## ANALYSIS OF TIGER SHARK STOMACH CONTENTS SUBMITTED TO THE HONOLULU LABORATORY Compiled by George H. Balazs

DATE	LOCATION	LENGTH	CONTENTS
10/23/92	North Shore, Oahu	14'	-Mass of cream-colored fibrous tissue (subsample of est. 60 lb. piece) -Black and white bird feathers
11/29/92	Makaha, Oahu	9'6"	<ul> <li>-7 fish lenses from at least 3 different sizes of fish</li> <li>-1 octopus beak</li> <li>-1 likely squid beak</li> <li>-2 bird feathers (indigestible)</li> <li>-Terrestrial plant twigs</li> <li>-Complete carapace and plastron scutes of 42 cm (11 kg) green turtle, including substantially digested bony elements</li> </ul>
6/11/93	Malaekahana, Oahu	13'3"	-Stingray vertebrae -Sandbar shark used as bait on hook
6/11/93	Malaekahana, Oahu	9'11"	-Diodon spines -Octopus parts -Mollusk parts -Sandbar shark used as bait on hook
7/10/93	Waialua, Oahu	11'(?)	-Triggerfish (whole) -Fish spine and flesh -Left front flipper of 50 cm green turtle

Note: These samples consist of cases where there is reasonable certainty that the complete stomach contents were collected from the shark. Samples are not included here where only the larger, more visible (and less digestible) parts were selectively removed from the shark for identification.



UNITED STATES DEPARTMENT OF COMMERCE National Oceanic and Atmospheric Administration NATIONAL MARINE FISHERIES SERVICE Southwest Region 501 West Ocean Boulevard, Suite 4200 Long Beach, California 90802-4213 TEL (310) 980-4000; FAX (310) 980-4018

December 14, 1993 F/SW023:JJN

Mr. Jerry Crow Waikiki Aquarium 2777 Kalakaua Avenue Honolulu, Hawaii 96815

Dear Jerry:

Per your request, the following is a brief description of the tiger shark study that I am presently undertaking on an informal, non-funded basis.

I feel it is essential to examine the stomach contents of every tiger shark taken in the Hawaiian Islands. It may be that tiger sharks are altering their feeding behavior to take advantage of a more abundant prey, thereby putting them in contact with surfers and other water users while actively hunting.

As an example, my records indicate that of 28 tiger sharks examined in the last two years with food in their stomachs, 13 had turtle remains, for a 46% occurrence. As you know, in Tester's program it was around 13%. These data are from both task force caught tigers (33% turtle occurrence) and non-task force caught animals. Although these are certainly not the best data, and may be biased toward larger sharks, there is a strong indication here which is essential to investigate further. We know from other areas that tiger sharks will alter their behavior or feeding strategy to take advantage of an increase in a specific prey item, i.e. albatross fledglings in the Northwestern Hawaiian Islands, sea snakes in northern Australia, etc.

I plan to continue collecting these data as they become available. George Balazs is also very interested in tiger shark stomach contents, particularly as this animal is the primary predator of adult and subadult green turtles. We are both slowly compiling and sharing data from various sources.

Sincerely,

John<sup>(</sup>J. Naughton Pacific Islands Environmental Coordinator

SUPERIOR OF COMPANY OF COMPANY.

cc: F/SWC2 - George Balazs