



U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southwest Fisheries Center Honolulu Laboratory
2570 Dole St. • Honolulu, Hawaii 96822-2396

April 30, 1990 F/SWC2:GHB

Dr. and Mrs. Earl Bakken
Medtronic, Inc.
7000 Central Avenue, NE
Minneapolis, MN 55432

Dear Dr. and Mrs. Bakken:

I am writing to provide you with an overview of the research results of our recent trip to Kiholo Bay. Once again, we experienced a highly successful field expedition to study and tag sea turtles, and to provide an unique educational experience for students of the Hawaii Preparatory Academy (HPA).

During our 3-day period at Kiholo Bay we were able to capture 58 green turtles (*Chelonia mydas*) and one small (2 kg) hawksbill (*Eretmochelys imbricata*). The hawksbill was a different individual from the one previous captured and tagged in October 1989, and again in January of this year. We did, however, confirm by direct sighting that the previously tagged hawksbill continues to reside at Kiholo Bay.

Of the 58 green turtles captured, 37 of them (63.7%) had already been captured and tagged during our prior study visits to Kiholo Bay. Based on these data, using the Petersen formula to determine population size, there are at present an estimated 188 green turtles living in the Kiholo area. Thus far, no sexually mature turtles have been seen or captured; only immature turtles (<82 cm in shell length) have been encountered. The reason for this may simply be that an insufficient length of time has passed in order for immature turtles to grow to adults following heavy hunting mortality pressures of the 1960's and 1970's.

Two of the green turtles we recaptured during our recent trip are remarkable by virtue of not having been seen since originally tagged in 1980 and 1984, respectively. These two turtles were among a small number that I was able to tag at Kiholo working alone prior to integrating HPA students into this research. The growth rates for the two turtles again demonstrate the protracted time required for green turtles in Hawaii to reach sexual maturity. One turtle grew from 45 cm to 62 cm over a 9.5 year period, while the other turtle grew from 51 cm to 58 cm over 5.7 years.

As you may know, two students from HPA attended a "model student legislature" held here in Honolulu at the State Capitol during late March. On their own initiative, the two students introduced and obtained "legislative" approval for designating Kiholo Bay as a sanctuary for sea turtles and other marine life. Although this action by students carries no formal legal status, it is my understanding that elected members of the legislature from Kona are now paying serious attention to the idea of such a sanctuary.

In closing, I would like to ask if you are in possession of any aerial color photographs (negatives or transparencies) taken of the Kiholo Bay region. If so, I would greatly appreciate receiving copies of several different views for use in our research and educational efforts.

Thank you again for your continuing support and assistance.

Sincerely,

George. H. Balazs
Zoologist