

Documentation of the Occurrence of the green
sea turtle in shoreline ponds along the leeward
coast of the island of Hawai'i prior to 1978

The transfer by man of green sea turtles from the ocean to the shoreline ponds is not a new practice on the leeward coast of the island of Hawai'i. The occurrence of green sea turtles in ponds along this coast was documented by a scientific study conducted in 1972-1973, well before the implementation of Federal regulations which protect this species. The results of the scientific survey are reported in a publication by the University of Hawaii Sea Grant College Program: Aquatic Survey of the Kona Coast Ponds, Hawaii Island¹. The principal investigators of this study were Dr. John A. Maciolek and Dr. Richard E. Brock. They found green sea turtles in 3 ponds (see circled areas on attached maps). These ponds are very similar in bottom type, depth, surface area, and salinity to ponds in the Kalahuipuaa pond complex managed by Alike Cooper & Sons, where turtles are also found.

In contrast to many of the Kalahuipuaa ponds, which have outlets to the sea, the 3 ponds in which turtles were reported by Maciolek and Brock are landlocked. It is the opinion of Dr. Brock that the turtles were transferred into the ponds by humans to speed their growth. The ponds in which the turtles were seen had dense growths of seaweed and pondweed. A variety of seaweed species are important to the diet of the green sea turtle. It has been observed that the major food source along the lava coastline of the Ka'u District is a seaweed which grows in shallow water close to shore, often on rocks just below the low tide line and in areas where freshwater enters the ocean from underground springs². Waters along this coast are turbulent, and turtles have to do considerable swimming and maneuvering to prevent from being smashed against the rocky shoreline and bottom by rough surf. It is no wonder that turtles congregate in the few partially sheltered bays and ponds that they can get into.

Turtles were photographed in the protected waters of Kiholo Lagoon in 1972 (see photos). This lagoon is similar to the largest pond in the Kalahuipuaa complex, which turtles enter through outlets to the open ocean. Because of the dense seaweed growth and the calm waters of such areas, it may be argued that this is the preferred environment for feed by the green sea turtles along the leeward coast of Hawai'i.

The turtles do a service in the Kalahuipuaa ponds, Kiholo Lagoon, and other protected waters into which groundwater carries nutrients from upland development. Without natural cropping by grazing animals, like turtles, the ponds would soon be enveloped by seaweeds, which otherwise would have to be controlled with herbicides. Green sea turtles appear to favor protected waters with plen-

tiful supplies of seaweeds, and their natural feeding behavior provides benefits to fishpond managers who do not have to artificially clear the vegetation which the turtles graze on. It would be very difficult to improve on this two-way relationship through the intervention of the Federal government. In fact, it would seem to be contrary to the interests of this "threatened" species for the Federal government to insist that green sea turtles not be kept in shoreline ponds along the Kona coast.

References

- 1J.A. Maciolek and R.E. Brock. 1974. Aquatic survey of the Kona Coast ponds, Hawaii Island. UNIHI-SEAGRANT-AR-74-04. University of Hawaii Sea Grant College Program. 73 p.
- 2G.H. Balazs. 1980. Synopsis of biological data on the green turtle in the Hawaiian Islands. NOAA-TM-NMFS-SWFC-7, NOAA/National Marine Fisheries Service, Southwest Fisheries Center. 141 p.

TAXONOMIC LIST AND DISTRIBUTIONS OF LESS-COMMON FAUNA
OF CLOSED PONDS, KONA COAST, HAWAII

- A. Porifera (sponges)
Unidentified species: X-5
- B. Coelenterata
Hydrozoa (hydroids). Ostromouvia horii: K-1
Anthozoa (anemones, etc.) Unidentified species: J-7
- C. Mollusca
Gastropoda (snails)
Melampus parvulus: H-4; J-45; K-22
Theodoxus vespertina: E-14,16; H-9; K-3,10,24
Nerita polita: K-16,30; X-2
Neritilia sp.: F-5; J-45,47
Unidentified red species: E-15
Pelecypoda (clams, etc.)
Isognomon californicum: D-17
Unidentified species: S-1
- D. Anthropoda
Isopoda (pill bugs, etc.)
Unidentified cymothoid species: X-5
Decapoda (shrimps, crabs)
Alpheus crassimanus: J-46
Antecaridina lauensis: V-1; X-5
Procaris hawaiiensis: X-5
Calliasmata pholidota: X-5
Unidentified xanthid crab: D-60
Insecta
Unidentified beetle: F-1; G-15; H-23
Unidentified mosquito: F-1; O-1
Unidentified midge: D-47
- E. Chordata (vertebrates)
Pisces (fishes)
Abudefduf abdominalis (Mamo): D-61; F-5
Abudefduf sordidus (Kupipi): D-3,54; E-3; H-1,20,30; U-4
Acanthurus achilles (Pakuikui): H-9
Acanthurus sandwicensis (Manini): D-2,3,56; H-2,8,20,21; U-3
Adioryx sp. (Alaihi): D-55
Awaous genivittatus (Oopu kanio): D-36
Bathygobius fuscus (Oopu kai): D-32; H-8,30; J-46; M-6
Chanos chanos (Awa): E-3
Conger sp. (Puhī uha): C-10
Cyprinus carpio (Koi-exotic): E-3,9
Kelloggella oligolepis: D-32,33,45
Neomyxus chaptalii (Uouoa): H-9,20
Sphyræna barracuda (Kaku): E-14
Reptilia (turtles, etc.)
Chelonia mydas (Honu): E-14,17; H-23

QUAD E

- 4. -

19°54'



19°53'

Ohiki Bay

11

PUUWAAWAA

PUUANAHULU

[ANAHOOMALU]

[KIHOLO]

Hou Pt.

12

Kiholo Bay

13

17

16

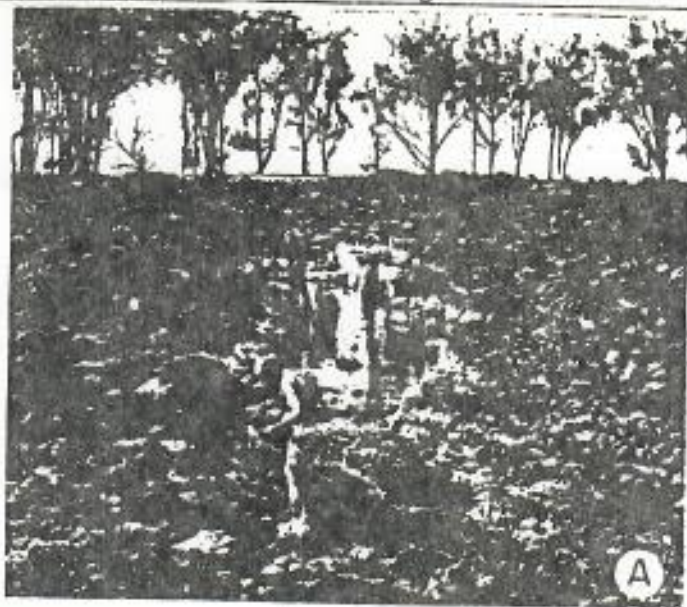
15



B

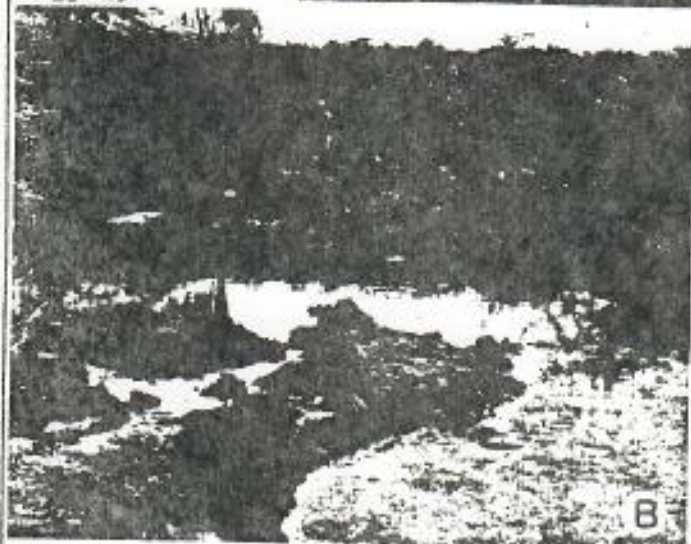
QUAD H

[MAKALAWENA]



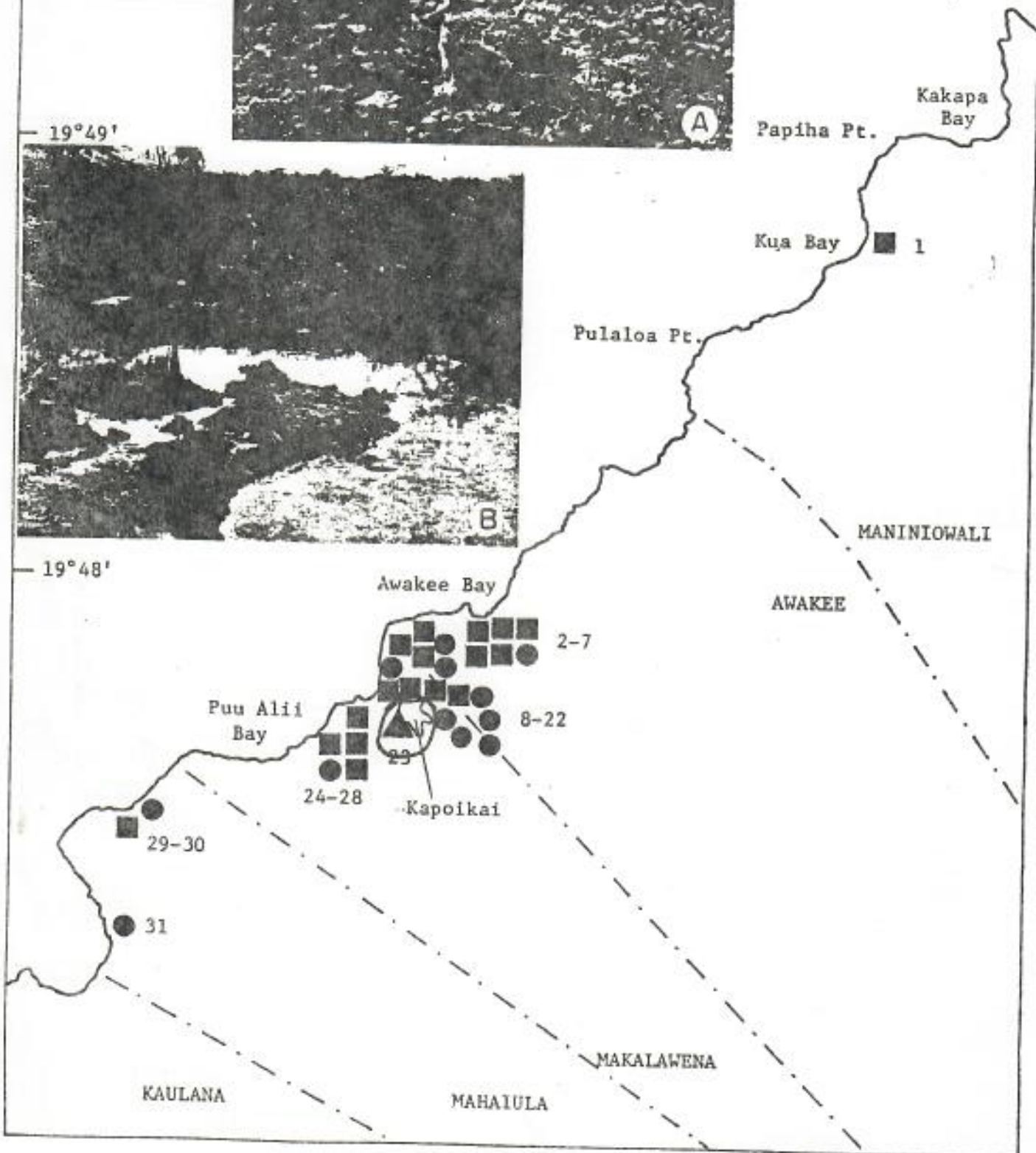
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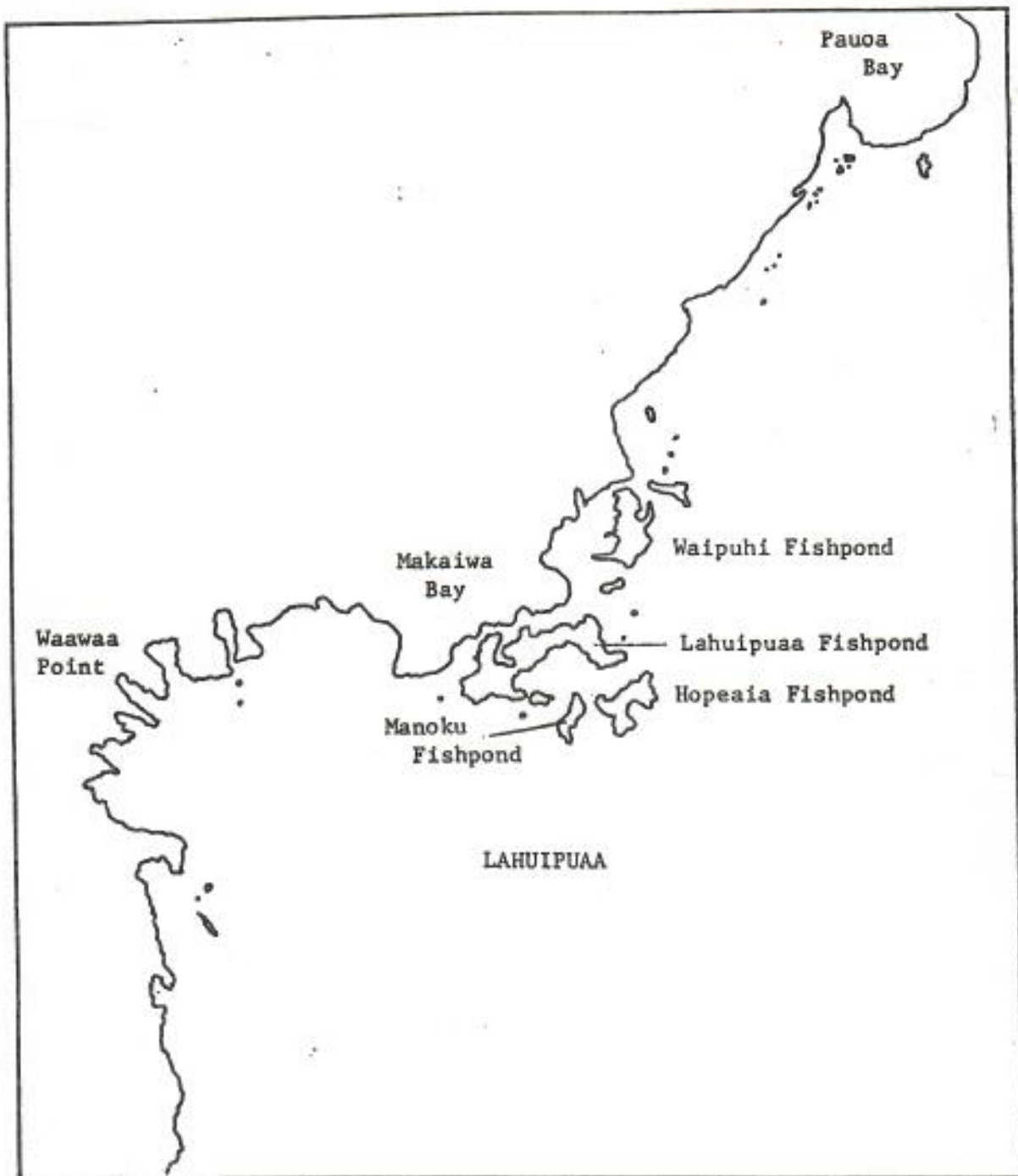
19°49'



B

19°48'





Important Kona coast pond sites: ponds of Lahuipuaa Land
Division, South Kohala District.
Scale = 1:12,000 (1 cm = 120 m).



Fish ponds with reconstructed walls at the Mauna Lani resort, Island of Hawaii (March 1984). These ponds are also known as Kalshuipuaa (translated "gathering place of the pigs").

Alika Cooper and Sons, Incorporated, now manages the Kalahuipuaa Fishpond Complex at Kawaihae, Hawaii. Presently, we have five or six turtles in the pond. Since 1981, I have made repeated requests to the National Marine Fisheries for scientific permits to do research as well as permission to keep turtles in the ponds to control the obnoxious weeds.

All I get from the bureaucrats is shuffling paper, no action, and a lot of talk. I am thoroughly disgusted with all of their bureaucratic excuses. The taking and keeping of turtles are part of our aboriginal rights. Traditionally, my family ate turtle several times a week. It was a necessary part of our weekly diet. The turtle has no fat in the meat, the fat is layered between the shell and the meat. It is very high in protein. Since 1978 when the Federal Government stopped everyone (except those exemptions in the Trust Territory) from taking turtles, my family has been prevented from eating what I consider the best source of protein. I believe our health has suffered.

I would like to see the turtle taken off the threatened species list so that the native Hawaiian can again eat turtle, use it for other traditional uses, religious, medicinal as well as to clean fishponds. A precedence has already been set by other native Americans. It should also be granted to the native Hawaiians without question.

I'd like to thank those of you who signed these resolutions. Those of you who didn't, I ask that you please respect Hawaiian aboriginal rights, our culture, our land and ocean Konohikis. These rights will be addressed some day. Let us begin now.

Aloha A Nui Loa Kakou,

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