

BALAZS MOP/MMFS

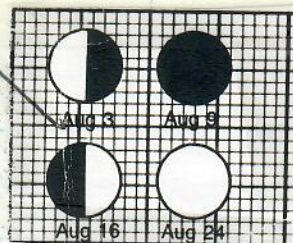
PUNALUU

15-16-17

(step
18)

PUNALUU
BALAZS
1991-1992

2 of 2



need -
plastic containers ✓
→ Video to
Richardson

Aloha - FL 414 9am \$85.50
9 Aug TO Hilo

5 Aug FL 77 5pm

Budget \$23.00 #736 8903

4 AUG 91 Depart FL 414 Aloha 9am for
SUN. Hilo.

Depart FL 77 Aloha
7pm departure

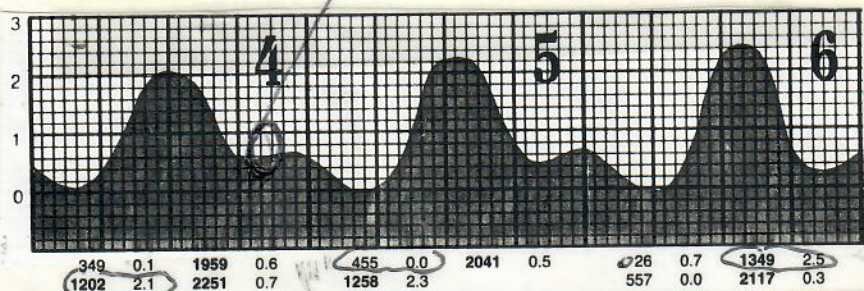
OBJECTIVES:

- 1.) Expose Tom Richardson to hawksbill nesting habitats, as per Robert Smith's FW invitation.
- 2.) Review progress made in predator control, and data collected by NPS.
- 3.) Witness and assess green turtles hauling out at night to bask at home.

4 AUG
1991

8 pm hawksbill

67



SUN.

MON.

Drove to Tom Walsh's home at
Paradise - wife, Carmen
Saw several turtles.

TAGGED N 403 RFL CL-90
N 404 LFL CNL-88

Hawksbill

TAGGED 8 pm ^{OLD} CRACK across RIGHT.
False crawl - up side of cliff
1ST LAT

7 pm - arrive top of cliff.

8/5/91

Z2 clasp hinds
Y644 for new Bay

Tame -
Swam with them

At 7 pm a ~24" green was seen
already hauled out but
being hit every so often by waves.
Turtle made no effort to
pull up higher. At about 7:30 pm

Beach sent
Goes at PMAW

Laure & Ed McKeon
1404 Foothill Rd
Ojai, CA 93023

8/4/91
Sunday

up second smaller turtle (Comp.)
hauled up to the left, in the same
position as the beach, at about
7:45pm (very black - no moon
and black sand) we walked to
look at space between Nguaka
and encountered a hawkbill.
It subsequently hauled up side of
hill slope, couldn't go higher and
turned and headed for the ocean.
At this point we restrained her -
double tagged, and measured.
Easy to do with two people
helping (Larry, Richardson & Eric Hill)

Eric reports turtle came back
the night of 8/5, but "false again"

In addition to greens hauled out,
I saw several feeding close
to rocks - *Herichthys* present.

I checked at 4AM - NO BASKERS, NO SIGNS
OF FURTHER NESTING.

① need - old photos of Kanehame
to determine extent of Naupaka.

② Cut back Naupaka

✓ ③ Letters to papers - Kanehame

④ Several new bulldozed roads in area.

⑤ 30-50 mongoose + 1 cat trapped

⑥ "Telephone pole" light still on.

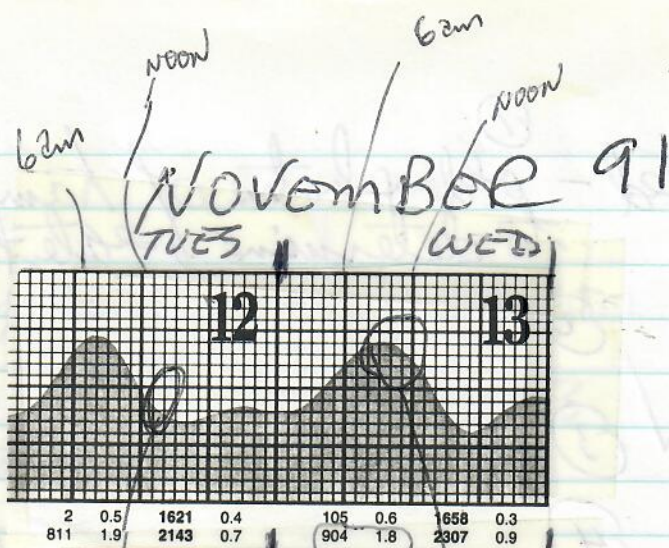
⑦ Orange paint complaint

8/5/91 Monday
Drove out and to Punaluu -
11 AM. Examined Nihoa area -
no nesting signs.

Surveyors going along shoreline spraying
(orange) paint, pounding pipes, and
putting in sticks with plastic flagging.

Saw many turtles feeding in
Punaluu. Richardson and I
swam with them for about 1 hour.

Kids asked "how we had made
them tame by putting toys of them".
One turtle played floating by kids -
flippers on back - let kids pull it
around - seemed to be in "trance"

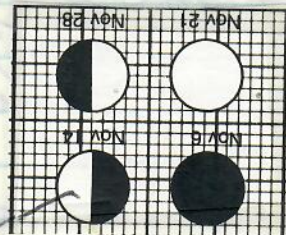


Arrow
4-5pm
3 hand
captures
(2 resightings)
1 new

21 captures
(14 resightings)
7 new

24 CAPTURES TOTAL - ALL HAND - Not not used.
(7 new; 17 resightings)

5 CAPTURES PARILLION - [4 new, 1 recapture.
Boat-ramp side of bay - ~~4~~ new, 5 recapture]



RAIN

12 NOV 91 TUES. FL 414 9:15 am
 13 NOV Wed FL 65 5:40 pm

Tropical - #2578613 #45 MINIVAN
 Tel. 957-0800

12 NOV 91

TUES Depart w/ Russ Moya for Hilo/Punaluu
 Punaluu (#17)

Tropical van GMC for \$48.95.

Drove to Punaluu - arrive ~ 12:30 pm.
 Mrs. Hanoo waiting for us. Described road (P. 72)

Needs

LARGE - PLASTIC TARPS
 - TOWELS

✓ ① Pete Hanoo - T-shirt

② Carry call Nitta Re: Beach Road Punaluu

✓ ③ ECF letter to Larry FWS

✓ ④ Hanoo FWS TEI # Sect (FWS) for beach trail

⑤ Dan Taylor letter (need copy)

⑥ Longterm lease to county - Beach Park?

⑦ Hoda Heiau - Sazaji World owned

⑧ Gt. basking census

⑨ Jeanette - Send handouts

⑩ ALAN Young - CATE 1950's

Kill and Sell on Beach -

(MOMAWAVE) Friend of Dick Young

⑪ Raymond (HANOA?)

⑫ "Access is being limited to protect
 nesting hawksbill turtles" sign.

⑬ light on electric pole now off

⑭ Follow-up on cages UW for algae?

⑮ Talk to Kevin or Dave Rose
 RE: ALGAE CAGE STUDY

Video on KAU - Copies. Black VHS TO CONVEY

Black top & wood:

11/12/91 walkway along Nivole & Horseshoe by
"Sazali World"

11/13/91
Wed.

TUES Students + Walt & Lean arrived ~ 2:30pm.
By 4pm we had 2 teams in the
water, 4 each, w/ Russ and Willy leading
them. Turtles had be regularly
seen prior to entry, but not great
numbers. Below fairlly in tide was
too low for turtles to feed
over boulders. Instead, they were
more toward center of Bay.
Teams caught 3 turtles by
~ 5pm when we stopped.
Rain during evening and early
night - heavy at times.

13 NOV 91 Up ~ 6:30am - breakfast
Wed. at 7:00am. Russ and I
walked to Horseshoe. Spraypaint
not evident now on rocks.
Waves rough across Horseshoe - high
tide soon. Searched for any
evidence of hawksbill nests, but
found none.

2 Teams in the water at ~ 7:45am
Many turtles being seen on both
sides. From ~ 8:15am until
noon we measured, tagged and released
the turtles captured (21 - more).

11/13/91
Wed.

Filming

Les MATSUURA - Hawaii Public Television
+ Mother Theokushi

- Nyssa Kushi - Waialae High School

Visited Project - 8:30 AM - 11:30 AM.

Net not used because captures by
hand stayed high, ∴ net not needed.

Vet. Marta Lopez

VNP Volunteer, knows

Murray Daily.

Students departed - 2 pm.

Spoke to Raymond. Harua?

Mother is Pele Harua. He complained
about too many turtles at Puuvalu,
eating all the algae, which is
decreasing the manini, etc. fish.Wanted to know if I would
support taking turtles by Hawaiians
there. He bought a new "lobster
net" set in at Puuvalu and
caught and drowned 6-8 turtles (at night?).
Said everybody's gill net gets tore
up now by turtles.Wanted to know if turtles could
be moved out of Puuvalu! (Had he
read HFW editorial!) I reminded
him that his mother had complained
about golf course run off affecting
him here.Drove to Nihoa and inspected beach
and shoreline for nesting.

11/13/91
Wednesday

Along NAUPAKA LANE
only 3 depressions noted that
may possibly be excavations
by turtles. If so, they were many
months old, by my estimation.
Lots of rock debris there washed
down by flooding in stream
that filled fishpond.

Drove to Hilo and departed at 5:40pm.

continued
from p. 65

SEA TURTLE TAGGING FORM

79

(20)

CAPTURE DATE, LOCATION AND METHOD:

11-13-91 12:30 HAND

PERSON RECORDING DATA: Echo Jennings

OLD RFL
TAGS:

7541

LFL

7540

TUMOR
SCORE

2253 (L3)

N828 (LH)



NEW TAGS: RFL

LFL

OTHER
NEW
TAGS:

STRAIGHT CARAPACE-LENGTH:

70.7

WIDTH:

~~51.5~~ 56.3

NOTCH LENGTH:

70.5

CURVED CARAPACE LENGTH:

76.0

WIDTH:

71.0

HEAD WIDTH:

10.8

SEX: MALE, FEMALE OR
UNDETERMINED

J

TAIL LENGTH: T

NT

C

NT

RIGHT FRONT FLIPPER WIDTH:

12.1

SAMPLES COLLECTED:

PLASTRON LENGTH:

54.5

WEIGHT:

110

DESCRIPTIVE REMARKS:

~~Flippers~~ Flippers clasped shut; Tail curled; about 5
chipped places on carapace (bone deep)

CAPTURE DATE, LOCATION AND METHOD:

11-13-91 12:45 HAND

PERSON RECORDING DATA: Geno Jennings

OLD RFL
TAGS:

LFL

TUMOR
SCORE

N826

N800

N827(RH)

NEW TAGS: RFL

LFL

OTHER
NEW
TAGS:

STRAIGHT CARAPACE-LENGTH:

73.0

WIDTH:

58.2

NOTCH LENGTH:

72.7

CURVED CARAPACE LENGTH:

77.5

WIDTH:

72.0

HEAD WIDTH:

10.7

SEX: MALE, FEMALE OR
UNDETERMINED

U

TAIL LENGTH: T

15.5

c

10.5

RIGHT FRONT FLIPPER WIDTH:

13.2

SAMPLES COLLECTED:

PLASTRON LENGTH:

56.8

WEIGHT:

113

DESCRIPTIVE REMARKS: PC in mouth

PONALUU #18

① 81

SEA TURTLE TAGGING FORM

CAPTURE DATE, LOCATION AND METHOD:

4-14-92	PONALUU	HAND SNORTAZ
PERSON RECORDING DATA: Lisa D'Orta		4pm

OLD RFL
TAGS:

LFL

TUMOR
SCORE

0

V537
V536
LHV538

NEW TAGS: RFL

LFL

OTHER
NEW
TAGS:

STRAIGHT CARAPACE-LENGTH:

61.9

WIDTH:

49.5

NOTCH LENGTH:

61.7

CURVED CARAPACE LENGTH:

66.0

WIDTH:

60.0

HEAD WIDTH:

SEX: MALE, FEMALE OR
UNDETERMINED

TAIL LENGTH: T

C

RIGHT FRONT FLIPPER WIDTH:

SAMPLES COLLECTED:

PLASTRON LENGTH:

46.8

WEIGHT:

69 lbs

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DESCRIPTIVE REMARKS:

MOUTH CHECK

82

(2) PUNALUU
- #18

SEA TURTLE TAGGING FORM

CAPTURE DATE, LOCATION AND METHOD:

4-14-92

PUNALUU

Hand Snorkel

4 PM

PERSON RECORDING DATA:

LD

OLD RFL
TAGS:

LFL

TUMOR
SCORE

0

V366

V365

RHV367

NEW TAGS: RFL

LFL

OTHER
NEW
TAGS:

STRAIGHT CARAPACE-LENGTH:

58.7

WIDTH:

44.3

NOTCH LENGTH:

58.6

CURVED CARAPACE LENGTH:

62.5

WIDTH:

56.0

HEAD WIDTH:

SEX: MALE, FEMALE OR
UNDETERMINED

TAIL LENGTH:

T

C

RIGHT FRONT FLIPPER WIDTH:

SAMPLES COLLECTED:

PLASTRON LENGTH:

46.2

WEIGHT:

63 lbs.

DESCRIPTIVE REMARKS:

MOUTH CHECK

PUNALUW
#18

SEA TURTLE TAGGING FORM

83

3

CAPTURE DATE, LOCATION AND METHOD:

4-14-92	PUNALUW	Hand snorkel
PERSON RECORDING DATA: LS		4 pm

OLD RFL
TAGS:
LFL

NEW TAGS: RFL
LFL

H191
H192

TUMOR
SCORE

0

OTHER
NEW
TAGS:

LH H193

STRAIGHT CARAPACE-LENGTH:

46.6

WIDTH:

37.7

NOTCH LENGTH:

46.4

CURVED CARAPACE LENGTH:

50.0

WIDTH:

45.0

HEAD WIDTH:

7.7

SEX: MALE, FEMALE OR
UNDETERMINED

--

TAIL LENGTH:

T

9

C

6

RIGHT FRONT FLIPPER WIDTH:

8.8

SAMPLES COLLECTED:

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PLASTRON LENGTH:

36.6

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WEIGHT:

35 lbs

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DESCRIPTIVE REMARKS:

BB

PAVILLION SIDE OF
BAY

mouth check

84

(4)

PUNALUU
#18

SEA TURTLE TAGGING FORM

CAPTURE DATE, LOCATION AND METHOD:

4-14-92 PUNALUU

Hand

Snorkel 4pm

PERSON RECORDING DATA:

LD

OLD RFL
TAGS:

LFL

TUMOR
SCORE

0

Y198

Y199

LH Y200

L3SZZSZ

NEW TAGS: RFL

LFL

OTHER
NEW
TAGS:

STRAIGHT CARAPACE-LENGTH:

72.8

WIDTH:

59.2

NOTCH LENGTH:

72.6

CURVED CARAPACE LENGTH:

77.5

WIDTH:

73.5

HEAD WIDTH:

SEX: MALE, FEMALE OR
UNDETERMINED

TAIL LENGTH: T

C

RIGHT FRONT FLIPPER WIDTH:

SAMPLES COLLECTED:

PLASTRON LENGTH:

58.1

WEIGHT:

DESCRIPTIVE REMARKS:

mouth
checkPrecentral prop slash nearly
all healed.

PUNALUU
#18

85

(5)

SEA TURTLE TAGGING FORM

CAPTURE DATE, LOCATION AND METHOD:

4-14-92	PUNALUU	Hand
PERSON RECORDING DATA: LD		snorkel 4pm

OLD RFL
TAGS:

LFL

TUMOR
SCORE

0

Y195
Y196
R3-42259
RH Y197

NEW TAGS: RFL

LFL

OTHER
NEW
TAGS:

STRAIGHT CARAPACE-LENGTH:

72.1

WIDTH:

55.8

NOTCH LENGTH:

71.6

CURVED CARAPACE LENGTH:

77.0

WIDTH:

73.5

HEAD WIDTH:

SEX: MALE, FEMALE OR
UNDETERMINED

TAIL LENGTH: T

C

RIGHT FRONT FLIPPER WIDTH:

SAMPLES COLLECTED:

PLASTRON LENGTH:

56.4

WEIGHT:

DESCRIPTIVE REMARKS:

PAVILLON SIDE OF BAY

MONTH CHECK: PTER. in
mouth

Central & left lateral
split + merged
5 laterals on Left

86

(6)

PUNALUU
#18SEA TURTLE TAGGING FORM

CAPTURE DATE, LOCATION AND METHOD:

4-14-92 PUNALUU

HAND SNORKEL

PERSON RECORDING DATA:

US

4PM

OLD RFL
TAGS:

LFL

TUMOR
SCORE

0

7541

7540

L3S Z253

LHN828

NEW TAGS: RFL

LFL

OTHER
NEW
TAGS:

STRAIGHT CARAPACE-LENGTH:

71.0

WIDTH:

56.4

NOTCH LENGTH:

70.9

CURVED CARAPACE LENGTH:

76.0

WIDTH:

71.0

HEAD WIDTH:

SEX: MALE, FEMALE OR
UNDETERMINED

TAIL LENGTH: T

C

RIGHT FRONT FLIPPER WIDTH:

SAMPLES COLLECTED:

PLASTRON LENGTH:

54.8

WEIGHT:

DESCRIPTIVE REMARKS:

PRUDENT BEHAVIOR

mouth check:
PTER. in mouth

PUNAWU #18

SEA TURTLE TAGGING FORM

87

(7)

CAPTURE DATE, LOCATION AND METHOD:

4-14-92 PUNAWU Hand Snorkel

PERSON RECORDING DATA:

WS

4PM

OLD RFL
TAGS:

LFL

TUMOR
SCORE

0

7604
7605
L3-4E258
RH4654

NEW TAGS: RFL

LFL

OTHER
NEW
TAGS:

STRAIGHT CARAPACE-LENGTH:

73.8

WIDTH:

59.0

NOTCH LENGTH:

73.6

CURVED CARAPACE LENGTH:

78.0

WIDTH:

73.0

HEAD WIDTH:

SEX: MALE, FEMALE OR
UNDETERMINED

TAIL LENGTH: T

C

RIGHT FRONT FLIPPER WIDTH:

SAMPLES COLLECTED:

PLASTRON LENGTH:

57.1

WEIGHT:

DESCRIPTIVE REMARKS:

NOMOUTH CHECK

HAND CAPTURE BY GHB
NO RESISTANCE.
PRUDENT BEHAVIOR
MATING POSE?

88

(8)

END OF DAY 1

SEA TURTLE TAGGING FORM

GO TO BOOK II PUNALUU #18

CAPTURE DATE, LOCATION AND METHOD:

4-14-92	PUNALUU	HAND Snorkel	4PM
PERSON RECORDING DATA: LS			

OLD RFL
TAGS:

LFL

TUMOR
SCORE

N388
N389
RHNS37

NEW TAGS: RFL

LFL

OTHER
NEW
TAGS:

H194 - LH

STRAIGHT CARAPACE-LENGTH:

WIDTH:

NOTCH LENGTH:

CURVED CARAPACE LENGTH:

WIDTH:

HEAD WIDTH:

SEX: MALE, FEMALE OR
UNDETERMINED

TAIL LENGTH: T

C

RIGHT FRONT FLIPPER WIDTH:

SAMPLES COLLECTED:

PLASTRON LENGTH:

WEIGHT:

DESCRIPTIVE REMARKS:

MOUTH CHECK
 PHOTOGRAPIED BY: TRACY MAYER
 bridges ~ 1cm out
 #2 TUMOR (2) DORSAL
 EYE length 1.9cm
 50% Blockage

PUNALUU #16 16-17 JULY 91

Tag No.	Straight (cm)		Curved (cm)		Tumor Ranking	Comments
	Length	Notch	Length	Width		
Expedition date 07/16/91						
① V356 (07/16/91), Y191, Y192	59.8	59.3	63.5	53.5	0	Punaluu; LFF used for width measurement. Mouth examined w/ speculum.
② Y198, Y199, Y200, Z252	71.5	71.3	77.0	73.0	0	Punaluu; examine mouth - pterocladia present. Precentral & 1st Marg. left - likely prop slash (healing)
Expedition date 07/17/91						
③ 6360, 6361, Y650	87.7	87.7	93.0	88.0	0	Punaluu; Skin & burrowing barns. in plastron, mouth checked.
Expedition date 07/17/91						
④ 6714, 6715, 6716, 6717	79.1	79.0	86.0	78.0	0	Punaluu; recap from 11/26/83 SL=71.1 cm. Mouth checked.
⑤ 7540, 7541, 7542, N828, Z253	70.9	70.5	76.5	71.5	0	Punaluu; mouth checked, worn beak end, picked out BB's (5). HF's tightly clasped, unable to take tail measurements. Missing tag 7542 orig. tagged 12/17/83 at R34 position.
⑥ 7604, 7605, Y654, Z258	73.2	73.2	78.5	73.5	0	Punaluu; Mouth checked
⑦ N553, N554, N555, Z230	71.3	71.0	77.5	72.0	0	Punaluu; mouth checked, worn grooves on beak
⑧ N829, N830, N831	68.3	68.0	75.0	69.0	0	Punaluu; mouth checked
⑨ V357, V358, V359	66.4	66.1	72.0	66.0	0	Punaluu; mouth checked, end of beak abraded grooves. LFL missing and healed - possible tag today

now

--Continued

3

Tag No.	Straight (cm)		Curved (cm)		Tumor Ranking	Comments
	Length	Notch	Length	Width		
Expedition date 07/17/91						
V360, V361, V362	52.7	52.4	57.0	49.5	0	Punaluu; mouth checked, PL - skin barn, 1-burrowing barn. Lower right jaw edge serrations broken.
V365, V366, V367	54.9	54.9	59.0	53.5	0	Punaluu; mouth checked - Pterocladia capillacea present. 10-11th marg. - healed groove.
V364 (07/17/91), Y186, Y187	68.5	68.2	73.5	65.0	0	Punaluu; mouth checked, 2nd L. lat. healing gouge (12 X 2.5 cm).
Y640, Y641, Y642	62.6	62.0	68.0	66.0	0	Punaluu; mouth checked - small yellow scabs on tongue, PCA, 9th 10th and 11th L. marg. partly missing but healed. Small white-healed pimple R. eye.
Y646, Y647, Y648, Z254	66.9	66.7	71.5	66.5	0	Punaluu; R2S Missing and healed, PC in mouth.

--Continued

4

Tag No.	Straight (cm)		Curved (cm)		Tumor Ranking	Comments
	Length	Notch	Length	Width		
Expedition date 07/17/91						
N538, Y653, Z2	66.8	66.6	70.0	68.5	0	Punaluu; Tail measurements NT - hind flipper clasped so tightly together that it wasn't possible, (prude!). 10% tip of LFL missing. Joe Zuckerman - Photo.

16-17 JULY 91 PUNAWU #16

7* Turtles also caught last trip 4/91 Punawu #15

1. Y191, 192 (V356)

② 2. Y198, 199, 200; Z252 = 4/89 - 11/90 - 4/91

③ 3. Y646-648; Z254 = 4/90 - 11/90 - 4/91

4. 7604-05; Y654; Z258 3/84 -

④ 5. 6714-6717 $\stackrel{5/79.1}{=}$ 11/83 - 3/84 - 7/90 - 4/91

⑤ 6. Y640-Y642 = 4/90 and 4/91

7. N553-555; Z230

8. 6360-61; Y650; V363

⑥ 9. Y653; Z2; N538 = 4/90 - 7/90 - 11/90 - 4/91

⑦ 10. 7540-41; Z253; N828 = 12/83 - 4/89 - 11/90 - 4/91

11. N829-831 4/90

⑧ 12. Y186-Y187 = 4/89 - 4/91

NEW TAGS - new turtles

⑨ 13. V357-359

⑩ 14. V360-V362

⑪ 15. V365-V366

12-13 NOV 91

PUNALOO #17103

1. 7604, 05; Y~~654~~; Z 258
2. Y176-179
3. N553-555; Z230
4. 7550, 7570-71; Y649
5. Y198-199; Y200; Z252
6. N538, ~~Y~~Y653; Z2
- 7. Y646, Y647, Y648, Z254
8. 8922, 8923 (V523) PAVILLION
9. N829-N831
10. 2899, Y180. (V527)
11. Y643-Y645, Z251
12. 3041, 6164, Y205-Y206
13. 7622-7623, N832
- 14. Y193-194, N546, Z257
15. 7540, 7541, N828, Z253
16. N800, N826, N827

1 out of
16 new

17. V514, V515, V516 PAVILLION
18. V517-V519
19. V520-V522 PAVILLION
20. V524-V526 PAVILLION
21. V528-V530
22. V531-V532 PAVILLION
23. V533-V534
24. V536-V538

4 out of
8 new

Report for Scientific Collecting Permit No. SCP 84-18
Submitted to State of Hawaii, Division of Aquatic Resources

Date	Tag No.	Sex	Straight-line carapace (cm)		Location
			Length	Width	
11/5/83	6707-08		55.0	45.3	Lelewi Pt.
11/9/83	6709-10		47.5	40.0	Lelewi Pt.
9/24/83	7209-12	M	84.1	62.7	Lelewi Pt.
x 9/24/83	7213-16		69.8	53.3	Lelewi Pt.
11/26/83	6711-13	M	80.3	--	Punaluu
11/26/83	6714-17		71.1	56.3	Punaluu
11/26/83	6718-21		69.3	54.3	Punaluu
11/27/83	6722-25		73.3	57.5	Puhi Bay
12/03/83	7528-30		45.4	34.8	Puhi Bay
12/15/83	3519-20		62.3	58.9	Punaluu (hawksbill released from the Waikiki Aquarium)
12/15/83	7529-32		61.0	50.4	Punaluu
12/17/83	2877, 2879, 7533	♂	60.2	48.7	Punaluu
x 12/17/83	7534-36		68.2	52.8	Punaluu
12/17/83	6711-13	M	80.3	--	Punaluu (recapture from 11/26/83)
12/17/83	7537-39		56.1	42.7	Punaluu
12/17/83	7540-42 x 4-11-89		56.3	45.2	Punaluu
12/17/83	7543-46		73.7	58.5	Punaluu
12/18/83	7547-49		63.9	53.1	Punaluu
12/18/83	7550, 7570-71 4/90, 11/90		66.4	52.0	Punaluu
12/18/83	7573-74	M	--	--	Punaluu
12/19/83	7572, 7575-77	M	85.2	66.8	Punaluu
12/19/83	7578-80	F	85.8	66.0	Punaluu
1/08/84	2514-15, 7593-94		78.0	61.8	Punaluu
1/08/84	7595-96		46.7	38.6	Punaluu
1/08/84	7597-98		58.8	56.5	Punaluu
1/08/84	4966-69		69.0	56.5	Punaluu
1/09/84	7589-92	M	79.1	63.6	Punaluu
1/09/84	7585-88	F	89.3	73.0	Punaluu
1/09/84	7581-84	M	81.2	63.3	Punaluu

1/09/84	7537-39	--	--	Punaluu (recapture from 12/17/83)
1/09/84	7599, 7600 4~11-89	51.6	42.0	Punaluu
1/09/84	5501-04	♀ 75.3	61.8	Punaluu
1/09/84	7534-36	--	--	Punaluu (recapture from 12/17/83)
1/10/84	7601-03	62.8	49.0	Punaluu
1/09/84	7604-05	48.4	39.6	Punaluu
2/17/84	7624-25	41.3	33.0	Punaluu
2/17/84	7622-23 7/18/90 Recap	47.7	37.2	Punaluu
2/17/84	7620-21	45.2	38.0	Punaluu
2/18/84	7613-16	73.5	58.5	Punaluu
2/17/84	7617-19	62.0	51.8	Punaluu
2/17/84	7606-09	68.0	56.2	Punaluu
→ 2/18/84	7630-33 M	88.8	68.1	Punaluu
2/18/84	2875-76, 7638	61.5	50.0	Punaluu
2/18/84	7639-40	44.1	36.5	Punaluu
2/18/84	7641-43	63.5	48.0	Punaluu
2/19/84	7634-37 M	84.5	66.3	Punaluu
2/19/84	2523-24, 7644	65.5	53.0	Punaluu
3/17/84	7645-47	53.3	41.5	Honolii
3/24/84	2877, 2879, 7533	61.1	49.3	Punaluu (recovery from 12/17/83)
3/24/84	7601-03	63.3	48.9	Punaluu (recovery from 1/10/84)
3/24/84	7648-50	73.2	59.2	Punaluu
3/24/84	7652-53	61.9	50.5	Punaluu
3/25/84	7654-56	71.6	57.8	Punaluu
3/25/84	7657-59	63.8	49.2	Punaluu
3/25/84	4966-69	69.3	57.5	Punaluu (recapture from 1/8/84)
3/25/84	7660-62	74.5	60.7	Punaluu
3/25/84	7663-64	55.0	43.1	Punaluu
3/25/84	7665-67	77.6	63.8	Punaluu
3/25/84	7672-73	44.5	37.0	Punaluu
3/25/84	7668-71	78.9	64.5	Punaluu
3/25/84	7674-77 M	84.0	62.5	Punaluu
3/25/84	7604-05	48.7	39.8	Punaluu (recapture from 1/10/84)
3/26/84	7681-83	58.0	25.2	Punaluu
3/26/84	7678-80	61.9	51.2	Punaluu

3/26/84	7622-23		47.9	36.9	Punaluu (recapture from 2/17/84)
3/26/84	7684-85		52.4	42.0	Punaluu
3/26/84	2896-97		69.5	--	Punaluu
3/26/84	6714-17	7/18/90 Recap	71.8	56.2	Punaluu (recapture from 11/26/83)
3/26/84	2523-24, 7644		66.2	52.7	Punaluu (recapture from 2/19/84)
3/26/84	2885, 7686-88		75.7	60.0	Punaluu
3/26/84	7689-91		68.1	54.0	Punaluu
3/26/84	7692		38.1	30.1	Punaluu
3/27/84	7693-96		77.6	63.9	Punaluu
3/27/84	7697-7700	F	89.5	66.0	Punaluu
3/27/84	7701-02		59.0	47.5	Punaluu
3/27/84	7572, 7575-77	M	--	--	Punaluu (recapture from 12/19/83)
3/28/84	7703-06	F	81.5	62.5	Punaluu
3/28/84	7707-10		75.7	60.9	Punaluu
3/31/84	7711-12		52.1	41.9	Honolii
3/31/84	7713-14		41.2	33.5	Honolii
4/13/84	7749-50		55.8	--	Punaluu
4/13/84	7639-40		44.5	--	Punaluu (recapture from 2/18/84)
5/14/84	7715-16		39.8	30.9	Punaluu
5/14/84	7715-18		41.0	32.5	Punaluu
5/14/84	7721-22		57.4	46.0	Punaluu
5/14/84	7719-20		51.2	41.4	Punaluu
5/14/84	7634-37	M	--	--	Punaluu (recapture from 2/19/84)
5/15/84	7723-24		51.9	41.2	Punaluu
5/16/84	4966-69		69.8	57.0	Punaluu (recapture from 1/8/84 and 3/25/84)
5/17/84	7678-80		62.2	52.6	Punaluu (recapture from 3/26/84)
5/17/84	7620-21		46.1	38.2	Punaluu (recapture from 2/17/84)
5/17/84	7725-27		63.2	51.8	Punaluu
5/17/84	7728-29		37.8	32.0	Punaluu

6/26/84	7630-33	M	--	--	Punaluu (recapture from 2/18/84)
6/26/84	7581-84	M	--	--	Punaluu (recapture from 1/9/84)
6/26/84	7730-31		C47.0	C44.5	Punaluu
6/26/84	7732-33		C50.5	C43.6	Punaluu
6/27/84	2523-24, 7644		66.5	53.4	Punaluu (recapture from 2/19/84 and 3/26/84)
6/27/84	6182, 6242, 6260	F	91.1	--	Punaluu (recapture from French Frigate Shoals)
6/27/84	7537-39		57.4	43.7	Punaluu (recapture from 12/17/83 and 1/9/84)
6/27/84	7738-39		35.2	30.5	Punaluu
6/27/84	7740-41		58.5	47.2	Punaluu
6/28/84	7734-37	F	85.1	--	Punaluu
6/28/84	7578-80	F	84.9	--	Punaluu (recapture from 2/19/84)
6/28/84	7742-44		68.2	52.8	Punaluu
6/28/84	7745-47		66.7	53.6	Punaluu

TAGGED 6/84

C 1

Summary of long term recoveries of green turtles made at Punaluu Kau District, Island of Hawaii (ND = not determined).

Tag No.	Tag loss	Date recovered and length	Date/location originally tagged and length	Interval		Increase in carapace length		Mean yearly growth rate		Sex
				Months	Years	(cm.)	(in.)	(cm)	(in.)	
2877, 79 (7533)	0	12-18-83 60.3 (Net)	8-31-78 Punaluu (Horseshoe) (41.3)	63.5	5.3	18.9 19	7.4	3.6	1.4	Male
2514, 15 (7593, 94)	1	1-8-84 78.0 (Scuba)	1-23-78 Punaluu (Bay) (37.2)	72.0	6.0	20.8	8.2	3.5	1.3	ND
5501-04	0	1-9-84 75.3 (Net)	7-28-81 Punaluu (Bay) (68.1)	29.0	2.4	7.2	2.8	3.0	1.2	Female
2875, 76 (7638)	0	2-18-84 61.5 (Net)	8-31-78 Punaluu (Horseshoe) (39.4)	65.5	5.5	22.1	8.7	4.0	1.6	Female
2523, 24 (7644)	0	2-19-84 65.5 (Net)	1-25-78 Punaluu (Horseshoe) (39.0)	73.0	6.1	26.5	10.4	4.3	1.7	Male
2896, 97	0	3-25-84 69.5 (Net)	9-2-78 Punaluu (Hale Loke) (42.9)	66.7	5.6	26.6	10.5	4.8	1.9	ND
2885 (7686-88)	--	3-25-84 75.5 (Net)	8-31-78 Punaluu (Horseshoe) (54.9)	66.8	5.6	20.8	8.2	3.7	1.5	ND

110

TAG

SELECTED GROWTH RATES UP TO PONTAION #15 APRIL 91

6714-17 $11/83 = 71.1 \text{ cm}$; $3/84 = 71.8$; $7/90 = 78.9$; $4/91 = 79.2 \text{ cm}$
7.4 years total elapsed time = $8.1 \text{ cm} = 1.1 \text{ cm/yr}$

7550

7570-70 $12/83 = 66.4 \text{ cm}$; $4/90$; $11/90 =$; $4/91 = 78.6 \text{ cm}$
Y 649 7.3 years total = $12.2 \text{ cm} = 1.7 \text{ cm/yr}$

7622-23 $2/84 = 47.7 \text{ cm}$; $7/90 =$; $4/91 = 69.5 \text{ cm}$
N832 7.2 years total = $21.8 \text{ cm} = 3.0 \text{ cm/yr}$

2896-97 $9/78 = 42.9 \text{ cm}$; $3/84 = 69.5 \text{ cm}$; $4/91 = 78.1 \text{ cm}$
N835, N836

5.6 yrs =

26.6 cm

4.75 cm/yr

7.1 yrs

8.6 cm =

1.2 cm/yr

overall = 12.7 yrs, $35.2 \text{ cm} = 2.8 \text{ cm/yr}$

See p110 for
selected growth
rate summaryPUNALOU #15
23-24 APRIL 91

8.1cm

7.4 yrs = 1.1 cm/yr

16 TAG RECAPTURES

- ① 6714-6717 $SL=71.1^{cm}$ 11/83-3/84-7/90
 ② Y198-Y200; Z252 4/89 and 11/90
 ③ Y186-Y187 4/89
 ④ 7550; 7570-71; Y649 $SL=71.8^{cm}$ 12/83-4/90-11/90 7.3 yr 78.6
 ⑤ Y653; N538; Z2 4/90-7/90-11/90 12.2cm
 ⑥ 7540-7541; Z253 (N828) 12/83-4/89-11/90
 ⑦ 7622-7623 (N832) 2/84-7/90 4/91 7.2 yr 69
 ⑧ N543-N545; Z256 11/90 47.7cm 3.8cm/yr
 ⑨ Y183-Y185 (N833) 4/89
 ⑩ N537; N388-N389 7/90-11/90
 ⑪ N540-N542; Z255 11/90
 ⑫ Y651-Y652; Z1 (N834) 4/90
 ⑬ Y176-Y179 4/89 and 7/90
 ⑭ Y640-Y642 4/90
 ⑮ 2896-2897 $SL=69.5$ (N835-N836) 4/24/91 18.6
 ⑯ Y646-Y648; Z254 4/90 and 11/90

NEW TAGS

- 1 N798-N799
 2 N800; N826-N827
 3 N829-N830
 4 N837-N838

2896-97 42.9 cm 69.5 cm 78.1 cm
 9/2/78 5.6 yr 3/25/84 7.1 yr 4/24/91
 4.75cm/yr + 26.6cm = 4.2cm/yr + 8.6cm =

35.2
 (overall = 2.8cm/yr)

4/25/91
Lecture

MRS. THEO KUSHI
Grade 4 Teacher

Keaau School

630 IWAANI ST.

H160
96720

Nick Wightman
Beryl Yamaguchi
Jacob Calveros

Linda Tyson
Stephen Hawkins

Sean Carey

Melodie Freitas

Mark Padilla

Liza Hernandez

Ray Bumagat

Hilary Mungano

Melena Weese

Keli Ignacio

Brandon Hamay

Michael Evans

Leslie Masami

Kimo Dacalio

Jason medeiros

Dave Unis

Leslie Tugaff

Keala Cotton

Lauren Phillips

Daniel Paul

Mrs. Kushi

P.O. Box 128
Keaau, HI 96745
November 9, 1990

National Marine Fisheries Service
2570 Dole Street
Honolulu, HI 96822

Dear Mr. Balazs,

We know that you study turtles and we would like to learn more about them from you. We would like you to come to Keaau School to do a presentation for the 4th grade classes when you come to our island. Our school is in the Puna District right off the Volcano Highway and you could stop by when you go to Punalu'u from the airport.

Please write back to let us know if you can visit us.

Thank you for taking the time to read and answer our letter.

Aloha,

The 4th Graders in Rm. B-II
Keaau Elementary

966-9313

4/24/91 Wed. WRAPPED up everything and students departed ~ 1:30pm. Thereafter, only a couple turtles seen at Boatramp Bay & old net site #1 where we had worked this morning. However, many (5+) turtles by pavilion. Yellow spray turtle, 4/24 release, seen foraging again on this same date. only one seen.
 4/23 = white paint
 4/24 = yellow paint
 ACE QUICK DRY HOBBY SPRAY SMALL CANS

Installed "WARNING" TURTLE SIGN by gift stands. saw 3 small.
 Walked to turtle Bay - FOUND .22 CARTRIDGE on soil surface. old turtle bones.
 Walked the Shoreline trail back. Richard Ng Grove 1956-1983.
 Took photos of turtle in grassy Bay. need photo of Heia wall.
 TO Seaside Hotel - #77. Dinner at Pizza Hot.

4/25/91 TO KEMAH E. School - 8:30am presentation to 111 kids of 4 4th grade classes.
 Depart Aloha FL 437 at 11:25 am.

4/23-4/24/91

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Needs =

- 1.) Another "Warning" size w/ $3/8" \times 2\frac{1}{2}"$ Bolts.
- 2.) A definite "Time" schedule - Arrive & Depart
- 3.) Pre-briefing and perhaps assignments -
- 4.) A far ^{more} simple ^{water} ^{vs} ^{land work} lunch and breakfast

5.) Scuba off Punaluu - charter
call Dudley first? Howard?

TDM
Professor
DID MORE
than most
Students

6.) Fund-raiser for Sign - MOP?
one last chance as "their" project,
then offer to collaborate w/ conservation
Groups.

7.) Cooney - Sazali World - Punaluu
Development. Ever get a response?

8.) Nature trail - walk to see turtles -
Turtle Bay - .22 calbridge.

9.) Drinkin & Drivin - if we truly
don't want the "mix", why do the
Airfines sell - push - booze on
the interisland flights ?? 30 mins.

10.) Sewer for toilets at Pavillion?
Drive away from airport

11.) Swivel for large scale

12.) Award Cert. to Casey

sent
need

KATY McCASLAND
Mother - MAELA 929-9737
(FATHER - DECEASED DIVER) MARTIN

P.O. Box 741 96772
NAALEHU, HI

HONOLULU BEACH & TURTLE SHAPED ROCK.

Telecon



need
sent

"LAVA CAME OVER TURTLE"
Telecon 4/27 Mrs. McCasland - stand on sand beach
lava point to the left (S. Point side). Rock that looks
like a turtle - They locally (apparently not historically) call it
"turtle rock". Looks like the back of a turtle. High tide
covered by water.

CHRISTOPHER FREEMAN

P.O. Box 6014

CAPT. COOK 96784

SAVE

VANISHING

SPECIES

need
Answer
sent

Miss CASEY MCGUIRE - TURCOTTE

"How Honu The Turtle Got His Shell"

23-24 APRIL 91

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PUNALU#15

1. DAVE ROSE
2. Alex Skevnick
3. Leah Lotman
4. Mary Nielsen = 1978 HALEAPE Hawkbill observations
5. Michael Childers
6. Andy Kikuta
7. Charlotte Forbes, Hawaii Volcanoes NP.
8. Matthew Crosby
9. Josh Geiske
10. Peter Manly
11. John H. McCollum
12. Judy JOURNEY
13. OLIVER HOLLER
14. Kristi Wilcox
15. Clint Elliott
16. Bruce Canfield
17. KEVIN MAHONGI
18. PETER COOPER
19. John Carey - MHP
20. CAROL GIVANDON
21. SHANNON OSHIRO
22. Terry S. Riessen
23. TERRI ANN WHALEN (X)
24. Sherri Miller
25. Bill Miller

959-5572

951-8652

(808) 969-1738

909-7718

933-3544

(808) 969-6995

966-7006



Yorlanda: Willie
 TOM Hammond - Marine Science Teacher
 Leon Hallacher
 Walter Dudley

cook

Punaluu #16 16-17 July 91

Tues. Wed.

STUDENTS/PARTICIPANTS

NAMES AND PHONE CONTACT

1. Cathleen Lyons - (914) 733-1097 (N.Y.)
2. Linda Badzioch 805-927-3480
3. MELISSA MATOLCHI (718) 456-0944 (N.Y.)
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5. Deirdre Hall 908-269-3977 NJ
6. PEICHA STUBBS 609-653-0509 NJ
7. JOSEPH ZUCKERMAN 212-320-0242 NY
8. Mike Pacheco (808) 959-3240
9. EMMANOUELA ATHANASSIADES 212-7583920 (Greece)
10. Karrie Zukowski 803-485-9077, 201-966-8881
11. Kristi Crofoot 914-356-5388
12. CAROLINE CURTIS (908) 464-0916
13. Joseph Kress Jr. (908) 231-0606
14. JEREMY J. HAGGAS (315) 336-8401
- * 15. Willy Dana + Yolanda Lobato (808) 934-7785
16. Paul Farmer 812-824-9599 (IN)
17. Dave Langerud 602-967-7641 (AZ)
18. Rich O'Connell 201-228-0655 (N.J.)
19. Glen Watt 908-899-1944 (NJ)
20. Tom Woodward (319) 393-9123 (IA)
- 21.
- 22.
- 23.
- 24.
- 25.
- 26.
- 27.
- 28.
- 29.

Punta Cuu #17

119

12-13 Nov. 91

- 1 Brian Dillon 961-9939
 - 2 Ron Harris-White II 961-9939
 - 3 Holly Christianson (609) 259-2522
 - 4 ERLYN OLAP 959-3051
 - 5 Terri Elffner 961-0829
 - 6 Charles Baer
 - 7 Lisa Moorcroft 961-9818
 - 8 Dawnie Millston 961-9818
 - 9 Jeremy Succiardi 961-935
 - 10 CHRIS DWALL 961-9935
 - 11 Brad Blankenship 933-3544
 - 12 Heather J. Kauhi ← 959-0291
 - 13 Tammy Wenham 961-9994
 - 14 KOSI KASAI 959-9708
 - 15 GERALD VAVEPPS 933-3544
 - 16 Jaymes Hartman 933-3544
 - 17 Matt Jennings 935-5978
 - 18 Echo Jennings ♀ 933-3383
 - 19 Michael Childers 961-5285
 - 20 William Jr. Dana (Willie) 934-7785
 - 21 Terry S. Riessen 961-9965
 - 22 Daniel McGuire
 23. Dane Nagasawa 961 9819
 24. MARTA M. LEPES DVM NPS volunteer OFF 961-3486
- Sent ^{TIME} Report #711 KANOELEHUA AVE HIL0 (HOME 935-5962) 96720
- ERLYN M. OLAP
430 W. KAWILI ST APT 4B
HIL0, HAWAII 96420
PH # 959-3051

ERLYN M. OLAP
P.O. BOX 539
WENO, CHUUK STATE (FSM)
96942

I WISH YOU'LL COME TO MICRONESIA SOMETIMES .
PH # 330-4206

Pterocladia
Study1. YUKO OKANO P.O. BOX 5857 HILO 966-8162
96720

2. JESSE OWENS } P.O. BOX 10292 HILO

3. Peach Owens 96720

4. James & John McKinney 1777 Ala Moana Blvd. #644
Hon, HI. 968155. Liann Lanawé 28 LIKEKE ST 959-8277
HILO, HI 967206. Matt & Echo Jennings PO Box 643 933-3383
47 KEEAU, HI 96749+ MOP 8. John Tye P.O. BOX 344
Kahului, HI 96732 878-6285

9. Doug Ford Box 2092 KEEAU 96749 982-5839

10. Michael Childers 1632 KILAUWA HILO 96720

11. Tammy Wenham P.O. Box 10311 HILO, HI 96721

12. RICHARD COWAN PO BOX 142 HILO HI 96721

DATA
Records 13. LISA D'ORLA 134 WAHUE LANE #104 LAHAINA, HI 967

14. Alan Williams PO BOX 1457 Kihui HI 96753

15. JAMES SCHUMAKER 1875 KALANIANA'OLE #302
HILO, HI 96720

16. Rose M Caballero P.O. Box 10311 HILO HI 96721

17. Dougaronie Potier HILO MOP

18. TRACY MAYER ^{need} photo of
EYE Tumor

19. HEATHER & ALONA

study dates	Total no. captured	No. newly tagged	No. tag resightings	Total no. tagged to date	Peterson population index estimate*
5/77	3	3	0	3	-
1/78	8	8	0	11	-
8/78	10	10	0	21	-
7/81	7	7	0	28	-
11/83	3	3	0	31	-
12/83	12	10	2	41	186
1/84	13	9	4	50	133
2/84	12	10	2	60	300
3/84	30	20	10	80	180
4/84	3	2	1	82	240
5/84	11	7	4	89	225
6/84	13	8	5	97	231
3/87	7	5	2	102	340
3/88	3	3	0	105	-
4/89	14	11	3	116	490
4/90	12	8	4	124	348
7/90	12	5	7	129	213
11/90	17	5	12	134	183
4/91	20	4	16	138	168
7/91	15	3	12	141	

*No. tagged turtles resighted

Total No. turtles tagged

Total No. turtles captured

Total No. turtles in resident population (X)

Note: Tagged turtle 7723-24 found dead with throat cut at Punaluu 11/4/84. Originally tagged 5/15/84 at Punaluu. Another turtle, tag numbers unknown, documented as being killed at Punaluu on 7/16/84.

PUNA-8T.GHB

Sent:

Lani Brewer
605 W. Lanikaula St.
Hilo, HI 96720

Summary of green turtles tagged at Punaluu Bay, Kau Hawaii during the 27-28 November 1990 during the cooperative NMFS/MOP-UH Hilo Marine Turtle Research Project, Compiled by George Balazs.

National Marine Fisheries Service
2570 Dole Street
Honolulu Hawaii 96822-22396

PUNALUU
#14

Tag No.	Straight (cm)		Curved (cm)		Tumor Ranking	Comments
	Length	Notch	Length	Width		
Expedition date 11/27/90						
* 3041, 6164, Y205, Y206	88.5	88.5	93.0	90.0	0	Possible tag loss 3-4
* 7540, 7541, (Z253)	70.6	70.4	76.5	71.5	0	
* N388, N389, N537	69.8	69.3	75.0	69.5	1	
* N539, Y181, Y182, Z228	59.1	58.8	63.0	58.0	0	"horseshoe" - hand capture
* Y198, Y199, Y200, (Z252)	70.5	70.0	75.0	71.0	0	Raised injury, posterior carapace.
* Y643, Y644, Y645, (Z251)	69.9	69.9	75.5	71.0	0	Recaptured by seine net 11/28. The next day - at same site by same method.

Expedition date 11/27/90

*Y646, Y647, Y648, (Z254)	66.3	66.1	71.0	65.5	0	R2S entirely missing and completely healed.
*N538, Y653, Z2	66.4	66.3	71.0	68.0	0	Tag mark on Z2. Another turtle bit it? or turtle

Expedition date 11/27/90

*Y646, Y647, Y648, 66.3 66.1 52.8 71.0 65.5 0
(Z254)

*N538, Y653, Z2 66.4 66.3 53.0 71.0 68.0 0
R2S entirely missing and completely healed.
Tag mark on Z2. Another turtle bit it? or turtle bit its own tag? or pufferfish.

Expedition date 11/28/90

*7550, 7570, 7571, 78.8 78.6 59.8 83.0 77.0 0
Y649
3rd lateral right - likely spear hole wound, partly healed.

*7604, 7605, Y654, 72.8 72.5 58.0 78.0 72.0 0
(Z258)
N540, N541, N542, 65.8 65.8 52.2 72.0 66.5 0
(Z255)
N543, N544, N545, 67.8 67.8 54.8 73.0 68.0 0
(Z256)
Numerous burrowing barnacles
L3-4 Z256 upside down

N547, N548, N549, 66.8 66.8 52.6 73.0 65.0 0
(Z260)
R1S 3/4 missing

N550, N551, N552, 67.9 67.7 53.8 72.5 65.0 0
Z229
Tag site on LH missing

N553, N554, N555, 70.8 70.5 57.5 76.0 71.0 0
Z230
Lots of burrowing barnacles

Expedition date 11/28/90

*N546, Y193, Y194, 58.3 58.2 46.2 63.0 56.0 0
(Z257)

*Y195, Y196, Y197, 70.0 69.4 54.0 75.0 71.5 0
(Z259)

() Tag newly applied along with existing tags.

*Recapture of previously tagged turtle. 12 Total

Study dates	Method of capture	Total no. captured	No. newly tagged	No. tag Resightings	Total no. tagged to date	Original tag dates for turtles resighted at Punaluu
6/76-9/76	SC	42	37	5	37 ^a	
5/7/77	N	3	3 ^b	0	3	
1/20-1/26/78	N, SC, SK	8	8	(1)	11	(8/76)
8/31-9/3/78	SK	10	10	0	21	
7/26-7/29/81	N, SK	7	7	0	28	
11/26/83	SC	3	3 ^c	0	31	
12/15-12/19/83	N, SC, SK	12	10	2 ^c	41	8/78; 11/83
1/8-1/10/84	N, SC, SK	13	9	4	50	1/78; 7/81; 12/83; 12/83
2/17-2/19/84	N, SK	12	10 ^d	2	60	8/78; 1/78
3/23-3/28/84	N, SC, SK	30	20	10	80	1/84; 1/84; 1/84; 2/84; 9/78; 11/83; 1/78 and 2/84; 8/78; 12/83; 8/78 and 12/83
4/13-4/14/84	N, SK	3	2	1	82	12/83-1/84-4/84
5/14-5/17/84	N, SK	11	7	4 ^e	89	2/84; 1/84; 3/84; 2/84

^aAlso includes tagged turtle (6182, 6242, 6260) originally tagged nesting at East Island, French Frigate Shoals, 6/82 and 8/82.

^bAlso includes tagged male (3041, 6164, Y205-06) originally tagged basking ashore at Whale-Skate Island, French Frigate Shoals, 5/4/79. Resighted at same location 6/79, 6/80, and 6/82.

^cAlso includes tagged male (6360-61, Y650) originally tagged basking at Tern Island, French Frigate Shoals, 11/28/82.

^dIncludes tagged turtle N388-89 with small tumor in corner of left eye.

PUNALUU

Study dates	Method of capture	Total no. captured	No. newly tagged	No. tag Resightings	Total no. tagged to date	Original tag dates for turtles resighted at Punaluu
6/26-6/29/84	N, SK	13	8	5 ^d	97	2/84; 2/84; 1/84; 1/78- 2/84-3/84; 12/83-1/84- 4/84
3/23-3/25/87	N	7	5	2	102	3/87; 3/87
3/21-3/23/88	N	3	3	0	105	
4/10-4/12/89	SK	14	11	3 ^f	116	12/83; 1/84; 9/78
4/9-4/11/90	SK	12	8	4 ^g	124	12/83; 1/84; 3/88; 9/78 and 4/89
7/18/90	SK	12	5 ^h	7	129	4/90; 4/90; 4/89; 2/84; 3/88 and 4/90; 11/83 and and 3/84; 1/84 and 4/90
11/27-11/28/90	BN, SK	17	5	12 ^{s,h}	134	4/90 and 7/90; 7/90; 4/90 and 7/90; 4/89; 12/83 and 4/89; 4/90; 4/89; 4/89; 1/84 and 4/90; 4/89; 12/83 and 4/90.
#15 4/23-4/24/91 BN, SK		20	4	16	138	
#16 7/16-7/17/91 BN, SK		15	3	12	141	

N = net; SC = hand capture while, scuba diving; SK = hand capture while skin diving

^aMonel alloy tags. All other tags used are made from Inconel 625 alloy. "Total no. tagged to date" was computed separately for Monel and Inconel.

^bTagged turtle 5008(8165) resighted 6/19/84 nesting at East Island, French Frigate Shoals.

^cTagged turtle 6711-13 resighted 7/9/86 nesting at East Island, French Frigate Shoals.

^dIncludes tagged turtle 7634-37 with four leeches, leech eggs, and likely small tumor in corner of right eye.

Need
Day or NIGHT NETTING?

METRIC SYSTEM WITH U.S. EQUIVALENTS

METRIC UNIT (1) U.S. EQUIVALENT

LENGTH

millimeter	(mm)	0.04 inches
centimeter	(cm)	0.39 inches
decimeter	(dm)	3.94 inches
meter	(m)	39.37 inches
decameter	(Dm)	32.81 feet
hectometer	(hm)	109.36 yards
kilometer	(km)	0.62 miles
myriameter		6.2 miles

AREA

square centimeter	(cm ²)	0.155 sq. inches
square meter	(m ²)	1.196 sq. yards
are	(a)	119.60 sq. yards
hectare	(ha)	2.47 acres
sq. kilometer	(km ²)	0.3861 sq. miles

WEIGHT

milligram	(mg)	0.015 grains
centigram	(cg)	0.154 grains
decigram	(dg)	1.543 grains
gram	(g)	0.035 ounces
decagram	(Dg)	0.353 ounces
hectogram	(hg)	3.527 ounces
kilogram	(kg)	2.2046 pounds
quintal		220.46 pounds
metric ton		1.1 tons

METRIC UNIT (1) U.S. EQUIVALENT

VOLUME

cubic centimeter	(cm ³)	0.061 cubic inches
cubic decimeter	(dm ³)	0.0353 cubic feet
cubic meter	(m ³)	1.31 cubic yards
cubic decameter	(Dm ³)	13.10 cubic yards

CAPACITY, CUBIC

milliliter	(ml)	0.06 cubic inches
centiliter	(cl)	0.6 cubic inches
deciliter	(dl)	6.1 cubic inches
liter	(l)	61.02 cubic inches
decaliter	(Dl)	0.35 cubic feet
hectoliter	(hl)	3.53 cubic feet
kiloliter		1.31 cubic yards

CAPACITY, DRY

deciliter	(dl)	0.18 pints
liter	(l)	0.908 quarts
decaliter	(Dl)	1.14 pecks
hectoliter	(h)	2.84 bushels

CAPACITY, LIQUID

milliliter		0.27 fluidrams
centiliter		0.338 fluidounces
deciliter		0.21 pints
liter		1.057 quarts
decaliter		2.64 gallons

