

MOLOKAI

3

1980s ARTICLES, LETTERS
AND TAGGING DATA
G.H. BALAZS' FILE

ATTACHED SHEET #1

***** DISTINGUISHING FEATURES ON TAGGED TURTLES *****

Date Tagged: Jan. 28, 1983

left f/f right f/f

Tag Number : 6599 6600

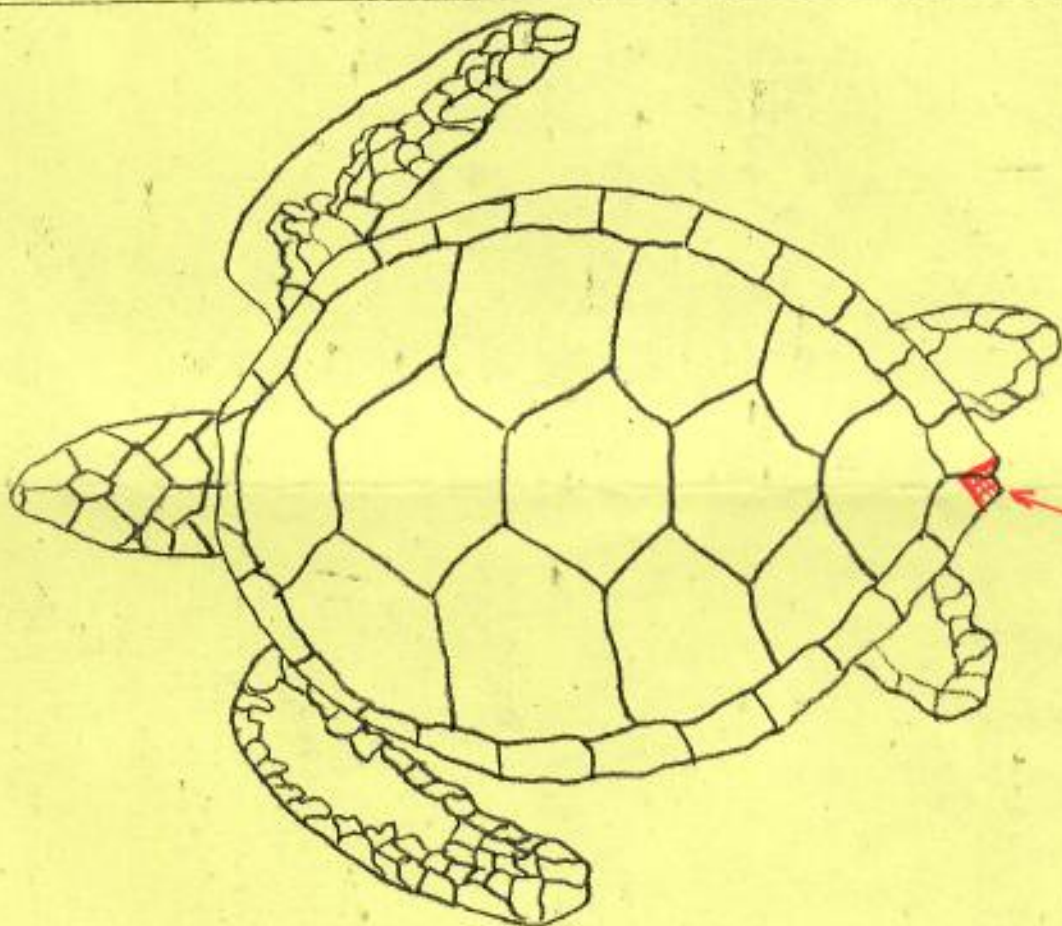
Location Caught: At mouth of Kamalo River, between Kamahuehue Fishpond and Kamalo Harbor.

Location Released: Same as above

Curved Length: 39 cm

Curved Width: 37 cm

Comments: Rear end of shell chipped off and forms a noticeable "v".



ATTACHED SHEET #2

***** DISTINGUISHING FEATURES ON TAGGED TURTLES *****

Date Tagged: Jan. 27, 1983

	<u>left f/f</u>	<u>right f/f</u>
Tag Number :	<u>6595</u>	<u>6596</u>
	<u> </u>	<u> </u>

Location Caught: Mouth of Kamalo River, between Kamahuehue Fishpond and Kamalo Harbor

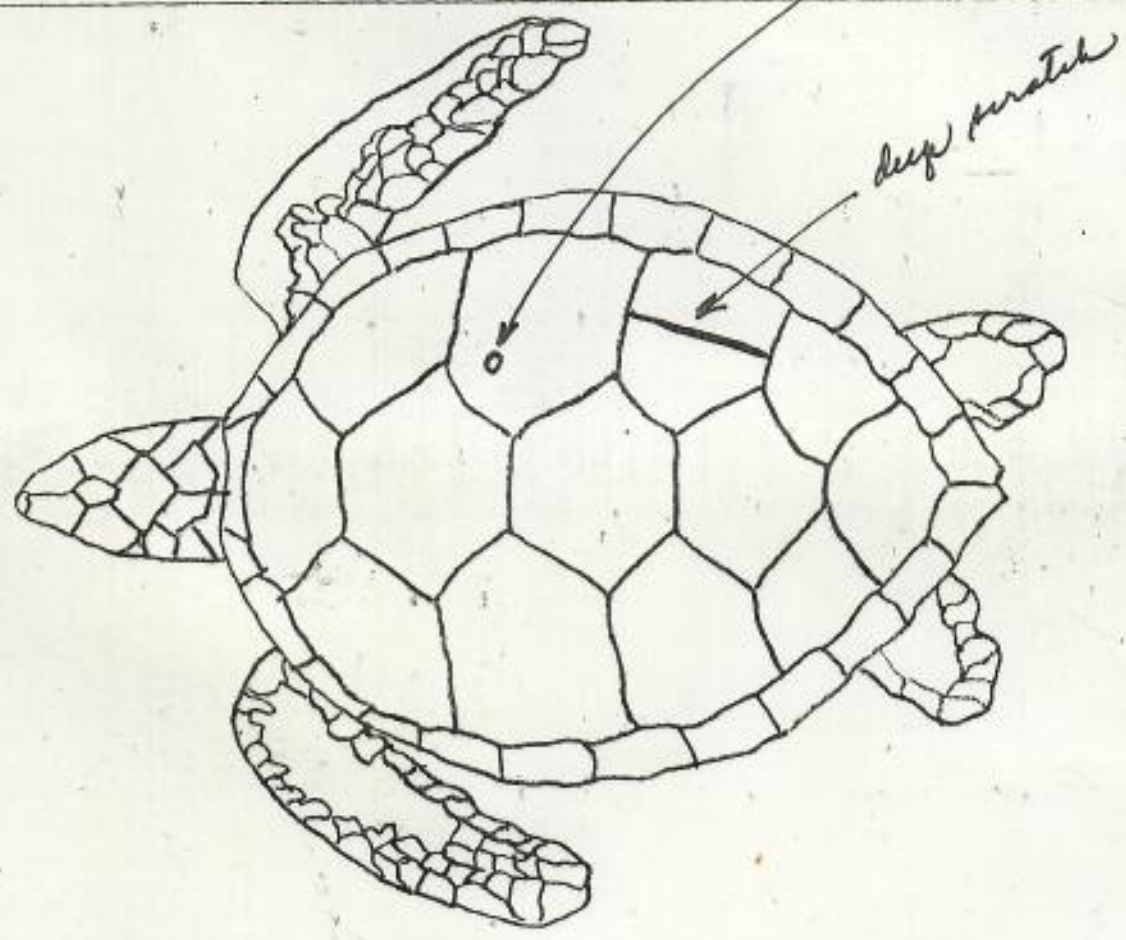
Location Released: Kamalo Harbor

Curved Length: 86 cm

Curved Width: 78 cm

Comments: Deep scratch on right side of animal, 5.8 cm long.

Deep puncture hole on right side
about .5cm diameter



ATTACHED SHEET #1

***** DISTINGUISHING FEATURES ON TAGGED TURTLES *****

Date Tagged: Jan. 27, 1983

left f/f right f/f

Tag Number : 6593 6594

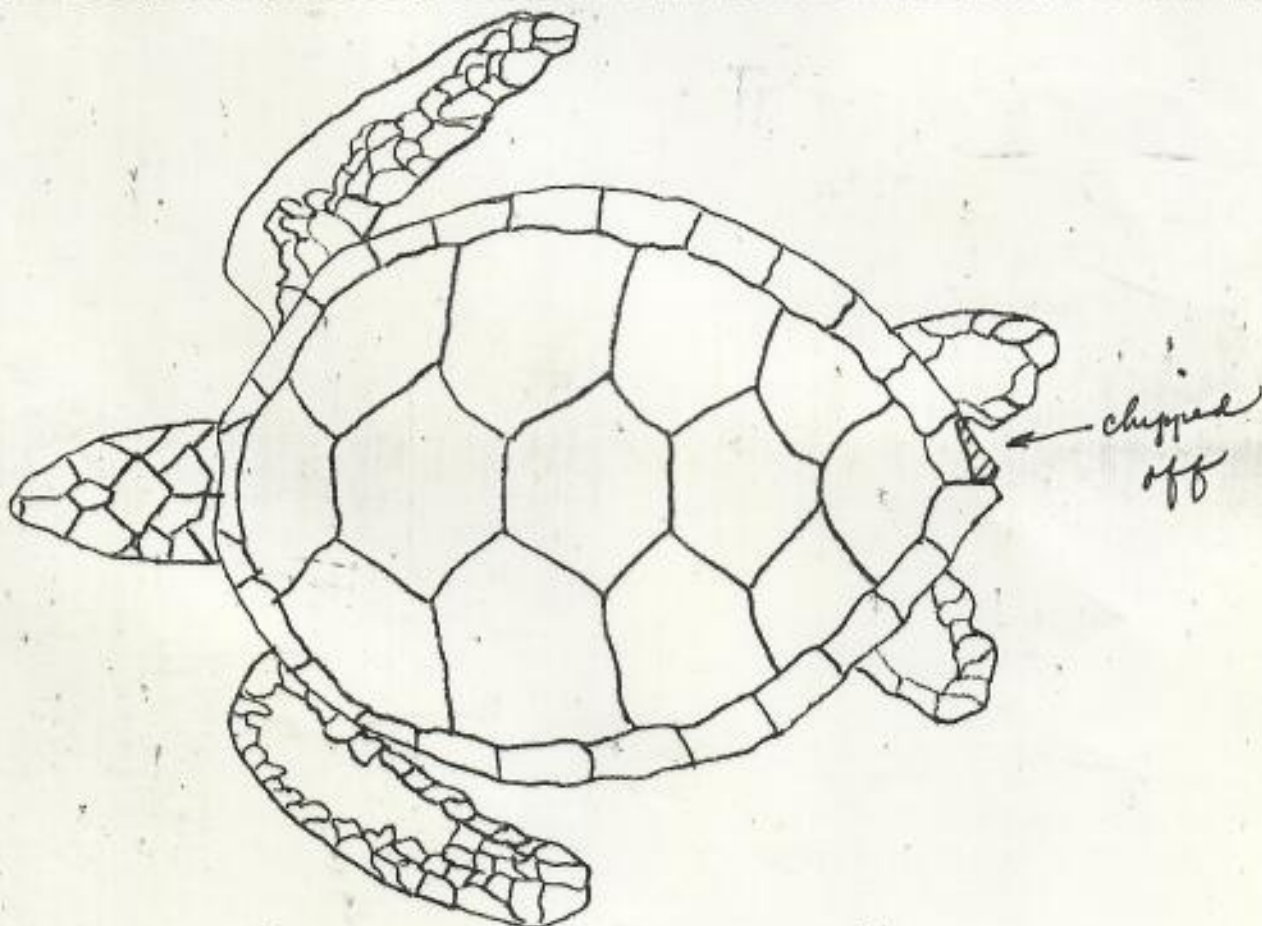
Location Caught: Mouth of Kamalo River, between Kamahuehue Fishpond and Kamalo harbor

Location Released: Kamalo Harbor

Curved Length: 44 cm

Curved Width: 40.5 cm

Comments: Shell chipped just above tail.



ATTACHED SHEET #1

***** DISTINGUISHING FEATURES ON TAGGED TURTLES *****

Date Tagged: Jan. 28, 1983

left f/f right f/f

Tag Number : 6599 6600

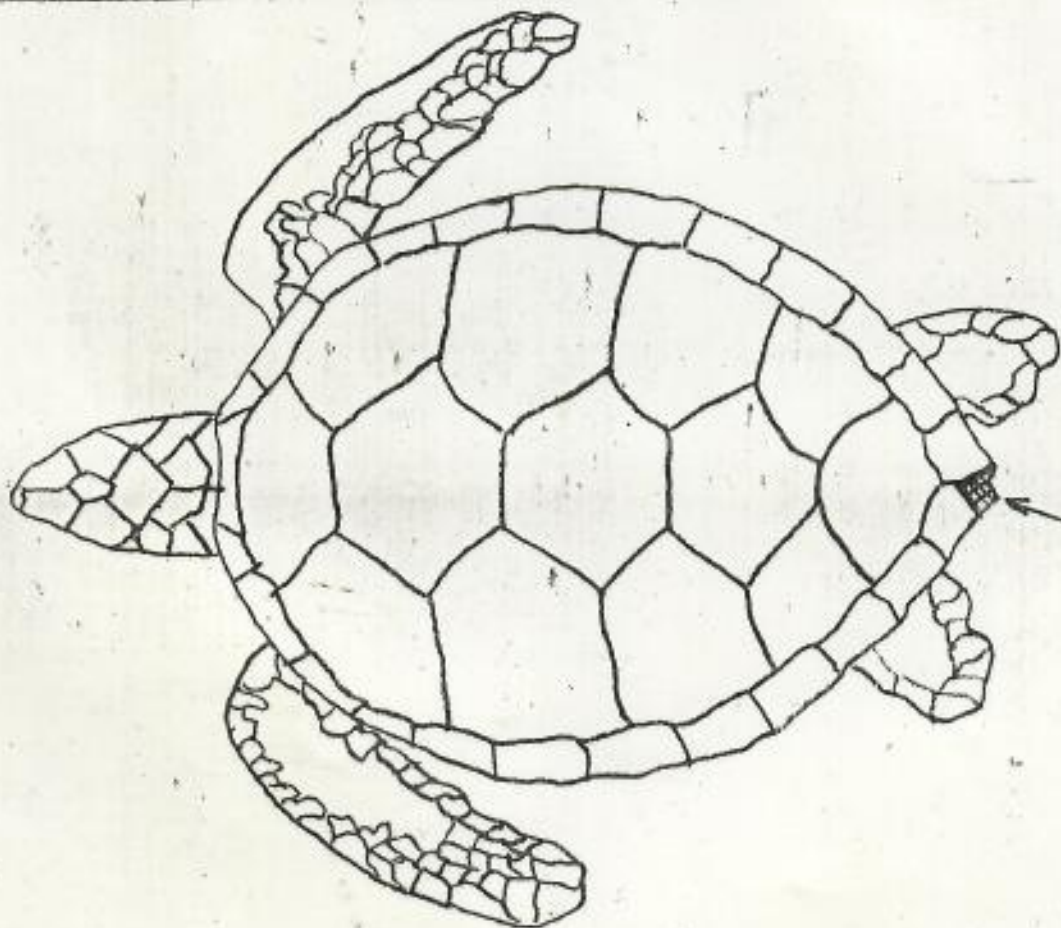
Location Caught: At mouth of Kamalo River, between Kamahuehue Fishpond and Kamalo Harbor.

Location Released: Same as above

Curved Length: 39 cm

Curved Width: 37 cm

Comments: Rear end of shell chipped off and forms a noticeable "V".



ATTACHED SHEET #2

***** DISTINGUISHING FEATURES ON TAGGED TURTLES *****

Date Tagged: Jan. 11, 1983

left f/f right f/f

Tag Number : 6578 6579

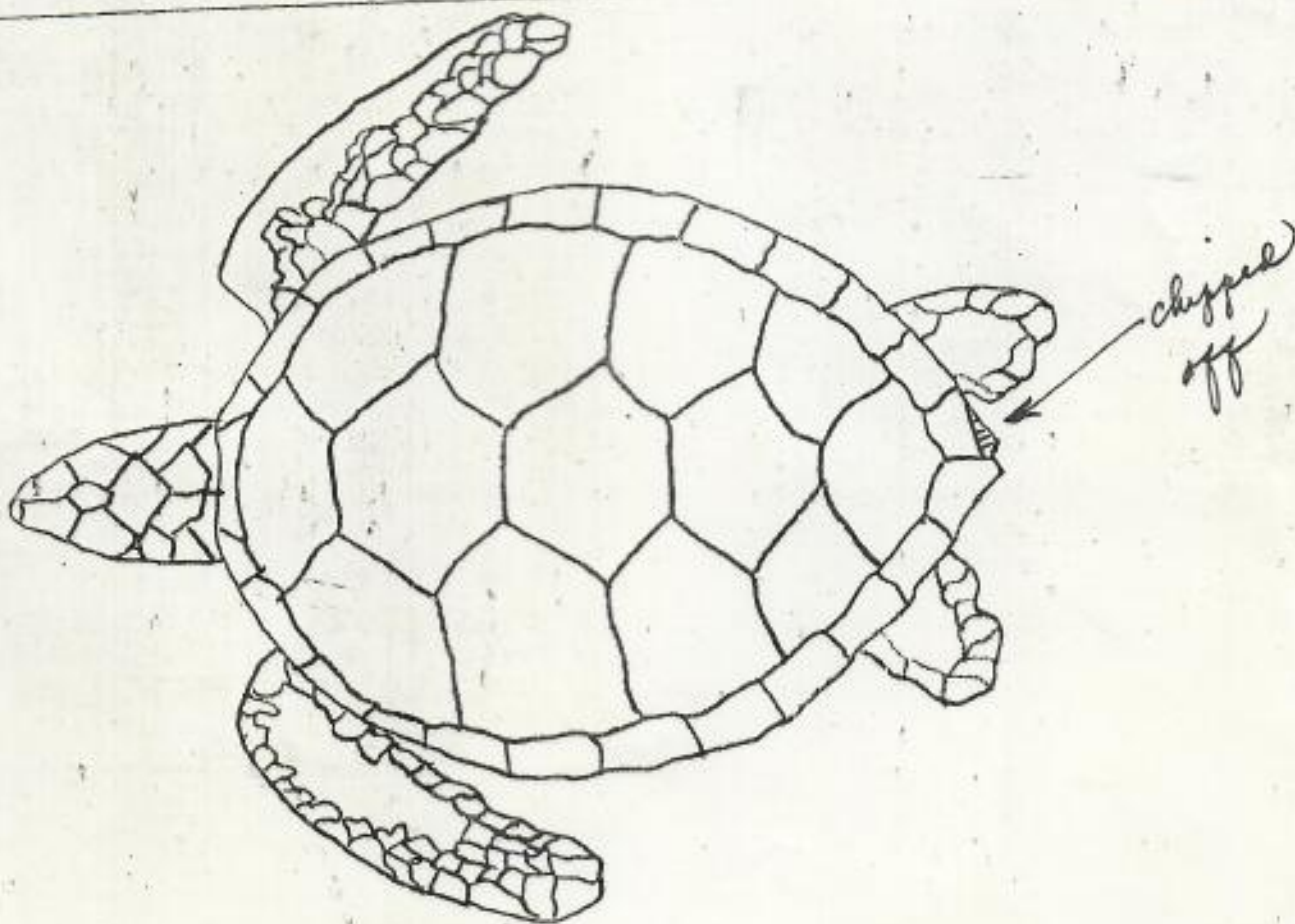
Location Caught: Kawela, Molokai

Location Released: Kawela, Molokai

Curved Length: 82.5 cm

Curved Width: 72 cm

Comments: Shell right above tail chipped on right side.



ATTACHED SHEET #1

***** DISTINGUISHING FEATURES ON TAGGED TURTLES *****

Date Tagged: Jan. 11, 1983

left f/f right f/f

Tag Number : 6574 6575

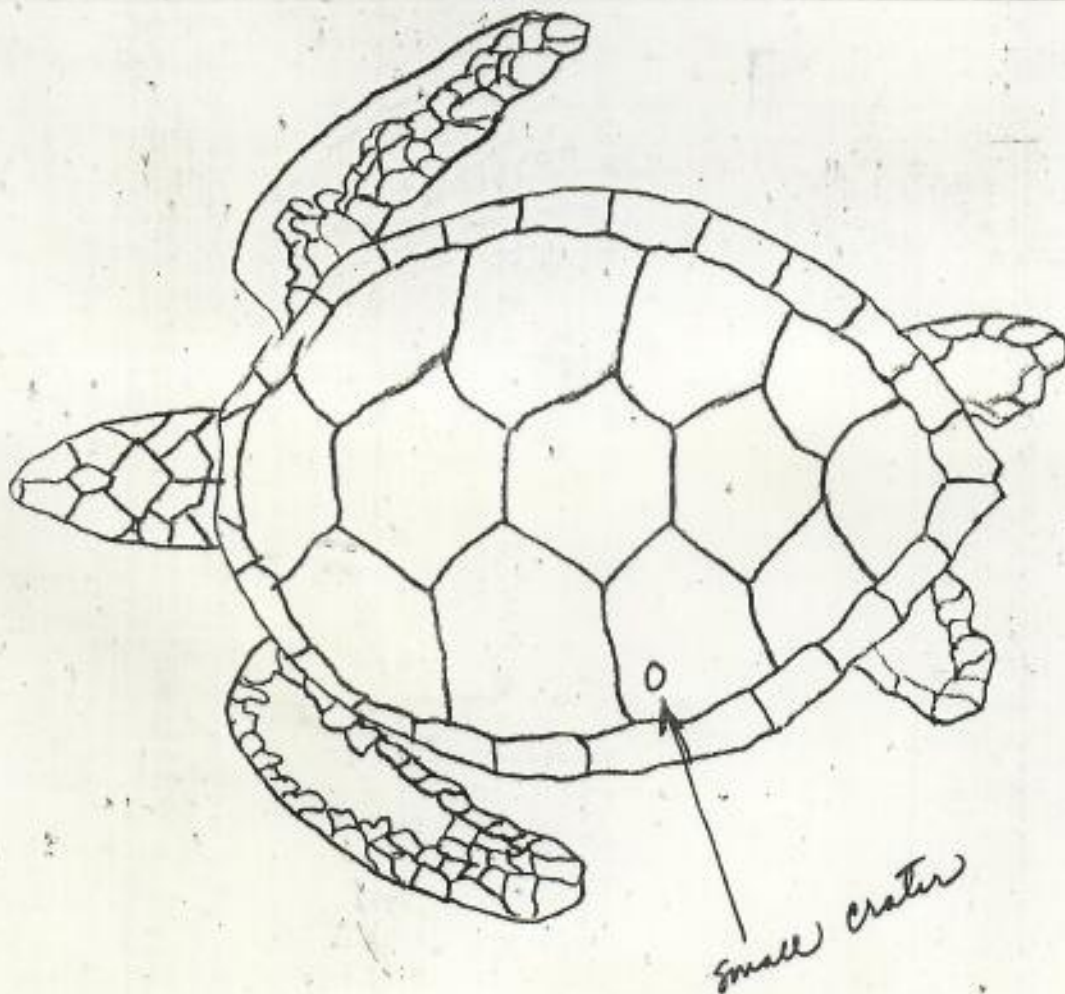
Location Caught: Kawela, Molokai

Location Released: Kawela, Molokai

Curved Length: 92.5 cm

Curved Width: 88.5 cm

Comments: small pit/crater (possibly old spear wound) on left side of body. Completely healed over. Male.



***** DISTINGUISHING FEATURES ON TAGGED TURTLES *****

Date Tagged: Jan. 14, 1983

left f/f

right f/f

Tag Number : 6580

6581

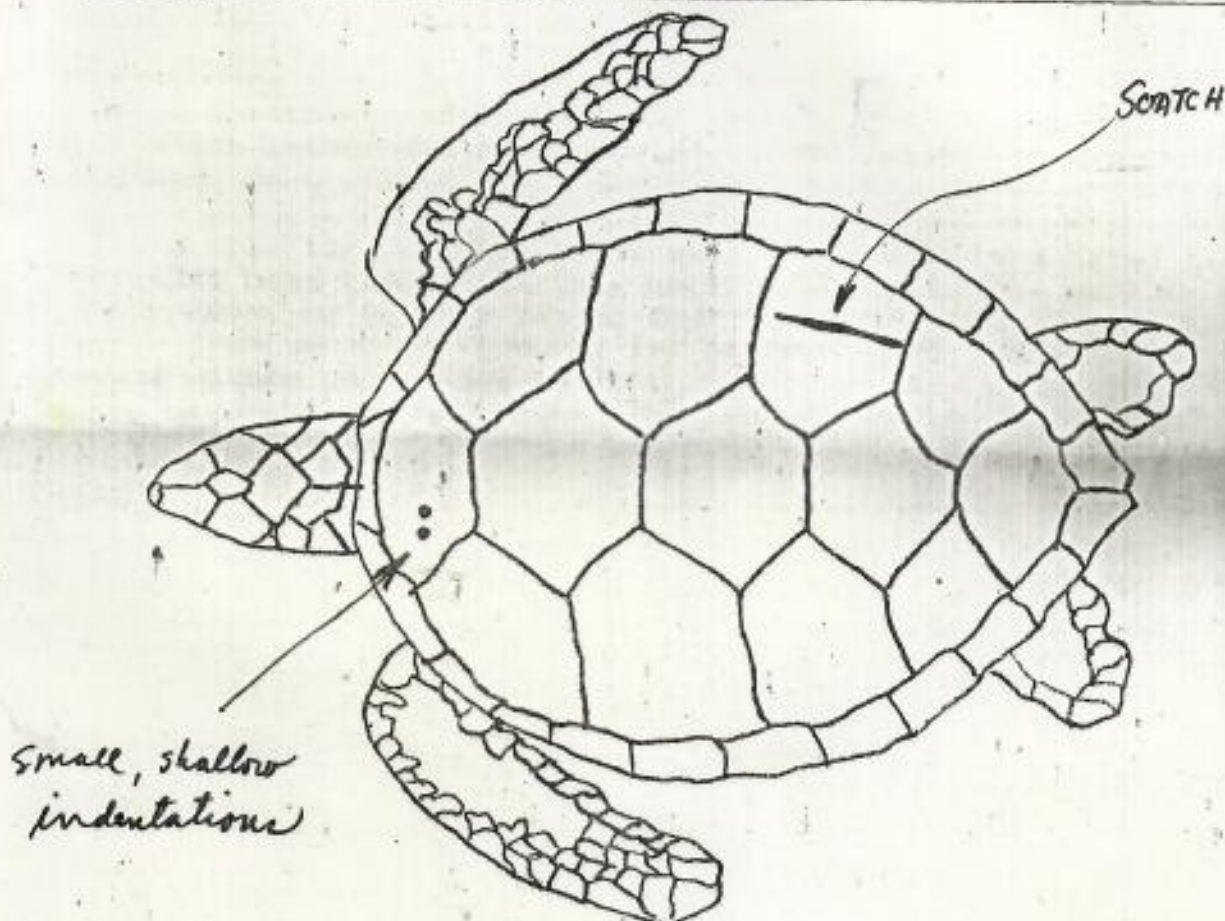
Location Caught: Kawela, outside Panahaha Fishpond

Location Released: same as above

Curved Length: 100 cm

Curved Width: 91 cm

Comments: Large, healthy, female. Long scratch on right side
of shell. Two shallow and small indentation of top
next to neck.



May 9, 1983

George,

Enclosed more turtle data.

Mederios caught them in his nets. He told me the way he had his nets were legitimate and I left it at that. I won't be going out with him for a while. Don't want to be caught in an embarrassing situation.

Bill

Bill

***** TURTLES TAGGED ON MOLOKAI *****

Date Tagged: May 6, 1983

Location Caught: Outside Kanukuawa Fishpond

Method of Capture: Mederios' Nets

<u>Number</u>	<u>Straight XXXXX Length</u>	<u>Straight XXXXX Width XXXXX (cm)</u>	<u>Tag Number On Left Front Flipper</u>	<u>Tag Number On Right Front Flipper</u>
<u>1</u>	<u>61</u>	<u>50</u>	<u>6609/6612</u>	<u>6613</u>
<u>2</u>	<u>43.5</u>	<u>37</u>	<u>6614</u>	<u>6615</u>
<u>3*</u>	<u>56.5</u>	<u>44.5</u>	<u>6616</u>	<u>6617</u>
<u>4</u>	<u>41</u>	<u>33</u>	<u>6618</u>	<u>6619</u>

****RECOVERY****RECOVERY****RECOVERY****RECOVERY****RECOVERY****

<u>5</u>	<u>72</u>	<u>55.5</u>	<u>6584</u>	<u>6585</u>
	<u>77.0</u>	<u>67.0</u>		

↻ curved measurements ↻

This animal was originally tagged on Jan. 25, 1983
and caught in the same general area.

Remarks: *Barnacles were found on this animal and were knocked off.

***** DISTINGUISHING FEATURES ON TAGGED TURTLES *****

Date Tagged: Feb. 26, 1983

left f/f right f/f

Tag Number : 6603 6604

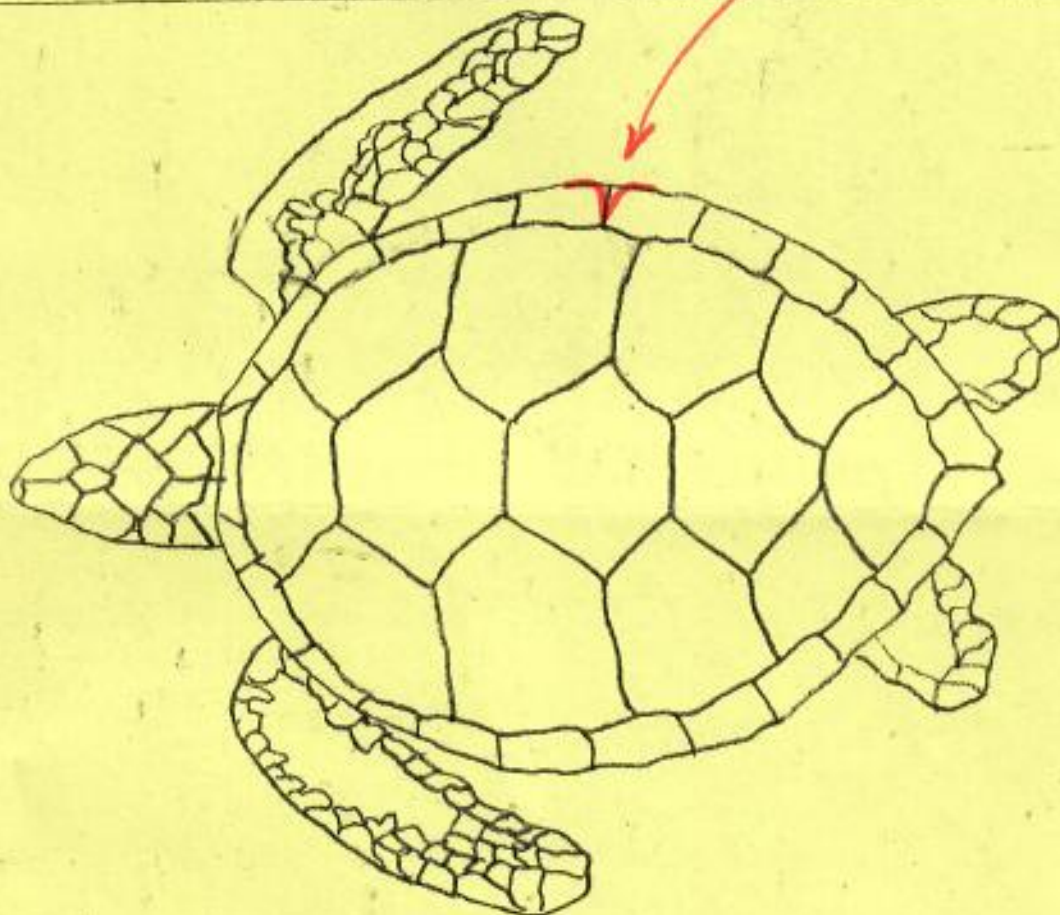
Location Caught: Outside Panahaha Fishpond

Location Released: Same above

Curved Length: 77 cm

Curved Width: 71 cm

Comments: Notch on right side of shell



***** DISTINGUISHING FEATURES ON TAGGED TURTLES *****

Date Tagged: April 20, 1983 Attached Sheet #1

left f/f right f/f

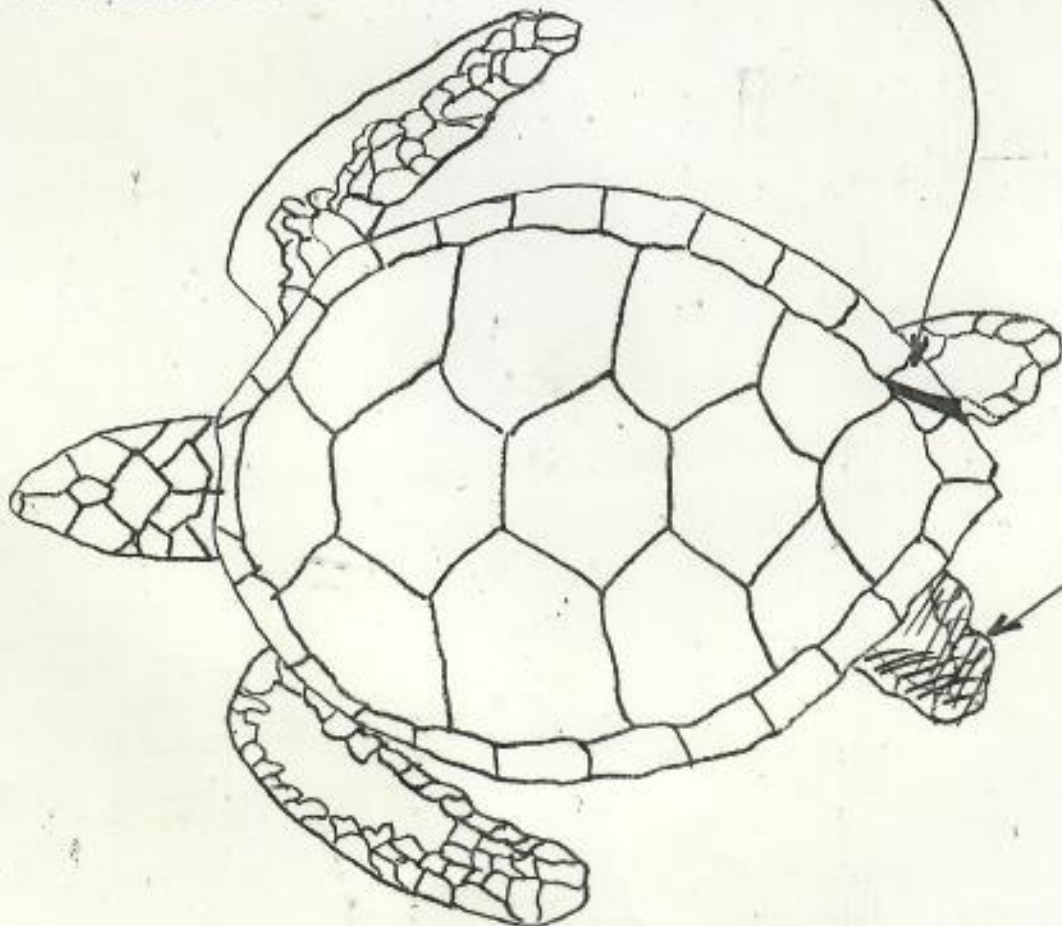
Tag Number : 6609 6611

Location Caught: Between Pahomū & Kamahuehue Fishponds

Location Released: Same as above

~~XXXXXX~~ Length: 56.5 ← "straight" measurements
~~XXXXXX~~ Width: 47 ←

Comments: (1) Left rear flipper missing. Only stub. Congenital defect.
(2) Cut on shell on right rear portion.



July 5, 1985

George,

Here's this month's tagging data. All of these were from Hocado. I went out with him a couple of times. Small in scale compared to Mederios. Same general configuration of nets. I got to talking with Ed and told him of wanting to do more tagging in the Waikane area with you. He said it would be a little difficult now as Darth is in the Mainland attending his brother's graduation. He asked if you could hold off until later this month. I keep you posted.

Received readout concerning turtle stranding. Here's the only one that comes to mind for 1985:

June 14, 1985

Remains of 3-4 green sea turtles found close to the beach at Kawela. Covered with maggots. Estimated sizes of carapaces = 20" to 36".

Going over my notes, I have recorded 6 turtle strandings/beaching prior to 1985 here on Molokai. I can let you have that info upon request.

George, I'm down to 21 tags. Better send more. Hocado is fishing regularly now and is very agreeable and cooperative in having his incidentally caught turtles tagged.

I'll be off to Kauai later this month for a week or so. R & R with the whole family. Bypassing Honolulu entirely!!!

Aloha,

Brie

↳ Congratulations
on your
Permanent Status!!!

***** TURTLES TAGGED ON MOLOKAI *****

Date Tagged: 6-15-85

Location Caught: Kawela

Method of Capture: Fisherman's nets (Hocajo)

Number	Curved Length (cm)	Curved Width Depth (cm)	Tag Number On Left Front Flipper	Tag Number On Right Front Flipper
<u>1</u>	<u>42.0 (39.0)</u>	<u>38.5 (33.0)</u>	<u>8616</u>	<u>8617</u>
	<u>***RECOVERY***RECOVERY***RECOVERY***</u>			
<u>2</u>	<u>48.5 (45.0)</u>	<u>42.5 (36.0)</u>	<u>6573 & 6571</u>	<u>6572</u>

Turtle #2 was originally tagged in the same area 2 years and 5 months ago. Since then it has increased its curved length by 8.5 cm and its curved width by 7.0 cm.

Both animals released at site of capture.

Remarks: 263 turtles tagged to date with 23 recoveries.

***** TURTLES TAGGED ON MOLOKAI *****

Date Tagged: 6-28-85

Location Caught: Kawela

Method of Capture: Fisherman's nets (Hocajo)

<u>Number</u>	<u>Curved Length(cm)</u>	<u>Curved Width XXXXXX (cm)</u>	<u>Tag Number On Left Front Flipper</u>	<u>Tag Number On Right Front Flipper</u>
<u>1</u>	<u>72.5(68.0)</u>	<u>65.0(52.5)</u>	<u>6820</u>	<u>8621</u>

Note: Left front flipper cut off at spur. See attached sheet.

Remarks: Turtle released at site of capture. 265 turtles tagged to date with 23 recoveries.

***** DISTINGUISHING FEATURES ON TAGGED TURTLES *****

Date Tagged: 6-28-85

Tag Number : left f/f right f/f
 6820 8621

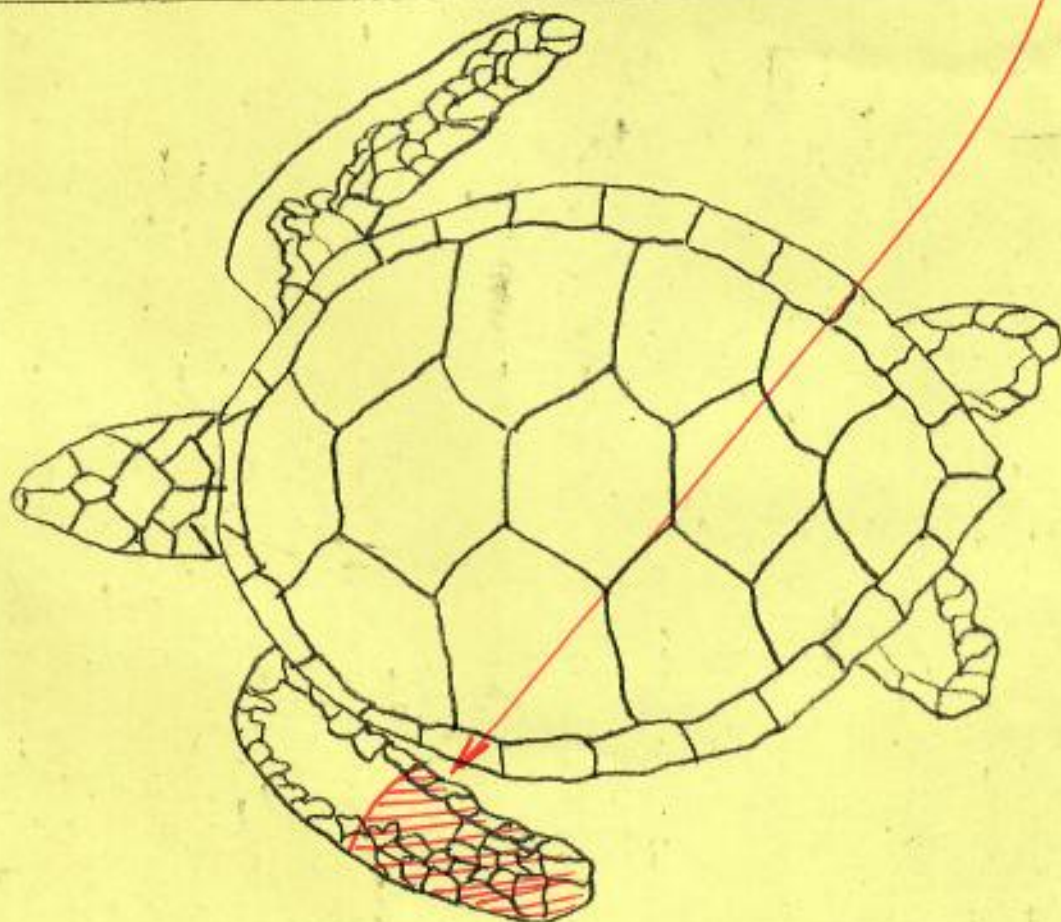
Location Caught: Kawela

Location Released: Kawela

Curved Length: 72.5(68.0)

Curved Width: 65.0(52.5)

Comments: Left Front flipper cut in half at spur



***** TURTLES TAGGED ON MOLOKAI *****

Date Tagged: 6-29-85

Location Caught: Kawela

Method of Capture: Fisherman's nets (Hocajo)

Number	Curved Length (cm)	Curved Width XXXXXX (cm)	Tag Number On Left Front Flipper	Tag Number On Right Front Flipper
<u>1</u>	<u>45.0(42.5)</u>	<u>39.5(33.5)</u>	<u>8622</u>	<u>8623</u>
<u>2</u>	<u>74.0(68.0)</u>	<u>67.5(54.5)</u>	<u>8624</u>	<u>8625</u>
<u>3</u>	<u>67.0(62.0)</u>	<u>60.0(50.5)</u>	<u>8626</u>	<u>8627</u>
<u>4</u>	<u>45.5(43.0)</u>	<u>39.5(34.0)</u>	<u>8628</u>	<u>8629</u>

RECOVERYRECOVERY***RECOVERY***

<u>5</u>	<u>63.0(58.0)</u>	<u>52.5(45.5)</u>	<u>8634</u>	<u>8635</u>
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This turtle was initially tagged two months ago, approximately 13 miles west of today's capture, at Palaau. All of the above turtles were tagged and released at site of capture.

1st recording of eastward movement by Palaau turtles!

Remarks: 269 turtles tagged to date with 24 recoveries.

MOLOKA'I MANGROVE



photo by Kimber Alspach

Student Projects

Projects designed, carried out or participated in by UHH is the focus of this column. Creating or participating in a project is one of the requirements for receiving a MOP certificate and those who have done so deserve some extra recognition. These activities are part of what separates MOP, an academic program from clubs on campus and all members, even those who don't have any intention at this point to finish a project, can appreciate the effort involved. MOP fulfills many varied needs for it's diverse membership so on with the story.

One of our members Kimber Alspach was involved in a project off the shores of Moloka'i from July 25th through August 10th that was originally requested by Walter Ritte, Jr. of the Hawaii Dept. of Business and Economic Development. The effort was a series of three surveys of 1. potential fishery management district near Moanui, on the southeast coast, 2. the Ualapu'e fishpond west of Moanui, and 3. mangroves introduced by the American Sugar Company in 1902 meant to prevent erosion. We wouldn't want to give the impression that Kimber was the only one there, she was joined by six MOP members from other campuses, four

Moloka'i high school students, and Manoa graduate student Keith Bigelow the project leader.

A general survey was done at the Ualapu'e fishpond site where there is interest in restoration of the pond and at the area near Moanui a full transect was completed. The information gathered on substrate and fish population should be invaluable for anyone in future considerations about either area. The mangroves have reduced erosion helping to improve the water quality, but residents feel the fast growth of the mangroves may reduce access to beaches, fishing areas, and existing fish ponds.

While the group was in Moloka'i they attended a community meeting hosted by Walter Ritte in Kaunakakai. Such events are important educational experiences where the information gathered on a scientific survey can be used for increased community awareness of important ocean resources. The day after the meeting the group got the chance to do some diver training in deeper, clearer water on the north shore. The definitive quote from Kimber was "A lot of hard work but well worth it."

Survey Page

Attached to this newsletter is a survey page which is designed to update our files. Also if the specific interest section is filled out we can notify individual students when opportunities arise that fit their specific goals. Most students would be surprised at the degree to which MOP can be a helpful support group in a variety of areas and the return of the survey letter will make us more effective.



Changing Tides



We Want Your Body!!!!

Perhaps we here in the MOP office are suffering under a delusion but many of us are afraid that our members and non-members might have the wrong impression of the purpose of the Marine Option Program. Maybe our insecurities are showing but we don't want people to get the impression that all our members are "nose in the air biology majors". Besides most biology majors don't know up from down and usually their peering in some microscope anyway. Seriously, the perception that environmentally concerned people are somehow snobbish is detrimental to a very important social issue. We honestly feel that serious research projects and "laid back" activities can originate from the same organization with the common bond being a concern for our marine environment. Don't want to be hackneyed but "All work and no play does make for dull days."

MOP wants to be used as a resource not only for project research that may result in a MOP certificate but also as a general support group for our members. We receive job opening listings from the state and other sources all the time. For example; a sport fishing lodge in Juneau, Alaska is looking for about a half dozen people of various skills for the summer. You might not get rich but room, board, and airfare are included.

Included in this newsletter is a survey letter that can help us clear up our records with the end result being the ability to send informational letters to members who list their specific interests. So if someone has diving skills or fishing skills or photographic skills we can let them know about future opportunities.

The MOP student workers have found out that they will be able, in the future, to take students on various field trips without faculty members present. Our faculty coordinators are very busy people and scheduling activities has been difficult, but non in-water activities can be handled by a students along with signatures on the proper waiver forms.

As Robin Williams says "CCCCheck it out!!!!!!"

Weigh Anchor

We have received the rigging for a new sailboat, a 12ft. Laser, and the hull will be here in time for a scheduled Feb. 11th sailing.

By the beginning of Spring semester we should have an 18ft, 10 passenger, outboard available for research, nekton sampling (fishing), plus added safety and enjoyment on sailing days.

Spring Semester Plans

Feb. 11th - Sailing (two vessels) Hilo Bay

March 4th + 5th, MOP Symposium at UHH

March 27th - April 1, Marine Archaeology Symposium, Manoa



LIBERT K. LANDGRAF
DEPUTY

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF AQUATIC RESOURCES

P. O. BOX 248
KUALAPUU, MOLOKAI, HAWAII 96757

AQUACULTURE DEVELOPMENT
PROGRAM
AQUATIC RESOURCES
CONSERVATION AND
ENVIRONMENTAL AFFAIRS
CONSERVATION AND
RESOURCES ENFORCEMENT
CONVEYANCES
FORESTRY AND WILDLIFE
LAND MANAGEMENT
STATE PARKS
WATER AND LAND DEVELOPMENT

June 9, 1989

To : Paul Kawamoto
From : Bill Puleloa
Subject : Synopsis of Turtle Nesting Activities at Kawaaloo Bay, Molokai
Summer of 1988, June 15th to September 30th

Kawaaloo Bay (aka Ranch Moomomi) is a crescent shape bay with a white sand beach located on the north shore of Molokai. It is approximately 3/4 mile long with the widest portion of the beach being about 100-150 yards from the water's edge to the vegetation line. Accessibility is granted at the discretion of the landowner Molokai Ranch, Ltd. This area being relatively remote, no water nor electricity is available and except for occasional fishermen is seldom visited by the general public. Furthermore, being on the north side of the island, the prevailing trades and marginal waters help restrict traffic to a minimum.

Our first report of turtles coming ashore last summer came on July 5th. Investigation revealed no actual diggings in the sand but merely that the animal had crawled ashore and then returned to the sea. This incident occurred at the western part of the bay.

Approximately three weeks later on two consecutive nights (July 30th & Aug. 1st), two or more turtles crawled ashore and dug a total of 7 separate "pits" toward the eastern portion of the bay. 5 of these pits were dug during the first visit on the 30th and the second two on the following night.

On August 14th, 2 weeks later, one set of tracks indicated another single turtle crawled ashore to deposit her eggs. She dug a total of 5 pits very high up in the pohuehue (beach morning glory) all of which were very close to each other and approximately in the middle portion of the bay. From this incident came one verified successful hatching as juvenile sea green turtles were actually observed emerging from one of the pits on October 8th approximately two months later.

On August 30th, another single set of tracks was seen indicating another single turtle coming ashore. This female turtle dug a total of 2 pits again approximately in the middle portion of the bay. Subsequently, this nesting also proved successful as many juvenile turtle tracks were observed radiating out from one of the pits two months later on Oct. 24th.

No other subsequent observations of nesting activities were recorded and our monitoring was officially terminated on September 30th.

In sum, during the summer of 1988, six separate incidents of turtles coming ashore ostensibly for nesting purposes were recorded at Kawaaloo Bay, Molokai. Because no tagging of turtles was conducted it is not known if these incidents involved six separate individuals because it is possible some of them may have crawled out more than once. A total of 14 pits were excavated with a minimum of two successful hatchings confirmed from these incidents, and that one hatching at least involved the species Chelonia mydas.

cc: Ed Misaki
NIBs
George Balazs ✓



OFFICE OF STATE PLANNING

Office of the Governor

STATE CAPITAL, HONOLULU, HAWAII 96825 TELEPHONE: (808) 548-3493

2007 RELEASE UNDER E.O. 14176

Ref. No. P-8766

September 29, 1988

Mr. George Boehlert, Director
U.S. National Marine Fisheries Service
2570 Doyle Street
Honolulu, Hawaii 96822

Dear Mr. Boehlert:

Subject: Consolidated Application Process (CAP) Meeting for the Department of Business and Economic Development's Proposed Restoration and Revitalization of Ualapue Fishpond, Molokai (CAP/88-2)

We have been requested to initiate a Consolidated Application Process (CAP) meeting for a proposal to restore and revitalize Ualapue fishpond on Molokai to economic productivity. We have tentatively determined that a permit, approval, or input from your agency may be required for the project. Subsequent to the provisions of Act 237, SLH 1985, we are requesting your agency's participation in a consolidated review of the proposed activity.

This meeting will be a forum for the applicant to describe the proposed project and discuss permit concerns. Input regarding your agency's interests, concerns, jurisdictions, possible permits, and general reaction to the proposed project would be appreciated. We are enclosing the applicant's summary description of the project.

We look forward to your Department's participation at the meeting which has been scheduled for:

Tuesday, October 18, 1988, at 9:00 a.m.
Department of Business and Economic Development
9th Floor Conference Room
Kanasalu Building, 750 South King Street

Please inform us if you are planning to attend the meeting by contacting our Coastal Zone Management office at 548-5973. Also, please feel free to call if you have any questions regarding this matter.

Sincerely,

Harold S. Masumoto
Harold S. Masumoto
Director

Enclosures

September 14, 1988

Mr Harold S. Masumoto, Director
Office of State Planning
Hawaii State Capitol
Honolulu, Hawaii 96813

Dear Mr. Masumoto,

The Department of Business and Economic Development is initiating a project on Molokai at Ualapue fishpond. The project involves the restoration/revitalization of the fishpond toward economic productivity. It is anticipated that this project will be a model for the development of other family style businesses on the island. The mode of management of this project is a mixture of ancient and modern methods of aquaculture.

As you know, the permit procedures for such a project can be lengthy and complex. I have been hired by DEED as consultant on the project and have initiated some procedures toward permits acquisition. I would like to meet with the various agencies involved in the Consolidated Application Process under the auspices of your office. A scoping session would be a valuable vehicle to expedite matters and answer questions of the various agencies involved. I have enclosed for your information:

- *A brief narrative of the project
- *A tasks lists giving specific works
- *A map of Molokai showing the location of the pond
- *A synopsis taken from a State Survey of Fishponds

If there is more information that you need, please contact me at:

737-2300 (B) or 395-7409 (H).
1115B Waimiha St. Hon. 96825.

I will be calling the CZM office soon to schedule an appointment to discuss this matter in greater depth with you and your staff. Thank you.

Sincerely,

Carol Araki Wyban

Carol Araki Wyban
Consultant, DEED

RECEIVED

SEP 14 1988

Office of State Planning

27049

03

Fishponds: A Resource of the Past Revitalized for the Future

Ancient Hawaiian Fishponds are living cultural treasures. Unique in all the world, the ponds are a testimony to the work and ingenuity of the ancient Hawaiians. Fishponds expanded the food producing capabilities of the land through long-range planning and vision. They are the manifestation of a community that based its works on malama, caring for the land. This planning, vision, and caring has lasted for more than 600 years with the few remaining ponds.

With Western contact came a change of values. The short-term economic gains from the fisheries replaced the long-term efforts of growing fish. Shoreline development resulted in the filling in or destruction of many fishponds. Abolishment of the hierarchy and the native population diminishment left pond walls unintended.

Hawaii is again in a period of economic change. The existing fisheries of the Hawaiian islands can no longer meet the needs of a growing population with ever increasing needs for fresh fish. In 1987, U.S. and foreign imports of seafood into Hawaii amounted to 7,781,039 lb with a dollar value of \$30,000,000. The local market values fresh fish, as such, island pond raised mullet and milkfish commands higher prices than imports of the same species.

The Hawaiian fishponds are valuable cultural treasures, but they are also valuable economic resources. With precious few remaining ponds, conscious restoration and resource planning must be executed to protect the physical and cultural integrity of these resources.

The Department of Business and Economic Development intends to restore and revitalize Uialapue Fishpond. Through proper management, the yields from the pond can exceed extensive style aquaculture production of the ancient days and produce at a semi-intensive scale that can be cost-effective in today's economy. In essence, the project would enhance the site, fulfilling the purpose for which the pond was intended. Ongoing works at the pond would assure maintenance of an historic site.

The long range implications of this project are many. As a model for the development of a cottage industry on Molokai, it would help boost an economically depressed area. (Of 67 ponds deemed usable by a State study, 21 exist on the island of Molokai.) As a cultural resource, fishponds serve as an educational focal point for islanders and visitors. As an example of conscious resource planning, it continues a tradition of 600 years. Ultimately, the project would provide fresh fish for the Hawaii's markets.

It is not enough to protect the ponds through regulation and historic designation. The ponds that are in good condition are those that have been actively managed and used for growing fish. Your help as an agency is requested in facilitating the success and progress of this important project. We are not accustomed to long-range resource planning that spans centuries, but in his testimony to the City Council regarding He'eia fishpond, George Uyemura, operator of Mo'ili pond said, "If you take care of that pond today, 300 years from now, it will still be there." Let us work together to regenerate these vital resources. Thank you.

Tasks:

1. Gathering of baseline information about Uialapue fishpond. Data collection including measurements of depth, salinity, pond wall, makaha, breaks in the wall, acreage, and siltation.
2. Permits Acquisition and compliance with requirements and reports, including archeological memorandum of agreement with the Division of State Parks and the participation of a qualified archeologist to fulfill the requirements.
3. Repair of the pond wall with the specifications of a qualified archeologist. The repairs will carefully reconstruct the wall to its original state, (with the exception of existing concrete work that has been documented). Insertion of gates into the makaha using the existing double gate design.
4. Removal of predators from the pond using nets, lines, traps and the makaha. This activity will consist of stringing gill nets within the pond wall, use of thrownets, moveable fishtraps and the makaha. These activities enhance the historic value of the site. They are the same activities that occurred in the pond in ancient days when Hawaiians used upena nets, fishtraps of cordage, and the makaha at the high tide.
5. The fingerlings stocked in the pond will be the traditional crops of mullet and milkfish. Oceanic Institute has developed the technology for the spawning and larval rearing of these two species. We are requesting the donation of stocking materials from the Institute. Wild caught fry can also be acquired in nearby streams as was the practice of ancient days.
6. To increase the growth rate of the fish and allow optimal stocking, the fish will be fed daily.
7. Market sized fish will be harvested and marketed on Molokai. If quantities exceed local needs they will be shipped to Oahu.
8. Assessments will be made regularly about optimal methods of biological, business and market management. Data and observations will be recorded in a report that will be used as a model for the revitalization of other fishponds on Molokai.



1. Kaluapuhi
2. Kalok'eli
3. Aili
4. Kalokiki
- * 5. Ualapue
6. Kaapehina
7. Naupala
8. Kupeke

Name: Ualapue Tax Map Key: 5-6-01-1

Location: Kamalo, Molokai Zoning: Conservation (within urban)

Size: 15.5 acres Owner: State of Hawaii

Present Use: None Lessee: None

Proposed Use: Fishpond Salinity: 20-30 ppt

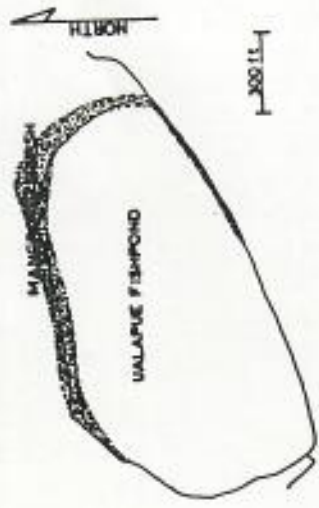
Description: Coastal pond in excellent condition with porous wall and moderate to high flushing rates. Moderate freshwater flow from shoreline springs provide some nutrient replacement. Nursery/acclimation pond not present. Pond is not now in use. Fair primary productivity with fair species diversity.

Suitability: Good potential for production of mullet and milkfish in moderate-density culture. Also suited for cage culture of mol and more intensive aquaculture development.

Repair/Modification Required: Gate repair and screen installation needed so that stocking of mullet and milkfish can occur.

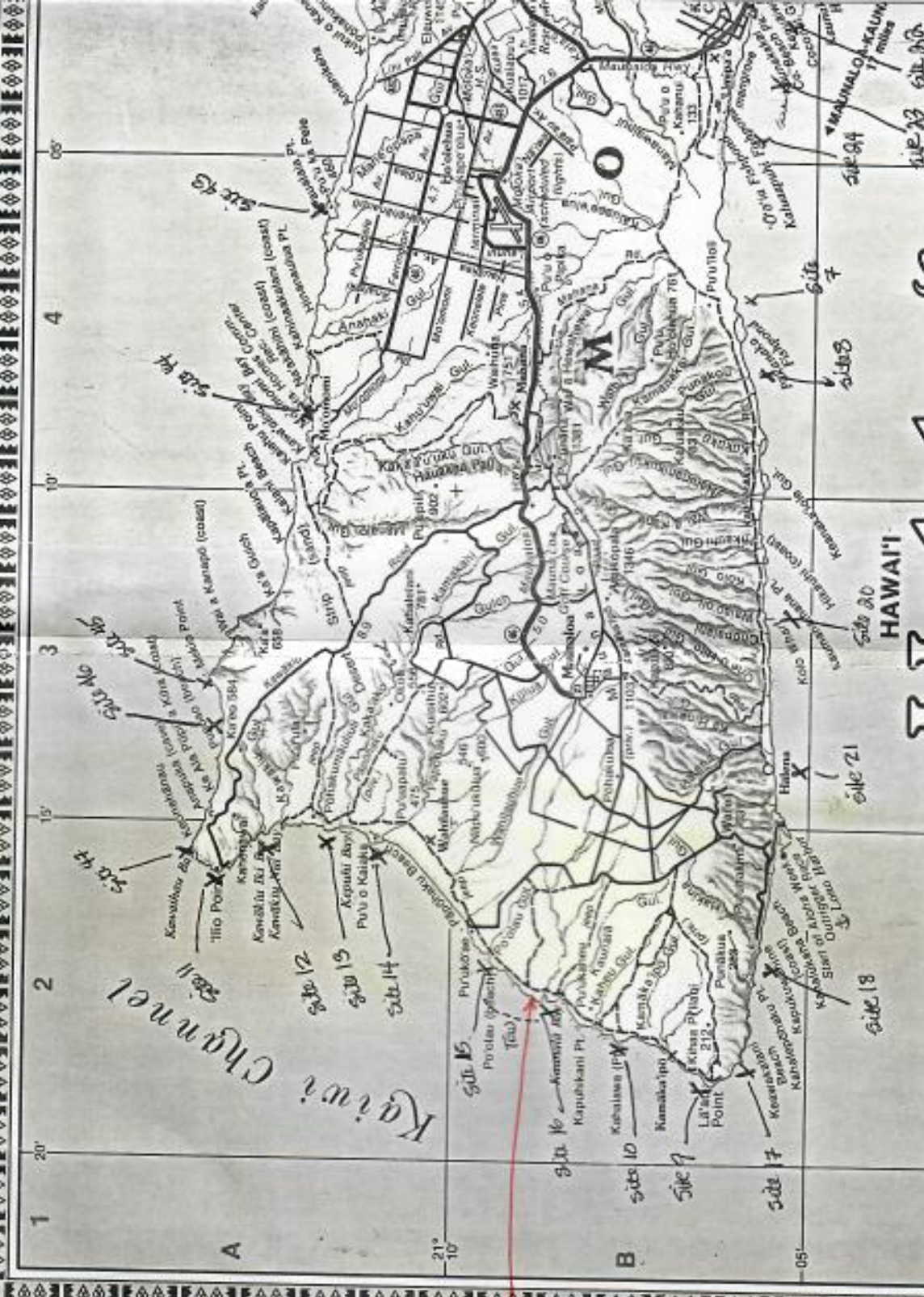
Management Strategies: Control predators and competitors by selective fishing and trapping. Banking of sand along pond wall to supplement accretion and reduce porosity of wall. Install satisfactory gate system which would prevent the entry of unwanted fish species and allow one-way flows of water. Build nursery/acclimation impoundment. Establish holding/sorting tank system for wild-caught juveniles. Build a fence to reduce unwanted entry from the adjacent roadway.

Recommendation: Good potential for "feeder" production of mullet and milkfish. Increased production can be expected with recommended modifications and with supplemental feeding and fertilization.



Approximate location of turtle sighting
& Pterocladia patch

Pterocladia & turtles -
50-100 meters South of
Second-to-last right of way (Southernmost)



HAWAII

Molokai

The Friendly Isle

James A. Bier
Department of Geography, University of Illinois at Urbana-Champaign
Published by
The University Press of Hawaii
Honolulu

from the desk of

1/9/90

DONN T. FUKUDA
Environmental Department
Hawaiian Electric Co., Inc.

Thought you'd be interested in subject matter.

As requested.

For your comments by

Re: Turtle siting on West Molokai

George

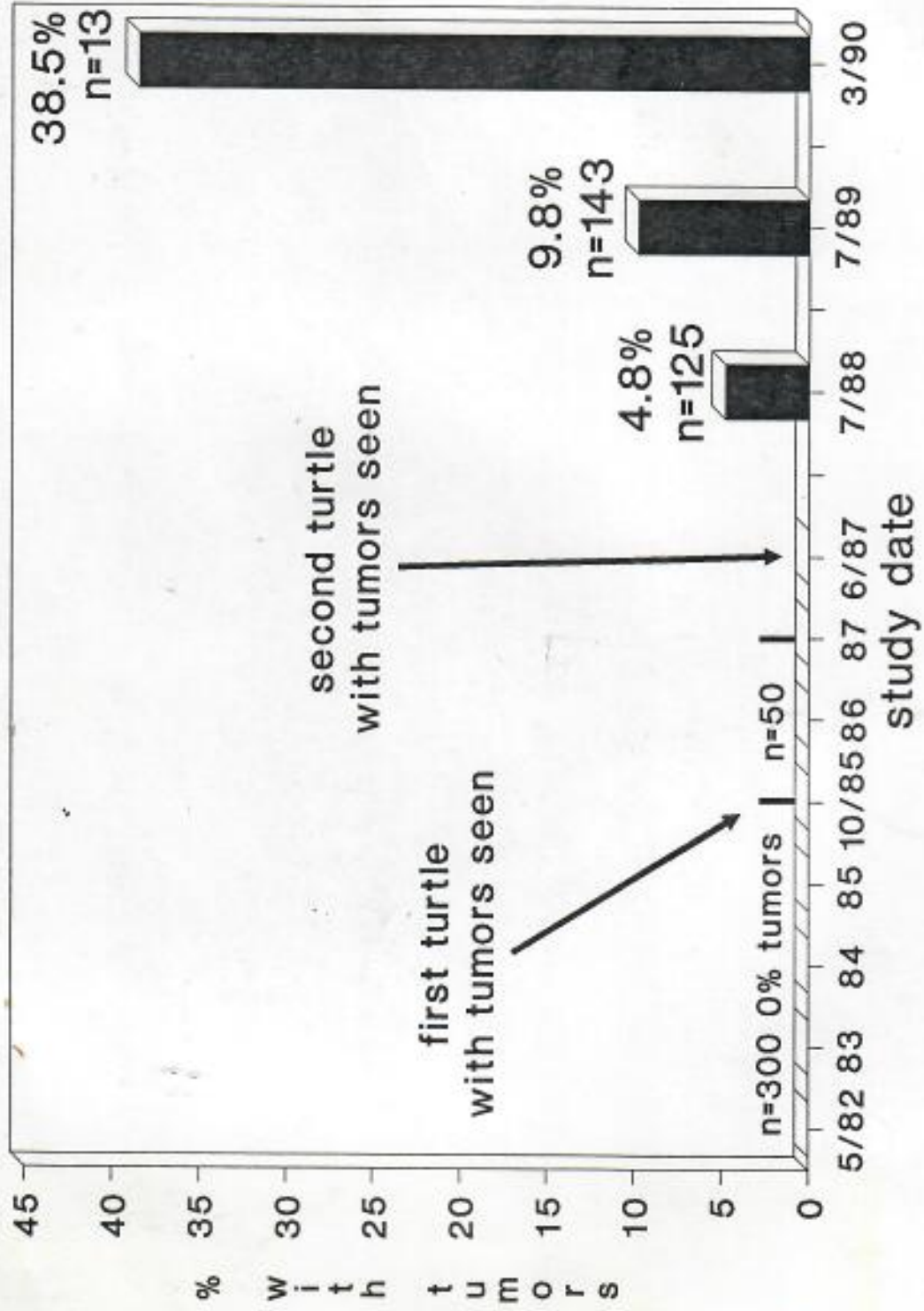
From the map provided, the best I can estimate is that the Pterocladia patch is between your site 15 and 16.

There are ^{several} public "rights-of-ways" to the beach running ^{south} from Kalua Koi Hotel, along Papohaku Beach, and down to about Kaunala Bay. If I remember correctly, the turtle site is 50-100 meters south of the second-to-last right of way (i.e., southern-most).

Please call if you have any questions.

Green turtles at Palaau, Molokai

(compiled by G. Balazs, W. Puleloa and E. Medeiros)



Summary of 13 green turtles captured at Palaau, Molokai
28 Feb.-2 Mar. 1990.

Compiled by

George Balazs, Bill Puleloa, and Ed Medeiros

Inconel tag no.	Carapace length (cm)			Carapace width (cm)		Notation
	standard	notch	curved	Standard	Curved	
28 Feb-1 Mar 1990, Site A (1 turtle)						
Y601,02, 03(H)	74.8	74.6	79.5	56.3	70.5	TMR-eye & tail
1-2 Mar 1990, Site C (12 turtles)						
Y604,05(3-4)	40.5	39.9	43.0	35.1	40.0	--
Y606,07(3-4)	39.2	38.8	41.5	33.3	38.5	White PL
Y608,09(3-4)	42.5	41.9	45.0	--	40.0	--
Y610,11	55.1	54.6	60.0	54.6	53.0	--
Y612,13,14(H)	63.9	63.9	68.0	49.5	60.0	TMR-eyes
Y615,16,18(H)	63.7	63.7	68.0	49.2	60.5	L&R FL's gone
Y619,20,21(H), 22(3-4)	84.4	84.3	90.0	--	--	male?
Y623,24(3-4) 625(H)	80.9	80.8	86.0	59.2	73.0	TMR-RFL & eye
Y626,27,28(H)	78.9	78.9	83.0	62.4	77.5	6 centrals
Y630,31(3-4) 32(H)	60.0	59.9	65.0	49.7	56.5	TMR-eyes & FF's
Y634,35,36(H)	83.9	83.9	88.5	66.7	81.0	TMR-eyes, jaw, FF's
7240(9292) (Y633H)	68.6	68.3	73.5	54.4	66.0	tag recapture
[This turtle originally tagged by Bill Puleloa and Ed Medeiros at Site C on 5/16/84, 5.75 years ago. Measurements: Standard length was 46.5 cm (growth of 3.8 cm/yr) and curved length was 49.0 cm (growth of 4.3 cm/yr.)]						

Notes: Of 13 turtles captured, 5 (38.5%) had tumors.
3/1/90 Site A seawater = 68°F
3/2/90 Site C seawater = 72°F

Some of these fishes have evolved specializations for occasional hiding in mats of floating algae, seagrasses, and leaves. As juveniles, they have extremely thin bodies, with dark, irregular color patterns that serve as camouflage. These young fishes can swim on their sides by lateral undulations of the dorsal and anal fins, or by sculling with their pectoral fins.

Atlantic Ocean species of these genera often show the same patterns of early morphology and behavior. In the Atlantic, sightings of the tripletail (*Lobotes surinamensis*), both adult and juvenile, are common. The mottled-brown adults have large, rounded dorsal and anal fins that give the fish the appearance of having three tails. The tripletail associates with pelagic drifting objects and is often seen floating on one side, resembling a piece of seaweed.

1.52(29)/(61) 4124

Question: When visiting the Florida Keys, I saw a tree growing right out of the salt water not far from shore. It had strange roots extending downward, like stilts, from the trunk. What kind of tree was it? R.R., Brooklyn, New York.



Answer: The tree you observed is the red mangrove (*Rhizophora mangle*, above), which can grow in both fresh water and salt water. As described in *Everglades—The Park Story* (University of Miami Press, Coral Gables, FL), this kind of mangrove tree forms the coastal edge of the mangrove swamps along low-lying shores in South Florida. These swamps also include the black mangrove (*Avicennia germinans*) and the white mangrove (*Laguncularia racemosa*), which grow farther inland. Although each species belongs to a different botanical family, all three have the common ability to thrive in highly saline soils and areas subject to overflow by seawater.

The red mangrove is the basis of an important food web. Fallen mangrove leaves supply nourishment to a multitude of tiny fishes and invertebrates inhabiting the swamp waters. The mangrove environment can be 20 times as productive as

the open sea; see "Middle World of the Mangrove," *Sea Frontiers*, September-October 1981, pages 267-273.

1.70 4125

Question: How did places in the United States get their names? In particular, how did California get its name? M.R., Miami, Florida.

Answer: Places usually get their names from their discoverers or from cartographers. In the United States, many names are derived from European cities or towns; New York and New Jersey are examples of this type of name. Other places took Indian names; these include Delaware, Mississippi, and Lake Okechobee (Florida).

The name California has an even more interesting origin. In the early sixteenth century novel *Las Sergas de Esplandian*, author Garcia Ordonez de Montalvo wrote about an island named California that was filled with gold. The Spanish explorers Ortuno Ximenez and Hernando Cortez, who named California, thought it was an island and named it after the fictional one in the book. By 1541, the name California was established on maps.

The origins of all 50 state names are discussed in *State Names, Seals, Flags, and Symbols: A Historical Guide* (Greenwood Press, New York, 1987).

7.52 4126

Question: What percentage of water is below ground? R.W., Mount Morris, Michigan.

Answer: Only about 0.36 percent of Earth's water is ground-water. The bulk of Earth's water, or 98 percent, is in the ocean or in the form of sea ice. Glaciers and land ice account for about 1.6 percent, rivers and lakes for about 0.04 percent, and the atmosphere about 0.001 percent.

Even a fraction of a percent is a great deal of water. The 0.36 percent below ground represents 5.1 million cubic kilometers (1.3 quintillion gallons) of water.

6.00 4127

Question: How deep do manned submersibles go? J.L., Merrick, New York.

Answer: The depth record for a manned submersible is 35,800 feet (10,912 meters). This was accomplished in 1960 by the research bathyscaphe *Trieste I* in the Challenger Deep of the Marianas Trench near the Philippines.

Under normal conditions, manned military submarines do not go below 3,000 feet (915 meters). Routine dives of manned research or commercial submersibles generally do not exceed 14,000 feet (4,265 meters). *Alvin*, the deep-diving component of the U.S. scientific fleet, can dive to 13,120 feet (4,000 meters).

7.30 4128

What's Happening

by Walter Ritte, Jr.

Turtles

What's hapening...to our turtles? **Tumors Continue to Spread in Hawaiian Green Turtles** was the headline in the Hawaii Wildlife Newsletter. George Balazs of NOAA Fisheries, writes...“the incidents of fibroapapellomas, a life threatening tumor, has substantially increased in an important aggregation of the Hawaiian Green Trutle, which resides along the southern coast of the island of Moloka'i. Prior to 1985 there were no known cases of the tumors in this area. In the last harvest, March 1990, 38.5% of the turtles had tumors.

What can we do to help protect these turtles? Turtles were once a traditional Hawaiian food until greed wiped them out and the Federal Government stepped in to protect them under the Endangered Species

Act. Now a mysterious disease on our reefs? Call the Feds and demand an answer: 943-1221, or call the State Office at 548-6550. Only through public pressure will government get us an answer.

Hawaiians

Homesteaders have taken a long over due stand to Pono their wai (take care of their water). They have asked the Federal Government to step in because the state, including DHHL have not acted in their best interest. Hawaiians are different from the “general public,” they have rights beyond the general public. They are having a difficult time getting government to recognize and deal with Hawaiian Rights. Their water rights over the Kualapu'u aquifer is a good example. Δ

orig: → 7/5/89 BBA408, Y426, Y427 569.3 #4
C76.0 PALAU

SIGHTING INFORMATION TURTLE AND SEAL

Animal sighted (circle): Turtle Seal
Number of animals: 5 Type, if known: Green Sea Turtle
Date: Jan. 11, 1991 Observer: Mark Johnson
Address & phone 3500 L. Honkapillani Hwy #10E
(optional): Lahaina, HI 96761 669-8310
Time: 10:30 AM
Location: East Shore Lanai (Turtle Haven) Acleris Station
Observed from (circle): shore, boat (name: Sea Smoke),
while skin or SCUBA diving (on surface or at 30 feet deep).
Estimated size (length): 2 1/2" - 4"

Comments: (such as color pattern; injuries; scar patterns; tumors; whether flipper tags are present (Y/N); color and number of the tag(s); bleach marks (number/letter); behavior; and weather)

one large turtle had a white tag on left forward flipper
Tag # BBA408 He/She appeared to be healthy and
happy. Weather: Clear, light current, a few emys in water.

Seals and sea turtles are protected under Federal and State law.

DO NOT DISTURB.

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3/26/89

SSB&A

Mystery oil spill fouls eight

By David Waite
Advertiser Staff Writer

A nine-man crew was dispatched from Oahu yesterday to begin cleaning an eight-mile stretch of Molokai shoreline fouled by an offshore oil spill.

A Coast Guard spokesman said a black, tar-like substance was washing ashore from an offshore slick, estimated to be three to five miles long and about a half-mile wide.

Coast Guard investigators had not yet determined the oil slick's origin.

The contaminated area is 12

to 16 miles east of Kaunakakai and is the site of several historic Hawaiian fish ponds.

Rusty Nall, vice president and general manager of Pacific Environmental Corp., the firm contracted by the Coast Guard to provide cleanup services, said his company planned to put oil booms — floating barriers — across the mouths of at least three fish ponds to limit damage.

Nall said the cleanup crew would work throughout the night, if necessary, to keep the spill's effects to a minimum.

Molokai board sailor Kurt Shively, 35, said some of the heavy oil appeared to be floating just offshore in the Honouliwai area, causing unusually glassy sea conditions.

"I got some on my board and feet," Shively said. "It really sticks and smears when you try to take it off."

Sandi Kapuni of Pukoo said she and her husband Bill first noticed the slick from their boat early yesterday morning.

"We saw it coming in and it just got worse throughout the day," Kapuni said. "It's not

miles of Molokai shore

coming up to shore right now (in the Pukoo area) because the outside edge of the fish ponds is stopping a lot of it."

Kapuni said she and her husband help run a tourist snorkeling business at Pukoo. The two had to spend an extra 1½ hours after work yesterday cleaning oil smudges from the snorkelers, who are ferried from Maui to the diving area by boat.

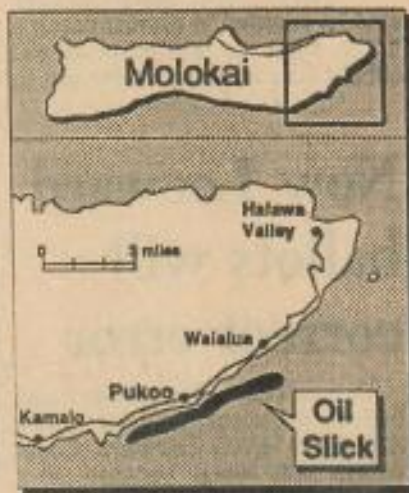
Bruce Anderson, deputy director for environmental health of the state Department of Health, said surfers and swim-

mers should avoid contact with the oil.

"It's more of a nuisance than anything else," Anderson said. "We don't recommend that people use gasoline or other solvents to clean it off their skin. Instead, they should use a lanolin-based soap."

Fish from contaminated waters usually becomes unpalatable before turning inedible, Anderson said.

"If someone ate enough of the contaminated fish, they would probably get a very bad case of diarrhea," Anderson said.



Advertiser graphic by Greg Taylor

* * * * * TURTLES TAGGED ON MOLOKAI * * * * *

Date Tagged: June 10, 1989

Location Caught: Washed up dead on beach at Kamiloloa

Method of Capture: _____

<u>Number</u>	<u>Curved Length (cm)</u>	<u>Curved Width (cm)</u>	<u>Tag Number On Left Front Flipper</u>	<u>Tag Number On Right Front Flipper</u>
<u>1</u>	<u>87.0(81.0)</u>	<u>80.0(61.5)</u>	<u>missing</u>	<u>8625</u>

This animal was found washed up on the beach at Kamiloloa covered with tumors on all soft areas. The right front flipper was missing but the tag on its left front flipper was retrieved. It was originally tagged four years ago on June 29, 1984 at Kawela and field notes do not indicate any abnormalities. The carcass was disposed of by the Maui County Public Works.

Remarks: 647 turtles tagged to date with 75 recoveries.

***** TURTLES TAGGED ON MOLOKAI *****

Date Tagged: November 14, 1989

Location Caught: Kawela

Method of Capture: Incidental catch in fisherman's nets

<u>Number</u>	<u>Curved Length (cm)</u>	<u>Curved Width (cm)</u>	<u>Tag Number On Left Front Flipper</u>	<u>Tag Number On Right Front Flipper</u>
<u>1</u>	<u>57.0(53.0)</u>	<u>47.0(40.0)</u>	<u>9184</u>	<u>9185</u>
<u>2</u>	<u>53.5(50.5)</u>	<u>47.5(39.0)</u>	<u>9186</u>	<u>9187</u>
<u>3</u>	<u>48.0(46.0)</u>	<u>42.0(35.0)</u>	<u>9188</u>	<u>9189</u>

Note: This turtle was badly tumored but still vigorous upon release.

<u>4</u>	<u>81.5(74.5)</u>	<u>73.5(60.0)</u>	<u>9192</u>	<u>9193</u>
<u>5</u>	<u>63.0(59.0)</u>	<u>55.0(45.0)</u>	<u>9190</u>	<u>9191</u>
<u>6</u>	<u>57.0(53.5)</u>	<u>48.0(41.0)</u>	<u>9194</u>	<u>9195</u>

Note: Turtle number six had many small tumors on all soft parts.
All animals release outside of Kanoa Fishpond.

Remarks: 653 turtles tagged to date with 75 recoveries.

***** TURTLES TAGGED ON MOLOKAI *****

Date Tagged: November 15, 1989

Location Caught: Kawela

Method of Capture: Incidental catch in fisherman's nets

<u>Number</u>	<u>Curved Length (cm)</u>	<u>Curved Width (cm)</u>	<u>Tag Number On Left Front Flipper</u>	<u>Tag Number On Right Front Flipper</u>
<u>1</u>	<u>54.0(50.5)</u>	<u>48.5(40.5)</u>	<u>9196</u>	<u>9197</u>
<u>2</u>	<u>44.5(42.5)</u>	<u>40.0(34.0)</u>	<u>9198</u>	<u>9199</u>
<u>3</u>	<u>62.0(58.0)</u>	<u>52.5(44.5)</u>	<u>9200</u>	<u>9201</u>

Note: Turtle number three had tumors on soft parts.

All turtles released outside of Kanoa Fishpond.

Remarks: 659 turtles tagged to date with 75 recoveries.

* * * * * TURTLES TAGGED ON MOLOKAI * * * * *

Date Tagged: August 30, 1989

Location Caught: Kaluasaha, Molokai

Method of Capture: Found entangled in discarded gill net in 10-15 feet of water

<u>Number</u>	<u>Curved Length (cm)</u>	<u>Curved Width (cm)</u>	<u>Tag Number On Left Front Flipper</u>	<u>Tag Number On Right Front Flipper</u>
<u>1</u>	<u>60.0</u>	<u>53.5</u>	<u>9182</u>	<u>9183</u>

Animal found by skin diver. Tumors on head and other parts of its body. Left eye completely blinded by large tumor. Right eye approximately 90% covered by another tumor. Turtle was still strong and vigorous at time of release at Pukoo Harbor.

Remarks: 647 turtles tagged to date with 74 recoveries.

* * * * * TURTLES TAGGED ON MOLOKAI * * * * *

Date ~~Tagged~~: June 10, 1989

Location Caught: Initially at Kawela, Molokai on June 29, 1985

Method of Capture: _____

Number	Curved Length (cm)	Curved Width (cm)	Tag Number On Left Front Flipper	Tag Number On Right Front Flipper
<u>1</u>	<u>87.0(81.0)</u>	<u>80.0(61.5)</u>	<u>missing</u>	<u>8625</u>

Straight measurements in parenthesis.

This animal was reported dead and washed up on shore at Kamiloloa, Molokai by DOCARE/DLNR personnel. The front left flipper was missing and appeared to be the result of a shark attack as the tear was very ragged. Tumors were present on the arm pits, groin areas, head and neck region of the turtle. The tag on the left flipper was retrieved but the right tag was missing along with the right flipper. The turtle was disposed of by the Maui County Public Works at ~~a~~^{the} municipal land fill.

The original measurements taken on June 29, 1985 are as follows:

74.0(68.0) 67.5(54.5)

straight measurements in parenthesis.

13cm INCREASE FOR
3 yrs 11 months (3.9 yr) =
3.33 cm/yr

Remarks: _____

***** TURTLES TAGGED ON MOLOKAI *****

Date Tagged: Nov. 17, 1987

Location Caught: Kawela, Molokai

Method of Capture: Fisherman's Nets

<u>Number</u>	<u>Curved Length (cm)</u>	<u>Curved Width (cm)</u>	<u>Tag Number On Left Front Flipper</u>	<u>Tag Number On Right Front Flipper</u>
<u>1</u>	<u>86.5 (79.5)</u>	<u>86.0 (64.0)</u>	<u>9607</u>	<u>9608</u>
<u>2</u>	<u>87.0 (81.0)</u>	<u>78.0 (66.0)</u>	<u>9609</u>	<u>9610</u>

Straight measurements in parenthesis.

Both animals released at site of tagging.

Remarks: 379 turtles tagged to date with 42 recoveries.

***** TURTLES TAGGED ON MOLOKAI *****

Date Tagged: November 18, 1987

Location Caught: Kawela, Molokai

Method of Capture: Fisherman's Nets

<u>Number</u>	<u>Curved Length (cm)</u>	<u>Curved Width (cm)</u>	<u>Tag Number On Left Front Flipper</u>	<u>Tag Number On Right Front Flipper</u>
<u>1</u>	<u>44.5(43.0)</u>	<u>42.0(35.0)</u>	<u>9611</u>	<u>9612</u>
<u>2</u>	<u>47.0(45.0)</u>	<u>42.0(36.5)</u>	<u>9613</u>	<u>9614</u>

Straight measurements in parenthesis.

Both turtles released at 'site of tagging.

Remarks: 381 turtles tagged to date with 42 recoveries.

***** TURTLES TAGGED ON MOLOKAI *****

Date Tagged: August 30, 1988

Location Caught: Kawela, Molokai (outside Kanoa Fishpond)

Method of Capture: Fisherman's nets

<u>Number</u>	<u>Curved Length (cm)</u>	<u>Curved Width (cm)</u>	<u>Tag Number On Left Front Flipper</u>	<u>Tag Number On Right Front Flipper</u>
<u>1</u>	<u>56.0(51.5)</u>	<u>51.0(41.5)</u>	<u>9159</u>	<u>9160</u>
<u>2</u>	<u>46.0(43.5)</u>	<u>40.5(35.0)</u>	<u>9161</u>	<u>9162</u>

Note: Straight measurements in parenthesis.

Remarks: 516 turtles tagged to date with 61 recoveries.

***** TURTLES TAGGED ON MOLOKAI *****

Date Tagged: February 5, 1988

Location Caught: Kawela (right side of channel)

Method of Capture: Fishermen's nets

<u>Number</u>	<u>Curved Length (cm)</u>	<u>Curved Width (cm)</u>	<u>Tag Number On Left Front Flipper</u>	<u>Tag Number On Right Front Flipper</u>
<u>1*</u>	<u>68.0(63.0)</u>	<u>61.5(49.0)</u>	<u>6640</u>	<u>6641</u>
<u>2</u>	<u>76.0(70.0)</u>	<u>70.0(54.5)</u>	<u>9617</u>	<u>9618</u>
<u>3</u>	<u>44.0(41.5)</u>	<u>39.0(33.5)</u>	<u>9619</u>	<u>9620</u>
<u>4</u>	<u>66.0(61.5)</u>	<u>60.0(48.5)</u>	<u>9621</u>	<u>9622</u>

NOTE: Straight measurements in parenthesis.

* Turtle #1 was originally tagged on 7-7-83
2 miles east of this site.

All turtles released in same area today.

Remarks: 386 turtles tagged to date with 43 recoveries.

***** TURTLES TAGGED ON MOLOKAI *****

Date Tagged: March 1, 1988

Location Caught: 1 mile west of K'kai Wharf & released at Kawela

Method of Capture: Incidental catch in fisherman's nets

<u>Number</u>	<u>Curved Length (cm)</u>	<u>Curved Width (cm)</u>	<u>Tag Number On Left Front Flipper</u>	<u>Tag Number On Right Front Flipper</u>
<u>1</u>	<u>53.0(50.0)</u>	<u>45.5(39.0)</u>	<u>9645</u>	<u>9646</u>
<u>2</u>	<u>68.0(62.0)</u>	<u>62.0(51.5)</u>	<u>9647</u>	<u>9648</u>

NOTE: Straight measurements in parenthesis.

Remarks: 399 turtles tagged to date with 44 recoveries.

***** TURTLES TAGGED ON MOLOKAI *****

Date Tagged: Sept. 19, 1986

Location Caught: Palaau (Just west of house)

Method of Capture: Nets

Number	Curved Length (cm)	Curved Width (cm)	Tag Number On Left Front Flipper	Tag Number On Right Front Flipper
<u>1.</u>	<u>81.5(76.5)</u>	<u>71.0(60.0)</u>	<u>9581</u>	<u>9582</u>
<u>2</u>	<u>58.0(53.5)</u>	<u>51.0(42.5)</u>	<u>9583</u>	<u>9584</u>
<u>3</u>	<u>61.0(57.0)</u>	<u>54.0(46.5)</u>	<u>9585</u>	<u>9586</u>
<u>4</u>	<u>62.0(58.0)</u>	<u>54.0(44.0)</u>	<u>9587</u>	<u>9588</u>
<u>5</u>	<u>49.5(47.0)</u>	<u>43.5(37.0)</u>	<u>9589</u>	<u>9590</u>
<u>6</u>	<u>80.5(75.0)</u>	<u>69.5(56.5)</u>	<u>9591</u>	<u>9592</u>
<u>7</u>	<u>42.5(40.5)</u>	<u>39.5(33.5)</u>	<u>9593</u>	<u>9594</u>
<u>8</u>	<u>80.0(73.5)</u>	<u>70.5(61.0)</u>	<u>9595</u>	<u>9596</u>
<u>9</u>	<u>44.0(41.5)</u>	<u>38.5(32.5)</u>	<u>9597</u>	<u>9598</u>

RECOVERYRECOVERY***RECOVERY***RECOVERY***RECOVERY***

<u>10</u>	<u>80.5(76.0)</u>	<u>69.0(57.0)</u>	<u>8843</u>	<u>8844</u> initially tagged <u>7/11/85</u>
<u>11</u>	<u>63.0(58.5)</u>	<u>56.0(46.0)</u>	<u>9486</u>	<u>9487</u> initially tagged <u>10/2/85</u>
<u>12</u>	<u>72.0(67.5)</u>	<u>66.0(54.5)</u>	<u>6397</u>	<u>6398</u> initially tagged <u>9/3/82</u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>

Remarks: All three recoveries were originally tagged in the same area as today. 350 turtles tagged to date with 36 recoveries.

***** TURTLES TAGGED ON MOLOKAI *****

Date Tagged: July 13, 1986

Location Caught: Outside Kanoa Fishpond, Molokai

Method of Capture: incidental catch in fisherman's nets

<u>Number</u>	<u>Curved Length (cm)</u>	<u>Curved Width XXXXX (cm)</u>	<u>Tag Number On Left Front Flipper</u>	<u>Tag Number On Right Front Flipper</u>
<u>1</u>	<u>87.5 (79.5)</u>	<u>78.5 (61.5)</u>	<u>9579</u>	<u>9580</u>

NOTE: Turtle had a very deep puncture on the plastron.

Remarks: 341 turtles tagged to date with 33 recoveries.

* * * * * TURTLES TAGGED ON MOLOKAI * * * * *

Date Tagged: May 21, 1986

Location Caught: Outside Kalokoeli Fishpond

Method of Capture: Fisherman's nets (incidentally)

<u>Number</u>	<u>Curved Length (cm)</u>	<u>Curved Width length (cm)</u>	<u>Tag Number On Left Front Flipper</u>	<u>Tag Number On Right Front Flipper</u>
<u>1</u>	<u>57.5 (53.5)</u>	<u>46.5 (38.5)</u>	<u>9575</u>	<u>9576</u>

NOTE: Straight length in parenthesis. Animal
definitely not a green turtle but was
identified as a hawksbill after checking
with reference materials and literature.

Remarks: 339 turtles tagged to date with 33 recoveries.

***** TURTLES TAGGED ON MOLOKAI *****

Date Tagged: October 3, 1985

Location Caught: Palaau, Molokai

Method of Capture: Incidental catch in fisherman's nets

<u>Number</u>	<u>Curved Length (cm)</u>	<u>Curved Width (cm)</u>	<u>Tag Number On Left Front Flipper</u>	<u>Tag Number On Right Front Flipper</u>
<u>1</u>	<u>76.0(71.5)</u>	<u>63.5(51.0)</u>	<u>9482</u>	<u>9483</u>
<u>2</u>	<u>71.0(66.0)</u>	<u>62.5(50.5)</u>	<u>9484</u>	<u>9485</u>
<u>3</u>	<u>61.5(57.0)</u>	<u>54.5(46.0)</u>	<u>9486</u>	<u>9487</u>
<u>4</u>	<u>69.5(65.0)</u>	<u>62.0(51.0)</u>	<u>9490</u>	<u>9491</u>
<u>5</u>	<u>68.0(64.0)</u>	<u>60.5(50.0)</u>	<u>9488</u>	<u>9489</u>
<u>6*</u>	<u>63.5(58.5)</u>	<u>57.5(46.5)</u>	<u>6393</u>	<u>6394 RECOVERY!</u>
<u>7</u>	<u>44.0(41.5)</u>	<u>41.0(35.0)</u>	<u>9492</u>	<u>9493</u>
<u>8</u>	<u>41.0(39.0)</u>	<u>36.5(32.0)</u>	<u>9494</u>	<u>9495</u>
<u>9</u>	<u>49.5(46.0)</u>	<u>44.0(37.5)</u>	<u>9496</u>	<u>9497</u>
<u>10</u>	<u>73.5(68.5)</u>	<u>63.0(52.5)</u>	<u>9498</u>	<u>9499</u>
<u>11</u>	<u>68.0(63.0)</u>	<u>60.0(47.5)</u>	<u>9500</u>	<u>9501</u>
<u>12</u>	<u>66.0(61.5)</u>	<u>54.5(47.0)</u>	<u>9502</u>	<u>9503</u>
<u>13</u>	<u>42.0(39.5)</u>	<u>39.0(35.0)</u>	<u>9504</u>	<u>9505</u>
<u>14</u>	<u>67.0(62.5)</u>	<u>59.0(47.5)</u>	<u>9506</u>	<u>9507</u>
<u>15</u>	<u>80.0(76.5)</u>	<u>72.5(58.5)</u>	<u>9508</u>	<u>9509</u>
<u>16</u>	<u>77.5(72.5)</u>	<u>70.5(57.5)</u>	<u>9510</u>	<u>9511</u>
<u>17</u>	<u>74.5(69.0)</u>	<u>68.5(55.0)</u>	<u>9512</u>	<u>9513</u>
<u>18</u>	<u>79.5(75.5)</u>	<u>70.0(59.0)</u>	<u>9514</u>	<u>9514</u>
<u>19</u>	<u>79.5(74.0)</u>	<u>73.0(60.0)</u>	<u>9515</u>	<u>9516</u>
<u>20</u>	<u>60.0(56.5)</u>	<u>52.0(45.0)</u>	<u>9517</u>	<u>9518</u>

only one tag on FL flipper!

Remarks: *Turtle #6 was originally tagged 3 years 1 month ago in the same area. It has increased it's curved length by 7.5 cm. 310 turtles tagged to date with 26 recoveries.

***** TURTLES TAGGED ON MOLOKAI *****

Date Tagged: October 16, 1985

Location Caught: Palaau, on reef just west of house

Method of Capture: Fisherman's nets

<u>Number</u>	<u>Curved Length(cm)</u>	<u>Curved Width XXXXX (cm)</u>	<u>Tag Number On Left Front Flipper</u>	<u>Tag Number On Right Front Flipper</u>
<u>1*</u>	<u>77.5(72.5)</u>	<u>68.5(57.0)</u>	<u>9519</u>	<u>9520</u>
<u>2</u>	<u>59.0(56.0)</u>	<u>55.0(46.0)</u>	<u>9521</u>	<u>9522</u>
<u>3</u>	<u>84.5(78.0)</u>	<u>80.0(61.0)</u>	<u>9523</u>	<u>Note: Heavily infested with tumors. Pictures taken. Only one tag on FL flipper</u>
<u>4</u>	<u>75.0(69.0)</u>	<u>70.0(57.0)</u>	<u>9524</u>	<u>9525</u>
<u>5</u>	<u>60.0(56.0)</u>	<u>52.5(44.0)</u>	<u>9526</u>	<u>9527</u>
<u>6</u>	<u>86.5(80.0)</u>	<u>79.0(63.5)</u>	<u>9528</u>	<u>9529</u>
<u>7</u>	<u>48.0(45.5)</u>	<u>42.0(36.0)</u>	<u>9530</u>	<u>9531 (3 barnacles knocked off shell)</u>
<u>8</u>	<u>76.0(71.5)</u>	<u>72.0(57.0)</u>	<u>9532</u>	<u>9533</u>
<u>9</u>	<u>50.0(47.0)</u>	<u>45.0(38.0)</u>	<u>9534</u>	<u>9535</u>
<u>10</u>	<u>71.0(66.5)</u>	<u>65.5(52.0)</u>	<u>9536</u>	<u>9537</u>

is applied to

****4 RECOVERIES****4 RECOVERIES****4 RECOVERIES****4 RECOVERIES****

<u>11</u>	<u>79.5(74.0)</u>	<u>73.0(60.0)</u>	<u>9515</u>	<u>9516</u>
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Initially tagged 2 weeks ago in same general area. No changes.

<u>12</u>	<u>83.5(77.5)</u>	<u>72.5(58.0)</u>	<u>7867</u>	<u>7868</u>
-----------	-------------------	-------------------	-------------	-------------

Initially tagged 5 months 3 weeks ago and released at K'Kai Wharf. 0.5 cm increase in length.

<u>13</u>	<u>70.5(65.0)</u>	<u>62.5(51.5)</u>	<u>6448</u>	<u>6447</u>
-----------	-------------------	-------------------	-------------	-------------

Initially tagged 3 years & 6 weeks ago in same area. 17.5 cm increase in curved length. 2nd recapture for this animal.

<u>14</u>	<u>64.0(59.0)</u>	<u>57.0(46.0)</u>	<u>6393</u>	<u>6394</u>
-----------	-------------------	-------------------	-------------	-------------

8.0 cm increase in curved length. Also 8.0 cm increase in curved width.

Initially tagged 3 years & 6 weeks ago in same area.

Remarks: 1* = See attached sheet #1.

320 turtles tagged to date with 30 recoveries.

***** DISTINGUISHING FEATURES ON TAGGED TURTLES *****

Date Tagged: October 16, 1985

 left f/f right f/f
Tag Number : 9519 9520

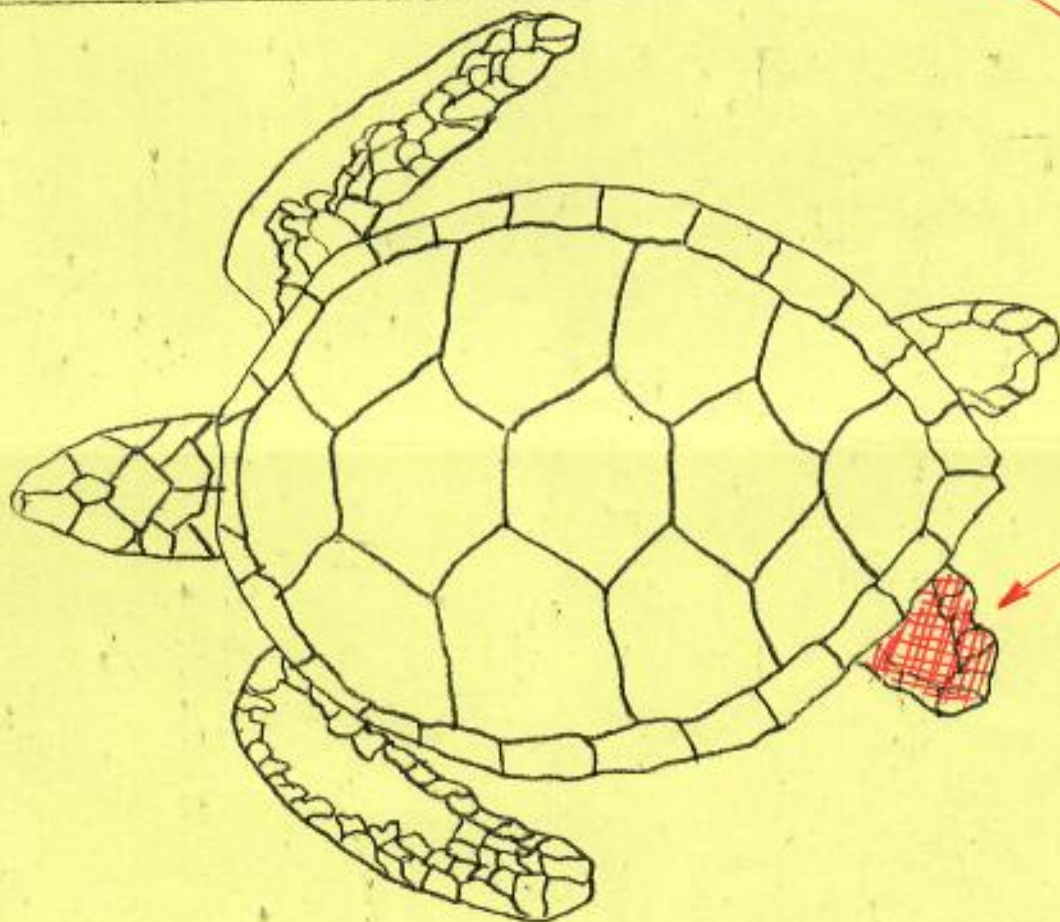
Location Caught: Palaau, Molokai, Just west of house

Location Released: Same as above.

Curved Length: 77.5(72.5)

Curved Width: 68.5(57.0)

Comments: Rear right flipper completely gone.
Stump healed over.



* * * * * TURTLES TAGGED ON MOLOKAI * * * * *

Date Tagged: August 30, 1985

Location Caught: Panahaha Fishpond, outside

Method of Capture: Fisherman's nets, incidental catch

<u>Number</u>	<u>Curved Length (cm)</u>	<u>Curved Width (cm)</u>	<u>Tag Number On Left Front Flipper</u>	<u>Tag Number On Right Front Flipper</u>
<u>1</u>	<u>87.5(81.0)</u>	<u>80.0(62.0)</u>	<u>9397</u>	<u>9398</u>
<u>2*</u>	<u>49.5(46.0)</u>	<u>36.5(32.5)**</u>	<u>9399</u>	<u>9400</u>
<u>3</u>	<u>42.5(40.0)</u>	<u>38.5(34.0)</u>	<u>9476</u>	<u>9477</u>
<u>4</u>	<u>43.0(41.5)</u>	<u>38.0(33.0)</u>	<u>9478</u>	<u>9479</u>
<u>5</u>	<u>40.5(38.0)</u>	<u>36.0(31.5)</u>	<u>9480</u>	<u>9481</u>

NOTE: Straight measurements in parenthesis.

2* = See attached sheet #1

** = See attached sheet #1 for location of width measurement.

Remarks: All turtles released at same area of capture. 291 turtles tagged to date with 25 recoveries.

***** DISTINGUISHING FEATURES ON TAGGED TURTLES *****

Date Tagged: August 30, 1985

Tag Number : left f/f 9399 right f/f 9400

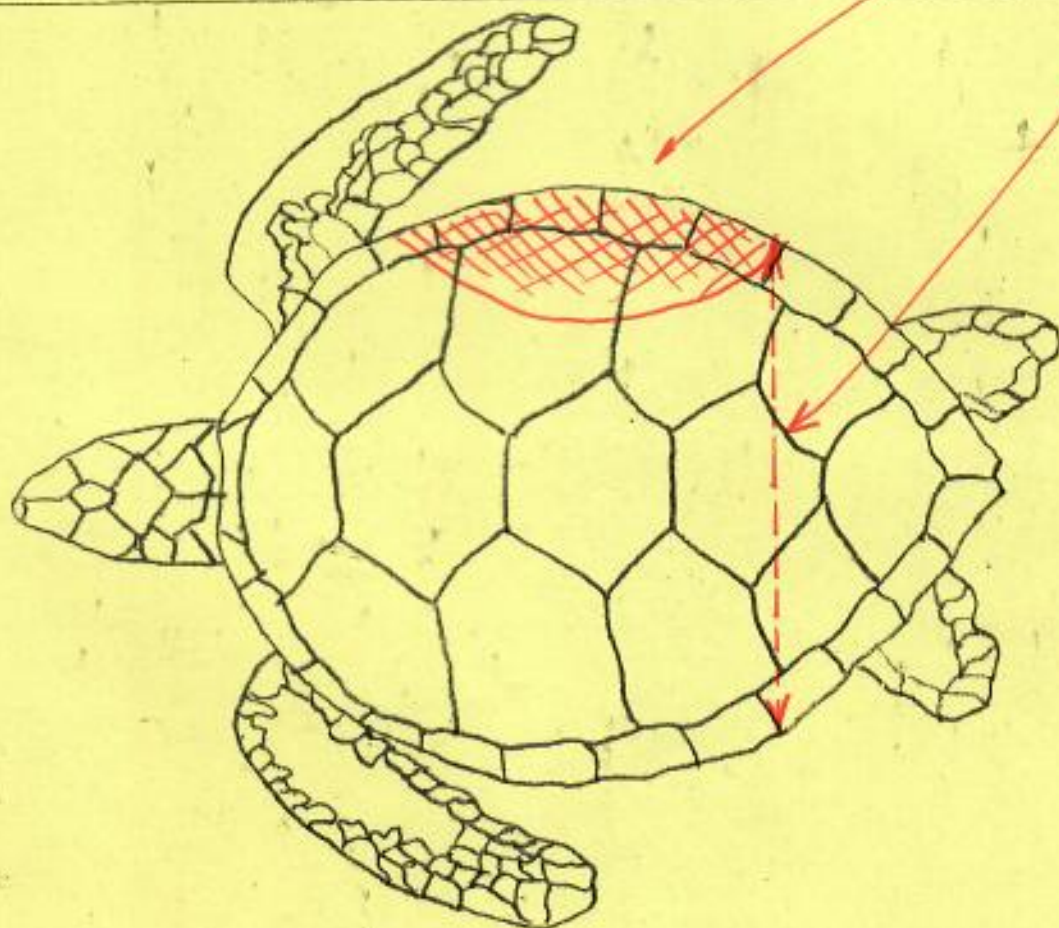
Location Caught: Outside Panahaha Fishpond, Molokai

Location Released: Same

Curved Length: 49.5(46.0)

Curved Width: 36.5(32.5) NOTE WIDTH MEASUREMENT DEPICTED BELOW!

Comments: Right side bitten by shark but healed over.



***** DISTINGUISHING FEATURES ON TAGGED TURTLES *****

Date Tagged: Dec. 17, 1983

Tag Number : left f/f right f/f
7285 7286

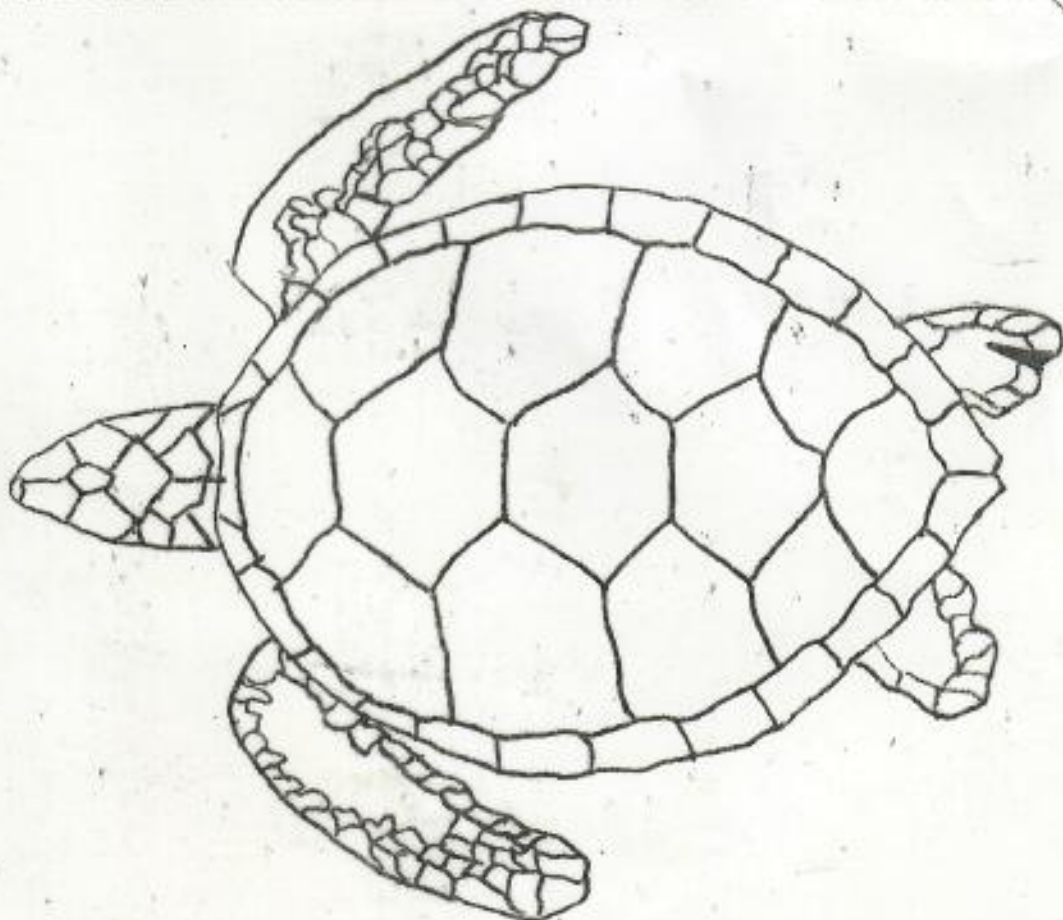
Location Caught: Kanukuawa Fishpond, Molokai

Location Released: Same as above

Curved Length: 53.0 cm (49.0 = straight measurement)

Curved Width: 46.5 cm (41.5 = straight measurement)

Comments: Right rear flipper torn.



ATTACHED SHEET #1

***** DISTINGUISHING FEATURES ON TAGGED TURTLES *****

Date Tagged: December 20, 1983

Tag Number : left f/f 7291 right f/f 7292

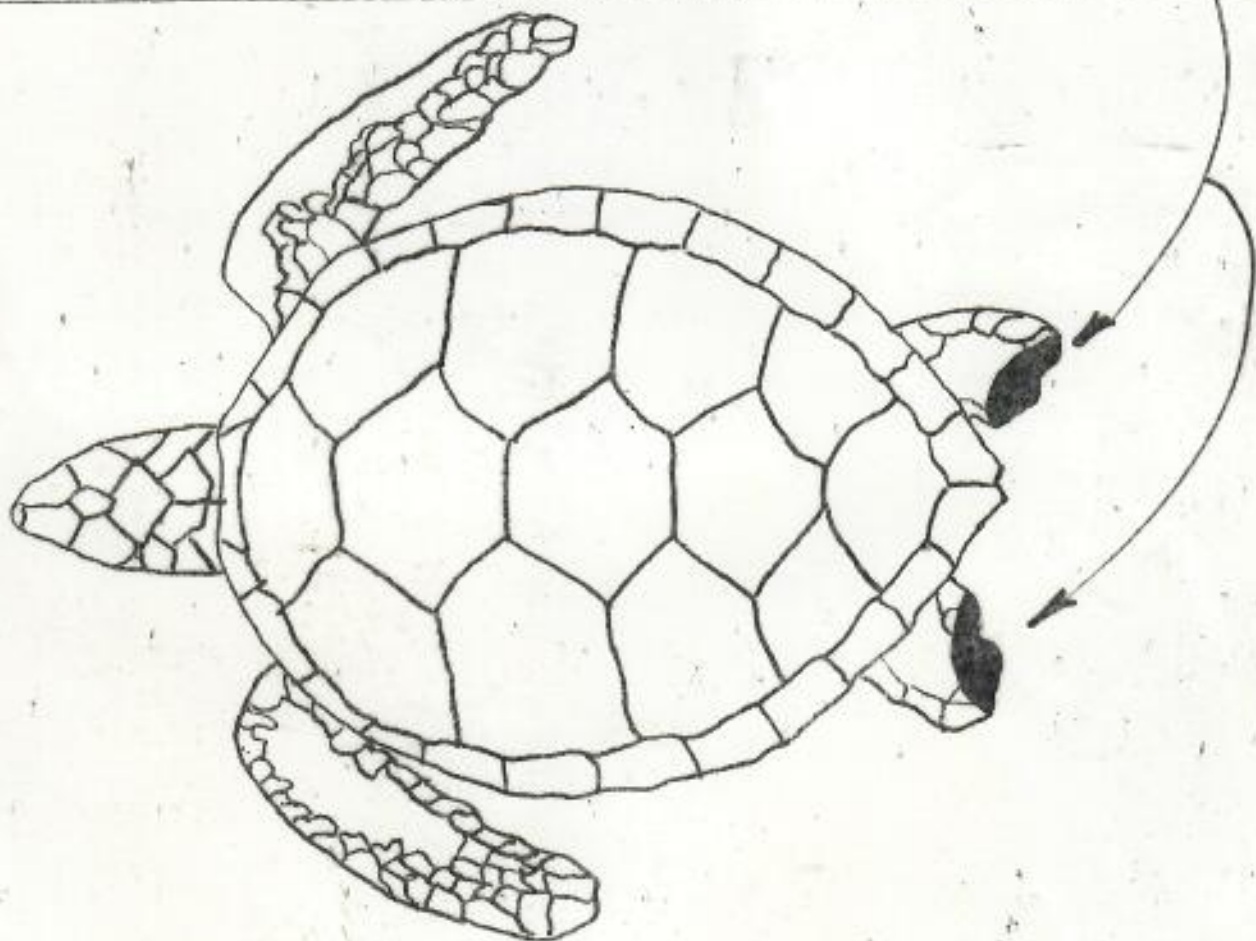
Location Caught: Palaau, Molokai

Location Released: Same as above

Curved Length: 47.5 (45.0)←-straight measurement

Curved Width: 42.0 (37.5)←-straight measurement

Comments: Both rear flippers were bitten or deformed.



ATTACHED SHEET #2

***** DISTINGUISHING FEATURES ON TAGGED TURTLES *****

Date Tagged: December 20, 1983
 left f/f right f/f
Tag Number : 7293 7294
 _____ _____

Location Caught: Palaau, Molokai

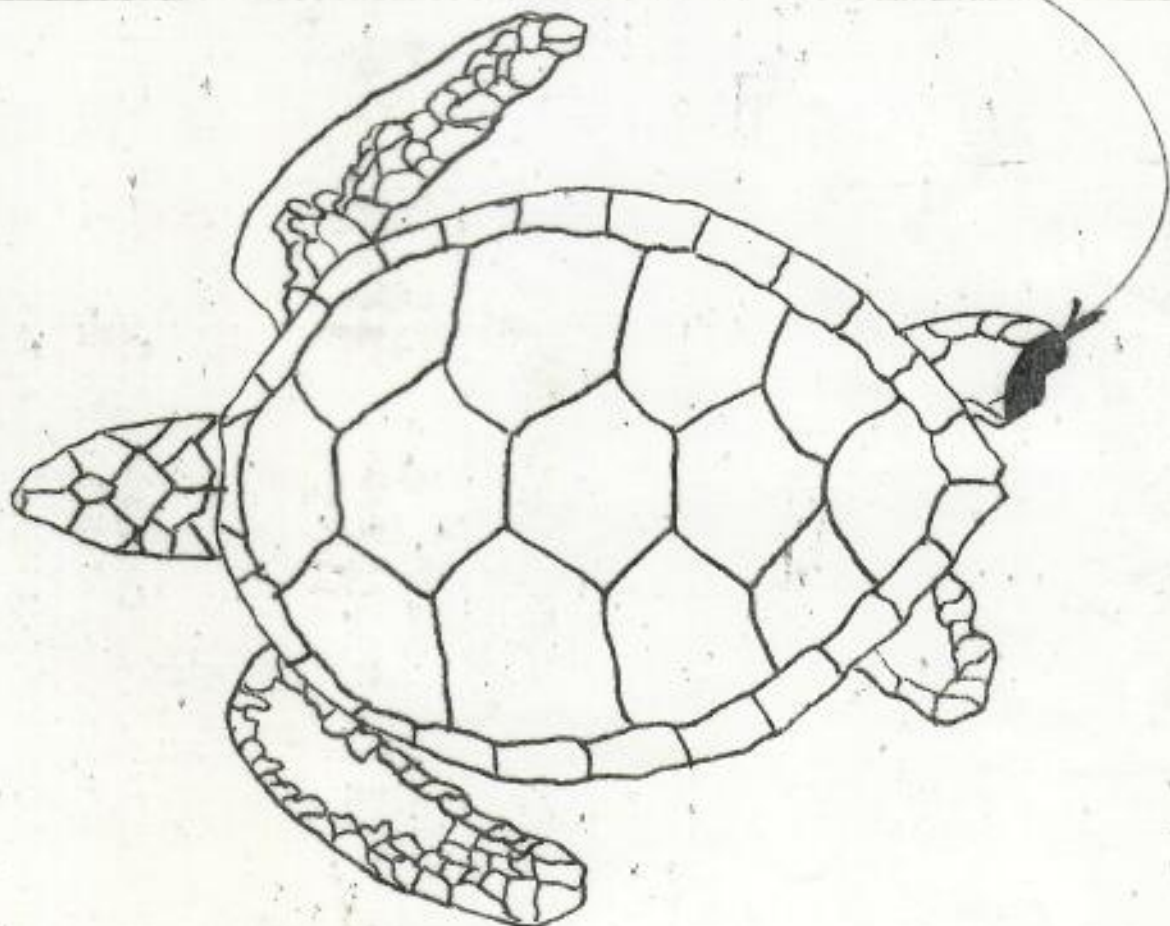
Location Released: Same as above

Curved Length: 46.0 (43.0) ←straight measurement

Curved Width: 42.0 (36.5) ←straight measurement

Comments: _____

Right rear flipper bitten _____



***** DISTINGUISHING FEATURES ON TAGGED TURTLES *****

Date Tagged: December 20, 1983

left f/f right f/f

Tag Number : 7297 7298

Location Caught: Palaau, Molokai

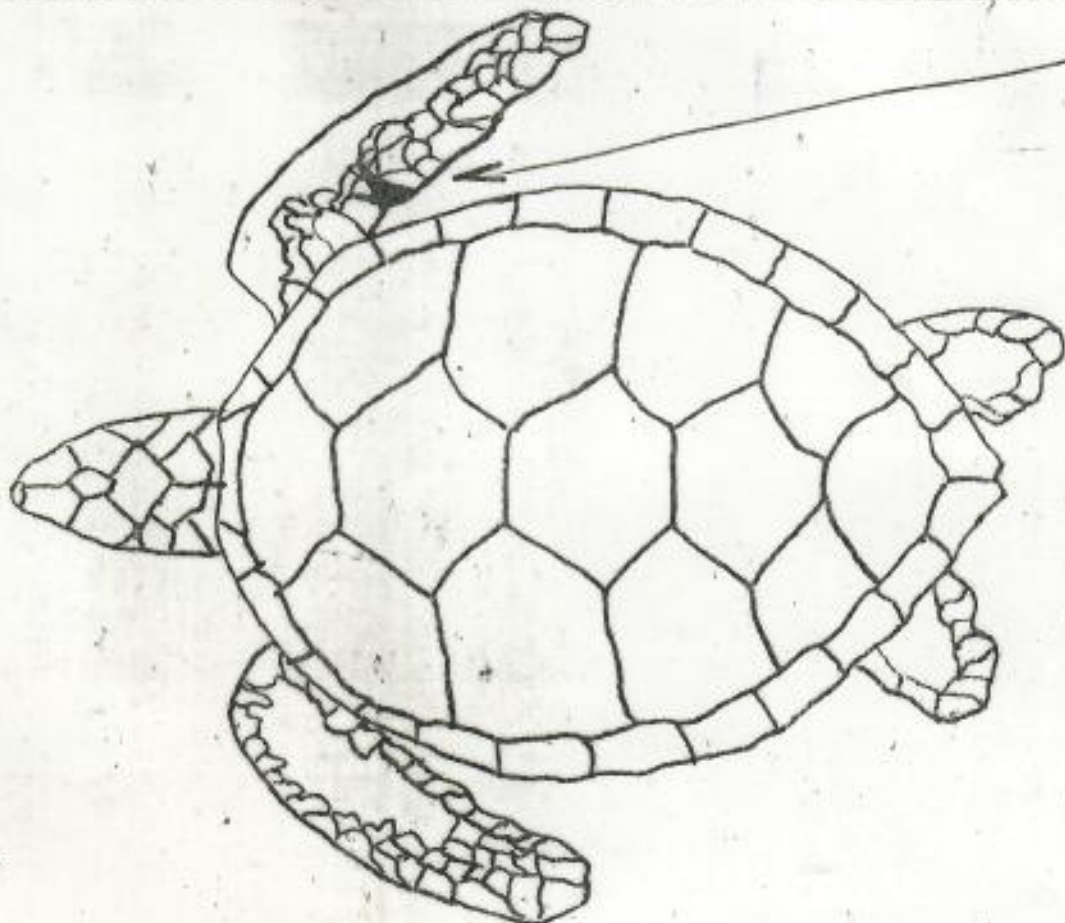
Location Released: Same as Above

Curved Length: 45.0 (36.5) ← straight measurement

Curved Width: 42.0 (33.0) ← straight measurement

Comments: _____

right front flipper torn between 2nd and 3rd scale.



***** DISTINGUISHING FEATURES ON TAGGED TURTLES *****

Date Tagged: Dec. 17, 1983

left f/f right f/f
Tag Number : 7285 7286

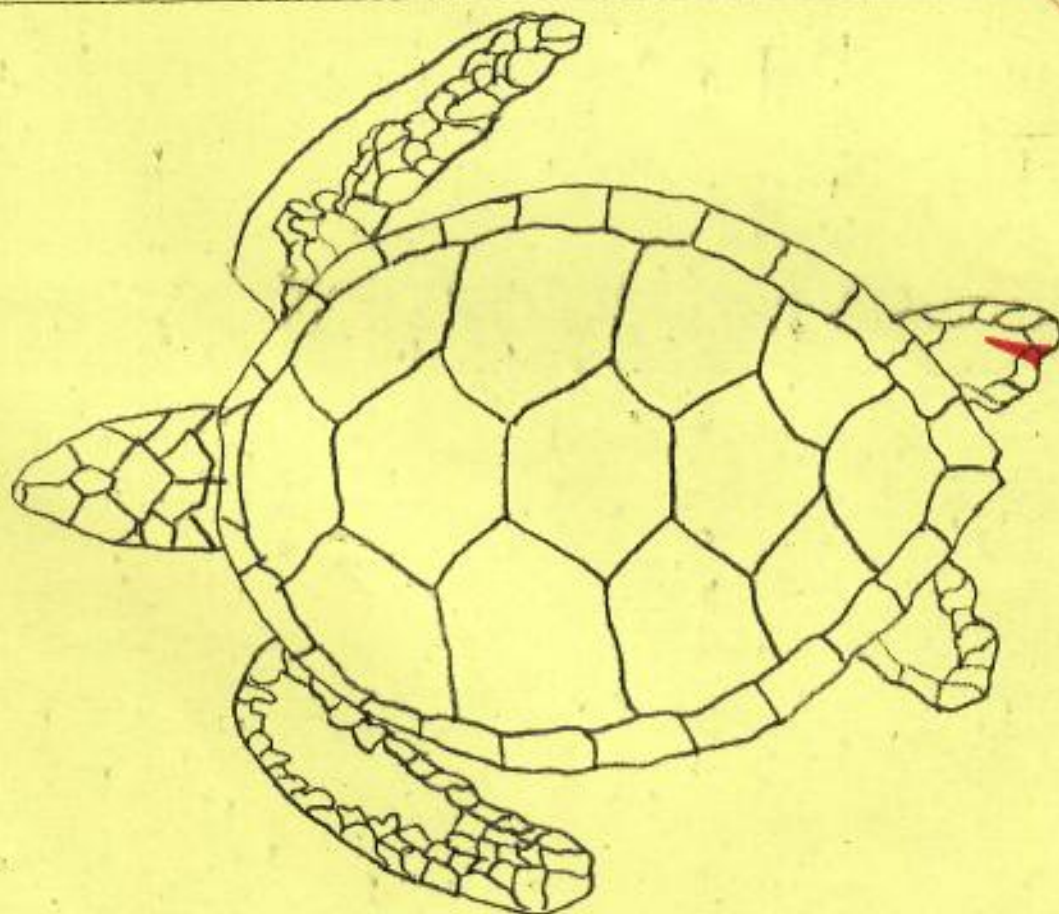
Location Caught: Kanukuawa Fishpond, Molokai

Location Released: Same as above

Curved Length: 53.0 cm (49.0 = straight measurement)

Curved Width: 46.5 cm (41.5 = straight measurement)

Comments: Right rear flipper torn.



* * * * * TURTLES TAGGED ON MOLOKAI * * * * *

Date Tagged: December 20, 1983

Location Caught: Palaau, Outside Pakanaka Fishpond

Method of Capture: Nets

<u>Number</u>	<u>Curved Length (cm)</u>	<u>Curved Width XXXXXX (cm)</u>	<u>Tag Number On Left Front Flipper</u>	<u>Tag Number On Right Front Flipper</u>
<u>1</u>	<u>48.0(44.5)</u>	<u>43.0(36.0)</u>	<u>7287</u>	<u>7288</u>
<u>2</u>	<u>49.0(46.0)</u>	<u>42.0(35.0)</u>	<u>7289</u>	<u>7290</u>
<u>3*</u>	<u>47.5(45.0)</u>	<u>42.0(37.5)</u>	<u>7291</u>	<u>7292</u>
<u>4**</u>	<u>46.0(43.0)</u>	<u>42.0(36.5)</u>	<u>7293</u>	<u>7294</u>
<u>5</u>	<u>49.0(46.0)</u>	<u>43.0(37.0)</u>	<u>7295</u>	<u>7296</u>
<u>6***</u>	<u>45.0(36.5)</u>	<u>42.0(33.0)</u>	<u>7297</u>	<u>7298</u>
<u>7</u>	<u>85.0(79.0)</u>	<u>77.5(62.0)</u>	<u>7299</u>	<u>7300</u>

NOTE: *See Attached sheet #1

**See Attached Sheet #2

***See Attached Sheet #3

Remarks: Numbers in parenthesis represent straight measurements.

Five more turtles with tags attached were seen in the nets today but were not boated. 113 tagged to date with 6 recoveries.

ATTACHED SHEET #1

***** DISTINGUISHING FEATURES ON TAGGED TURTLES *****

Date Tagged: December 20, 1983
 left f/f right f/f
Tag Number : 7291 7292
 _____ _____

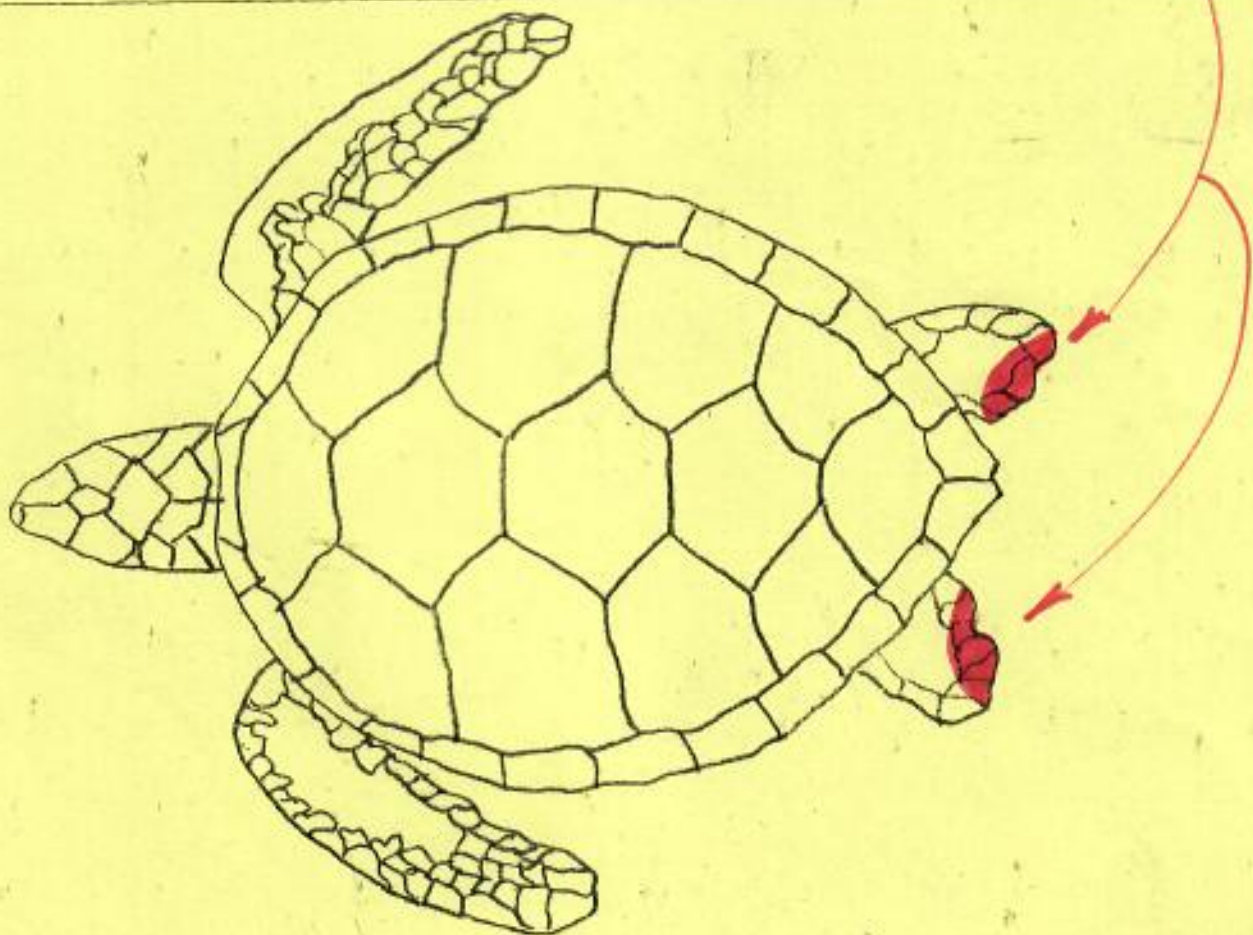
Location Caught: Palaau, Molokai

Location Released: Same as above

Curved Length: 47.5 (45.0)←-straight measurement

Curved Width: 42.0 (37.5)←-straight measurement

Comments: Both rear flippers were bitten or deformed.



ATTACHED SHEET #2

***** DISTINGUISHING FEATURES ON TAGGED TURTLES *****

Date Tagged: December 20, 1983
 left f/f right f/f
Tag Number : 7293 7294

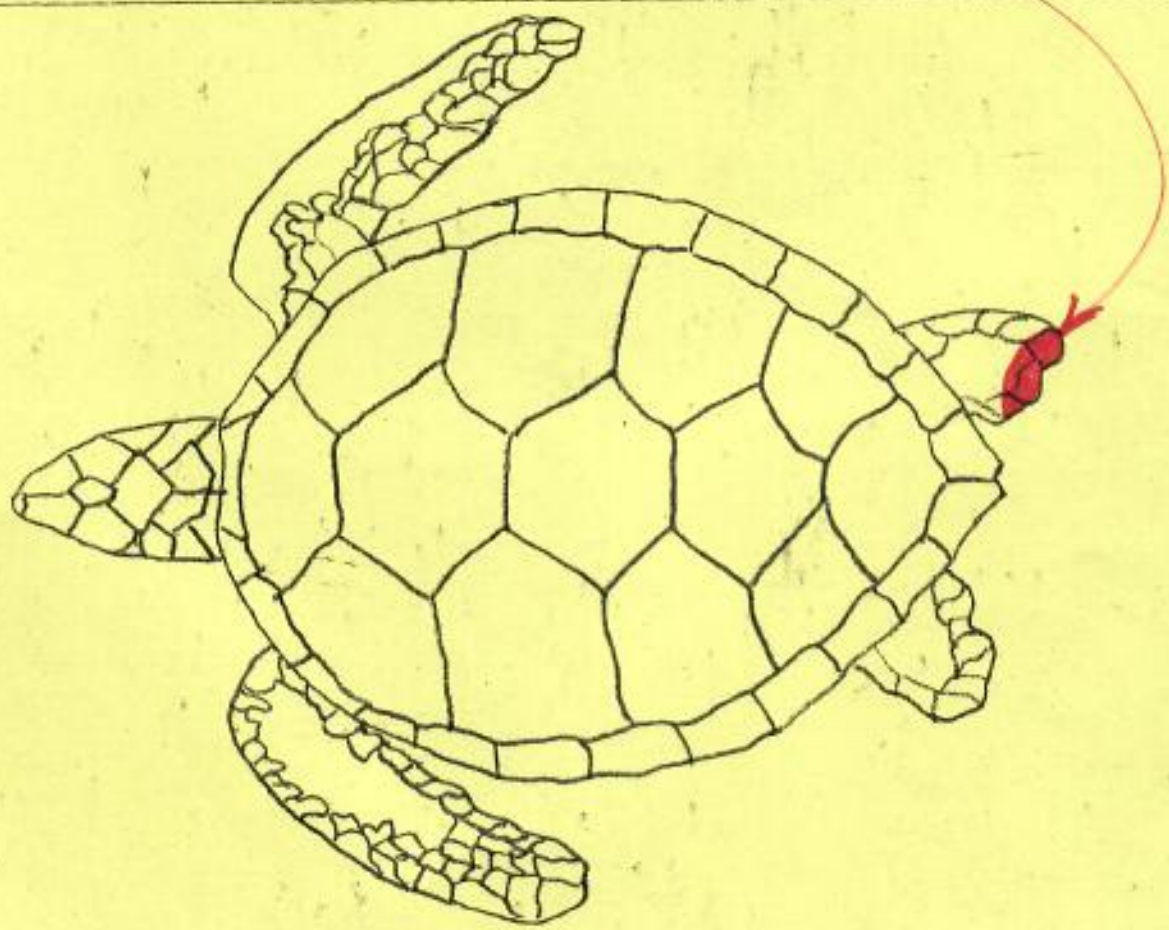
Location Caught: Palaaau, Molokai

Location Released: Same as above

Curved Length: 46.0 (43.0) ←-straight measurement

Curved Width: 42.0 (36.5) ←-straight measurement

Comments: _____
 Right rear flipper bitten _____



ATTACHED SHEET #3

***** DISTINGUISHING FEATURES ON TAGGED TURTLES *****

Date Tagged: December 20, 1983
 left f/f right f/f
Tag Number : 7297 7298
 _____ _____

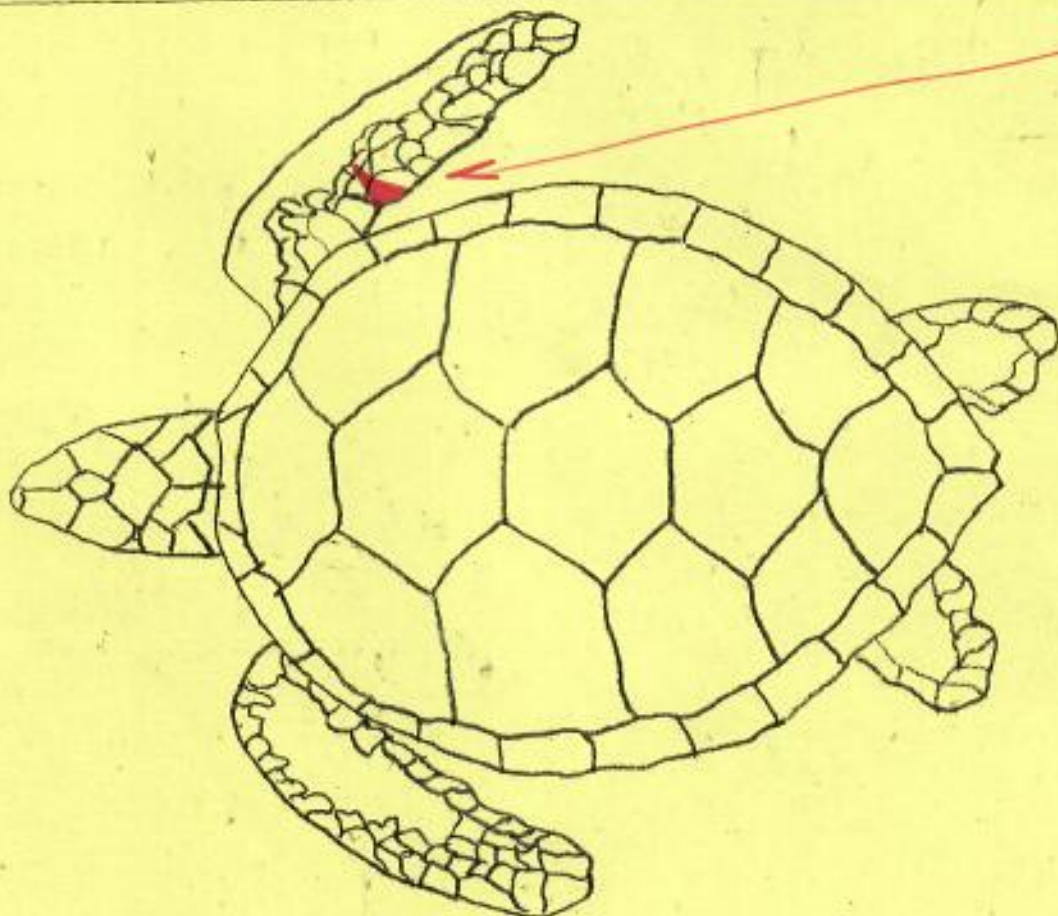
Location Caught: Palaau, Molokai

Location Released: Same as Above

Curved Length: 45.0 (36.5) ← straight measurement

Curved Width: 42.0 (33.0) ← straight measurement

Comments: _____
 right front flipper torn between 2nd and 3rd scale.



* * * * * DISTINGUISHING FEATURES ON TAGGED TURTLES * * * * *

Date Tagged: Nov. 1, 1983

Tag Number : left f/f right f/f
7277 7278

Location Caught: Palaau, Molokai

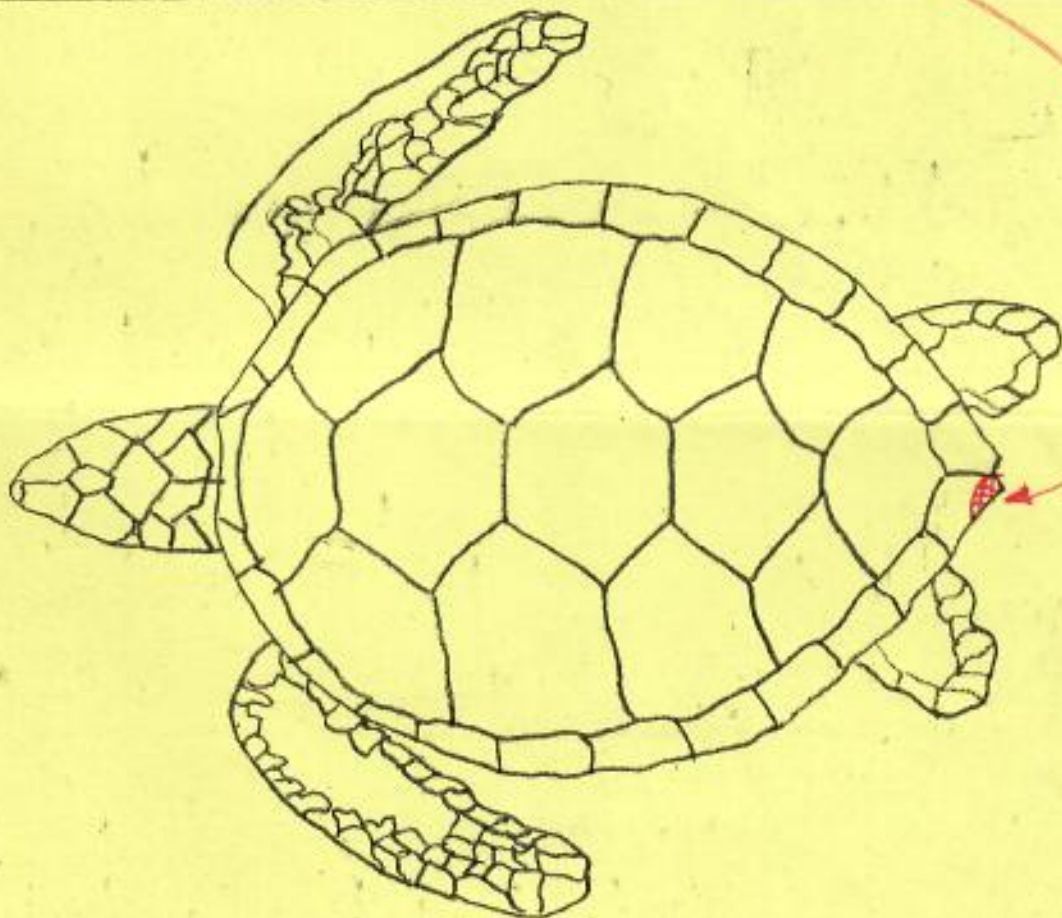
Location Released: Kaunakakai Dock

Curved Length: 76.0 cm Straight Length: 70.0 cm

Curved Width: 69.0 cm Straight Width: 56.0 cm

Comments: _____

Shell chipped at rear. _____



November 4, 1983

George,

Here's one more turtle tagging for your records. Ed had three more in the nets but let them go.

We had a very interesting public meeting here on Oct. 27th. It was convened by (Maui County) Molokai Community Action Agency and had as guest speaker Mr. Noah Pekelo of DOCARE. He was invited to speak specifically on the recent restriction of "bullpen" netting. At the meeting several bullpen operators spoke up and questioned the merits of this ban. Pekelo made some very interesting and surprising revelations:

1. DOCARE will not enforce Act 87 because they are waiting for DLNR to promulgate rules and regulations re bullpen trapping and then only after three years have lapsed; (Pekelo misinterpreted 188-29 (b) which refers to the escape devices soon to be required on all types of traps. DAR is supposed to come up with escape device requirements for traps and then all trappers will have a three year grace period to comply.) Pekelo told the audience that DOCARE cannot enforce the law because they are still waiting for DLNR, and since DLNR have not done their job it was permissible for bullpen operators to continue their operations! (At this point Ed Mederios who was sitting in front of me leaned back and said to me that "...Noah was in right field" indicating that he knew Noah made a mistake.) Ed then asked Noah point blank if he could go fishing with his bullpen nets and Noah answered affirmative in front of the entire audience.
2. After the meeting, Noah confided in me that the Maui prosecutor recently dismissed a charge against several fishermen who were cited for violation of Act 87. These fishermen went to Maui (they're from Waianae, Oahu) and set up an underwater trap with guides and then chased the fish into it using scuba tanks. DOCARE Maui busted them. They returned back to Oahu and solicited the help of House Speaker Henry Peters. As a consequence, the Maui prosecutor dismissed the charges "in the interest of justice" because of the alleged confuse wording of the Act. Noah told me that since a precedence had been set, DOCARE would be wasting their time enforcing additional violations of the same Act. The end result being the bullpen netters can continue their operations unmolested.
3. Pekelo also confided that he strongly feels Act 87 will be repealed at the next legislative session because of the furor it has caused on both Oahu and Maui as well as Molokai.

more
Now that Ed's back in operation, he asked me to see if you could generate some money for his part in the tagging of turtles here on Molokai. I guess to show that he meant business, he left a turtle in his boat and gave me a call to come over. What do you think?

Billie

July 8, 1983

George,

Four more ^{yesterday} ~~today~~. Diane told me this morning (8th) that there was one more small one in the nets today but ^{ED} tossed him over. He had planned to drive the boat back to Kaunakakai and did not want the turtle in the vessel.

In regards to measuring and reporting finer than $\frac{1}{2}$ cm, I find that a little disconcerting. I'm not all that comfortable with my measuring technique. A little bit this way and a little bit that way and it's already a difference of $\frac{1}{2}$ cm. You know what I mean. Furthermore, upon recovery who's to say that the second measurement will be exactly over the same two points originally measured? As it is, the $\frac{1}{2}$ cm recording now can be considered questionable. What's the sense of being precise if you're not accurate?

With the four tagged yesterday, I'm now down to only three (3) tags. I hope you've got more in the mail.

Yokwe,

Bia

P.S. Totals to date: 99 tagged
6 recoveries

GEORGE R. ARIYOSHI
GOVERNOR OF HAWAII

-SIZE only
to 0.5
- curved too
- Bring in boat
to wharf?



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF FISH AND GAME
1151 PUNCHBOWL STREET
HONOLULU, HAWAII 96813

SUSUMU ONO, CHAIRMAN
BOARD OF LAND & NATURAL RESOURCES

EDGAR A. HAMASU
DEPUTY TO THE CHAIRMAN

DIVISIONS:
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FORESTRY
LAND MANAGEMENT
STATE PARKS
WATER AND LAND DEVELOPMENT

July 5, 1983

George,

Some more tagged turtles. Diane calls me and I go to their boat to tag whatever they have in there. Because of the situation, I have stop going along with them during their operations.

Sorry to hear about the paucity of nesting turtles at FFS. May be a blessing in disguise considering the recent hearings re opening of taking for "subsistence".

Don't know when I'll be coming to Honolulu. Maybe towards the end of August to meet Mickey as he returns from Majuro. Will keep you informed.

Ridley news very interesting. Probably more of them out there than we originally thought.

I'm down to eleven (11) tags. I think you should send more ASAP as Mederios is on island and apparently will continue netting.

All for now.

Yokwe,

Bie

P.S. Please note new P.O. Box number!

ATTACHED SHEET #1

***** DISTINGUISHING FEATURES ON TAGGED TURTLES *****

Date Tagged: June 30, 1983

left f/f right f/f

Tag Number : 6626 6627

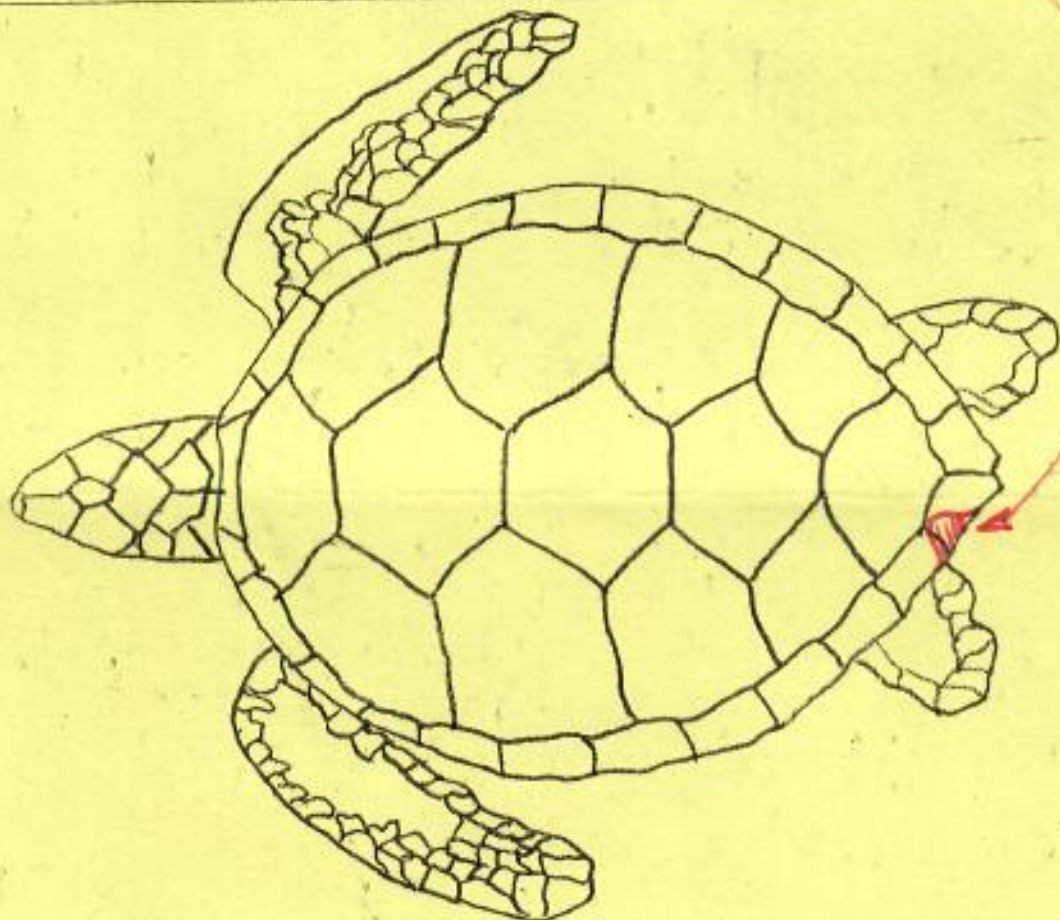
Location Caught: Kawela, Outside Kakahaia Fishpond

Location Released: Same as above

Straight
~~XXXXXX~~ Length: 63.0 cm

Straight
~~XXXXXX~~ Width: 48.5 cm

Comments: Notch on left rear of shell



GEORGE R. ARIYOSHI
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF FISH AND GAME
1151 PUNCHBOWL STREET
HONOLULU, HAWAII 96813

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FISH AND GAME
FORESTRY
LAND MANAGEMENT
STATE PARKS
WATER AND LAND DEVELOPMENT

May 2, 1983

George,

Finally got to use calipers. Enclosed data for two additional turtles, and one recovery.

Regarding turtle number two, left rear flipper missing. Congenital defect. Stump is scaled on the end.

Mederios definitely will be terminating his "bullpen" fishing. DOCARE did a research on past records to see if anyone had ever been busted for "bullpen" violations under current statutes. Discovered that in 1950, game warden here on Molokai did arrest a man for using a bullpen setup. Court at that time got/secured an opinion as to the definition of "trap" and charged fisherman for violation of "trap" dimensions, i.e. bullpen was considered a trap and therefore it must comply to trap requirements. The fisherman was finally convicted in 1955.

DOCARE on Molokai was asked to enforce "trap" regulations and Mollena contacted Mederios to explain the situation. Mederios agreed to suspend "bullpen" and said he will be fishing with another method. May be the end of our goldmine.

Got your note re turtle subsistence public hearing. I plan to attend. Am considering getting off a note to Allan Ford.

Bee

***** DISTINGUISHING FEATURES ON TAGGED TURTLES *****

Date Tagged: April 20, 1983 Attached Sheet #1

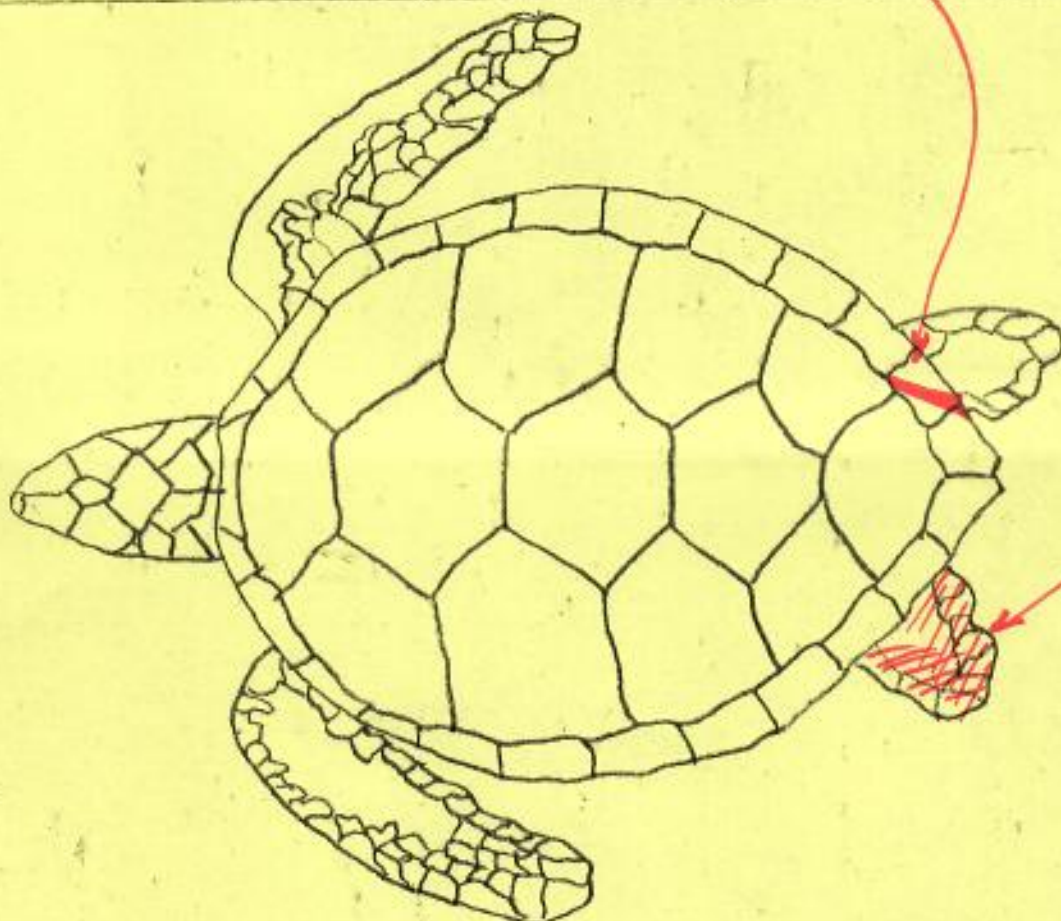
left f/f right f/f
Tag Number : 6609 6611

Location Caught: Between Pahiomu & Kamahuehue Fishponds

Location Released: Same as above

~~CKXCKX~~ Length: 56.5 ← "straight" measurements
~~KXCKXK~~ Width: 47 ←

Comments: (1) Left rear flipper missing. Ohly stub. Congenital defect.
(2) Cut on shell on right rear portion.



***** TURTLES TAGGED ON MOLOKAI *****

Date Tagged: December 3, 1989

Location Caught: _____

Method of Capture: _____

<u>Number</u>	<u>Curved Length (cm)</u>	<u>Curved Width (cm)</u>	<u>Tag Number On Left Front Flipper</u>	<u>Tag Number On Right Front Flipper</u>
<u>1</u>	<u>98.0</u>	<u>88.5</u>	<u>n/a</u>	<u>n/a</u>

This turtle was found dead on a remote stretch of beach at Ualapue, Molokai. The right front flipper was missing and its left front flipper displayed indications that it was bitten by a shark. In addition, numerous tumors was noticed on the soft parts of its body. The carcass was pulled ashore and buried in the bushes. Incident reported to NMFS.

Remarks: _____

GEORGE R. ARIYOSHI
GOVERNOR OF HAWAII



SUSUMU ONG, CHAIRMAN
BOARD OF LAND & NATURAL RESOURCES

EDGAR A. HAMASU
DEPUTY TO THE CHAIRMAN

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STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

DIVISION OF FISH AND GAME
1151 PUNCHBOWL STREET
HONOLULU, HAWAII 96813

5-19-82

George,

Tags on turtles as follows:

- (1) 6426 and 6427 on 18" curved measured individual;
- (2) 6428 and 6429 on 19" curved measured individual;
- (3) 6433 and 6434 on 22" curved measured individual;
- (4) 6430 and 6432 and 6435 on 30" curved measured individual,
possibly female.

Tag number 6431 bent out of shape and discarded.

All turtles were green turtles and tagged on the morning of 5/19/82
on Molokai at Kapuaokoolau just outside of Pahiomu fishpond.

Aloha,

Bill

Bill

March 2, 1982

George,

It was about 20 years ago (it doesn't seem that long!) when I used to fish the Kaluakoi area of Molokai and saw turtles swimming around. I have since returned to the area but it is usually rough making the sighting of turtles very difficult. However, reliable sources tell me that the turtles are still commonly seen in that area. In addition, others tell me that turtles seem to be making a comeback from the 70's as more and more are being seen. I've limited my discussions to steady long-time fishermen who should have a better perspective of the situation and they all pretty much agree that turtles are still fairly abundant around the waters of Molokai. One fishermen who dives and fishes the Waiakane area frequently told me they are always around. I myself have seen several animals lately in the Moomomi and Kawela areas.

It is pretty much the consensus that the gill netters do not actively seek turtles as their nets are too light and whatever animals they capture are incidental.

Yes, do send me some turtle tags. What data should be recorded prior to the release of the animals? You will have to describe where and how the tags should be attached. For your info, one of the old time turtle hunter here told me he can show us where and how live turtles can be caught without too much hassle if you are interested in a concerted effort of tagging turtles here in one of the main islands.

Finally, in regards to Mr. Cooper...it was true that he was asked not to catch turtles in Molokai waters by a group of local fishermen which he complied to amicably. It was a certain Mr. Allencaster from Maui that was physically detained from capturing turtles with his power head gun in the early 70's and forcibly shipped out of Molokai by competing local fishermen during that period when turtle steaks were a popular fare in Lahaina restaurants.

Reading over Cooper's papers rings a certain note of discord within my own heart. While it was certainly true that aboriginal Hawaiians captured and utilized turtles, nowhere is it recorded nor never have I heard old timers described anything more than an opportunistic harvesting of the animals. If by chance a turtle was seen and could easily be caught, the ancient Hawaiians no doubt took advantage of the situation and probably considered it as no more than a normal part of the day's take. In many other Pacific islands however, the harvesting of sea turtles was a concerted effort and the distribution of the catch followed a time honored ritual accompanied by prescribe ceremonies. In the Marshall Islands for instance, certain atolls such as Erikup, Bikar, Jemo, etc. were regonized and set aside as natural sanctuaries for turtles (and also other animals) and permission to utilize the resources on these atolls had to be obtained from the paramount chiefs. Moreover, the preparation for these trips involved most of the villagers as well as the men actually going on the trip...food and other other provisions were prepared by the women and children, other men made sure the canoes were seaworthy, the priests made sure the signs were appropriate for a successful trip, etc. Upon return the turtles were divided and distributed according to custom...the neck portion was always given to the high chief, other certain innards were awarded to the elderly and sickly for medicinal purposes, those women knowledgeable and adept in preparing turtles were assembled from afar and supervised the cooking of the catch, etc. Thus unlike the situation in Hawaii, in certain W.P. islands there evolved traditional customs and rituals in conjunction with the utilization of sea turtles and these ceremonies figured prominently in the lifestyle of the natives. This can be further illustrated by the common occurrence of the turtle as a motif in their art, woodcarving, handicrafts, building and clothing designs, legends, and also in their self imposed conservation practices. The U.S. Government exercised sound judgement in permitting these people to continue harvesting sea turtles because to do otherwise would clearly jeopardize their traditional way of life. In present day Hawaii this point is not a conveniently apparent. We have never evolved a tradition centered around the

utilization of sea turtles to the same extent as other Pacific islanders and even if they did it certainly no longer exist today. To claim now as Cooper has done that restricting the contemporary harvesting of sea turtles would infringe upon Hawaiian traditional rights is a moot question at best...and in my personal estimation certainly not justifiable in light of how little the utilization of sea turtles actually figured in Hawaiian culture as compared to other Pacific islanders. To answer Cooper's allegations then, the question we must address is if the turtle population in Hawaiian waters is stable enough to allow the taking of the animals for home consumption. Are there enough turtles within the waters of the Hawaiian archipelago to permit occasional taking by local fishermen or will this sort of activity further threaten the very existence of the animals? Cooper's references to traditional Hawaiian rights, the lack of appropriate substitute for turtle meat, and the controlling of limu in fishponds with turtles all become hollow if the answer to the above question is negative. Over and beyond any one individual's right is the right of the entire community as a whole. Our children, and their children, and their children's children have the right to see, touch, and to co-exist with other creatures in the world and I feel it is our responsibility to ensure this occurrence. To put it another way, I want my son to have a chance to sit on that same boulder and watch huge turtles swim and feed as I did 20 years ago! What a shame it would be for me to have the distinction of being the last to have that chance. The hell with Cooper and his fishponds and the hell with traditional Hawaiian rights if it means the extermination of our children's right to see a real live turtle swimming free in its natural environment.

What I want to say now I hope you will keep strictly confidential as it goes contrary to my employer's, the State of Hawaii, expressed position and it is only my personal suggestions and thoughts: (1) those fishermen who actually are able to take turtles for home consumption are a very small minority (Cooper represents even a smaller minority as a "Hawaiian with traditional rights" and even that's debatable as some of my informants consider him nothing more than a "local hoale"). We may as well face it...these guys are going to continue their opportunistic harvesting of sea turtles whether we like it or not and there's not very much we can do about it without being expansive. I know them, I grew up with some of them and I understand their mentality. Law or no law they're going to continue to catch and to eat turtle whenever the opportunity arises and whenever they feel they can get away with it. Why then should we legitimize this ongoing activity and thus invite more to partake in it? Assuming that sea turtles are not in imminent danger of being eliminated from the face of the earth, would it not be wiser for us to retain the status quo and to close our eyes to this incidental catch by certain hard core fishermen whose numbers will surely diminish with each passing generation? If Cooper wasn't such a windbag, he too could discretely fulfill his "taste" for turtle meat without trying to take on the whole world. I'm not sure I could condone him using turtles to keep his ponds free of limu. All the old and long time pond caretakers here on Molokai told me turtles were never deliberately placed in fishponds as they were not beyond preying on the pond fish themselves. Too much limu was never a problem the old pond caretakers encountered. In other words, I doubt very much if placing turtles in Hawaiian fishponds was a traditional practice as claimed by Cooper. Moreover, it would be a highly visible and blatant disregard of the law if we were to allow him to stock his ponds with turtles. Hard core fishermen discretely catching and eating turtles is one thing but keeping outlawed turtles alive in ponds for all to see is quite another; (2) assuming that the turtle population in Hawaiian waters can sustain subsistence harvesting, to allow "traditional" utilization of sea turtles by native Hawaiians would be asking for problems in my opinion. Hawaiians were not the only race to capture and eat turtles in Hawaii. The Chinese, Japanese, and even the hoales would all raise heck if we permitted only Hawaiians to take turtle for home consumption. And how would you define "Hawaiian" anyway... and what's so traditional about using scuba tanks, powered vessels, synthetic nets, etc. in capturing turtles? No, there's no merit in allowing the restoration of the "traditional" harvesting of sea turtles by Hawaiians because in my opinion there was no tradition to begin with.

In sum, continue the present ban on the taking of sea turtles in Hawaii and do not permit any subsistence harvesting. Those hard core turtle eaters are going to get their share anyway. Continue and step up the research to determine the viability of the turtle stock and if it proves appropriate, then and only then allow a control taking of animals preferably under a limited permit system. Put the permits up for high bid and let those who feel that they must have turtle meat pay for that privilege. For your added info, all the big time commercial turtle hunters here on Molokai confided in me that the State's banning of turtle for commercial use was a wise move. They themselves felt the turtle population was suffering too much of a loss and could not continue to sustain the pressure placed on it by commercial hunters. Therefore, do not entertain any thoughts of allowing the commercial taking of sea turtles. If the market demand for turtle meat and products is so great and overwhelming, let some bright and enterprising entrepreneur fill the need through culturing of the animal.

I hope this was not too verbose for you. I've enclosed several turtle sighting reports and will continue to forward them to you upon completion.

Aloha,

Rui
Z

GEORGE R. ARIYOSHI
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

DIVISION OF FISH AND GAME
1151 PUNCHBOWL STREET
HONOLULU, HAWAII 96813

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Jan. 27, 1982

George,

Thanks for the news clipping. I'm glad to see that the critter is doing fine.

I've been back and forth to Honolulu several times since we last talked. I made an attempt on one of the visits to go to the aquarium but gave up after not finding a parking space. Maybe next trip.

It happens that the chief Enforcement Officer here was born and raised in Halawa valley so I asked him about his experiences with hawksbill and other turtles there. He says he definitely recalls catching little turtles in Halawa bay as a small boy and keeping them in pails as pets (a common practice among other island groups in the Pacific which I visited). From his description of their size and numbers, I'd say they were very recent hatchings. Furthermore, he tells me that his grandfather told him that the old timers would line the beaches with coconut fronds at certain times of the year to better locate and find the actual nests of turtles coming up to shore to lay eggs. From the above, I would say that sea turtles did indeed come ashore at one time here on Molokai. He told me he couldn't say if they were hawksbill or not.

I myself remember seeing scores of huge green turtles swimming off the beaches of Kaluakoi (west Molokai where the Sheraton hotel is now) as a boy. In those days there were no public access to the beaches and the only way to get there was by boat. We'd park the boat a little ways offshore and swim in to throw nets for moi and invariably encounter turtles on the way in. I distinctly remember sitting on boulders on the beach and watching them swim through the off shore breakers. From what I've seen of the nesting grounds in the Marshalls, I'd say that the beaches on west Molokai were prime nursery beds for turtles at one time. It's sad to think that man through his activities are slowly restricting and eliminating the nesting grounds of turtles throughout the world. It seems that these creatures are doomed for extinction... a sad thought indeed.

In the short amount of time I've been back on Molokai, I have on several occasions seen a couple of turtles...unfortunately some of them already butchered. While walking along Kaunakakai stream about 3 months ago, I noticed the remnants of several turtles, approximately 2' to 2½', laying on the bank. They were obviously recent kills as they were still crawling with maggots. I reported the incident to DOCARE and they made a report on it. Also, they told me it probably was the gill netters who did it as their fishing shacks were close by. DOCARE promised to keep an eye out on the area but I'm not too optimistic as they've got only a 3 man crew (one just recently added last week) and they've got the whole island to patrol...to include hunting in the mountains, night poaching, and state parks.

Let me know if I can do anything for you here on Molokai and feel free to offer suggestions as to how to handle the illegal taking of turtles if you have any. Also, keep me in mind should the occasion arise where you'd be doing or want to be doing some tagging, collection, etc. of turtles in the Marshalls. I just recently had a talk with the Minister of Resources & Development who was instructed to introduce legislation to safeguard their endangered animals and I told him sea turtles should definitely be included on the list. I'm sure he'd accommodate us in any sort of investigation we would propose.

Aloha,

Bill

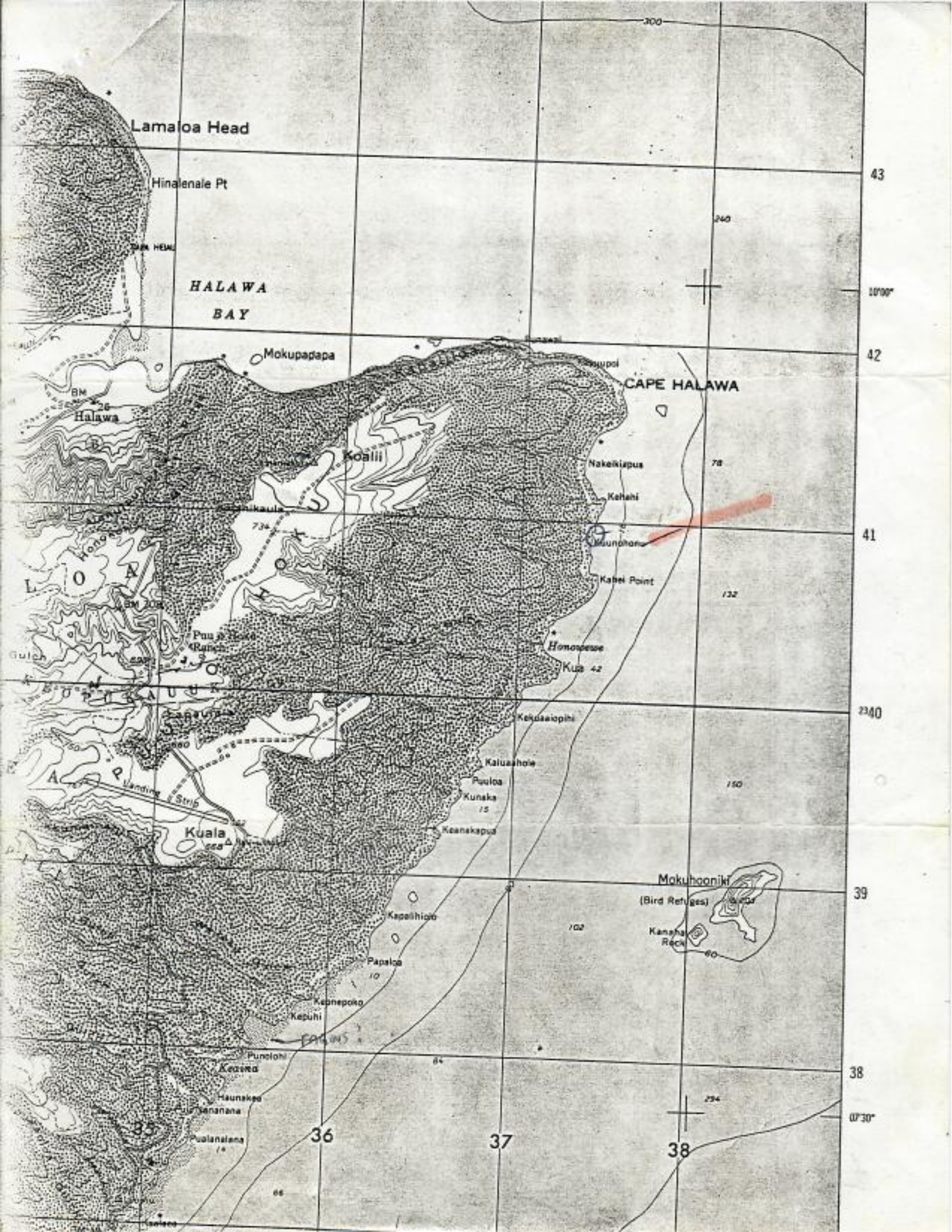


KAHAI Pt.

Kuunohou

kehahi





Kaunakakai, Molokai
Nov 28, 1973

Gentlemen:

The enclosed tag was from a turtle captured by a commercial fisherman off Iloli pt in the southern coastal waters of Molokai.

According to the fisherman the turtle weighed about 200 lbs. Please forward tagging information.

Sincerely,



Noah K. Pekelo Jr
Fish & Wildlife Enf Officer II

*Tagged Jan 29, 1973
length 24 3/4
width 20 1/2
wt 83 lbs*

STATE OF HAWAII
DEPT. OF LAND & NATURAL RESOURCES
DIVISION OF FISH & GAME
P.O. BOX 1006
WAILUKU, HAWAII 96791
P.O. Box 155
Kaunakakai, Molokai

July 20, 1974

Kamilo Loa, Maui

Mr. George Balazs

HIMB

Kaunakakai, Hawaii

Dear George:

I am convinced that the turtle concentration on the lee shore of Malakoi should be studied! For as long as I can remember there has been a concentration of turtles in this area (Palaau To Kalo). What I consider to be unusual is the fact that these animals seem to spend a great deal of their time in the very shallow shoal waters here in depths of from 2' to the breaker line.

Recently we have been attempting to "buy up" our enforcement patrols in the area, (it is somewhat remote) and many people set gill and trap nets in the area while on overnight expeditions. Access is by boat because the ranch lands are not available for trespass. Because these fishermen have taken many turtles in the past in their nets we are watching activities here closely.

Generally the water through the area is very turbid and does not afford one the chance to have a good look at the turtles. Presently water conditions have been such that it's been clear. This week on a one mile straight line strip in water from 2-6 ft in depth (duplicate counts considered) we counted 75 turtles ranging in size from 12" to over 3 ft. in shell length.

The turtles here appear to be rather tame, we were able to follow the animals with a skiff and noted that they seem to have no real desire to flee into deep water, they tend to circle about and conceal themselves under coral heads or just lie on the muddy bottom.

* In view of the present status of these animals, I sincerely believe that this area would make an excellent turtle preserve, especially when one considers the relative ease one could have working with them.

Historically speaking - the ancient Hawaiians were well aware of the turtles in this area. There was a rock with a turtle head carved on it. The significance of this rock and ruins

associated with it, will never be known
because they were destroyed in a land clearing
operation.

I really don't know if any of my
observations are of use or whether my
concerns have merit. Nevertheless I
want you to know about it.

Alana
Dora H. Sebek

NOAH K. PEKELD
P O BOX 155
KAUNAKAKAI, HAW.
96748



Kaunakakai, Maui

8-23-74

Dear George:

Just a short note to respond to some of your questions concerning turtles - re Malakai. If you plan any work here just let me know I'll be able to: ① provide you with assistance and use of our patrol boat (13.5 whaler w/20 H.P. motor) ② access by vehicle to any area.

Some in water work could be in the Palau Kalo area - early morning is the best time before the wind causes the water to get turbid.

Although I don't have specific records I know all of the beaches on Malakai which were used by turtles for nesting in the past. - late 1890's and early 1900's. These sites were pointed out to me by an old time cowboy who worked about 52 yrs for Malakai Ranch! I don't know of specific instances of turtles nesting at Moomomi beach but it was a nesting site in the early 1900's. According to what Home Steadent said in 1920 turtles still nested at Moomomi.

In the early late 40's and early 50's I personally witnessed many turtles that

by homesteaders for use as food there were
hundreds of turtles along the coastal areas. ~~WSE~~
Unfortunately the area just ~~WSE~~ of Moomomi
had topographical features which made turtle
hunting, much the same as shooting fish
in a barrel. Another method used in these
days was that of jiggging for turtles, I can
make the device from memory - although
I never used one some individuals were
expert in its use! Sometime when you
get here we can discuss the subject in
depth.

George
Noah

Linda Bail

Ken Bail

Bubbles Below, Inc.

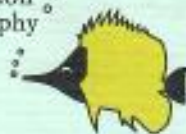
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GEORGE =

THANK YOU FOR YOUR CORRESPONDENCE. WE ARE ALWAYS INTERESTED IN ANY INFO YOU CAN SUPPLY US AND HAPPY TO INFORM YOU OF ANY SIGHTINGS IN THE FIELD. LET US KNOW OF ANY PARTICULARS YOU WOULD LIKE TO KNOW ABOUT. WE WOULD LIKE TO TAKE YOU OUT DIVING SOMETIME, NO CHARGE, JUST COME ON OVER. WE HAVE SYSTEMATICALLY EXPLORED MILES OF KAUAI'S SHORELINES IN SEARCH OF DIVE SIGHTS WHICH OFTEN TIMES ARE TURTLE RESTING SPOTS ALSO.

I SPOTTED BBA 442 AGAIN ON 7/26 IN THE SAME CAVE AT THE SHEPHERD CAVERNS. THE NUMBERS ARE CLEAR ON THE BLUE TAG. ON YOUR ADVICE I ALSO SPOTTED 2 SMALLER METAL TAGS, ONE NEXT TO THE BLUE ONE ON THE LEFT FRONT FLIPPER, AND ONE ON THE LEFT REAR FLIPPER. THESE WERE TOO SMALL FOR ME TO READ ANY MARKINGS WITHOUT BOTHERING THE TURTLE. THERE DID SEEM TO BE A SMALL PEA SIZE TUMOR FORMING ON THE RIGHT EYE AREA.

EARLIER THIS YEAR OFF OF THE EAST SIDE NEAR KAPAA I SPOTTED A TURTLE MISSING PART OF ITS SHELL, EXPOSING ITS LEFT REAR FLIPPER TOTALLY UP TO ITS BODY.

A FEW DAYS AGO A TURTLE ON THE BOTTOM STARTED MOVING ITS HEAD BACK AND FORTH WHILE OPENING AND CLOSING ITS MOUTH AS IF TO VOMIT ALTHOUGH NOTHING CAME OUT.
DO TURTLES VOMIT?

— OVER —

WE ALSO HAVE COME UPON TURTLE EGGS UNDERWATER
A NUMBER OF TIMES. WOULD YOU LIKE SAMPLES?

Enough for now

Keep in touch, KEN

'A lot of the old' promised if inn allowed to rebuild

By HARRY EAGAR
Staff Writer

KAUNAKAKAI — The owners of the Mid-Nite Inn will go before the Molokai Planning Commission Wednesday with proposals to rebuild the local landmark that was ruined by fire June 25.

John and Alyne Kikukawa are seeking a change in zoning to Country Town Business District. The public hearing is scheduled for 1 p.m. at Mitchell Paule Center.

John Kikukawa says he hopes to reopen the same place where "people used to order a large Coke, fried fish and sáimin and sweat in a '40s and '50s atmosphere, minus the heat."

Like the old Mid-Nite Inn, the new one will not be fancy, in part because the Kikukawas were not insured and don't have a lot of money to reinvest. They have taken on new partners as co-managers, Edwin and Diane Medeiros.

Edwin Medeiros grew up on Molokai with John Kikukawa and recently returned to run a tropical fish business. Diane Medeiros works for Molokai Community Federal Credit Union.

About 20 percent of the old building was saved. "We want to provide the same ambiance," says Kikukawa, "but cool it down and get on the good side of the Fire Department and the Health Department." (Kikukawa explains that although he never had any health code violations, it was a constant struggle with the old building to keep up to standards.)

That will allow him to get fire insurance.

Commercial lenders have rejected him, he says, because of the insur-

ance problem, which is common in wooden Kaunakakai. He hopes to make use of the state's Capital Loan Program, which can guarantee up to \$1 million in loans for businesses unable to qualify for unrestricted private lending. Construction costs are estimated at under \$200,000.

Kikukawa says he wouldn't want to spend more because "we want to keep the local business that made us survive 60 years. I cannot dump hundreds of thousands of dollars in and not have it show up on the menu."

His goal is to modernize the place without ruining it.

"I would like to update the menu," says Kikukawa, "because even Molokai people are becoming more health conscious."

Hamburgers and fried akule will still be on the menu, along with plates of opakapaka and onaga that "would cost \$27 at a hotel." Mid-Nite Inn prices were \$7.50, portions were bigger and the fish were fresher because Kikukawa bought from local fishermen.

The fresh vegetables he hopes to sell also will be bought on the island, as much as possible.

The old Mid-Nite Inn was remodeled at least seven times and was a marvel of inconvenience. The new one will have the kitchen in a better place and will have a more convenient meeting room. The new section will extend some 30 feet back from the remainder of the old building, and although the main street front will be preserved, the focus of the new restaurant will be on the side street.

A covered outside eating area and a patio will be innovations, along with the partial air conditioning, but "a lot of the old" will be revived, Kikukawa says.

***** TURTLES TAGGED ON MOLOKAI *****

Date Tagged: November 15, 1991

Location Caught: Palaa - Site E (page 1 of 3)

Method of Capture: FIF

Number	Curved Length (cm)	Curved Width (cm)	Tag Number On Left Front Flipper	Tag Number On Right Front Flipper	
1*	73.5(68.0)	64.0(52.5)	9227	9228 (left hind;	massive tumor on RFF)
	large tumor on RFF; several #2's on LFF.				
2	70.0(65.0)	63.0(51.5)	9229	9230	
3**	61.0(55.5)	53.0(43.0)	10,857	10,858	RECOVERY!
4*	60.0(56.0)	53.0(45.0)	9231	9232	
	left eye = #1				
5	55.0(51.5)	47.0(42.5)	9233	9234	
6**	62.0(55.5)	59.0(46.5)	9235=(added today)	Y488	RECOVERY
7	71.0(66.5)	62.0(48.5)	9236	9237	
8	62.0(57.5)	53.0(44.5)	9238	9239	
9**	75.0(70.5)	63.0(52.0)	Y-821	Y-822	RECOVERY
10*	62.0(57.5)	56.5(46.0)	9240	9241	
	Tumor: right eye = #2; left eye = #2				
11*	65.0(61.0)	56.0(49.0)	10,967	10,966	RECOVERY
	Note: notch on left rear edge of carapace.				
12**,**	65.0(59.5)	61.0(48.5)	Z164 (blue plastic)	10,933	RECOVERY!
	Tumor: right eye #2; also right hind deformed.				
13**,**	69.5(63.5)	62.0(50.5)	Y-431	Y-430	RECOVERY!
	Tumors: left eye = two #1s				
14**,**	67.0(62.5)	59.5(49.0)	covered by tumors; unreadable	10,883	RECOVERY!
Remarks:	Tumors: left eye = #3; right eye = #2; RFF (tag site) = #3; LFF = #4+				

** = recaptured animals; previously tagged

* = tumored animals

* * * * * TURTLES TAGGED ON MOLOKAI * * * * *

Date Tagged: November 15, 1991 (page 2 of 3)

Location Caught: Palaau - Site E

Method of Capture: FIF

<u>Number</u>	<u>Curved Length (cm)</u>	<u>Curved Width (cm)</u>	<u>Tag Number On Left Front Flipper</u>	<u>Tag Number On Right Front Flipper</u>
<u>15**</u>	<u>78.0(72.0)</u>	<u>68.5(56.0)</u>	<u>9425</u>	<u>9426 RECOVERY!!</u>
<u>16*</u>	<u>71.0(65.5)</u>	<u>60.5(51.0)</u>	<u>9242</u>	<u>9243</u>
	<u>Tumors: both eyes = #1</u>			
<u>17*</u>	<u>63.0(59.0)</u>	<u>54.5(48.0)</u>	<u>9244</u>	<u>9245</u>
	<u>Tumors: both eyes = #3; neck = #3; both front flippers greater than #4.</u>			
<u>18**,**</u>	<u>62.0(57.0)</u>	<u>53.0(44.5)</u>	<u>T50,221</u>	<u>V-335 RECOVERY!!</u> <u>V-336 (right hind)</u>
	<u>Tumors: LFF = #3; neck #3; right rear #2;</u>			
<u>19*</u>	<u>50.0(47.0)</u>	<u>43.5(36.0)</u>	<u>9246</u>	<u>9247</u>
	<u>Tumors: LFF = #2; neck #3; both eyes #2; tail = greater than #4.</u>			
<u>20</u>	<u>61.5(56.0)</u>	<u>52.0(43.5)</u>	<u>9248</u>	<u>9249</u>
<u>21**</u>	<u>62.5(58.0)</u>	<u>54.0(47.0)</u>	<u>9444</u>	<u>9445 RECOVERY!!</u>
<u>22*</u>	<u>68.0(63.0)</u>	<u>61.5(51.0)</u>	<u>Y-469</u>	<u>Y-468 RECOVERY!!!</u>
<u>23**,**</u>	<u>59.0(54.5)</u>	<u>54.5(43.0)</u>	<u>9250 (added today)</u>	<u>6590 RECOVERY!!</u> <u>9206 (added today left hind)</u>
	<u>Tumors: both eyes #2; tail #4; LFF #3; tail area = two #4.</u>			
<u>24*</u>	<u>68.5(64.0)</u>	<u>60.0(50.0)</u>	<u>9207</u>	<u>9208</u>
	<u>Tumors: left eye #1; LFF greater than #4; neck greater than #4.</u>			
<u>25**</u>	<u>75.5(69.0)</u>	<u>64.0(53.0)</u>	<u>T-50,205</u>	<u>V69 RECOVERY!!</u> <u>V70 (right hind)</u>
<u>26</u>	<u>67.0(62.0)</u>	<u>63.5(50.0)</u>	<u>9209</u>	<u>9210</u>
<u>27</u>	<u>77.0(73.0)</u>	<u>68.5(56.0)</u>	<u>9211</u>	<u>9213</u>
<u>28**</u>	<u>57.0(52.5)</u>	<u>50.0(41.0)</u>	<u>C-117 (blue plastic)</u>	<u>Y-987 RECOVERY!!!</u>

Remarks: _____

* * * * * TURTLES TAGGED ON MOLOKAI * * * * *

Date Tagged: November 16, 1991

Location Caught: Palaaau - Site E

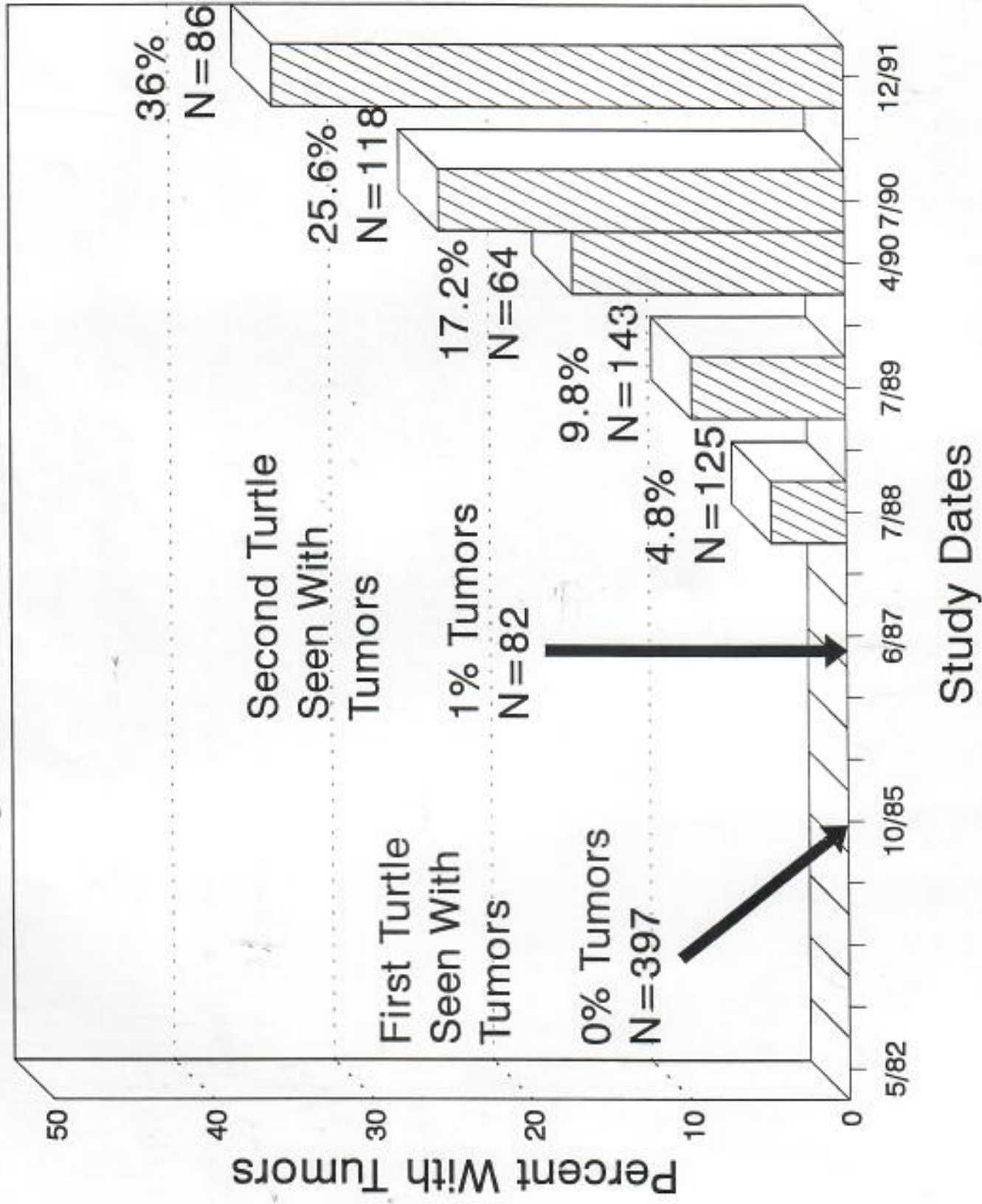
Method of Capture: FIF

<u>Number</u>	<u>Curved Length (cm)</u>	<u>Curved Width (cm)</u>	<u>Tag Number On Left Front Flipper</u>	<u>Tag Number On Right Front Flipper</u>
<u>1*,**</u>	<u>91.0(84.5)</u>	<u>83.0(63.5)</u>	<u>Y-806</u>	<u>Y-807 RECOVERY!!</u>
	<u>Tumors: RFF massive; LFF #2; right eye #2; left eye #2.</u>			
<u>2</u>	<u>63.5(60.0)</u>	<u>56.0(45.0)</u>	<u>V-759</u>	<u>V-760</u>
<u>3</u>	<u>61.0(56.0)</u>	<u>51.5(42.0)</u>	<u>V-761</u>	<u>V-762</u>
<u>4</u>	<u>59.0(56.0)</u>	<u>50.5(42.5)</u>	<u>V-763</u>	<u>V-764</u>
<u>5</u>	<u>73.5(68.5)</u>	<u>64.5(54.5)</u>	<u>V-765</u>	<u>V-766</u>
<u>6*,**</u>	<u>55.0(51.5)</u>	<u>47.5(39.5)</u>	<u>8849</u>	<u>V-767 RECOVERY!!!</u>
	<u>Tumors: LFF #2; left eye #3; right eye #1; right hind #4.</u>			
<u>7*</u>	<u>67.5(64.0)</u>	<u>60.0(50.0)</u>	<u>V-768</u>	<u>V-769</u>
	<u>Tumor: right eye = #3</u>			
<u>8</u>	<u>58.0(53.5)</u>	<u>49.0(42.5)</u>	<u>V-770</u>	<u>V-771</u>
<u>9</u>	<u>55.5(51.5)</u>	<u>48.0(39.5)</u>	<u>V772</u>	<u>V-773</u>
<u>10</u>	<u>55.5(51.5)</u>	<u>48.5(40.5)</u>	<u>V-774</u>	<u>V-775</u>
<u>11</u>	<u>68.5(64.0)</u>	<u>54.0(52.0)</u>	<u>V-776</u>	<u>V-777</u>
<u>12**</u>	<u>67.5(63.5)</u>	<u>57.5(49.0)</u>	<u>Y-499</u>	<u>Y-498 RECOVERY!!!</u>
<u>13</u>	<u>84.0(78.5)</u>	<u>71.0(56.5)</u>	<u>V-778</u>	<u>V-779</u>
	<u>Note: apparent shark bite on left side; healed over.</u>			
	<u>TOTALS: 3 tumored = 23%</u>			
	<u>3 recoveries = 23%</u>			

Remarks: 949 turtles tagged to date with 119 recoveries

* = tumored
** = recapture

Tumor Incidence in Green Turtles in Nearshore Habitats Along the Southern Coast of Molokai



Summary of green turtles, *Chelonia mydas*, tagged
and resighted in the Palaaau vicinity of the southern shore of Molokai

compiled by
George H. Balazs,
William Puleloa and Edwin Medeiros

Study dates	Total No. captured	No. newly tagged	No. resightings	Total No. tagged to date	Peterson population index estimate*
8/30/82	4	4	0	4	-
9/1/82	1	1	0	5	-
9/3/82	16	16	0	21	-
9/21/82	2	2	0	23	-
10/19/82	26	25	1	48	598
10/21/82	1	1	0	49	-
11/1/83	1	1	0	50	-
12/20/83	7	7	0	57	-
1/5/84	5	5	0	62	-
2/7/84	1	1	0	63	-
2/8/84	3	2	1	65	189
2/11/84	5	4	1	69	325
3/24/84	1	0	1	69	-
4/4/84	4	4	0	73	-
4/25/84	6	5	1	78	438
5/5/84	10	10	0	88	-
5/9/84	2	2	0	90	-
5/10/84	5	5	0	95	-
5/16/84	10	8	2	103	475
4/3/85	2	2	0	105	-
4/11/85	12	12	0	117	-
4/23/85	8	5	3	122	312
4/24/85	39	38	1	160	4758
4/26/85	3	3	0	163	-
4/30/85	1	1	0	164	-
5/7/85	9	7	2	171	738

Study dates	Total No. captured	No. newly tagged	No. resightings	Total No. tagged to date	Peterson population index estimate*
5/19/85	5	4	1	175	855
5/23/85	4	4	0	179	-
7/11/85	16	15	1	194	2864
7/16/85	10	10	0	204	-
7/17/85	36	32	4	236	1836
7/19/85	38	37	1	273	8968
10/3/85	20	19	1	292	5460
10/16/85	14	10	4	302	1022
3/5/86	19	16	3	318	1913
5/1/86	3	3	0	321	-
9/19/86	12	9	3	330	1284
2/24/87	3	3	0	333	-
6/3/87	10	9	1	342	3330
6/4/87	17	14	3	356	1938
2/23/88	3	3	0	359	-
3/1/88	2	2	0	361	-
7/12/88	38	32	6	393	2286
7/14/88	87	77	10	470	3419
7/5/89	115	106	9	576	6005
7/7/89	27	24	3	600	5184
7/9/89	1	1	0	601	-
3/1/90	1	1	0	602	-
3/2/90	12	11	1	613	7224
5/8/90	50	43	7	656	4389
5/10/90	1	1	0	657	-
7/2/90	36	29	7	686	3379
7/9/90	82	72	10	758	5625
7/9/91	31	21	10	779	2350
11/15/91	45	27	10	806	1948

Study dates	Total No. captured	No. newly tagged	No. resightings	Total No. tagged to date	Peterson population index estimate*
12/14/91	86	59	27	865	2567
5/26/92	121	84	37	948	2829

$$\frac{\text{*No. tagged turtles resighted}}{\text{Total No. turtles captured}} = \frac{\text{Total No. turtles tagged}}{\text{Total No. turtles in resident population}(X)}$$

July 4, 1992

George,

I wanted to use my new scanner and do a neat job but it seems I have less and less time to do things these days. Therefore, I simply xeroxed the maps I'm using and added some notations. Here's how it works:

1. there are six pages; #1 is the western most and each subsequent page thereafter leads to the east;
2. I've broken down the coastline into three sections: Palaau (Pa), Kawela (Kw), and Kamalo (Ka); demarcation lines are noted on the maps in red;
3. each section contains marked off areas where Ed sets his nets; the nature of his operations dictates his choice of areas and these have proven to be consistent throughout the years making it very convenient for us;
4. areas with letter designations are areas where turtles have been captured and tagged, e.g. Palaau "E" (where most of our tagging have been done these past couple of years); Kawela "G" (in front of my old house), etc.
5. areas without letter designations are areas where Ed has set his nets in the past but no turtles were captured, or else we were not there to tag those caught;
6. a few of the designated areas are sites where turtles have been tagged in conjunction with Hocado's operations;
7. each turtle in my database has one of these designated spots as its point of capture; I wanted to break these out for you but have still to work it out...it seems conceptually possible but I'm finding out the hard way that FoxBASE + Mac requires very specific expressions in order to do this...and if entries were not consistent throughout, then maybe it can't be done;

Concerning your question concerning the location of Kalokoeli, Kapaakea,
and Kamiloloa...all turtles tagged at these sites have been designated as
being captured at "Kawela I".

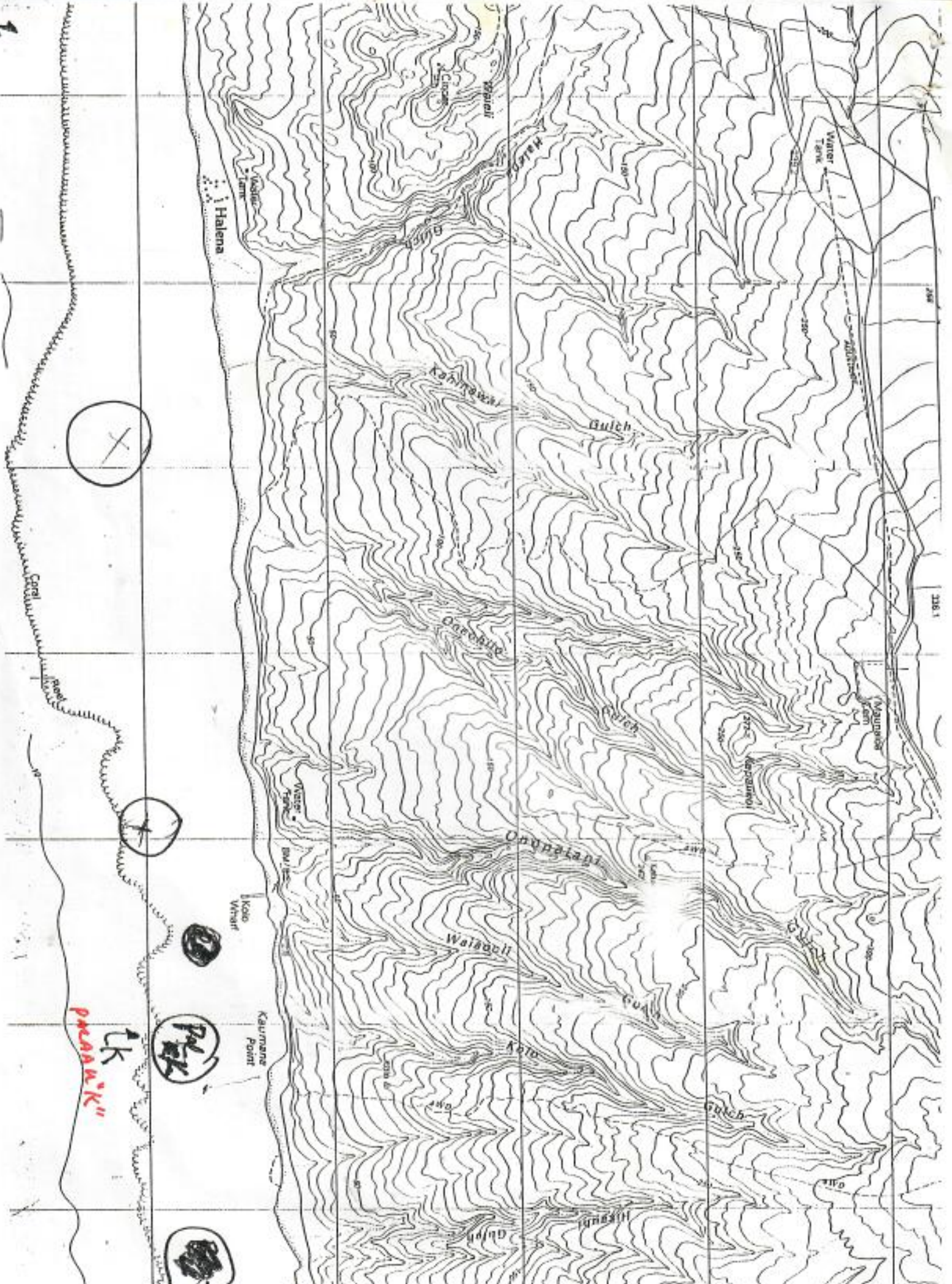
In regards to the Marshalls' trip, everything seems to be falling in place. I
am planning to go to Honolulu on the 13th or 14th to purchase and ship off
supplies and equipment we'll be needing...tents, lights, batteries, tarps,
etc. If you're planning to come over during that week, I'll probably miss
the first couple of days with you. Would you please bring over the tags,
applicators, etc. that we'll be using in the Marshalls? That will be one
less thing I would have to worry about. I also got a bunch of questions I
gotta bounce off you.

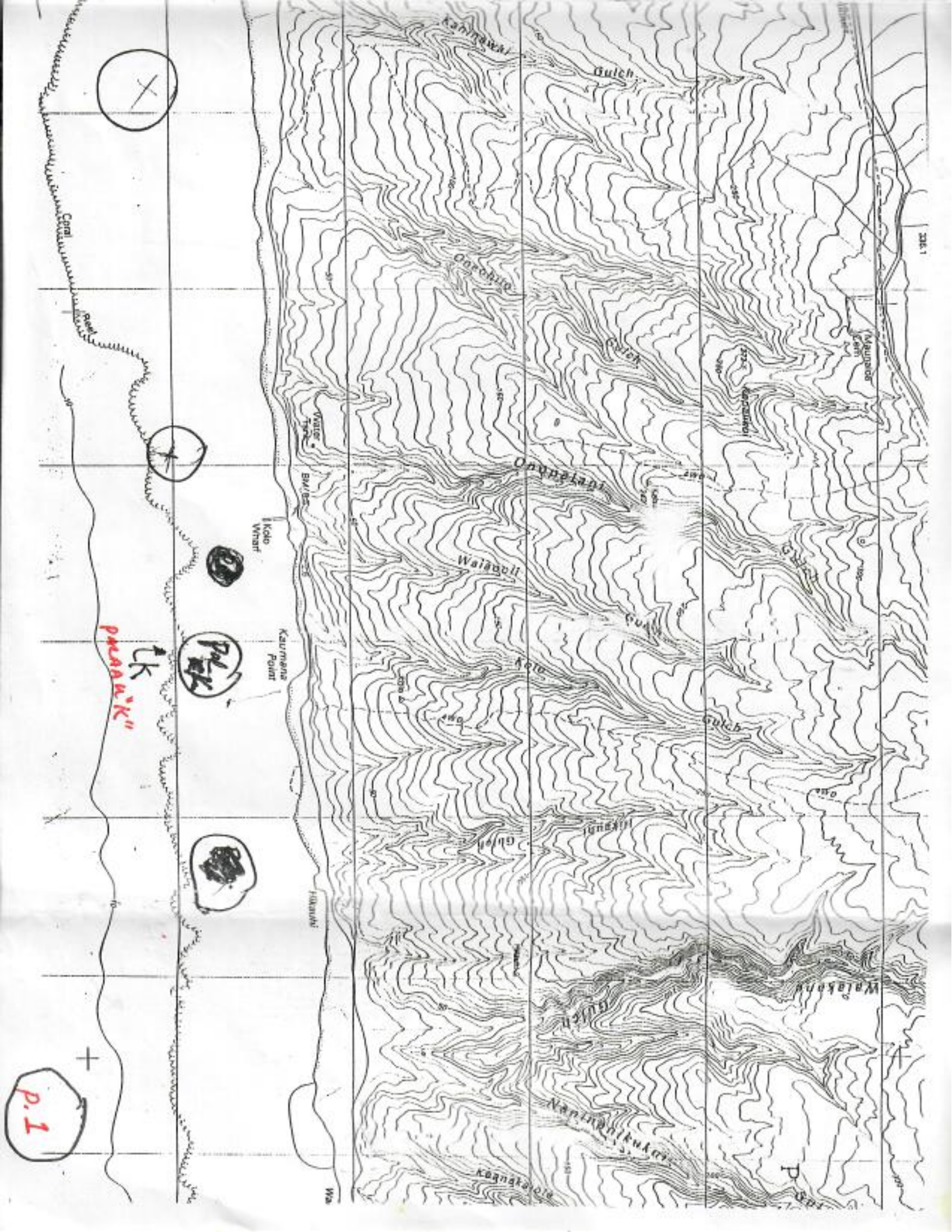
PACK & MAIL

Aloha,

Bue

*Judy -
Release
manual
date?*

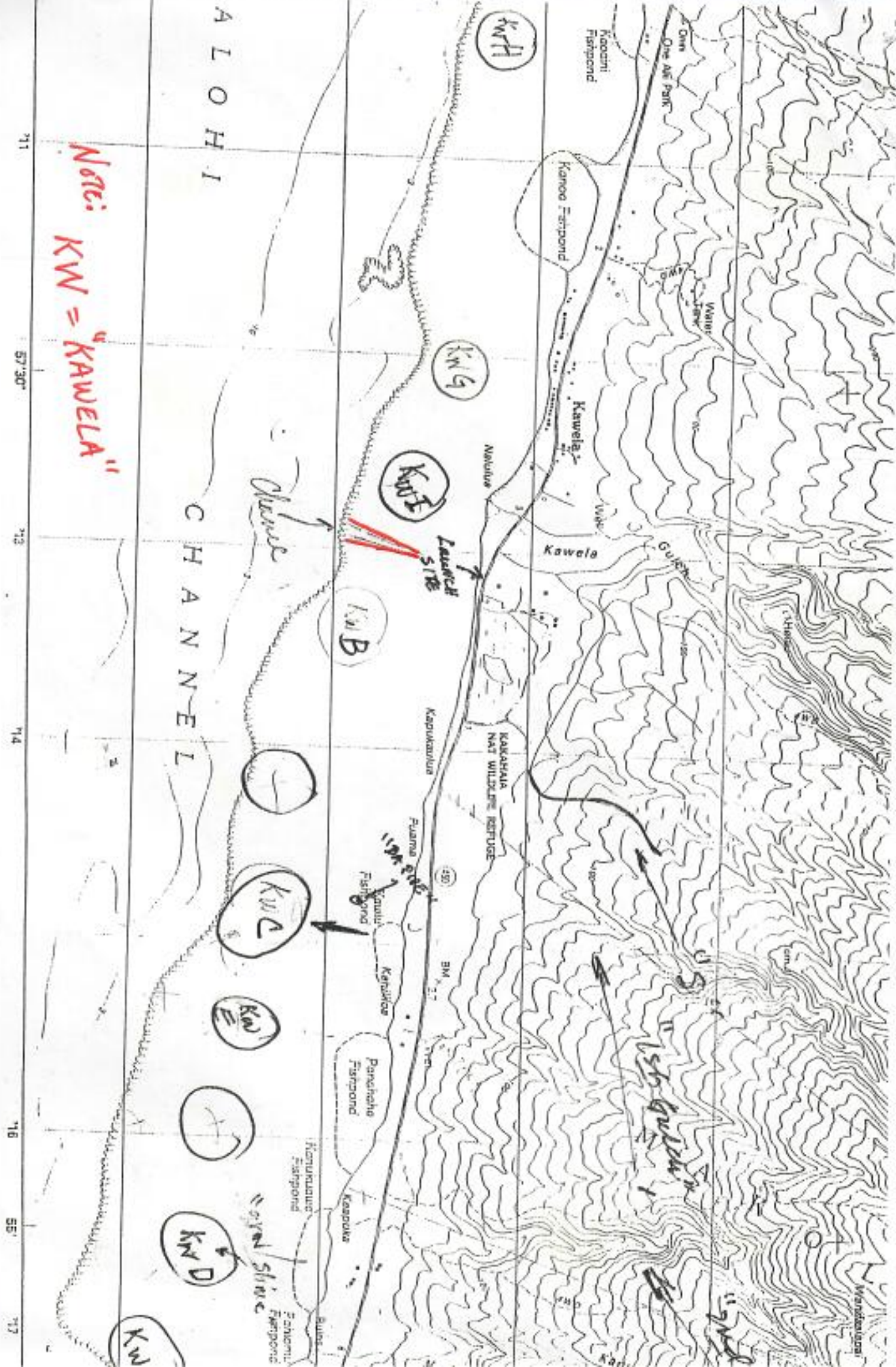




P.1

P.1

P.1



Note: KW = "KAWELA"

A L O H I
C H A N N E L

Channel

1st Gulch

2nd Gulch

2nd Slit

4. A, B, C, D, E, F, G, H, I



DELA II

CHANNEL

13 14 16 17 18



Launch SITE

KW B

KW C

KW E

KW D

KWA

KW F

KW G

Kauihi Fishpond

Panohia Fishpond

Kapukahu Fishpond

Enahou Fishpond

Kamohua Fishpond

KAKAHUA NAT WILDLIFE REFUGE

Kapukahu

Puamea

Kauihi

Kauihi

Panohia

Kapukahu

Enahou

Panohia

Kapukahu

Kamohua

Kawela

Nanua

Gulch

Waikukui

Waikukui

Kauehoola

Waikukui

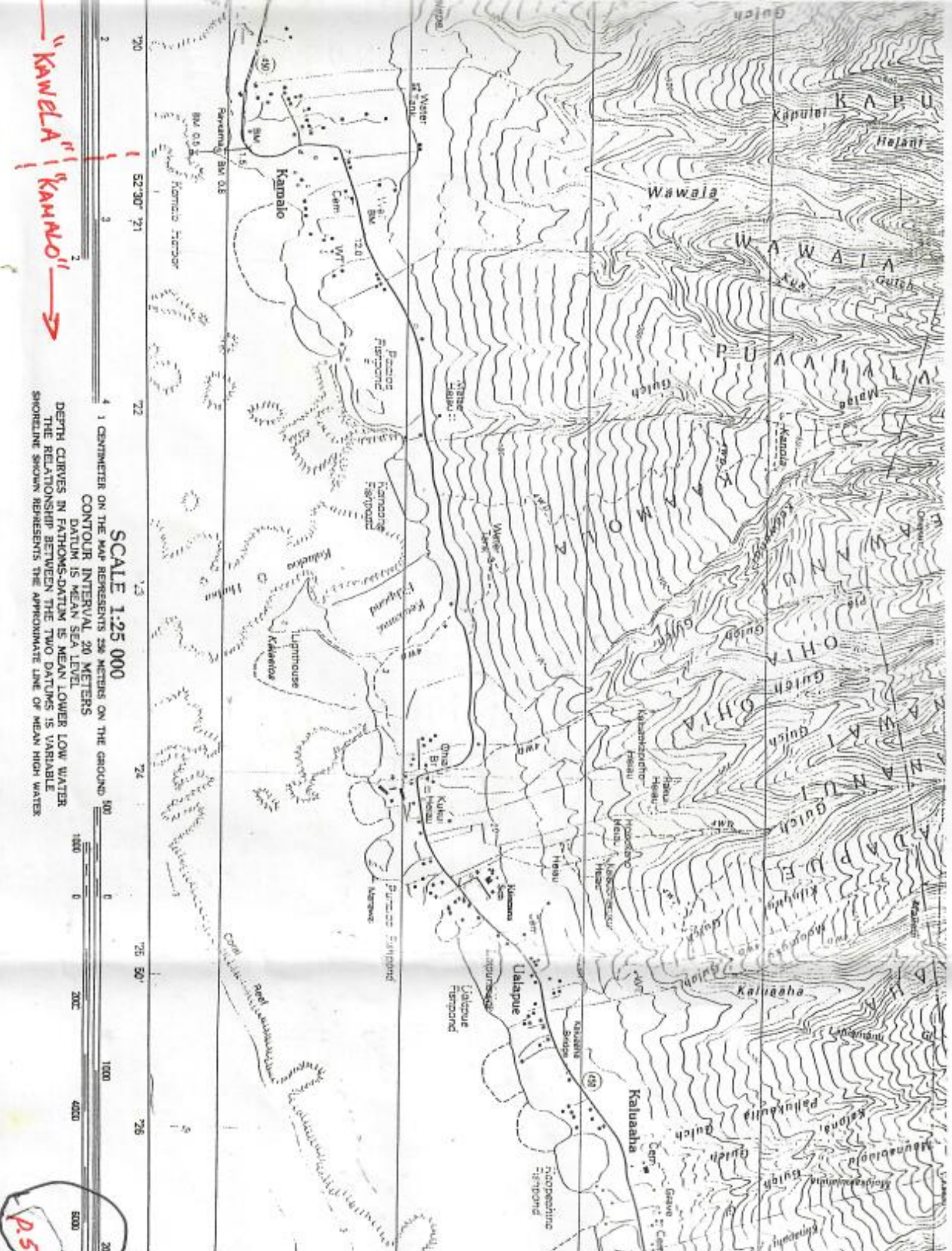
Makihina

Waikukui

K

A

P.4



"KAWELA" "KAWAHO" →

SCALE 1:25 000

1 CENTIMETER ON THE MAP REPRESENTS 250 METERS ON THE GROUND 500 METERS ON THE GROUND IS REPRESENTED BY 2 CENTIMETERS ON THE MAP

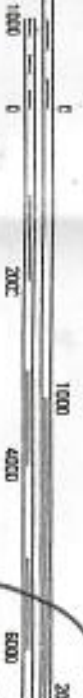
CONTOUR INTERVAL 20 METERS

DATUM IS MEAN SEA LEVEL

DEPTH CURVES IN FATHOMS-DATUM IS MEAN LOWER LOW WATER

THE RELATIONSHIP BETWEEN THE TWO DATUMS IS VARIABLE

SHOULDER SHOWN REPRESENTS THE APPROXIMATE LINE OF MEAN HIGH WATER



P.S.

SCALE 1:25 000

ON THE MAP REPRESENTS 250 METERS ON THE GROUND

CONTOUR INTERVAL 20 METERS

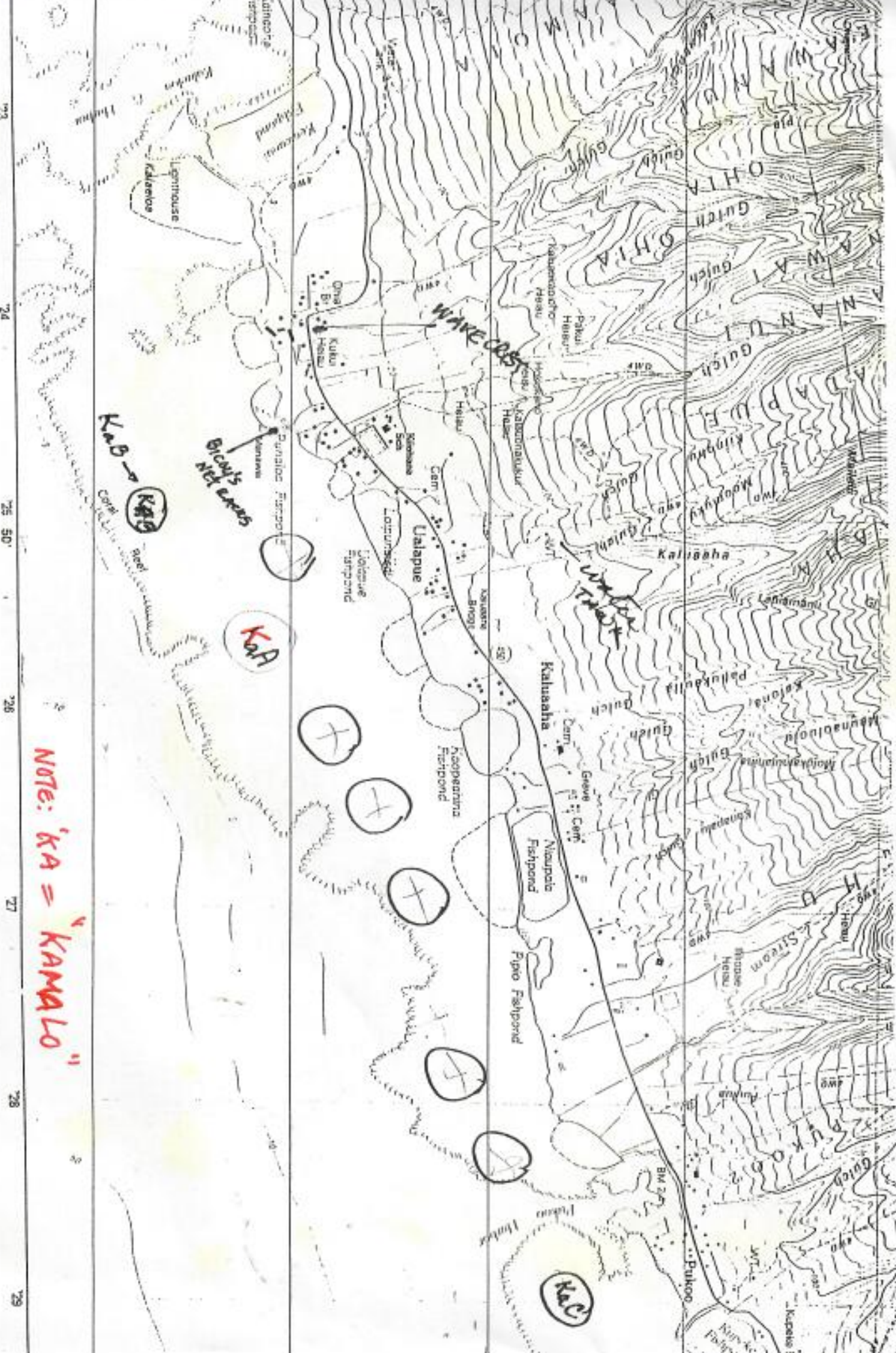
DATUM IS MEAN SEA LEVEL

DIFFERENCE BETWEEN THE TWO DATUMS IS VARIABLE

ON REPRESENTS THE APPROXIMATE LINE OF MEAN HIGH WATER



NOTE: 'KA' = 'KAMALO'



* * * * * TURTLES TAGGED ON MOLOKAI * * * * *

Date Tagged: June 25, 1992

Location Caught: Palaaau J

Method of Capture: FIF (BULLPEN)

<u>Number</u>	<u>Curved Length (cm)</u>	<u>Curved Width (cm)</u>	<u>Tag Number On Left Front Flipper</u>	<u>Tag Number On Right Front Flipper</u>
<u>1</u>	<u>85.5(78.5)</u> ^{SL}	<u>75.0(60.0)</u> ^{SL}	<u>V781</u>	<u>V782</u>

Note: Also tagged left hind with V783; right hind bitten and healed over.

<u>2</u>	<u>42.0(39.0)</u> ^{SL}	<u>38.0(32.5)</u> ^{SL}	<u>V784</u>	<u>V785</u>
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****RECOVERY****RECOVERY****RECOVERY****

<u>3</u>	<u>63.0(58.0)</u> ^{SL}	<u>58.5(47.0)</u> ^{SL}	<u>7231</u>	<u>7232</u>
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Note: added V786 to right hind today.

Big south swell today & portions of nets hung up on reef. One turtle was seen escaping over the floaters. All three turtles handled today were clean of tumors.

Remarks: 1066 turtles tagged to date with 166 recoveries.

SUPPLY, EQUIPMENT, OR SERVICE ORDER

This Order Number must appear on all invoices and packages.

40-JJNF-2-0195

1. RECEIVING OFFICE NO. 9246		2. CONTRACT ORDER AGAINST		3. PURCHASE ORDER (See Reverse) XX		4. DELIVERY ORDER (See Back 3)		5. SOURCE		6. ORDER DATE 06/09/92		7. SHIP TO: NOAA, NMFS, HONOLULU LABORATORY 2570 DOLE STREET HONOLULU, HI 96822-2396	
8. REQUESTING ACTIVITY MARINE TORTLE RESEARCH		9. CONTRACTING ACTIVITY		10. TELEPHONE CONTACT (808)553-3702		11. ATTENTION MRT/(808)943-1240		12. TAX ID NO. 566822448		13. EMPLOYER ID #		14. REQUISITION NUMBER	
15. ITEM NO.		16. DESCRIPTION		17. QUANTITY		18. UNIT PRICE		19. AMOUNT		20. UNIT PRICE		21. AMOUNT	
1		PROVIDE TIME & SPACE ON BOARD FISHING VESSEL FOR NOAA, NMFS REPRESENTATIVE TO TAG AND STUDY SEA TURTLES CAPTURED INCIDENTALLY DURING OPERATIONS CONDUCTED ALONG THE SOUTH SHORE OF MOLOKAI. ESTIMATED REQUIREMENT APPROX 110 TURTLES PER MONTH.		2517 01		330 EA		14.00		4620.00		4620.00	
22. DELIVERY DATE 09/30/92		23. DISCOUNT TERMS N/A		24. ESTIMATED FREIGHT 0.00		25. SUB-TOTAL 4620.00		26. TOTAL 4620.00		27. PAYMENT 0		28. NET TOTAL 4620.00	
29. USG Reference Order No. 40-JJNF-2-0195		30. ACC LINE		31. BUREAU CODE		32. ACCOUNTING CLASSIFICATION		33. DIST		34. AMOUNT		35. AMOUNT	
NOAA, WASC FINANCE DIVISION NCI, 7600 SAND POINT WAY N.E., BIN C15700		31		14		2722000L1AHT00		1005		4620.00		4620.00	
36. ACCEPTANCE SIGNATURE, TITLE, & PHONE NO. Karena Yee/Admin, Officer		37. TYPE SIGNATURE		38. FOR INQUIRED CALL: (808)943-1231/Janine K.		39. DATE SHIPPED		40. DATE ORDERED		41. DATE SHIPPED		42. DATE ORDERED	