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UNIVERSITY OF HAWAII

Hawaii Institute of Marine Biology

August 23, 1974

Mr. Eugene Kridler
U. S. Bureau of Sport Fisheries and Wildlife
337 Uluniu Street
Kailua, Hawaii 96734

Dear Gene:

As you are probably already aware, the intensive portion of my studies on the 1974 nesting population at French Frigate Shoals have now been completed. I am extremely pleased with the data that has thus far been collected and feel confident that the subsequent work on egg fertility and hatchling survival will be equally beneficial to our understanding of the Hawaiian green turtle. You will be interested to learn that a total of 93 females nested on East Island during the course of this season's investigation compared with 67 during the 1973 study. As expected, none of those observed in 1973 were seen during 1974. At first appearance 1974 looks like a better year in terms of population numbers, however, several important factors must be taken into consideration. This season's study was longer in that it continued through the second week of August while last year's intensive work terminated during the latter part of July. Although few new animals (late arrivals) were identified during late July and early August of this year, the longer period did contribute slightly to the total count. More important is the fact that estimated numbers of animals using other available islands (Whale-Skate, Trig, Gin, Little Gin and Tern) during this season appeared to be significantly less than last year. The greater numbers on East may therefore represent a shift in preferred (or ancestral) nesting sites in this year's population. Of real interest is the fact that during this season documentation was made of a multiple island nesting pattern in a portion of the population. This will help to explain some of the seemingly long re-nesting intervals observed on East during both 1973 and 1974. Population estimates previously made during 1973 for all islands at French Frigate Shoals are therefore probably too high as some of the pits on islands other than East were representative of nesters that had already been censused. Multiple island nesting within a given season has not been reported in other areas of the world, therefore, one more unique trait can be attributed to Hawaii's green turtles.

I have still been unsuccessful in locating the origin of the man-made notches observed in the upper shell of a number of this season's turtles. I am in the process of contacting Coast Guard personnel who have been stationed in the area during the last 20 years. If this fails to produce information, I intend to

Mr. Eugene Kridler
Page Two
August 23, 1974

have an inquiry notice placed in several publications that receive wide Pacific Basin circulation. Knowledge of the time and place of this notching could help to contribute significant information to the field of sea turtle biology.

You will find enclosed a listing of this year's turtles which already possessed a U. S. Fish & Wildlife tag (7 total). Recapture information includes date and location as well as measurements, where it was possible to collect such data. Please note that three of the numbers listed (46, 64 and 68) are old recoveries that were reported to the State Division of Fish and Game from Kauai during 1973. Also enclosed are data sheets relating to my observations and casual studies of the Hawaiian monk seal. Included are U. S. Fish and Wildlife tag numbers as well as date, location and estimated stage of maturity. Collection periods cover the October, 1973 and June through August expeditions. Considerable seal data from my June and July 1973 expedition have already been entered into the Bureau's files. I will find it both interesting and useful to have the date of tagging, location and stage of maturity information of the animals I have listed. For your convenience two copies of both turtle and seal data are being sent; one can be completed and returned to me at your earliest convenience.

Also I would like to take advantage of your kind offer of last year to obtain copies of aerial color slides taken of East Island during the early 60s. As I recall, you are in possession of three or four of these transparencies which quite nicely portray the geography of the island at that time. A comparison with slides taken recently will be valuable in ascertaining to what extent, if any, erosion is taking place. I will be most happy to reimburse you for all costs involved.

Many thanks for your continuing interest, cooperation and assistance with this project.

Sincerely,

George H. Balazs

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Enclosures

cc: Palmer Sekora