)
	32	"NMFS guidelines on economic valuation of marine recreational fishing" D. D. HUPPERT (June 1983)
	33	"Summary of environmental and fishing information on Guam and the Northern Mariana Islands: A review of the plankton communities and fishery resources of Guam and the Common- wealth of the Northern Mariana Islands" R. N. UCHIDA (July 1983)
	34	"Some data on dolphin mortality in the eastern tropical Pacific tuna purse seine fishery prior to 1970." T. D. SMITH and N. C. H. LO (July 1983)
	35	"Precision of age determination of northern offshore spotted

dolphins." S. B. REILLY, A. A. HOHN, and A. C. MYRICK, JR. (August 1983)