

BALAZS, G.

-1977-

HIMB OUTGOING
CORRESPONDENCE

December 28, 1977

Bird Banding Laboratory
Office of Migratory Bird Management
Laurel, Maryland 20811

Dear Sir:

At your earliest convenience, I would appreciate receiving a copy of your laboratory's publication "Birds and Aircraft on Midway Island, 1959-1963 Investigations" by Dr. C. S. Robbins. This is listed as U.S. Fish and Wildlife Service, Special Scientific Report No. 85 (1966) consisting of 63 pages. Please send this publication by first class mail and I will reimburse you for any additional costs involved.

Thank you for your assistance in this matter.

Sincerely,

GEORGE H. BALAZS
Assistant Marine Biologist

GHB:ec

December 27, 1977

Captain D. H. Fischer
Commanding Officer
U. S. Naval Station
Midway Islands
FPO San Francisco 96614

Dear Captain Fischer:

The purpose of this letter is to request your assistance in facilitating further studies of green turtles which I plan to conduct at Kure and Midway. I am presently scheduled to travel to Kure aboard the Coast Guard C-130 on January 10, 1978 for two weeks of work involving diving surveys. During this period, I would like to visit Midway for three or four days in order to capture and tag turtles with members of Koral Kings Diving Club. In order to do this, I will need a continuation of approval to travel on your station's helicopters. A copy of my earlier authorization has been enclosed for reference purposes. It should be noted that to date I have only used this authorization on one occasion.

On February 15 I am scheduled to board the NOAA research vessel TOWNSEND CROMWELL at Midway to conduct green turtle studies throughout the Northwestern Hawaiian chain. In order to meet the vessel, I will need orders issued from your command to travel via MAC from Honolulu to Midway, preferably on the flight of February 14.

Thank you for your consideration and assistance in these matters. If there are any questions, please telephone me at 247-6631.

Best regards for the Holidays.

Sincerely,

GEORGE H. BALAZS
Assistant Marine Biologist

GBB:ec
Enclosure

December 27, 1977

MEMORANDUM

TO: Personnel and Cooperating Researchers
Aboard the NOAA Vessel TOWNSEND CROMWELL

FROM: George H. Balazs
Assistant Marine Biologist

SUBJECT: Recovery of Sea Turtle Parts from the Stomachs of Carnivorous Fishes.

Virtually nothing is known about the natural history of sea turtles from the time they leave their natal beaches as hatchlings until they first appear as juveniles (approx. 10 lbs or larger) in nearshore feeding areas. This scarcity of information is due mostly to the fact that turtles under 10 lbs. are seldom ever seen, thereby making them unavailable for scientific study. It has been reasonably assumed that smaller size turtles live for a time in the open ocean, or on banks distant from land, where they feed at the surface on small invertebrates.

One method which I believe has considerable potential for gaining biological and ecological information on this little-known size category involves the indirect sampling of the turtles from the stomachs of carnivorous fishes. Certain bony fishes and sharks could be expected to periodically prey on small turtles in the open ocean. The recovery of turtle parts from the stomachs of such predators is therefore possible, provided that individuals conducting the examinations are alerted to the immense importance of such findings and are able to recognize the derived parts. The purpose of this memorandum is to provide information on these two points, and to request assistance in the recovery of such turtle parts.

In the Hawaiian chain, the green turtle (*Chelonia mydas*) is by far the most common species of sea turtle. The major breeding site for this native reptile is French Frigate Shoals, where from July through October of each year an estimated 25 to 50 thousand hatchlings emerge from nests and enter the ocean. Vigorous swimming and ocean currents disperse these young animals over a wide area of the Hawaiian chain, but greater concentrations probably occur in the ocean areas between French Frigate Shoals and Kure Atoll. Chances for the recovery of parts from the stomachs of predators in this northwestern segment of the Hawaiian chain are therefore undoubtedly greater.

The recognition and recovery of turtle parts should be enhanced by the following appended material:

- 1) Photograph of a live hatchling green turtle (weight-one ounce, upper shell length-two inches);
- 2) Plastic bag containing a dried and intact hatchling green turtle;
- 3) Plastic bag containing the dried fragments of a hatchling green turtle, representative of how partially digested pieces may appear in the stomachs of predators;
- 4) Plastic bag containing the dried fragments of a juvenile green turtle, representative of how partially digested pieces may appear in the stomachs of predators.

When parts are recovered, it will be important to record the species and size of the predator, and the location of capture. The entire stomach and intestinal contents of the predator should be preserved in formalin for my subsequent examination.

Any assistance that can be provided in this work will be greatly appreciated. If there are any questions, please feel free to telephone me at 247-6631.

GHB:ec

December 22, 1977

Ms. Kay Ahearn
Public Relations
Kahala Hilton Hotel
5000 Kahala Avenue
Honolulu, Hawaii 96816

Dear Ms. Ahearn:

Thank you for your letter of 12 November 1977 relating to our telephone conversation of 9 November, as well as to my earlier letter to Mr. William Weinberg dated 14 September.

As I briefly outlined over the telephone, my specific interest at this time in the Kahala Hilton's captive green turtles would be to record body measures and permanently identify each animal. The objective of these activities would be to gather information on rates of growth and longevity under captive conditions. Individual identification would be achieved by affixing a small corrosion-resistant tag to the trailing edge of the front flippers. The entire procedure, including recording measurements, would probably not take over two hours. Thereafter it would be desirable to remeasure the animals at approximately six month intervals. It would also be beneficial if I could look over any records which exist for the animals on the lengths of time in captivity, locations of original capture, or other significant information.

It would be of value to my research program, and I would be most appreciative to the Kahala Hilton, if the tagging and measuring I have described would be permitted. However, the conduction of these activities would not be representative of an endorsement or approval of the Hotel's display facility by either myself or the University of Hawaii. I am sure you can understand the need for such a condition.

Thank you in advance for your continuing consideration of this matter.

Best regards for the Holidays.

Sincerely,

GEORGE H. BALAZS
Assistant Marine Biologist

GHB:ec

December 19, 1977

The Honorable Daniel K. Inouye
United States Senate
Room 442, Russell Senate Building
Washington, D. C. 20510

Dear Senator Inouye:

Thank you for your letter of 7 December which replies to my correspondence of 30 November about pending federal rulemaking for sea turtles.

As you have indicated, the State of Hawaii will still have jurisdiction to enact greater regulatory measures, for conservation or management reasons, should the green turtle be designated a threatened species under Public Law 93-205. However, the concern which I previously expressed over jurisdiction relates to the fact that Hawaii will apparently not have the option to enact *less* stringent regulatory measures, should there be justifiable reasons for doing so at some time in the future. This would seem to me to be an important point in view of the State's commitment to a research program.

I appreciate having the opportunity to clarify this point.

Sincerely,

GEORGE H. BALAZS
Assistant Marine Biologist

GHB:ec

December 19, 1977

Dr. Ancel Johnson
National Fish and Wildlife Laboratory
Anchorage Field Station
4454 Business Park Blvd.
Anchorage, Alaska 99503

Dear Ancel:

Many thanks for your letter of 8 December. I look forward to receiving copies of the final reports you mentioned. Please understand that I do have considerable interest in the findings of monk seal research, and that my earlier letter was not referring specifically to turtle observations which your workers may make from time to time.

I would like to extend to you a personal invitation to visit our laboratory and meet with me during your next trip to Hawaii. There are several matters of common interest that I believe it would be worthwhile to discuss.

Best regards for the Holidays.

Sincerely,

George H. Balazs
Assistant Marine Biologist

GHB:md

December 19, 1977

Dr. Kenneth P. Emory
Bernice P. Bishop Museum
P. O. Box 6037
Honolulu, Hawaii 96818

Dear Dr. Emory:

I want to take this opportunity to thank you and your associates in the Archaeology Department for inviting me back to the Museum to give a second presentation on my study visits to Necker Island. Your personal encouragement after my first presentation on September 19th prompted me to gather further photographic material during my November visit to Necker. As a result, I now appear to have a reasonably comprehensive record of the status of the island's archaeological remains. In concordance with your earlier suggestion, within the next few months I will be preparing a concise report on my findings. I will of course send you a copy for evaluation and comments.

It seems to me that Necker and the mysteries surrounding its former inhabitants are of considerable interest to most people once they become aware of the island's existence and known history. Given this premise, I wonder if it would be worthwhile to explore the possibilities of preparing and publishing a booklet on the island which is designed to appeal to the general public. Such a booklet could be fully illustrated with both past and present photographs and, in essence, briefly tell the story of Necker from an ecological and archaeological standpoint. What I have in mind is perhaps something patterned after my color booklet, Hawaii's Seabirds, Turtles and Seals, but with more text. If you believe that such a publication may have merit, let us meet at some time in the near future to discuss the subject in detail.

You may be interested to learn that I am tentatively scheduled to give a lecture presentation on Necker to the general public on February 10th at the Waikiki Aquarium. It is my understanding that the time and other details will appear in the daily newspapers several weeks in advance.

Best regards for the Holiday season.

Sincerely,

George H. Balazs
Asst. Marine Biologist

GHB:md
cc: Dr. Radovsky

December 19, 1977

Mr. Eugene Kridler
Endangered Species Coordinator
Fish and Wildlife Service
P. O. Box 50167
Honolulu, Hawaii 96850

Dear Gene:

Thank you for your letter of 21 November which affords me the opportunity to comment on data accounts for three species of sea turtles which are being prepared by the Fish and Wildlife Service. In response to a request received in December 1976 from W. S. Lippincott of the FWS Gainesville Station, I have already been able to provide some information for this project.

As originally described to me, these accounts were to deal specifically with sea turtles of the United States. However, in reading through the three draft compilations which you forwarded, it would appear that the concept has been somewhat expanded. In certain respects, the accounts are now similar to the IUCN Red Data Book sheets, which are presently in the process of being revised. Condensing multifaceted and extensive biological information into a meaningful form is a difficult task, and it is commendable that FWS workers have undertaken such a project.

Without getting too lengthy or detailed in my comments, the one general constructive suggestion that I would offer is that additional information be included for representatives of the three species for the State of Hawaii. For the green turtle, no mention is made of the protection afforded by the State of Hawaii, or the fact that feeding aggregations of adults, subadults and juveniles occur around the major islands of the Hawaiian chain. For the hawksbill, no mention is made of the small population which feeds and nests in the major islands of the Hawaiian chain, and the protection afforded by the State of Hawaii. For the leatherback, no mention is made of the itinerant subadults which regularly occur in Hawaiian waters, and the protection afforded by the State of Hawaii. Also noticeably absent is the presence of Hawaii on the range maps given for each species. I suspect that somewhere along

Mr. Eugene Kridler
December 19, 1977
Page 2

the line these important points were simply overlooked. Hopefully the proper additions can now be made.

Best regards for the Holiday season.

Sincerely,

George H. Balazs
Assistant Marine Biologist

GBB:md

cc: W. S. Lippincott
(w/copy State Reg. 36)

December 19, 1977

Ms. Rebecca Bell
Little Cumberland Island
Box 3127
Jekyll Island, Georgia 31520

Dear Ms. Bell:

Thank you very much for the prepublication copy of your interesting and informative paper on loggerhead tag recoveries. I greatly appreciate not having to wait a year or more for the proceedings to be published.

In reading through your paper, I had several questions which hopefully you will be kind enough to answer for me.

1. You indicated that 41 of the 44 recoveries could be assigned to three categories. What were the circumstances of the other three recoveries (44-41 = 3)?
2. What were the circumstances of the "bizarre recovery from Tampa Bay, Florida" mentioned on page seven?
3. How many recoveries have been made on Little Cumberland Island which involved the remesting of females tagged during previous seasons? What is your percent recovery rate involving just this important segment?

In answer to the question raised in your letter, I am sorry to report that we do not have loggerheads in the Hawaiian chain. I am only aware of one documented report of a loggerhead, and this was made during the 1930/s involving an extremely emaciated individual picked up several miles offshore by a fishing boat. However, you may be interested to learn that loggerheads occur in some of the Fiji Islands. During a trip to the area last February, I saw them being sold in one of the outdoor markets in Lautoka.

Sincerely,

GEORGE H. BALAZS
Assistant Marine Biologist

GHB:ec

December 15, 1977

Mr. R. Stone
Chief Fisheries Officer
Ministry of Agriculture, Forests and Fisheries
Lami, Suva, Fiji

Dear Rob:

Enclosed is a translation of a short 1974 Japanese article which I recently received. I thought that you might find it interesting in view of the fact that Fiji is included.

Best regards for the holiday season to you and your family.

Sincerely,

George H. Balazs
Assistant Marine Biologist

mk
Enclosure

December 15, 1977

Mr. Robert A. Childers
3040 Alder Circle
Anchorage, Alaska 99504

Dear Mr. Childers:

Thank you for your informative letter of 6 December, and the translation copy of the 1974 Japanese article.

The observations of your sailor acquaintance are indeed interesting, however, I'm afraid that I cannot provide any additional information on the subject. My only thought is that this sounds like a ridley aggregation, but I have not heard of mass nestings in the Uvea area.

Best regards for the holiday season.

Sincerely,

George H. Balazs
Assistant Marine Biologist

mk

December 15, 1977

Ms. Sylvia Spring
Wildlife Ecologist
Department of Natural Resources
Wildlife Branch
P. O. Box 2585
Konedobu, Papua New Guinea

Dear Ms. Spring:

It is my understanding that you are presently involved in ecological studies of sea turtles in Papua New Guinea. As a researcher of turtles in the Hawaiian chain, I would be pleased to periodically correspond with you on matters of common interest.

By copy of this letter, I am requesting Dr. Nicholas Mrosovsky, Co-chairman of the IUCN Marine Turtle Specialist Group, to place your name on the mailing list for the IUCN Marine Turtle Newsletter.

Sincerely,

George H. Balazs
Assistant Marine Biologist

mk
cc: N. Mrosovsky

MEMORANDUM

December 15, 1977

To: Ia Ora te Natura
 B. P. 2542
 Papeete, Tahiti
 French Polynesia

From: George H. Balazs
 Assistant Marine Biologist

It has recently been brought to my attention that your organization is vigorously working for the rational conservation of Tahiti's natural resources. As a researcher of Hawaiian sea turtles and a member of the IUCN Marine Turtle Specialist Group, I would be greatly interested in learning of your involvement in the conservation of Tahitian sea turtles.

Enclosed are three publications which you may find interesting. If there is anything I can be of assistance to your organization, please feel free to contact me.

mk

December 15, 1977

Dr. Thomas E. Lovejoy
World Wildlife Fund
1319 18th Street, N. W.
Washington, D. C. 20036

Dear Dr. Lovajoy:

I wonder if you have found out any information concerning my inquiry of 28 October 1977 (copy attached)?

Your assistance in this matter would be greatly appreciated.

Sincerely,

GEORGE H. BALAZS
Assistant Marine Biologist

GHB:ec

Enclosure

December 15, 1977

Dr. Ralph W. Schreiber
Natural History Museum
900 Exposition Blvd.
Los Angeles, California 90007

Dear Dr. Schreiber:

Thank you very much for the reprint of your most informative article on the diets of seabirds at Christmas Island. I was particularly interested in the prey of Fregata, as these birds have been reported to feed on hatchling sea turtles at certain locations. I have not found this to be the case at French Frigate Shoals where I have been conducting research on nesting Hawaiian green turtles (Chelonia) since 1973. During the course of your field studies, I wonder if you have identified hatchling turtles in the diets of Pacific island Fregata or any other seabirds. I would be interested in such findings, and would greatly appreciate any assistance that you can provide on this subject.

Sincerely,

GEORGE H. BALAZS
Assistant Marine Biologist

GHB:ec

December 13, 1977

Mr. David L. Arnold
Assistant Illustrations Editor
National Geographic Magazine
Washington, D. C. 20036

Dear Mr. Arnold:

Thank you very much for having your secretary return the transparencies which I sent to you for consideration. They arrived in good condition during late August.

In case it has not been brought to your attention, you may be interested to learn that Dr. G. Causey Whitton and I were awarded a small National Geographic grant in June 1977 to place some research emphasis on the thermal ecology of basking green turtles in the Leeward Hawaiian Islands. It is my understanding that these turtles in general will receive coverage in the story scheduled to appear in March, 1978.

Sincerely,

George H. Balazs
Assistant Marine Biologist
and
Member IUCN Marine Turtle
Specialist Group

mk

December 13, 1977.

Dr. Archie Carr
University of Florida
Department of Zoology
233 Bartram Hall
Gainesville, Florida 32611

Dear Archie:

Thank you for the prepublication copy of your extensive paper on green turtles. This is very much appreciated, and I wish that more workers would share their information at an early date.

I have enclosed copies of two reports which you may find interesting. The information will eventually be prepared for publication, however, for the foreseeable future I will be spending more time in field than in my office.

Sincerely,

George H. Balazs
Assistant Marine Biologist

mk

December 13, 1977

Dr. Stephen E. Cornelius
Department of Wildlife and Fisheries Sciences
Texas A & M University
College Station, Texas 77843

Dear Dr. Cornelius:

If copies are still available, I would greatly appreciate a reprint of your article entitled "Marine Turtle Nesting Activity at Playa Naranjo, Costa Rica" (Brenesia, 8, 1:1-27).

Sincerely,

George H. Balazs
Assistant Marine Biologist

mk

December 13, 1977

Dr. Peter C. H. Pritchard
Florida Audubon Society
P. O. Drawer 7
Maitland, Florida 32751

Dear Peter:

Thank you for your note of 23 November. I look forward to receiving your Chalonia publication, which I assume should be automatic as I am a subscriber to Chalonia.

The findings of your trip to Oaxaca are indeed depressing. However, in view of Herbert Eder's 1969 dismal predictions for the area at a time when they were "only" killing 50-75 per day, it is astonishing that they are presently able to find 700 turtles a day. It seems highly unlikely that this level of exploitation can continue without a major crash.

I recently noted with interest that there are some photos and captions depicting the Oaxaco operations in the August 1976 issue of MAR Y PESCA. They indicated that 1,000 turtles (ridleys and hawksbills) a day were being processed during the 45 day period of greatest capture.

Sincerely,

George H. Balazs
Assistant Marine Biologist

mk

December 13, 1977

Dr. Gerald D. Schmidt
Professor of Zoology-Parasitology
The University of Northern Colorado
Department of Biological Sciences
Greeley, Colorado 80639

Dear Dr. Schmidt:

Hawaiian monk seals are in the news again. During a recent field trip to French Frigate Shoals, Dr. Causey Whittow (UN Physiology Dept.) and I observed a juvenile seal that hauled out on the beach one evening, but was found dead the next morning. There were no external signs that suggested a cause of death. In order to determine what the animal had been eating, we conducted a brief dissection which resulted in finding the stomach devoid of food. However, moderate numbers of nematodes were present, presumably Contracaecum turgidum which I sent to you for examination in November, 1974. The worms were attached to the stomach wall in several aggregations, and the attachment sites were deeply ulcerated. A close-up color transparency has been enclosed for your information and files. On the outside of the stomach we noted several reddish discolored areas which seemed to suggest chronic blood loss from perforations. Dr. Whittow speculated that this may have been the cause of death, while at the same time noting that this was a very young animal for such an affliction. The seal, a male, measured 57 inches in total length and probably was not over two years old.

I have a preserved sample of the stomach tissue with an attached aggregation of the worms. I would be pleased to send you this material for inspection if it would be of interest.

Best regards for the Holiday Season.

Sincerely,

George H. Balazs
Assistant Marine Biologist

mk

cc: G. Causey Whittow

December 13, 1977

Dr. F. Wayne King
New York Zoological Society
185th Street and Southern Blvd
Bronx, New York 10460

Dear Wayne:

Many thanks for your recent telephone call, and for thinking of me in relation to the job opening in Washington, D. C.

If a turtle group meeting is indeed held before June of 1978, as suggested as a possibility by Nicholas, this would seem to be the appropriate time for multiple input and updating of the Red Data Book pages that you previously sent to me. This is really what is needed, and presumably some sort of agreement could be reached for each species. If a meeting is not held, I suggest that the pages be distributed to each member for input. If it comes to this, I will start the ball rolling.

I still don't know who the other members of the Turtle Group are. As of last month, I don't believe that Nicholas has this information either.

Sincerely,

George H. Balazs
Assistant Marine Biologist

mk

December 12, 1977

To: Brent Giezentanner, Refuge Manager
From: George H. Balass, Assistant Marine Biologist
Subject: USFWS BOAT AND MOTOR AT FRENCH FRIGATE SHOALS

As you are probably aware, the Fish and Wildlife boat and outboard motor at French Frigate Shoals have served me safely and successfully during the course of periodic study visits conducted since June of 1973. This equipment continues to be entirely adequate for my purposes, provided that certain maintenance procedures are regularly carried out. As the principal user of this equipment, I am of course the one most familiar with these requirements. In order to make you fully aware of this information, I thought it would be desirable to set it forth in writing at this time.

1. Prior to launching the boat, spark plugs should be checked externally for excessive corrosion, and internally for carbon/oil buildup. If replacement is called for, use Champion number L4J. Also, a silicon lubricant (i.e. WD-40) should be used on all electrical connections in the motor, under the dash panel, and in the throttle, shifter and steering mechanisms (including shifting linkage in motor). Corrosion on battery terminals and contacts should be removed with sand paper. The specific gravity of the batteries (one in use, one spare) should be checked and, if needed, the USCG charger should be used on the low amp output for six hours or more.
2. When the engine is not running, the battery cables must be disconnected to prevent a slow discharge from occurring. This takes place apparently due to a small short somewhere in the motor's wiring. The battery cables are held on with two nuts, therefore removal is an easy procedure. In order to prevent receiving a small shock while standing in the wet bottom of the boat, the positive cable (red) should be connected first, and disconnected last.
3. The steering linkage where the cable joins the motor should be regularly inspected. Be careful not to excessively tighten associated bolts as the pot metal housing (built into the motor) could break. It is a good idea to join this fitting with wire as a backup safety precaution.

Memo: Brent Giesentanner
Page Two
December 12, 1977

4. I recommend that the boat not be tied directly along side Tern Island (i.e. under the hoist) for anything more than a brief period. It is best to use the ground tackle and anchor the boat (using both anchors) in a suitable partially protected area, such as in front of the club or off the small cove on north side of the island. My reason for this suggestion is due to the fact that during the early spring of 1977 an eight inch hole was banded into the port stern portion of the boat as a result of tying up along side the island under the hoist.

5. After a study visit is completed, I recommend that several gallons of fresh water be used to wash down the boat, motor and gas cans. The fuel line should be disconnected and the motor started and run dry of gasoline. The battery cables should be left disconnected. Silicon lubricant should again be sprayed over susceptible parts as was carried out before launching. The large FWS tarp should then be placed over the boat and motor and tied securely to prevent flapping in the frequently strong, salty winds. Cement blocks should be placed under the axle of the trailer in case the tires (which now contain tubes) go flat.

It seems worthwhile to state, as I have on a number of previous occasions, that the reefs and weather at French Frigate Shoals can at times be very dangerous, even to a person well-experienced in boat handling. Caution should therefore always be exercised by anyone working in the area.

When the decision is reached at some point in the future to replace the existing equipment, I would be happy to give you the benefit of my experience as an aid to selecting new equipment.

mk
cc: Causey Whittow

November 30, 1977

The Honorable Daniel K. Inouye
United States Senate
Room 442, Russell Senate Building
Washington, D. C. 20510

Dear Senator Inouye:

Thank you for your letter of 26 September concerning my inquiry about the status of pending federal rulemaking relating to green, loggerhead and olive ridley sea turtles. Further information on this case was also provided in correspondence which I received from R. M. Parsons of the Fish and Wildlife Service (FWS) and R. W. Schoning of the National Marine Fisheries Service (NMFS). Copies of these letters are enclosed for reference purposes.

For more than three years now, FWS and NMFS in Washington have been involved in an interagency dispute over who should have jurisdiction over sea turtles. This lengthy disagreement, in my opinion, has been both unwarranted and counterproductive to rational conservation efforts aimed at slowing the decline of sea turtle populations. While inactivity prevailed at the federal level, in 1976 the State of Hawaii took decisive action by making funds available to conduct an in-depth management study of the Hawaiian green turtle population. I am the principal investigator of this project, which has recently entered into its second year of research. Given this fact, along with the history to date of federal involvement with sea turtles, it seems ironic that jurisdiction over Hawaii's green turtles may soon pass to FWS and/or NMFS. In view of the commitment by the State to further our understanding of this native species for the purposes of protection and perpetuation, I believe it is entirely appropriate at this time for the State to retain jurisdiction over its green turtles. Your support of this position is respectfully requested.

Sincerely,

George H. Balazs
Assistant Marine Biologist

mk
Enclosures

cc: Dr. J. Craven, Marine Affairs Coordinator
Mr. M. Takata, Director, Div. of Fish & Game

November 28, 1977

Dr. Charles Birkeland
General Editor, MICRONESICA
University of Guam
Marine Laboratory
P. O. Box EK
Agana, Guam 96910

Dear Dr. Birkeland:

Many thanks for your letter of 17 November
concerning the Witzell manuscript.

Please feel free to call upon me at any
time for assistance concerning the review of
manuscripts on Pacific marine turtles.

Sincerely,

George H. Balazs
Asst. Marine Biologist
and
Member, IUCN Marine
Turtle Specialist Group

GHB:md

November 28, 1977

Dr. Sheila Conant, Chairperson
Animal Species Advisory Commission
General Sciences Department
University of Hawaii

Dear Dr. Conant:

Pursuant to our discussion on 21 November concerning my interest in serving on the Animal Species Advisory Commission, I have enclosed pertinent biographical information for your consideration. Most of this material has been taken directly from my University promotion application which recently resulted in advancement to Assistant Marine Biologist (R3-42). You will note that a number of my publications involve aspects of aquaculture research.

I would greatly appreciate your personal appraisal of this matter before any steps are taken toward my possible nomination.

Sincerely,

George H. Balass
Asst. Marine Biologist

GHB:md

Encls.

November 28, 1977

Dr. Ancel M. Johnson
National Fish and Wildlife Laboratory
Anchorage Field Station
4454 Business Park Blvd.
Anchorage, Alaska 99503

Dear Dr. Johnson:

As you are probably aware, my principal research effort deals with the Hawaiian population of green turtles. I am particularly interested in the role of our Northwestern islands and adjacent waters in this animal's life history and ecology. The results of research on other species inhabiting these areas is of interest and potential value to my own work. I would therefore be most appreciative if you would send me copies of reports which may result from Hawaiian monk seal studies under your direction. At the present time I am particularly interested in the findings your workers have made at the Kure State Refuge.

Thank you in advance for your assistance in this matter. In order to keep you informed on aspects of my own research, I have enclosed a copy of a report covering a recent study visit to Necker Island.

Sincerely,

George H. Balazs
Asst. Marine Biologist

GHB:md

Encl.

bcc: MAC Office
Ron Walker, Division of Fish and Game

November 25, 1977

Director, Customer Relations
United Airlines
P. O. Box 66100
Chicago, Illinois 60666

Dear Sir or Madam:

I have recently been informed by a colleague that "turtle soup" was included with the meal served on United Airlines flight 121 of November 10th enroute from Philadelphia via Chicago to San Francisco. The impression received was that the soup was made from the green sea turtle, Chelonia mydas. I would be most appreciative if you would verify this point, and inform me of the scope and magnitude of using such soup throughout the United Airlines meal system.

I am making this inquiry as a member of the Marine Turtle Specialist Group of the International Union for Conservation of Nature and Natural Resources (IUCN). Thank you in advance for your assistance.

Sincerely,

George H. Balass
Assistant Marine Biologist

mk

cc: Dr. N. Mrosovsky

November 25, 1977

Dr. John Bardach
Resource Systems Institute
Burns Hall
East-West Center
Honolulu, Hawaii

Dear Dr. Bardach:

It is with considerable pleasure that I take this opportunity to inform you that the outcome of reconsiderations by the University administration has resulted in my promotion to Assistant Marine Biologist (E3-42) retroactive to last July.

Your support and encouragement of my various professional endeavors over the years played a significant role in making this accomplishment possible. I both acknowledge and greatly appreciate your assistance.

Best personal regards.

Sincerely,

George H. Balazs
Assistant Marine Biologist

mk

November 25, 1977

Dr. John Craven
Marine Affairs Coordinator
1136 Union Mall
Honolulu, Hawaii 96813

Dear Dr. Craven:

It is with considerable pleasure that I take this opportunity to inform you of two recent events that have occurred in conjunction with my research of Hawaiian sea turtles. First, I have been appointed to full membership in the Marine Turtle Specialist Group of the International Union for Conservation of Nature and Natural Resources (IUCN). Drs. Archie Carr and Nicholas Mrosovsky are the co-chairmen of this small advisory group of turtle researchers. Secondly, on November 17th the University Board of Regents voted final approval of my promotion to Assistant Marine Biologist (R3-4Z).

The State of Hawaii's support of my work, as directed through your office, has played a substantial role in making it possible for me to achieve such accomplishments. Your support is both appreciated and acknowledged.

Sincerely,

George H. Balazs
Assistant Marine Biologist

mk

November 25, 1977

Dr. G. Brent Dabrymple
U. S. Department of Interior
Geological Survey
Branch of Isotope Geology (MS 18)
345 Middlefield Road
Menlo Park, California 94025

Dear Dr. Dabrymple:

Many thanks for your most informative and interesting letter of November 7th. I had the opportunity to read it immediately upon my return from a second trip to Necker which involved three successful days and nights on the island. In addition to gaining a better understanding of the turtle situation, during this time period I was also able to photograph each remaining marae. On my last day a Northwest swell came up which resulted in huge surf breaking across Shark Bay into the basins of Siever's Peak and Bowl Hill. It was a spectacular sight, and interesting to note the salt mist reaching the summits.

Hopefully we will have occasion in the future to discuss in person the various aspects of Necker Island. However, during the interim, I would like to mention a few points which may be of importance.

For some time now I have been interested in this apparent 1955 volcanic eruption in the Necker area. It has always seemed to me that if a pilot, crew and passengers all actually saw smoke rising from ocean, there can be little doubt of authenticity. The stated position seems to be the problem, as you indicated. On the enclosed xeroxed chart (C&G.S. 4181) I have marked a 10 fathom spot approximately 20 miles Northeast of Necker. When the original map surveys were made this pinnacle was presumably absolutely verified, as it is not listed as "reported." However, in recent years both the vessels TOWNSEND CROMWELL (NOAA) and EASY RIDER have searched for but failed to find this spot. The captain of the EASY RIDER (Gary "Skip" Naftel) is absolutely convinced that it does not presently exist. Using Loran A and a depth finder, he has surveyed the area on several

Dr. G. Brent Dabrymple
Page Two
November 25, 1977

occasions. He is very familiar with the Necker Bank, having made in excess of 45 fishing and chartered research expeditions to the area over the past three years. Perhaps this was the site of volcanic activity. Would it therefore be worthwhile to collect a bottom sample for your evaluation?

In Dr. Emory's 1928 publication the opinion was expressed that the marae uprights are insecurely fastened. My observations indicate that most of the remaining uprights are very well fastened. Of course, this may very well be due to their more secure original positioning. That is, all of the ones that were insecurely fastened have now fallen down.

The question of fresh water for use by early Polynesian visitors or inhabitants is another perplexing problem. Palmer (1927) located two seeps which he estimated were producing about five gallons each per day. However, the water tasted strongly of acrid salts and was apparently unfit to sustain human life. During my most recent trip I found a seep on the south slope of the saddle between Annexation and Flagpole Hills. Although there was little rain during our total of five days at the Necker Bank, the seep was flowing considerably, producing perhaps as much as 20 gallons a day of crystal clear water. I also found the water to be very strong tasting, such as that produced by an alum. If this contamination results from bird dropping, the condition may not have existed during earlier years when bird populations were possibly exploited by natives for food or just naturally at far lower numbers. However, if the contamination is the sole result of minerals in the island, it is difficult to understand how it could have been utilized. Perhaps the dissolved material in the water is not as physiologically unacceptable as speculated. Or perhaps palatability could be improved by boiling, as Captain Naftal suggested to me during a discussion of the subject. Do you have any thoughts on the subject? To your knowledge, has a chemical analysis ever been conducted on this water to determine exactly what it contains?

In the event that you have not seen it, I have also enclosed a copy of the Carr and Coleman article dealing with seafloor spreading theory and the evolution of migrations by Ascension Island green turtles. I made reference to this work in my Biological Conservation publication which I previously sent to you. As my knowledge of Hawaiian green turtles is enhanced, perhaps a stage will be reached where we can formally collaborate on this aspect.

You may be interested to learn that Gene Kridler has not been involved directly with the Refuge since late 1973. The present Refuge Manager's name is Brent Giesentanner.

Sincerely,

George H. Balazs
Assistant Marine Biologist

mk
Enclosures
cc: Captain Naftal

November 23, 1977

Dr. Colin Nash
Oceanic Institute
Makapuu Point
Waimanalo, Hawaii 96795

Dear Colin:

Enclosed is the completed review of the Perdue-Makamura manuscript which was conducted almost solely by Dr. Ernest Ross of the University's Animal Sciences Department. As previously indicated, Dr. Ross and I have worked together closely on several prawn nutrition problems. However, this is presently not my area of research. Dr. Ross has continued to work in the field of domestic animal nutrition and is therefore better qualified to make an evaluation. It should nevertheless be noted that I concur with his comments.

If you have any questions, please feel free to call Dr. Ross at 948-8334.

Sincerely,

George H. Balazs
Asst. Marine Biologist

GHB:md

cc: Dr. Ross

November 8, 1977

Dr. David B. Marshall
Senior Staff Biologist
Endangered Species Program
U.S. Fish and Wildlife Service
1500 N.E. Irving Street
Portland, Oregon 97208

Dear Dr. Marshall:

In a recent issue of the Atoll Research Bulletin (No. 206, May 1977) dealing with the natural history of Necker Island, reference is made to a report which you authored on 5 July 1962 entitled Inspection Trip, Hawaiian Islands National Wildlife Refuge, June 6-26, 1962. Unfortunately, this report is not on file at the local offices of the Fish and Wildlife Service or State Division of Fish and Game. I would therefore be most appreciative if you would send me a xerox of your own personal copy when time permits.

Enclosed are two articles dealing with my research of green turtles in Hawaii which you may find interesting.

Sincerely,

GEORGE H. BALAZS
Jr. Marine Biologist

GHB:ec

Encls.

November 8, 1977

Mr. Gordon Chapman
Ralph M. Parsons Company
P. O. Box 29909
Honolulu, Hawaii 96820

Dear Mr. Chapman:

Enclosed are the seven color transparencies which you kindly loaned to me for duplication on October 31st. Your company's assistance in this matter is greatly appreciated.

During our discussions, you mentioned the possibility of some funds being available to specifically monitor or determine the status of the green turtle aggregation adjacent to the reef runway. I am interested in pursuing this matter further and will be calling you in several weeks after my present field study commitments are accomplished.

Sincerely,

GEORGE H. BALAZS
Jr. Marine Biologist

GHB:ec

Enclosures

November 4, 1977

Mr. Ed Ewan
Headquarters SAMTEC/FMS
Vandenberg Air Force Base
California 93437

Dear Ed:

As requested, I have enclosed four of my better color transparencies showing aspects of green sea turtle reproduction, such as it takes place at Canton Island. I am sure that these views can be used quite effectively in the DOD film production you described.

If I can assist the Air Force further in this matter, please do not hesitate to contact me.

Sincerely,

George H. Balazs
Jr. Marine Biologist

GHB:md

Encl.

November 8, 1977

Dr. Frank Radovsky
Acting Director
Bishop Museum
Box 6037
Honolulu, Hawaii 96818

Dear Frank?

After giving a talk on Necker Island to the Museum staff on September 19, Dr. Emory asked if I would duplicate some of my color transparencies for the Museum's records. I am therefore sending you 17 slides portraying views of the island, maraes and bomb damage. A brief description of each slide appears on the attached sheet.

Please consider this as a donation in that reimbursement for the duplicating costs will not be necessary.

Sincerely,

George H. Balazs
Jr. Marine Biologist

GHB:md

Encl.

November 2, 1977

Koral Kings Dive Club
Midway Islands

Dear Fellow Member:

Although I had hoped to get back to Midway by this time for more diving and work with turtles, events have unfortunately not worked out that way. Nevertheless, I do hope to make it out your way before the New Year. I will be taking delivery soon on a gasoline powered portable compressor. This will be very nice for diving work at Kure, French Frigate Shoals and other areas in the Leeward Hawaiian chain.

During August and September I had a very interesting trip on the vessel EASY RIDER out to Nihoa, Necker, Laysan and Gardner Pinnacles. I was lucky to be able to spend seven days on Necker studying the turtles. In the event that any of you would like greater details on this research, I have enclosed a news article from the Honolulu Star-Bulletin as well as a copy of my report on the trip. Pages 10 and 11 of the report discusses some of our work at Midway.

Best regards to everyone.

Sincerely,

George H. Balazs
Jr. Marine Biologist

mk
Enclosures

November 2, 1977

Dr. A. Le Toquin
C.R.B.P.O.
Museum d'Histoire Naturelle
55, rue Buffon
75005 Paris

Dear Dr. Le Toquin:

Thank you for your recent letter of inquiry concerning marine turtle research and publication. As requested, I have enclosed some of the articles which have thus far resulted from my program.

If I can be of further assistance to you as your project develops, please do not hesitate to contact me.

Sincerely,

George H. Balazs
Jr. Marine Biologist

mk
Enclosures

November 2, 1977

Superintendent
Airport Mail Facility
International Airport
San Francisco, California

Dear Sir:

This letter is in reference to your notice no. 524126 (attached) which was received in today's mail. My parcel to Mr. de Silva was originally mailed CARE OF Dr. Wayne King at the New York Zoological Society, N. Y. (10460). Mr. de Silva was to be visiting that organization during the course of a world tour. Apparent persons at that address were not aware of this fact, and remailed the parcel after indicating Mr. de Silva's East Malaysian address.

The postage cost to Malaysia is excessive in view of the fact that some items in the parcel can be removed. I therefore request that the parcel be returned to me for repackaging. Thank you for your assistance.

Sincerely,

George H. Balazs
Jr. Marine Biologist

mk

October 31, 1977

Dr. George Harry
National Marine Fisheries Service
Northwest Fisheries Center
Marine Mammal Division
Naval Support Activity, Bldg. 32
Seattle, Washington 98115

Dear Dr. Harry:

Enclosed is a copy of my recent report on a study visit at Necker Island. Please disseminate this to Bob DeLong, Cliff Fiscus and other appropriate members of your staff.

Sincerely,

George H. Balazs
Jr. Marine Biologist

GHB:md

Encl.

October 31, 1977

Dr. Robert L. Pyle
President
Hawaii Audubon Society
P. O. Box 22832
Honolulu, HI. 96822

Dear Bob:

It was certainly nice to meet you in person last Friday evening over dinner. It was a very pleasant get-together and Mr. Bryan is a gentleman and scholar for having invited us all.

You expressed some interest in my recent report covering turtle research activities at Necker Island, therefore I have enclosed a copy for your information. If you think it is appropriate, I would consider having the report published in 'ELEPIDO in its entirety. I believe, however, that it would be valuable to incorporate at least two photos, an aerial of Necker, and turtles basking on the rock ledge.

Hopefully I will be in town for the next meeting.

Sincerely,

George H. Balazs
Jr. Marine Biologist

GHB:md

Encl.

October 31, 1977

Dr. G. Brent Dalrymple
U. S. Department of the Interior
Geological Survey
345 Middlefield Road
Menlo Park, California 94025

Dear Dr. Dalrymple:

This past August I spent seven days and nights on Necker Island in conjunction with studies of Hawaiian green turtles. It will probably be of interest for you to learn that during this visit I "rediscovered" the presence of bombs, bomb fragments and machine gun bullets on the island, as well as the destruction which had occurred to the archeological sites. You will of course recall your own similar observations in 1968 which were communicated by letter to Mr. Bryan at the Bishop Museum (copy enclosed). Your letter was also "rediscovered" after I gave a lecture on my Necker trip to the staff of the Bishop Museum and made inquiries as to existing knowledge of the bombing.

For reference purposes, I have also enclosed a copy of my manuscript report entitled, Ecological Aspects of Green Turtles at Necker Island.

Based principally on my photographic records, I am now in the process of preparing a report specifically on the bombing and other disturbances which have taken place on the island since Dr. Emory collected archaeological data in 1923 and 1924. This report will probably be entitled, Status of the Archaeological Remains on Necker Island. Although certainly not my field of expertise, I am nevertheless undertaking this work due to considerable encouragement from Dr. Emory (who will be 80 on Nov. 23).

One of my reasons for writing to you at this time is to present certain observations which I have made, and ask for your assistance with interpretation. In Dr. Emory's 1928 publication on Necker, it was stated on page 53 that:

"No evidence of faulting was found on Necker, nor other signs of disturbance which would have resulted from any marked and sudden recent upheavals or sinkings in the neighborhood. Any violent shock to Necker

Dr. G. Brent Dalrymple
October 31, 1977
Page 2

subsequent to the erection of the rows of uprights on platforms would certainly have toppled over most of the uprights, which are very insecurely fixed, yet more than half are standing, and a third of the fallen ones were evidently (my emphasis) knocked down and moved by human agency."

I had a copy of Dr. Emory's publication with me while on Necker and, consequently, in evaluating the extent of bomb damage I initially thought that the entire northeast side of Flagpole Hill had been impacted. This interpretation was based on the lighter colored rock exposed on the cliff face and the large volume of rubble at the base of the cliff. Additionally, crawling up and down over this slide area I found shrapnel, though not as much as I thought should have been present. After returning to Honolulu I was able to find a photograph of Flagpole Hill which was taken in 1923. This was, of course, before any bombing would have been possible. The photo clearly showed that the same condition was previously present in the cliff face. Can we now say that Dr. Emory was in error about there being no evidence of faulting, and that this break in the continuity of the rock formation could have been caused by earth tremors? I have xeroxed several photos to show you the area in question. Hopefully you will be able to provide some insight on this matter.

I look forward to hearing from you when your time permits.

Sincerely,

George H. Balazs
Jr. Marine Biologist

GBB:md

Encls.

October 31, 1977

TO: Dr. Peter Dobson
Chancellor's Office

FROM: George H. Balazs
Jr. Marine Biologist

I was pleased to learn during our brief meeting on October 24th that both Chancellor Yamamura and President Matsuda have approved my application for promotion. As I understand the procedure, this will be retroactive to July.

I would greatly appreciate being informed as to when official notification of the promotion will occur. I realize this must first be presented to the Board of Regents, and hopefully this will take place at the November meeting.

GHB:ec

cc: W. Coops
HIMB Interim Director

University of Hawaii at Manoa

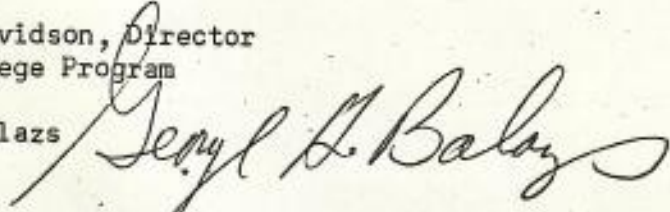
Hawaii Institute of Marine Biology

MEMORANDUM

October 28, 1977

TO: Dr. Jack R. Davidson, Director
Sea Grant College Program

FROM: George H. Balazs



At the In-house Review of Ongoing Projects on Tuesday October 25th there was some indication that you were not fully aware of the historical events relating to my Sea Grant proposal and project on green turtles in the Northwestern chain. This is certainly understandable in view of the fact that you have only recently returned to the Directorship. For clarification purposes, it would therefore seem beneficial for me to set forth in writing the background information present in my files. Please telephone me at your earliest convenience if you have any specific questions after reading through the following assembled material.

One of the principal motivating factors to my application for Sea Grant funds was encouragement by both Mr. Shomura and Mr. Takata to pursue such an avenue as a means of obtaining complementary support for my Legislative mandated MAC green turtle management study. The expressed purpose of the Sea Grant funding would be to place greater research emphasis on turtles in the Northwestern chain, as a component part of the resource survey and assessment being undertaken by the National Marine Fisheries Service, the Fish and Wildlife Service, and the State Division of Fish and Game. I subsequently submitted such a proposal on November 4, 1976 in concordance with instructions received from the Manoa Sea Grant Office. After undergoing review by the Sea Grant Advisory Panel, a meeting was called by Mr. Linsky on December 1st for those individuals whose projects were classified in the program area of Marine Resource Development. At this meeting, which consisted of approximately 10 aspirant principal investigators, I was informed that my proposed project had been listed as one of "high priority", being rated the second most important of those submitted in the program area. It was, however, indicated that some revision of the proposal, involving mostly clarification, should be carried out before December 24th. This was accomplished and the proposal was submitted to the Sea Grant Office on December 21st.

The next meeting took place on April 4, 1977 and involved both Dr. Craven's (as Program Area Leader) and Mr. Linsky's participation in developing strategy on how to best present the various projects to the forthcoming site team visit. On May 2nd another briefing was held for all of us who would be making presentations to the site team.

I presented my project to the site team on April 17th. Only a few questions were raised, and the members appeared entirely satisfied with my responses.

Dr. Jack R. Davidson
Page Two
October 28, 1977

On May 24th a briefing was held by Mr. Linsky and Dr. Craven in order to relate some of the verbal comments made by the site team before their departure. Along with others, it was indicated that funding for my project would be forthcoming. However, due to fiscal constraints, each investigator was asked to voluntarily reduce his budget to a "bare bones" status. After discussions with Dr. Craven, I deleted \$1551 designated as overload salary from my total budget of \$25,129 (47% of which was University overhead charges).

The next meeting to take place occurred on July 11th. This involved a workshop by Rose Pfund on grant requirements relating to fiscal and publications matters.

A final briefing with Mr. Linsky took place on July 12th, at which time I was informed that written comments received from the site team in Washington indicated that I should revise my proposal to provide greater detail of methodology and include more extensive literature references. At this time Mr. Linsky also informed me that only \$20,000 would be available for year one of my project. The proposal was rewritten as requested and submitted to Mr. Linsky several days after the meeting.

A memo authored by Mr. Linsky and dated August 18th stated that the revised proposal (program wide) had been accepted by Washington and that a temporary account of 10% of my budget had been established until the official release of all Sea Grant funds took place. Subsequently in a memo signed by you and dated October 7th, it was indicated that full funds had been received and were now available for expenditure.

In looking over my records, two points seem important to me at this time and therefore worthy of stating in conclusion. First, all material received from the Manoa Sea Grant Office since last summer has stressed the biennium nature of the proposals submitted and projects to be subsequently funded. Secondly, my Sea Grant Project appears to have exceptionally strong matching dollars support from the State, a criterion in the application instructions which was stressed to have considerable importance.

Hopefully the information which I have presented will be useful in your efforts to be brought up-to-date on the existing Sea Grant projects.

cc
Dr. Craven
Mr. Shomura
Mr. Takata

GHB:1b

October 27, 1977

Mr. Peter R. Wallbridge
c/o General Delivery
Rarotonga, Cook Islands

Dear Mr. Wallbridge:

Your recent letter to our University concerning the possibilities of obtaining sea turtle eggs in Hawaii for farming in Rarotonga was referred to me for reply. You will be interested to learn that some research has already been conducted in this field in the Cook Islands under a joint project with your Fisheries Department and the South Pacific Commission. Unfortunately, the results of these experiments were not very encouraging. The major problems encountered were disease and a scarcity of good, inexpensive food to feed the turtles. If you would like further information on this work, I suggest that you contact Mr. Tom Marsters of the Fisheries Department in Avarua. I am sure that Mr. Marsters would be glad to speak with you on this subject.

I should also tell you that it would not be possible in any event to get turtle eggs, either hawksbill or green, from Hawaii. All such eggs are legally protected and their taking and exporting banned.

Please feel free to contact me if I can be of any further assistance. Also, if you should have the opportunity to visit Hawaii, I would be pleased to speak with you in person here at our laboratory.

Sincerely,

George H. Balass
Jr. Marine Biologist

GHB:md

cc: Mr. Tom Marsters

October 27, 1977

Datuk Yap Pak Leong
Minister of Manpower and Environment
Secretariat
Kota Kinabalu
State of Sabah
East Malaysia

Dear Minister Yap Pak Leong:

Mr. deSilva and Mr. Jenkins of the Sabah National Parks have recently visited Hawaii in conjunction with a comprehensive study tour they are presently undertaking. I met with these gentlemen on several occasions and was informed of the establishment of Sabah's turtle islands and the surrounding seas into a new national park. This is certainly a commendable action and one that will undoubtedly serve as an example to other countries where marine turtle still exist.

If I can in any way be of assistance to your government, please feel free to contact me.

Sincerely,

George H. Balazs
Jr. Marine Biologist
Principal Investigator,
Hawaiian Marine Turtle
Management Study

GHB:md

October 27, 1977

Dr. Nicholas Mrosovsky
Department of Zoology
University of Toronto
Ramsay Wright Lab
25 Harbord Street
Toronto M5S 1A1 Canada

Dear Nicholas:

Your letter requesting that congratulations be sent to the Minister in Sabah came at a very opportune time. Stanley and I had just been discussing the new Turtle Islands Park over dinner the previous day, and he mentioned his request to you for assistance. I subsequently showed him your letter and he was very pleased that action had been taken on your part. Stanley and an associate in the Sabah Park's Service, Dai Jenkins, visited here in Honolulu between 14-18 October in conjunction with a study tour of zoos and parks. They went on to the Island of Hawaii to spend two days at the Volcanoes National Park which I had previously arranged with officials. From there they went to San Francisco, and right now should be at the San Diego Zoo. Eventually they will see Wayne in New York. I encouraged them to go through Toronto, but it would mean "back tracking" on their air ticket and that would mean additional money which they don't have.

We had some very nice discussions during their stay. I mentioned the possibility of a turtle meeting and we talked about how it could be made better than the Miami gathering. I promised him that I would write you of our agreed conclusions in the matter, which are listed as follows:

1. At least five days should be allotted for a meeting, ideally with a field trip or two breaking the sessions up. Three days is just too brief a period, particularly when one travels long distances to get to the meeting site.
2. It is very unfortunate that a turtle conservation brochure was not produced, as was agreed upon in the P and R's of the Miami meeting. Could some action be taken in this matter before the next meeting so that it can be listed as an accomplishment?

Dr. Nicholas Mrosovsky
October 27, 1977
Page 2

3. As Stanley said, "long-winded" people should not be allowed to dominate the meeting. Policies need to be set up on how discussions will take place. However, as an opening presentation, each person needs far more than ten minutes to tell what they have been doing (apparently ten minutes is about all each of us got in Miami for this sort of thing).
4. Appropriate press releases and other public relations should be carried out at the meeting site to promote conservation information to the general public. This sort of thing has good potential for being picked by international wire services (i.e. UPI, AP).

Although I did not agree, Stanley felt that John Hendrickson should be in the Turtle Group. He asked me to mention this to you in the letter. He wrote to Hendrickson several months ago in Tucson, Arizona and his letter was returned undelivered. If time permits, he will go to Tucson and try to look him up.

I asked Stanley where he thought would be a good meeting site and his response was one of the Arabian countries.

Just yesterday we had a Dr. Yousif Abu-Gideiri visit the lab from the University of Khartoum, Sudan. He informed me that Harold Hirth arrived in his country last month on a one year Hayes-Fulbright fellowship to study turtles and train personnel.

This business about periodic absences of funds for the Newsletter is fairly discouraging. May I ask how much it has been costing to put out each issue? Would it help to get money pried loose from WWF/IUCN if we wrote tactful letters expressing concern over the matter. Something needs to be done, and hopefully you can tell us the most effective course of action, if one exists.

Best regards,

George H. Balazs
Jr. Marine Biologist

GHB:md

October 27, 1977

National Aeronautics and Space Administration
Office of Audio-Visual Services
400 Maryland Ave., S. W.
Washington, D. C. 20546

Dear Sir:

I am returning the satellite photo negatives which you sent to me on loan several weeks ago. Unfortunately, the views are only of the major inhabited Hawaiian Islands. As I described in my earlier letter (copy attached), I am interested in satellite views of the Northwestern or "Leeward" Hawaiian Islands. Because they were used in a 1969 PACIFIC SCIENCE article, I know that at least Kure and Midway Atolls are in your files. Your assistance in locating this material would be greatly appreciated.

Sincerely,

George H. Balazs
Jr. Marine Biologist

GHB:md

Encls.

October 27, 1977

Dr. Wayne King
New York Zoological Society
Bronx Zoo
Bronx, New York 10460

Dear Wayne:

By this time you should have received the package which I addressed to Stanley care of you. Stanley and the Assistant to the Director of Parks, Dai Jenkins, visited here in Honolulu between 14-18 October during the course of a study tour which by now should have them at the San Diego Zoo. You may already be familiar with their trip, so it is sufficient to say that they will eventually be seeing you in New York.

During their stay they both expressed considerable concern about the absence of response from IUCN to their requests for action. Apparently Marcos was in Sabah recently and the two governments came to some tentative agreement about an international park encompassing both the Philippine and the Sabah turtle islands. However, IUCN's help is needed to serve as an outside, independent organizer. Stanley tells me that he has written of the urgency of the matter to Giew Wee-Lak, and Dai to a Mr. Grimwell. No response was received from either party. I thought it might be valuable to give you a rough outline of this situation so possibly the difficulties could be traced before they arrive in New York.

Many thanks for the recent literature. I put this material to good local use.

Sincerely,

George H. Balazs
Jr. Marine Biologist

GHB:md

October 25, 1977

Mr. Wil VanCampen
Executive Director
Western Pac. Reg. Fishery Mgm. Council
1164 Bishop Street, Room 1506
Honolulu, Hawaii 96813

Dear Mr. VanCampen:

I appreciate your attendance at my brief Sea Grant presentation this morning. With respect to your comment about trawl nets and sea turtles, I thought that you might be interested in the attached sheet which was received in today's mail. My associate in New York tells me that copies are now being distributed throughout the Southeastern seaboard. This could certainly be very beneficial to solving the problem.

Sincerely,

George H. Balazs
Jr. Marine Biologist

GHB:md

Encl.

October 25, 1977

CONFIDENTIAL

Dr. Charles Birkeland
General Editor, MICRONESICA
University of Guam
Marine Laboratory
P. O. Box EK
Agana, Guam 96910

Dear Dr. Birkeland:

I apologize for taking several weeks to respond to your request to review the W. N. Witzell manuscript. It arrived as I was preparing to leave for field studies and I have only now had the opportunity to carefully read it through. My comments, which are brief and mostly negative for its present form, are contained on the attached sheet. I would not mind spending time editing and improving a manuscript in which it is apparent that the author already devoted considerable time and thought in the preparation. I have done this on several occasions for the journal AQUACULTURE and once for HEPETOLOGICA. However, in the present case it is clear to me that the author only pieced together portions of old reports and set it off to you apparently hoping for publication. A complete rewrite is necessary in order to present the information in a meaningful, concise and scientifically sound fashion commensurate with accepted journal standards. I hope that the author will undertake such a rewrite.

Sincerely,

GEORGE H. BALAZS
Jr. Marine Biologist

GHB:ec

Enclosure

October 25, 1977

Mr. Michio Takata, Director
Division of Fish and Game
1151 Punchbowl Street
Honolulu, Hawaii 96813

Dear Mr. Takata:

Enclosed is a copy of my recently completed report on a study visit to Necker Island. I am sending this report out to various agencies and workers involved in research in our Leeward chain in an effort to disseminate preliminary findings at an early date. The periodic exchange of reports would seem to be a good way to keep up to date on each others activities and findings. It would therefore be greatly appreciated if copies of such written materials which result from your staff's work in the Leewards would be sent to me as they become available. I am, of course, particularly interested in any observations relating to turtles.

I would also like to request your assistance in another matter. During my literature research, I have come across three references to manuscript reports that were previously prepared by your Division. The authors and titles are listed on the attached sheet, and it would be very much appreciated if the reports could be located in your files and copies sent to me when time permits.

Sincerely,

GEORGE H. BALAZS
Jr. Marine Biologist

GHB:ec

Encls.

Kramer, R. J. and J. W. Beardsley. (MS). A report on a survey trip,
and an entomological report, to Hawaiian Islands National Wildlife
Refuge, June, 1962. Hawaii Dept. of Fish and Game, Honolulu.
iii and 17 p.

Kramer, R. J. (MS). Report on trip to Nihoa Island. December 1961.
Hawaii Dept. of Fish and Game, Honolulu. 20 pp.

Marshall, D. B. (MS). Report of July 5, 1962 on inspection trip,
Hawaiian Islands National Wildlife Refuge, June 6-26, 1962.
Hawaii Dept. of Fish and Game, Honolulu. 9 p.

October 25, 1977

Mr. Richard Shomura, Director
Honolulu Laboratory
National Marine Fisheries Service
P. O. Box 3830
Honolulu, Hawaii 96812

Dear Mr. Shomura:

Enclosed is a copy of my recently completed report on a study visit to Necker Island. I am sending this report out to various agencies and workers involved in research in our Leeward chain in an effort to disseminate preliminary findings at an early date. The periodic exchange of reports would seem to be a good way to keep up to date on each others activities and findings. It would therefore be greatly appreciated if copies of such written materials which result from your staff's work in the Leewards would be sent to me as they become available. I am, of course, particularly interested in any observations relating to turtles.

Sincerely,

GEORGE H. BALAZS
Jr. Marine Biologist

GHB:ec

Enclosure

October 24, 1977

Mr. Robert D. Barbee
Superintendent
National Park Service
Hawaii Volcanoes National Park
Hawaii 96718

Dear Mr. Barbee:

I would greatly appreciate receiving a copy of the Park's Master Plan and Resources Reports for inclusion in my reference library.

Thank you very much for the assistance that you and your staff gave to my friends and associates, Stanley deSilva and Dai Jenkins.

Sincerely,

GEORGE H. BALAZS
Jr. Marine Biologist

GHB:ec

October 19, 1977

Dr. John Craven
Marine Affairs Coordinator
1136 Union Mall
Honolulu, Hawaii 96813

Dear Dr. Craven:

During our meeting at Mr. Linsky's office on May 24th concerning my Sea Grant proposal, it was indicated that you would be able to persuade the MAC office to restore the one month of overload salary which I voluntarily deleted from my budget at your request. I mentioned the matter to Dr. Swerdloff during our meeting on October 18th, and he suggested that I bring this to your attention in writing. One month of overload salary, including, fringe benefits, amounts to \$1,550. Your consideration of adding this amount to my 1977-1978 RCUH award would be greatly appreciated.

Sincerely,

GEORGE H. BALAZS
Jr. Marine Biologist

GHB:ec

October 14, 1977

To: Gus Higuchi
Administrative Asst., RCUH

From: George H. Balazs
Principal Investigator, Project #5431

Subject: EMPLOYMENT OF MR. ALAN KAM.

The continued employment of Alan Kam is essential to my Green Turtle Management Study. His acquired abilities and knowledge have allowed my research to progress at a highly satisfactory rate. To recruit and train a new employee at this date would substantially retard my present work schedule. I therefore request your approval to continue Alan's employment indefinitely until further notice.

If necessary, I would be pleased to meet with you in person to further discuss this important matter.

mk

October 5, 1977

The Honorable Cecil D. Andrus
Secretary of the Interior
Department of the Interior
C Street, between 18th and 19th Streets
Washington, D. C. 20240

Dear Secretary Andrus:

You may recall the letter which you wrote to me on 14 January 1977 in response to my inquiry of 29 December 1976. Copies of these earlier letters are enclosed for reference purposes.

Although nine more months have now passed, to my knowledge no action has yet been taken by the Departments of Commerce and Interior in settling the pending proposals dealing with the green sea turtle. In your letter of 14 January it was indicated that this was one of the issues identified for careful consideration pending your confirmation as Secretary of the Interior. I would be most appreciative if you would inform me what findings have been made in this case.

Thank you for your assistance and attention to this matter.

Sincerely,

George H. Balazs
Jr. Marine Biologist

GHB:md

Encls.

September 30, 1977

Dr. Charles Birkeland
General Editor, Micronesica
University of Guam
P. O. Box EK
Agana, Guam 96910

Dear Dr. Birkeland:

Thank you for your letter of 20 September along with the manuscript by W. N. Witzell. I would be happy to review the article for your journal, however, my present schedule for field studies will prevent me from working on it until mid-October. I hope that this will be satisfactory.

Sincerely,

GEORGE H. BALAZS
Jr. Marine Biologist

CHB:ec

September 20, 1977

Mr. Ed Ewen
Headquarters SAMTEC/PMS
Vandenberg Air Force Base, CA 93437

Dear Ed:

As requested, within the near future I will be sending you an assortment of turtle nesting slides for use in the DOD environmental film. There will be no charge, however, I would appreciate photo credit where appropriate.

I am interested in the periodic overflights of the Phoenix group which you mentioned departs from Hickam. This would be a very quick and effective way to assess the status and activities of turtles in such a remote section of the Pacific. I would appreciate your help in getting me on one of these flights for such purposes.

You may be interested to learn that I have recently been appointed to the Marine Turtle Specialist Group of the International Union for Conservation of Nature (IUCN). This will increase considerably my involvement and effectiveness in international activities.

I look forward to hearing from you at your earliest convenience.

Sincerely,

GEORGE H. BALAZS
Jr. Marine Biologist

GHB:ec

September 20, 1977

Dr. Wayne King
New York Zoological Society
Bronx Zoo
Bronx, New York 10460

Dear Wayne:

Your last two letters concerning "tortoise shell" furniture and turtle investment opportunities in Thailand again points out that this whole culture business continues to be a formidable issue warranting our attention.

I have enclosed a copy of the publication referenced in the BANKOK POST BUSINESSWEEKLY. After reading through it, I am sure you will agree that it really presents nothing new. In fact, it looks as if they may be preparing to invent the wheel over again. Perhaps someone should contact official/researchers in Thailand and tactfully bring them up to date on recent events.

Sincerely,

GEORGE H. BALAZS
Jr. Marine Biologist

GHS:ec

cc: Dr. Carr
Dr. Mrosovsky

September 20, 1977

Mrs. Margaret Titcomb
3653 Tantalus Drive
Honolulu, Hawaii 96822

Dear Mrs. Titcomb:

Dr. Leighton Taylor of the Waikiki Aquarium has told me of your interest in writing a book on the use of marine organisms by early Hawaiians. I have accumulated some information on this subject relating to sea turtles. Please call me at 247-6631 when you have the opportunity and we can discuss this topic further.

Sincerely,

GEORGE H. BALAZS
Jr. Marine Biologist

GHB:ec

September 20, 1977

Dr. Nicholas Mrosovsky
University of Toronto
Ramsay Wright Zoological Laboratories
25 Harbord Street
Toronto M5S 1A1
Ontario, Canada

Dear Nicholas:

As you have seen from my acceptance letter to Sir Peter Scott, I was indeed officially asked by IUCN to serve on the turtle group. It is sufficient to say that I am quite pleased about this occurrence, and hope to be a more effective, constructive voice in world turtle conservation matters.

My reaction to your inquiry about the possibility of holding the next meeting in Hawaii is favorable, with cautious optimism. My reservations mainly concern the responsibilities that would undoubtedly rest with me in organizing much of the local ground work and serving as resident host. As a newly appointed member, I would, of course, want everything to turn out well. I am, however, willing to accept these responsibilities should Hawaii be the site chosen. The important questions to ask at this time are: 1) what is the anticipated month and year; 2) would you prefer a quiet country setting on one of the outer islands, or the big city atmosphere of Honolulu; and 3) how soon will a final decision be made. If the group is small (12 or less), I may be able to arrange some interesting side trips, after the conservation business is completed.

Wayne's recent memos have shaken me up again, just when I was beginning to relax due to the California veto. We certainly can't let the mariculture issue dominate our thoughts and activities, however, we obviously must continue to recognize it as a potentially damaging factor that will not go away soon. Incidentally, I assume you received my letter of 16 July 1977. Did you ever go to the IUCN meeting which you previously mentioned?

Sincerely,

GEORGE H. BALAZS
Jr. Marine Biologist

GHB:ec
Encl.

September 14, 1977

Mr. Mark Rauzson
Division of Cooperative Research
U. S. Fish and Wildlife Service
4454 Business Blvd.
Anchorage, Alaska 99503

Dear Mark:

Several months have now passed since your departure from French Frigate Shoals, and I am wondering if you have had the opportunity to compile the green turtle data which you and Karl consented to collect for me during the course of the seal study. I would greatly appreciate receiving this information.

Hopefully you received in good condition the silk screened sea turtle T-shirt which you requested during our March 31st meeting on Tern Island.

Sincerely,

GEORGE H. BALAZS
Jr. Marine Biologist

GHB:ec

September 14, 1977

Mr. William Weinberg
Owner
Kahala Hilton Hotel
5000 Kahala Avenue
Honolulu, HI 96816

Dear Mr. Weinberg:

The purpose of this letter is to introduce myself and, at the same time, ask for your personal assistance in establishing a working relationship between my research program and the staff of the Kahala Hilton Hotel. My name is George Balazs and I am the Principal Investigator of ecological studies of sea turtles in the Hawaiian Islands. Financial support for this management-oriented work is derived from a special appropriation of the State Legislature (administered through the Governor's Marine Affairs Coordinator) and a Federal grant from the National Oceanic and Atmospheric Administration. Additionally, in collaboration with Dr. Causey Whittow of the University's Physiology Department, a small grant has recently been received from the National Geographic Society to specifically investigate the thermal ecology of basking Hawaiian green sea turtles. In conjunction with these research activities, I also serve as a member of the Marine Turtle Specialist Group of the International Union for Conservation of Nature (IUCN) based in Switzerland.

There are presently only four organizations on Oahu which maintain sea turtles in captivity. Included are: 1) myself and Dr. Whittow as faculty members of the University of Hawaii; 2) the Waikiki Aquarium; 3) Sea Life Park, Inc.; and 4) the Kahala Hilton Hotel. Worthwhile advisory and cooperative research programs have already been established with Dr. Taylor at the Waikiki Aquarium and Dr. Shallenberger at Sea Life Park. I therefore believe it would be beneficial to both of us to discuss the Kahala Hilton's possible role with respect to maintaining captive sea turtles. At your convenience, I would very much like to meet with you in person, either at the Kahala Hilton or here at the Institute.

Mr. William Weinberg

-2-

September 14, 1977

I have enclosed three publications which you may find interesting.

Sincerely,

GEORGE H. BALAZS
Jr. Marine Biologist

GHB:ec

Enclosures

September 13, 1977

Dr. Mary Anne Pettibone
Curator
Division of Worms
U. S. National Museum
Smithsonian Institution
Washington, D. C. 20560

Dear Dr. Pettibone:

During a recent visit to Laysan Island in the Northwestern Hawaiian chain I collected worms from soil adjacent to the hypersaline lagoon. It seems to me that it is usual to find earth worms at such a location. Unfortunately, there does not appear to be anyone in Hawaii interested in these specimens. It would therefore be most appreciated if you or a member of your staff would examine this material for identification. The specimens do not need to be returned.

Sincerely,

George H. Balazs
Jr. Marine Biologist

GHB:md

September 13, 1977

Dr. R. W. Davies
Associate Professor
Department of Biology
The University of Calgary
2920 24 Ave., N.W.
Walgary, T2N 1N4
Canada

Dear Dr. Davies:

Thank you for your letter of August 18th concerning my earlier inquiry about leeches collected from a green sea turtle. The specimens in question are enclosed for your inspection, and, hopefully, identification. The full details of their collections are as follows. On July 6, 1977, an adult male *Chelonia mydas* (straight carapace length 89.5 cm) was captured by personnel of the Naval Undersea Center in Kaneohe Bay here on the Island of Oahu. The animal had become entangled in a buoy line, but showed no external signs of injury. Navy personnel subsequently delivered the turtle to me for inspection, measurements, tagging and release. At this time the leeches were found in association with the cloaca. They were not initially visible, but were discovered when a portion of the internal structure was made to protrude. The specimens were immediately preserved in dilute formalin and later transferred to alcohol.

If these particular leeches are confined to the cloacal area of sea turtles, it seems likely that sexual contact would be the sole means of transmission. A social disease of turtle?

I look forward to hearing from you on this case when your time permits.

Sincerely,

George H. Balass
Jr. Marine Biologist

GHB:md

Encl.

September 13, 1977

To: Dr. Maxwell Doty
From: George Balazs
Subject: Algae collected from Necker Bank and Maro Reef, Northwestern
Hawaiian Islands

During a recent trip to the Leewards I made algae collections at Necker Bank and Maro Reef in an effort to determine what food sources may be available to green turtles inhabiting such submerged areas. Your assistance in identifying the various species obtained (specimens enclosed) would once again be very much appreciated and acknowledged. The samples from Necker Bank were obtained at a depth of 24 fathoms, and those from Maro Reef at a depth of 18 fathoms.

I wonder if you or your staff have had the opportunity to look over the algae collection which I made earlier this year at Kure Atoll. As previously indicated, there is no great hurry in this matter as I realize you have a busy schedule.

GB:md

September 13, 1977

The Honorable Daniel K. Inouye
442 Russell Office Building
Washington, D. C. 20510

Dear Senator Inouye:

On 20 May 1975, a notice appeared in the FEDERAL REGISTER (Vol. 40, 21974) which proposed regulations listing three species of sea turtles as "Threatened" under the Endangered Species Act of 1973. On 16 June 1976, a notice appeared in the FEDERAL REGISTER (Vol. 41, 24378) proposing regulations treating the same three species of sea turtles as "Threatened" under the similarity of appearance clause of the Endangered Species Act of 1973. Both of these notices of proposed rulemaking were authored jointly by the Director of the Fish and Wildlife Service and the National Marine Fisheries Service. In view of the fact that 28 and 15 months, respectively, have now passed without final resolution, I would like to ask for your assistance in determining the status and problems of these cases.

Thank you in advance for whatever help you are able to provide in this matter.

Sincerely,

George H. Balazs
Jr. Marine Biologist
Principal Investigator
Hawaiian Green Turtle Management Study

GHB:md

September 13, 1977

Mr. W. Craig Van Note
Executive Vice President
MONITOR, INC.
1785 Massachusetts Ave., N.W.
Suite 506
Washington, D. C. 20036

Dear Mr. Van Note:

I am sorry to say that the lost MONITOR package once again contained a permit application approval relevant to Hawaii that was not brought to my attention at an early enough date to enable evaluation and comment. An earlier and more important case took place with respect to our Hawaiian monk seal several months ago (see enclosed copied letter).

I certainly understand the magnitude of keeping tabs on all permit applications that must appear. However, perhaps a special note could be put in your files so that all Hawaii-related matters would be sent to me as early as possible.

Sincerely,

George H. Balazs
Jr. Marine Biologist

GHB:md

Encl.

September 9, 1977

Sir Peter Scott, Chairman
Survival Service Commission
The New Grounds
Slimbridge
Gloucester GL2 7BT
ENGLAND

Dear Sir Peter:

Thank you for your letter of 6 August which I only had the opportunity to read this morning upon my return from field studies in the Northwestern Hawaiian Islands. It is with honor and pleasure that I accept your invitation to serve as a member of the IUCN Marine Turtle Specialist Group under Drs. Carr and Mrosovsky. I look forward to furthering the Commission's goals in whatever way that may be necessary and appropriate.

Sincerely,

GEORGE H. BALAZS
Jr. Marine Biologist

GHB:ec

cc: Dr. Carr
Dr. Mrosovsky

MEMORANDUM

August 10, 1977

To: Mr. Eric Onizuka
Aquatic Biologist
Division of Fish and Game

From: George H. Balazs

Some time ago my former employee, Randal Chau, contacted you to obtain information on Hawaiian green turtles taken under permit, as allowed by Regulation 36. A data summary for the period July 1974 to August 1975 was subsequently provided (copy enclosed for reference purposes). At your convenience, I would be most appreciative if you would provide me with an up-date of this information.

Thank you in advance for your assistance in this matter.

mk
Enclosure

August 9, 1977

Mr. G. S. deSilva
Office of the Park Warden
Turtle Islands National Park
P. O. Box 768
Sandakan, Sabah

Dear Stanley:

Thank you for your letter of 26 July inquiring further about visiting conservation or national park projects in Hawaii. I certainly hope that such a trip will be possible, and also that I will be in Honolulu at the time of your visit. Approximately 50% of my time is now spent doing field research in the remote Northwestern Hawaiian chain.

I would recommend a two to three day visit to the Hawaii Volcanoes National Park on the Island of Hawaii, which is about 200 miles from Honolulu. There are two scheduled airlines making several flights each day. Also, there ~~is~~ ^{are} excellent hotel accommodations in the Park at the Volcano House. A car could be rented in the city of Hilo right at the destination airport. Of course you must understand that wildlife is not all that abundant in the Hawaiian Islands. The Volcanoes National Park deals mostly with active volcanoes. It is a very large preserve area of great beauty and interest. I think you will find such a trip to be very rewarding.

Concerning costs, round trip air fare Honolulu-Hilo is approximately US\$65 per person. Car rental would be \$20-25 per day. Hotel about \$20 per person per night. There are many good restaurants on the island - it is all quite modern.

Keep me informed of your plans.

Sincerely,

GEORGE H. BALAZS
Jr. Marine Biologist

GHB:ec

August 9, 1977

Bird Banding Laboratory
Laurel
Maryland 20810

Dear Sir:

Band number 767-93035 was recovered from an albatross at Midway on June 2, 1977. The bird had been hit by a vehicle and subsequently died.

Sincerely,

GEORGE H. BALAZS
Jr. Marine Biologist

GHB:ec

August 9, 1977

MEMORANDUM

TO: Chew Wee-Lek
Program Officer for Asia and Oceania

FROM: George H. Balazs

SUBJECT: Screening Comments on Solomon Islands Turtle Status Survey
(Project Proposal 1452)

As requested in your memorandum of 26 July, I have reviewed the above proposal and arrived at the following conclusions.

1. I concur, in principle, with the contention that continued surveys are needed of marine turtles in the Solomon Islands.
2. However, I am concerned about the objectives and methods that have been set forth for this research. Although numerous statements are made in the proposal, there is, in fact, very little information given as to how the program would actually be carried out.
3. If the proposal or preferably a revised proposal is funded, IUCN/WWF should stipulate that the Principal Investigator be an experienced individual with previous and proven research in marine turtles. The individual should not be a new graduate or inexperienced volunteer. It would be highly desirable to employ in this position Mr. Andrew McKeown, as he already has three years of experience with turtles in the Solomon Islands; I have been exposed to Mr. McKeown's research results and have found them to be of high calibre.

GHB:ec

August 9, 1977

Dr. Ronald W. Davies
Department of Biology
University of Calgary
Calgary T2N 1N4
Alberta, CANADA

Dear Dr. Davies:

Some time ago you responded to my request for a reprint of your interesting article entitled, 'First Record from North America of the Piscicolid Leech, Ozobrachus margo, a Parasite of Marine Turtles.'

Recently I was able to collect two small leech-like parasites from the internal cloacal area of an adult male green turtle. To my knowledge, there is presently no one in Hawaii capable of identifying these specimens. I wonder if you or one of your colleagues would be interested in examining this material. Any assistance that you can provide in this matter would be greatly appreciated.

Sincerely,

GEORGE H. BALAZS
Jr. Marine Biologist

GHB:ec

August 9, 1977

National Aeronautics and Space Administration
Office of Audio-Visual Services
400 Maryland Ave., S. W.
Washington, D. C. 20546

Dear Sir:

I am interested in obtaining satellite view color transparencies of each island and shoal area of the Northwestern Hawaiian chain. This material would be used in my research of the migrations of Hawaiian green turtles (Chelonia mydas). I am aware of at least two such views in your files, involving the atolls of Kure and Midway. Black and white photographs of these areas made from color transparencies were published with an article entitled, Marine Geology of Kure and Midway Atolls, Hawaii: A Preliminary Report by M. Grant Cross et al. (Pacific Science, January 1969).

Your assistance in this request will be greatly appreciated.

Sincerely,

GEORGE H. BALAZS
Jr. Marine Biologist

GHB:ec

August 5, 1977

TO: Philip Halfrich
Associate Dean, Research Admin.

FROM: George H. Balazs
Jr. Marine Biologist, HMB

As discussed during our recent telephone conversation, I would like to inform you that Dr. Whittow (Physiology Dept.) and I have recently received a \$3,660 two-year grant from the National Geographic Society. Our topic of investigation is the thermal ecology of land basking green sea turtles. This work represents a valuable component addition to my ongoing Marine Affairs Coordinator project (RCUH 5431) dealing with management studies of Hawaiian green turtles.

Although your office will not be directly administering the National Geographic Society funds, we of course will give the University full recognition and acknowledgement in the resulting reports and publications.

GHB:ec

August 5, 1977

Ms. Nancy B. Bray
Department of Zoology
Biological Sciences Building
University of Rhode Island
Kingston, Rhode Island 02881

Dear Ms. Bray:

In response to your letter of 28 July, I am sending you information on the sizes of adult Chelonia at French Frigate Shoals, as well as a summary of my tag and recovery data for this breeding site. The fecundity of females is 104 ± 23.4 eggs per clutch ($N = 56$), which was determined for the 1974 season. Within season renesting data are presented in the attached pages.

I am sure you realize that Dr. Carr has been collecting data in Costa Rica for over 20 years now, while I just started in 1973 with a comparatively low level of emphasis. Also, unlike Dr. Carr's data, my data are mostly unpublished at this time. I therefore request that no further distribution or reproduction of the material be made without my specific approval.

Incidentally, the thesis abstract you mentioned was not enclosed with your letter.

Sincerely,

GEORGE H. BALAZS
Jr. Marine Biologist

GHB:ec

Encl.

August 4, 1977

CWO Dick Biers
Commanding Officer
USCG LORAN Station
Upolu Point
Box 2, Hawaii 96719

Dear Mr. Biers:

Tim Harris of the French Frigate Shoals LORAN Station has suggested that I contact you for possible assistance in obtaining information on sea turtles which frequent your coastline. Any assistance that you can provide to my work would certainly be most appreciated. I have enclosed some literature on turtles, as well as identification sheets and sighting report forms. Hopefully your men will have the opportunity to make observations during recreational diving, etc.

Within the next few months I plan to get over to the "Big Island" for some field work. I look forward to meeting you at that time.

Sincerely,

GEORGE H. BALAZS
Jr. Marine Biologist

GHB:ec

Encls.

August 1, 1977

Mr. Hideto Kono
Interim State Marine Affairs Coordinator
Office of the Governor
P. O. Box 2840
Honolulu, Hawaii 96803

Dear Mr. Kono:

Enclosed is a copy of my special report to the South Pacific Commission as requested by your office. It is important to point out that much of the information contained is confidential and sensitive in nature, as the report was prepared primarily for the South Pacific Commission's internal use. To date it has not been circulated outside of the agency, and I doubt very much if it ever will be. If you would like to permanently retain the enclosed copy for your personal files, you are certainly welcome to do so. However, perhaps further dissemination or reproduction should not take place at this time as it might be considered a breach of trust by the South Pacific Commission.

I have also enclosed the Project Activities Report for my MAC funded Green Sea Turtle Management Study. You are already familiar with a portion of the information and material contained, however, I thought it would be desirable to bring the relevant points together into one document for your convenience and thorough understanding.

Sincerely,

George H. Balazs
Jr. Marine Biologist

mk
Enclosures

July 29, 1977

Lic. Marta Acevede
Instituto Nacional de la Pesca
Centro de Investigaciones Pesqueros
Avenida Ira. y26
Miramar, Marianao
La Habana, Cuba

Dear Lic. Acevede:

This is to acknowledge and thank you for your letter of 29 June which was received today. I am very pleased to establish professional contact with a researcher of turtles in Cuba. In this respect, I look forward to corresponding with you on matters of common interest.

Please feel free to call upon me for whatever assistance that is necessary.

Sincerely,

George H. Balazs
Jr. Marine Biologist and
Principal Investigator
Hawaii Marine Turtle
Management Study

mk

July 25, 1977

Mr. Richard S. Shomura
Director, Honolulu Laboratory
National Marine Fisheries Service
P. O. Box 3830
Honolulu, Hawaii 96812

Dear Richard:

Enclosed are copies of two informative pages from the book Undersea Victory - The Influence of Submarine Operations on the War in the Pacific by W. J. Holmes (1966). The subject of mine fields being laid at French Frigate Shoals may already have been considered with respect to diver and research vessel safety, however, in the event that it has not, I thought it would be best to bring it to your attention. Caution against unexploded ordnance will also have to be exercised in other underwater areas of the Leeward chain. For instance, on June 22nd while SCUBA diving from the EASY RIDER near Necker with Skip Naftel and Lighton Taylor, I came across two bombs estimated to weight 250 lbs. each. One bomb appeared intact, while the other had undergone a partial explosion through the side. It is my understanding that even this latter piece of ordnance is potentially dangerous, as the detonators could still be functional.

I have had a very interesting and informative telephone conversation on the subject of unexploded ordnance with a BMC Dave Hart, Explosive Ordnance Disposal, Training and Evaluation Unit One, FPO San Francisco, CA 96611 (Tel. 684-8143). Chief Hart seems knowledgeable about World War II military activities at French Frigate Shoals. He had occasion to dive the Shoals in 1966, at which time a coral encrusted mine was observed. If you so desire, I am sure that Chief Hart would be pleased to further discuss this subject with you from the standpoint of our Survey and Assessment.

Sincerely,

George H. Balass
Jr. Marine Biologist

GHB:md

Encls.

July 22, 1977

Brigadier General E. H. Simmons
Director of Marine Corps History and Museums
Headquarters, United States Marine Corps
Washington, D. C. 20380

Dear General Simmons:

Last August you provided me with valuable assistance by responding to a request which I made through former Representative Patsy T. Mink. The specifics of this request are contained in copied correspondence which I have attached for your information.

In your letter of 30 August it was indicated that the whereabouts of Chief Warrant Officer J. E. Hutchison was known, however, he was on vacation at the time. I would be most appreciative if you would once again attempt to contact Mr. Hutchison in order to gain permission for me to obtain his address.

Thank you in advance for your continuing assistance in this matter.

Sincerely,

George H. Balazs
Jr. Marine Biologist

GHB:md

Encls.

July 21, 1977

Mr. Chandra Sekhora Kor
Crocodile and Sea Turtle Breeding Project
Biological Park, NANDANKANAN
P. O. Barang District: Cuttack (Orissa)
INDIA 754005

Dear Mr. Kor:

Thank you for your most interesting and informative letter of 23 June. I am pleased to make your acquaintance, and I hope that we will continue to correspond on matters of common interest related to marine turtle research and conservation.

As requested, I am providing you with the following current addresses:

Dr. David Ehenfeld

Dr. F. Wayne King
New York Zoological Society
185th Street and Southern Blvd.
New York, N.Y.

Dr. G. Carleton Ray

Mr. G. S. deSilva

Mr. Ross Witham

Mr. Chandra Sekhora Kor
July 21, 1977
Page 2

Mr. A. J. Mence

Miss Karen Bjorndal

It is presently my understanding from Dr. Carr that the IUCN Marine Turtle Specialist Group is in abeyance.

The only turtle "farm" which I am aware of at this time is

Cayman Turtle Farm, Ltd.
Grand Cayman Island, B.W.I.

This is the reconstituted Mariculture, Ltd. which went bankrupt. I discussed this case in one of my articles. All of the articles which you requested have been enclosed.

Again, I appreciate hearing from you and I hope that you will send me copies of your project's reports and publications. Also I would be interested to learn in what way your 10,000 Monel metal tags have been "specially prepared."

Sincerely,

George H. Balass
Principal Investigator
Hawaiian Marine Turtle Management
Study

GHB:md

Encls.

July 19, 1977

Mr. M. Takata, Director
Division of Fish and Game
Department of Land and Natural Resources
1151 Punchbowl Street
Honolulu, Hawaii 96813

Dear Sir:

I am writing to request a permit for use of an ichthyocide in Kaneohe Bay, Oahu. I am involved in an EPA-funded program studying the effects of sewage relaxation on the biota of the bay; we have collected in depth data on the benthic communities throughout the bay for over a year and the project is scheduled to continue for more than a year and a half.

A portion of this program involves study of the fish community structure and function both within and outside of the bay. To obtain these data visual surveys have been conducted over permanent transects for the last year and a half and to determine food habits, gonad development, wet weight to dry weight conversions and the extent of commercially important fishery resources within the bay a program of selective spearing, trapping and netting has been undertaken. Preliminary observations on the above data suggest that the fish communities in Kaneohe Bay are dominated by planktivorous, detrital and herbivorous species. A possible major primary energy source for these fishes in the south and mid bay regions is the sewage released in the southern basin. When this outfall is removed in September - October, 1977 there may well be a drastic shift in the structure (species composition) of these fish communities which we would like to document. Visual fish survey techniques are known to inadequately sample the cryptic and nocturnal fish species. For this reason a limited amount of sampling with an ichthyocide is desirable.

In August, 1966 Dr. Richard Wass undertook a study of the fish community resident on a small isolated patch reef in Kaneohe Bay. His study concerned itself with the migratory habits, standing crop and community trophic structure of these fishes. This objective was accomplished, in part, in a single day by collecting an entire community of fishes from an isolated patch coral reef using the ichthyocide,

Mr. M. Takata
July 19, 1977
Page 2

rotenone. Wass followed the recolonization patterns of fishes to the poisoned reef for 240 days after the poisoning.

It has been 11 years since Wass performed his study. His data are probably representative of the fish communities present under relatively low levels sewage stress. At the present time (under high nutrient loading) we wish to again examine this same reef using the same methodology as used by Wass in 1966. The specimens obtained will be used to accurately determine the present community structure and trophic relationships. All fishes collected will be used in this study; none will be "thrown away." Data collected in this survey will be compared to Wass' findings; recolonization of the reef by fishes will be followed for at least two years.

Wass' method of fish collection included the emplacement of a 450 x 30 ft net (10mm mesh size) quickly around the reef to the 30 foot depth contour as to contain the fishes. One hundred and twenty pounds of 5 percent rotenone was placed within this enclosure for collection purposes. All fishes were removed from the reef leaving the invertebrate population and algae virtually intact.

The proposed study reef is located in Kaneohe Bay near "Sand Island" (see figure 1 of the enclosure). A short description of this reef and environs is given by Wass in his Master's thesis (1967, Department of Zoology, Univ. of Hawaii) and is included here as pertinent background information (see enclosure).

In summary, I want to apply for a permit allowing the use of 120 pounds of 5 percent rotenone to be used on the above mentioned patch reef in Kaneohe Bay. If permitted, the ichthyocide would be used in early to mid August 1977 dependent on calm weather conditions.

If you have any questions regarding this proposed study, please feel free to call me here at Hawaii Institute of Marine Biology. I look forward to your reply.

Thank you.

Sincerely yours,

Richard Brock
Research Associate

RB:md

Encl.

cc: S. Smith

Description of Study Reef
(From Wass' M.S. Thesis, 1967)

"The study reef is a roughly circular mound of coral rising from the bottom of the bay which is 45-50 ft. deep in the area around the reef. The reef has a relatively flat top averaging 84 ft. in diameter which is exposed during very low tides, but is usually covered by one to two ft. of water. The average diameter at the 30 ft. depth contour is 144 ft. giving the reef a total horizontal area of 16,286 square feet.

The 30 ft. depth was used as a limit for study because a natural barrier exists between 20 and 40 ft. Few fishes, with the exception of numerous, tiny eleotrids are found in this zone. Slopes at these depths are steep and covered by broken coral pieces roughly 1-2 inches in diameter. ...This rubble slope is unstable, offering a poor foundation for living coral, and lacks larger crevices needed for shelter by most fishes.

The outstanding feature of the study reef is its isolation. It is completely surrounded by water 45-50 feet deep.- the nearest reef being 425 ft. distant. The bottom of the bay is mostly mud across which are widely scattered coral fragments. A survey extending in a 50 ft. radius out from the reef revealed a mud bottom interrupted only by the frame of an old fish trap. Very few reef fishes frequent this area between reefs - instead they are concentrated on the reefs in shallower water."

July 7, 1977

Mr. Don Brandon
Department of Fisheries
Box 96, Rarotonga
Cook Islands

Dear Don:

Enclosed are 45 of the Inconel alloy tags which you requested for use on the captive reared turtles. The tag numbers are consecutive from 2281 through 2325. Please return to me at your earliest convenience any tags that are not used. Also please return the applicator pliers upon completion.

I have indicated on the enclosed diagram the site on the turtle's front limb that has given us the best tagging results. Please note that the tag should extend at least three quarters of its distance onto the limb. A lesser distance will greatly increase the possibility of it being torn off, and a greater distance will cause excessive scar tissue to form as the animal grows.

In order for the tags to self-pierce and lock properly, the tag should be inserted into the pliers with the hole side flush against the plier's lower jaw. I have taped a tag in the pliers to show you the correct positioning. When applying the tags, have the turtle held firmly while you slowly and firmly squeeze the plier handles together as far as they will go. If for some reason, proper tag locking does not take place, you can always use a pair of needle nose pliers to bend the point over adequately.

Our Institute's mailing address is on the tags and I will of course notify SPC and the Cook Island's government when any future returns are received. For my files, I would appreciate having a copy of the measurement data for each tagged turtle, as well as the plate(s), site(s) and condition(s) of release.

Best regards.

Sincerely,

GEORGE H. BALAZS
Jr. Marine Biologist

GHB:ec

cc: Tom Marsters
bcc: Dr. R. Grandperrin

July 6, 1977

Mr. Don Brandon
Department of Fisheries
Box 96
Rarotonga
Cook Islands

Dear Don:

Thank you for your letters dated June 14 and 23, which I only received today after returning from field work in the Leeward chain.

It should be noted that my final report to SPC included some 54 pages and was, in my opinion, considerably in-depth. Above all, I was entirely satisfied that it was a fair and objective report. I had therefore certainly hoped that the full text would be made available by SPC to both the Fiji and Cook Islands' governments, as well as anyone else interested enough to read it.

Your request for tags and pliers can be easily met. As I previously indicated, I am willing to make available some of my Inconel tags. Within the next week I will send them off to you by air post.

Concerning the frozen material, we would be interested in examining several (3-4) specimens, but I'm not sure what information will result. Ideally they should be packed in dry ice in a thick styrofoam container. Check with the Air New Zealand office first to determine what shipping restrictions may exist. We may find out that the easier thing to do is pickle the animals in formalin.

You have asked for a fairly large number of copies reprints and it will take me a while to get them all together. We have a minimum of clerical staff and I will have to do most of it myself. I'll do my best, but this is a bad time of the year as it is the breeding season at French Frigate Shoals and I am out in the field a lot.

Please give my best regards to Tom and others who offered me hospitality during my visit.

Sincerely,

GEORGE H. BALAZS
Jr. Marine Biologist

GHB:ec

July 6, 1977

To: Messrs. Cliff Fiscus and Bob DeLong
Marine Mammal Division, NWAFC

From: George H. Balazs

Subject: CENSUS OF MONK SEALS AT NECKER ISLAND

Through the courtesy of Skip Maftel, I was able to obtain transportation to French Frigate Shoals during June aboard the vessel EASY RIDER. On June 23, while enroute, we anchored off the southwest side of Necker Island to make underwater surveys with SCUBA. At 1600h I exercised provisions of my FWS research permit by going ashore to census basking green turtles and make observations of possible feeding sites. At that time, I also had the opportunity to count monk seals hauled out on the rock ledges. The following numbers were observed:

adults	13
subadults	5
pups	1

The single pup was still with its mother and appeared to be approximately one month old and quite healthy. A shallow tidal pool served as a convenient "play-pen." A dead and bloated adult seal was also noted among the live animals. From the observation distance, no signs of physical injury could be detected.

Two dead subadult seals were found at French Frigate Shoals, one on Whale-Skate and one on East. Neither showed any indication of physical injury, such as might be caused from shark attack. I buried both animals at marked locations for the possible future recovery of skeletal material.

mk

cc: Mr. Palmer Sekora
U.S. Fish & Wildlife Svc.

July 6, 1977

The Honorable Edmund Brown Jr.
Governor
State Capitol
Sacramento, California 95814

Dear Governor Brown:

I want to take this opportunity to commend you for the wise decision you have made in vetoing the bill that would have allowed continued importation of green turtle products into California. I firmly believe you have followed the proper course of action in this matter.

Sincerely,

George H. Balazs
Jr. Marine Biologist

mk

June 22, 1977

Captain R. P. Nystedt
Headquarters, Fourteenth Naval District
Box 110
FPO San Francisco 96610

Dear Captain Nystedt:

This is set forth in writing the salient points of my request for the Navy's support in conducting surveys of marine turtles at Kahoolawe, as discussed during our meeting of 16 June 1977. Written background material covering my overall marine turtle research project in the Hawaiian chain has previously been made available to your office in correspondence dated 10 June. It seems appropriate to again emphasize that the work I am proposing for Kahoolawe represents a component part of the far longer project that is now in progress.

The proposed work at Kahoolawe encompasses two phases. The first phase would consist primarily of direct observations from low flying (500-800') aircraft in order to survey sand beaches for signs of nesting and nearshore waters for the presence of feeding aggregations of turtles. Available information suggests that nesting in the major Hawaiian Islands would be most likely to occur from June through September. Any Navy support for such observations would therefore have to be provided during these months, either in 1977 or 1978 but preferably during both years. Support for observations of feeding aggregations could be provided during any time of the year. However, in order to account for variations in the presence of such turtles due to season, stage of tide, sea conditions, and other factors, it would be highly desirable to make such serial surveys of nearshore waters at approximately four month intervals or less for at least a one year period.

The second phase of the work would be entirely dependent on the findings which result from phase one. If nesting activity is identified, land surveys of beaches should be carried out in order to determine the species and numbers involved. If sizable aggregations of feeding turtles are identified, underwater surveys should be made to gather information of a more detailed nature on size categories represented and food sources utilized. This may also involve capture and tagging activities as

Captain R. P. Nystedt
June 22, 1977
Page 2

provided in my State of Hawaii, Division of Fish and Game Scientific Research Permit No. 7744.

I fully understand that any support the Navy may provide will be on a mission congruent basis and not require added expenditure of Navy funds. I also fully understand that any support the Navy may provide for phase one of my proposed work does not obligate them to support work in phase two. However, should such work be warranted, I would ask that the Navy give due consideration to offering further assistance within the framework of existing missions.

I want to express my appreciation to both you and your associates for taking the time to meet with me and for giving consideration to this request for assistance.

Sincerely yours,

George H. Balazs
Jr. Marine Biologist

GHB:md

June 16, 1977

To: Drs. Karl Kenyon and Bob DeLong

From: George H. Balazs
Hawaiian Green Turtle Management Study

Subject: Observations of internal parasites and food sources of the
Hawaiian Monk Seal.

During the course of field work at Kure Atoll on 24 May 1977, I came across the fresh regurgitation from a monk seal which consisted of two large, nearly intact Octopus sp. (transparency enclosed). The surfaces of both of these cephalopods were found to be covered with nematodes, specimens of which are enclosed for your inspection. In 1974 I collected nematodes of a similar appearance from a monk seal regurgitation at French Frigate Shoals. You may also be interested to learn that in 1973 I collected cestodes from the fecal material of a monk seal at French Frigate Shoals. These parasites were examined and identified as Contracaecum turgidum and Diphyllobothrium cameroni by Dr. Gerald D. Schmidt of the University of Northern Colorado. Copies of Dr. Schmidt's earlier letters to me on this subject have been enclosed for your files. One of you (KWK) listed both of these parasites in a 1959 publication. It should be noted that Dr. Schmidt's mention of surgeonfish serving as intermediate hosts for seal parasites was in response to my suggestion of such a possibility. This was based on my repeated observations of schools of surgeonfish following monk seals in shallow water and feeding on evacuated fecal material. I have noted surgeonfish (Acanthurus sp.) in the regurgitations of seals on a number of occasions. An identification of fish recovered from such a regurgitation in February 1975 has been enclosed for your use.

Hopefully this information will be useful to your research. If there are any specific questions about these observations, please feel free to contact me.

June 15, 1977

TO: Mr. Bob Iversen
National Marine Fisheries Service

FROM: George H. Balazs
Hawaiian Green Turtle Management Study

SUBJECT: Occurrence of marine turtles at the Milwaukee Banks

On 2 June 1977, the Taiwanese precious coral harvesting vessel, NO. 2 HAI TIEN, docked for a short time at Midway to obtain medical treatment for an injured crewman. Through a translator, I was able to interview the Captain and several crewmen concerning any observations they may have made of marine turtles in the vicinity of their stated harvesting site of 35°N 174°E. I was informed that on several occasions juvenile turtles of approximately two feet in length had been sighted in areas where the ocean bottom comes to within 300 feet of the surface.

This is the first indication I have had that turtles may utilize shallower portions of banks lying to the Northwest of the Hawaiian chain. There is, of course, the distinct possibility that these turtles are derived from our Hawaiian green turtle population. I would therefore like to ask for your assistance in monitoring, by whatever means appropriate and possible, the occurrence of turtles in such areas. For instance, if there is occasion for your agency to inspect the harvest of a trawler which has operated in the area, perhaps a special inquiry could be made as to observations or incidental catch of turtles.

Thank you in advance for any assistance that you can provide in the matter.

GHB:ec

June 9, 1977

To: Howard Pennington
Office of the Marine Affairs Coordinator

From: George H. Balazs
Green Sea Turtle Project

Subject: MOP Student Alan K. H. Kam

The purpose of this memorandum is to confirm and summarize our telephone conversation of 8 June concerning Alan Kam's proposed MOP project in which I am listed as formal advisor. Over the past twelve months Alan has shown considerable interest and enthusiasm in my research of turtles. It is my opinion that the work outlined in the proposal which he has submitted will appropriately re-enforce and complement the research I am presently conducting. Additionally, the involvement will represent a worthwhile learning experience which will hopefully strengthen our State's work pool of qualified, ocean oriented individuals.

I recommend that you support Alan Kam's proposal to the modest extent that has been outlined in his basic study plan and my earlier qualifying memorandums.

GHB:ec

June 9, 1977

Captain D. H. Fischer
Commanding Officer
U.S. Naval Station Midway
FPO San Francisco, California 96614

Dear Captain Fischer:

I want to take this opportunity to express my appreciation to the Navy for allowing me to conduct field studies of sea turtles at Midway from May 24 to June 6. This ongoing research, in cooperation with Koral Kings Diving Club, is viewed as an extremely valuable component program that can make significant contributions to our knowledge of the Hawaiian green turtle population. Your support of this work on a mission congruent basis is commendable.

Sincerely,

GEORGE H. BALAZS
Jr. Marine Biologist

GHB:ec

cc: Office of the Governor's Marine
Affairs Coordinator
Koral Kings Diving Club

June 9, 1977

To: Kent W. Bridges
Botany Department

From: George H. Balazs
HIMB

Subject: Occurrence of *Halophilla* sp. at Midway

From 25 May to 6 June, 1977 I conducted a series of underwater surveys in the lagoon at Midway for the primary purpose of locating, censusing and tagging green turtles. During the course of this activity, the sea grass *Halophilla* was found to occur at two locations. A preserved sample of this material has been enclosed for your inspection and identification. To my knowledge, *Halophilla* has not previously been reported from Midway.

The specific sites of occurrence are listed as A and B on the attached chart. Site A consists of a sand and silt bottom with a water depth ranging from 10 to 20 feet. The plants are found in random patches varying from sparse to moderate coverage. Site B comprises a portion of the Navy's inner harbor facility. The bottom substrate is principally silt with a water depth ranging from 20 to 40 feet. I would consider the plant coverage to be very sparse and irregular.

It is interesting to note that no evidence presently exists which indicates that the green turtles at Midway utilize *Halophilla* as a food source, such as takes place around Oahu. I will be making additional study visits to Midway during the coming months and will pass on to you any new information which arises on this subject.

GHB:ac

Encls.

June 9, 1977

Mr. Milton C. Searle
Executive Director
The American Humane Association
P.O. Box 1266
Denver, Colorado 80201

Dear Mr. Searle:

I am pleased to accept your invitation to participate in the General Session of the 101st Annual Meeting of the American Humane Association. I will be looking forward to receiving details of the meeting and the format to be established for the various presentations.

Sincerely,

GEORGE H. BALAZS
Jr. Marine Biologist

GHB:ec

June 9, 1977

Ms. Nancy Butowski-Casey
Box 14, U.S. Naval Station
FPO San Francisco, California 96614

Dear Nancy:

Pursuant to our recent discussions, I have recommended that you be designated as the new Hawaii Audubon Society Representative at Midway. You will note from the enclosed recent copy of 'Elepaio that Dr. Robert Pyle is the Society's President. I suggest that you write to Dr. Pyle at an early date enclosing \$3.00 for 1977 membership dues and expressing your desire to periodically provide bird and other wildlife information as the Midway Representative. The Society's mailing address is: P. O. Box 22832, Honolulu, Hawaii 96822.

I want to thank you once again for all of your valuable assistance during my recent study visit. I look forward to working with you on matters of common interest during the course of your two year residency.

Sincerely,

GEORGE H. BALAZS
Jr. Marine Biologist

GHB:ec

cc: Dr. Pyle

May 19, 1977

To: Mr. William R. Coops
Administrator, RHHH

From: George H. Balazs
Junior Marine Biologist

The purpose of this memorandum is to request your assistance in hiring Mr. Alan K. H. Kam on a casual basis for 20 hours per week, from June 1 - September 1, with funds from my MAC GREEN SEA TURTLE MGT. STUDY (RCUH 5431). As indicated in the attached copied memorandum to Mr. McMahon, it has been proposed that the Marine Option Program complement this support with an equivalent 20 hours per week with funds also administered by RCUH.

Over the past 12 months Mr. Kam has developed skills as a biological research assistant. His employment in my project will include underwater SCUBA surveys of turtle aggregation, as well as compilation of data and preparation of preliminary progress reports.

Thank you for your assistance in this matter.

GHB/eh

cc: J. McMahon

May 17, 1977

Mr. Arnold L. Howard
P. O. Box 4
Pahala, Hawaii 96777

Dear Mr. Howard:

I want to take this opportunity to thank you for serving as a special consultant from May 4 - 8 in my experimental trial on the use of nets for capturing and tagging green turtles. Your knowledge of turtles and skills in the use of nets proved to be exceptionally valuable. I recognize and appreciate the considerable efforts you put forth in this work, and look forward to your additional assistance in future project activities as funds and circumstances warrant.

A report covering our experimental capture work is now being prepared for submission to the Division of Fish and Game. Following their evaluation, I will send you a copy of the completed report.

Sincerely,

GEORGE H. BALAZS
Jr. Marine Biologist

GHB:ec

cc: Mr. Michio Takata
Office of Marine Affairs Coord.

May 18, 1977

Mrs. Zahida Whitaker
Editor
Madras Snake Park
Guindy Deer Park
Madras 600022
INDIA

Dear Mrs. Whitaker:

I would greatly appreciate receiving issue number one of the Newsletter of the Madras Snake Park Trust. Enclosed is a small donation to cover foreign air postage mailing costs.

Sincerely,

George H. Balazs
Jr. Marine Biologist

GHB:md

Encl.

May 18, 1977

Captain R. P. Nystedt
CEC, District Civil Engineer
Headquarters
Fourteenth Naval District
Box 110
FPO San Francisco 96610

Dear Captain Nystedt:

This letter is in reference to your correspondence dated 17 November 1976 (48A:FWD:cdg, Ser 2679) concerning my appointment by the Governor's Marine Affairs Coordinator to conduct a management study of the Hawaiian green sea turtle.

At this time, I would like to respectfully request the Navy's support and assistance in the conduction of aerial surveys to locate and census aggregations of green turtles in the near shore waters of the Island of Kahoolawe. Additionally, I would like to survey on land as many of the island's sand beaches as possible to identify any possible nesting activity which may be taking place.

I believe it would be advantageous for me to meet with you in person in order to fully discuss this request. When your schedule permits, I would be most appreciative if you would telephone me at 247-6631 to arrange for a meeting date and time convenient to both of us.

Sincerely,

George H. Balazs
Jr. Marine Biologist

GHB:md

cc: Mr. Michio Takata, Director
Division of Fish and Game

May 12, 1977

Mr. D. L. Arnold
Assistant Illustrations Editor
National Geographic Magazine
Washington, D. C. 20036

Dear Mr. Arnold:

You will probably recall that last July I sent you 29 duplicate color transparencies for possible use in a feature article on the Leeward Hawaiian Islands. It is my understanding that the planned article has now been postponed for an undetermined period of time. I would therefore be most appreciative if you would return the transparencies at your earliest convenience. I will of course be most happy to reimburse the National Geographic Society for whatever postage costs that may be involved.

Sincerely,

George H. Balazs
Jr. Marine Biologist

GHB:md

May 12, 1977

Dr. M. Grant Cross
National Science Foundation
Washington, D. C. 20550

Dear Dr. Cross:

In your informative article entitled "Marine Geology of Kure and Midway Atolls, Hawaii: A Preliminary Report" (Pacific Science, 1969), Figure 1 displayed an aerial view from Gemini VII spacecraft of Pearl and Hermes Reef to Kure. In the Acknowledgements section, it was indicated that photo was prepared from a color transparency provided by the National Aeronautics and Space Administration. I would greatly appreciate learning of the specific source within NASA of this transparency, which is undoubtedly one of a series of photos taken of the entire Archipelago. I am presently conducting ecological studies of the Hawaiian green turtle (*Chelonia*) and such photographs could prove to be valuable in my work.

Thank you in advance for any assistance that you are able to provide in this matter.

Sincerely,

George H. Balazs
Jr. Marine Biologist

GHB:md

May 13, 1977

To: John J. McMahon, Director
Marine Option Program

From: George H. Balazs
Jr. Marine Biologist

Subject: MOP STUDENT ALAN K. H. KAM

The purpose of this memorandum is to confirm and summarize in writing the several telephone discussions we have had in recent weeks concerning Alan Kam's proposed MOP project in which I am listed as formal advisor. Over the past 18 months Alan has demonstrated to me that he is a capable, enthusiastic and reliable individual. Although Alan has been employed as a student worker in the baitfish culture program here at HIMB, he has nevertheless shown considerable interest in my research of sea turtles, and has volunteered significant portions of his own personal time to provide me with assistance. I have considered this assistance to be most valuable and would therefore like to have Alan's involvement continue, as outline in his Proposal. It is my strong recommendation that you support this work to the modest extent requested.

Starting June 1, I anticipate being able to financially support Alan for 20 hours a week at a rate of \$3.00 per hour. It is my hope that your office will be able to complement this support with an equivalent amount in order to provide Alan with a reasonable income for the project's duration.

I fully endorse the work of the Marine Option Program and will continue to provide assistance in whatever way necessary.

mk

cc: J.E. Bardach, HIMB
S. V. Smith, HIMB

I think this work in the Trust Territory is pretty important and I'd like to put a word in for that. The Trust Territories do have significant populations of the hawksbill turtle which is an endangered species and which is exceedingly rare in the mainland United States. They also have important populations of the green turtle. So of three of the species that nest under the U.S. flag, two of them are really Trust Territory turtles compared to the loggerhead which is a significant U.S.-mainland species.

There are also no local programs out there on turtles. So there at least needs to be some programs started out there. Here we at least have states with some sort of local program ongoing and you do have problems there of foreign poachings, pirates, from Taiwan going into remote atolls ripping off significant, indeed large numbers of green turtle. So we have an enforcement problem out there that's going to be very difficult and we need to beef-up the Coast Guard or something to come to grips with it.

I think that it is a highly neglected area. This area has been started with private funds, well, notably World Wildlife funds through me, but it needs to be expanded to a thorough program as well as soon as we can. Peter, how would you rate that with the other programs listed there? I think it's very important. It really is. You might want to send him out for a few months.

There are some ongoing programs in Hawaii and I think some money from the Governor's office or somewhere is being routed into turtle studies out there, so at least there is a Hawaiian program that will exist independent of whether NMFS can get into there or not, but there is nothing in the Trust Territories at the present time.

May 2, 1977

Mr. J. R. Haas
National Band and Tag Company
721 York Street
Newport, Kentucky 41072

Dear Mr. Haas:

Today I discovered that my stock of size 3 turtle tags is almost exhausted. My use for smaller size tags is not all that great, however, I do want to maintain a supply. I imagine that it is unlikely to arrange for production of this size in Inconel 625, therefore an order for regular Monel will apparently have to be made. Unfortunately, I do not have the NBT current price sheet. At your earliest opportunity, would you please give me a price quotation for the following:

1000 - size 3 numbered 6001 - 7000
with the lettering
WRITE UNIV
HAWAII 96744

1 - pliers 4-1005-3S

1000 - size 1 numbered 7001 - 8000
with the lettering
HAWAII

2 pliers 4-1005-1S

Thank you for your assistance in this matter.

Sincerely,

George H. Balazs
Jr. Marine Biologist

GHB:md

April 28, 1977

MEMORANDUM

To: Bob Wright
Mike Lay

From: George H. Balazs

Thank you for the third draft of your final report which I received on 20 April. With the exception of Figure 3, I am sending the manuscript to John McMahon with my recommendation that it now be accepted in fulfillment of your responsibility to the Marine Option Program. It is necessary for me to return Figure 3 to you for correction, as the regression lines are not in agreement with the formulae presented. I have computed and drawn in the correct lines for your inspection. Please redraw this Figure and forward a copy both to me and to John McMahon for insertion in the manuscript.

You apparently forgot to place your signatures on the title page adjacent to your typed names as I had requested in my letter of 1 April.

GHB:ec

Enclosure

April 26, 1977

Dr. R. Grandperrin
Fisheries Adviser
South Pacific Commission
Post Box D.5
Noumea Cedex
New Caledonia

Dear Dr. Grandperrin:

Enclosed is the report which has resulted from my review of the South Pacific Commission Turtle Project. It is my hope that the information contained in this document will be valuable in the formulation of sound plans for future action. To the extent possible, I will be available to provide additional assistance.

Sincerely,

George H. Balazs
Jr. Marine Biologist

mk
Enclosures

April 26, 1977

Mr. J. R. Haas
National Band and Tag Company
721 York Street
Newport, Kentucky 41072

Dear Mr. Haas:

I want to thank you very much for sending me the copied letter from Huntington Alloys and the laboratory data concerning Inconel 625. This was all most informative, and serves to further confirm our earlier findings. Before saying anymore, I want to tell you that the Inconel tags I have had on my seven captive turtles for over six months now show absolutely no pitting or corrosion of any sort. I am encouraged by these results, as the Monel tags (also size 681) showed noticeable pitting after the same time period under similar conditions. It may be premature, but I think Inconel 625 is the answer to turtle tag problems.

Bill Rainey's plans for the redesigning of your size 49 tag were interesting, but I can't help but wonder what its all for. The basic problem to my present way of thinking, is the composition of the metal and not the design. I'm sure you could change the size 49 locking mechanism; in fact, I suggested it to you two years ago and you thought at the time it could be done without much trouble. But will it solve the corrosion problem of Monel? I doubt it. As I've said before, attack also takes place on the inscription and at other sites in contact with the flesh of the animal.

Another point you will certainly want to consider is that your seal tagging customers apparently require the internal locking mechanism presently found on your size 49 tag. This is to eliminate the possibility of the tag becoming caught on fish nets that seals come into contact with. I discussed this problem briefly last year with Bob DeLong of the National Marine Fisheries Service in Washington State. He is one of your customers and perhaps you will want to discuss this point with him.

I feel that the best likely solution to the corrosion problem of turtle tags is to do exactly what we have already done - manufacture Inconel 625 tags in size 681. The tags are perfectly suited for all sizes of turtles (except hatchlings), they have a simple locking mechanism, and the alloy is proving to be resistant

Mr. J. R. Haas

-2-

April 26, 1977

to salt water attack (as Huntington predicted it would be). Personally, I now have enough of these tags to last me for some years, therefore it apparently is no longer a problem for me. I certainly do thank you for this fact.

Have you had any requests for another run of Inconel tags? I would very much like to stay informed on what other researchers around the world are also using Inconel.

I have submitted your name for the permanent mailing list of the Marine Turtle Newsletter (no cost involved). Let us continue to stay in contact on matters of turtle tags.

Sincerely,

GEORGE H. BALAZS
Jr. Marine Biologist

GHE:ec

April 25, 1977

Mr. R. D. Cooper
Secretary
Applied Ecology Pty. Ltd.
P. O. Box 26
Woden, A.C.T. 2606
Australia

Dear Mr. Cooper:

I would like to take this opportunity to thank you for your prompt letter of 7 April (102/30/OPS) in response to my enquiry about Mr. Teokotal Maitai of the Cook Islands. The information provided has been most useful in preparing my report for the South Pacific Commission.

I continue to have considerable interest in your resource assessment and farming research activities, and would appreciate receiving copies of publications or reports that may become available.

On a separate but related matter, I wonder if you can verify some observations that were recently passed on to me concerning Raine Island. Apparently in early December 1975 a Dr. Veron visited the island and observed what he estimated to be 13,000 nesting turtles on the beaches. Although I did not speak directly to Dr. Veron, the impression was given that this was a daytime occurrence. The species of turtle was not stated, but from such a description this certainly sounds like a mass nesting of olive ridleys. Any information that you can provide on the subject would be greatly appreciated.

Sincerely,

George H. Balazs
Jr. Marine Biologist

GHB:md

April 1, 1977

MEMORANDUM

To: Mike Lay
Bob Wright

From: George H. Balazs

Subject: Final Report on MOP Turtle Study.

The second draft of your report was received on 25 March, and I am returning it to you at this time for corrective action on the following comments:

1. It is inappropriate for you to change significantly the title of your report/project at this late date. Further, the new title you have selected is not an accurate reflection of the report's contents.
2. In my comments on the report's first draft, I asked you to give careful thought to organizing your cover title page. I mentioned that it should include the project's title, author's names and affiliation (U.H.-Hilo), project duration, my name and affiliation (HDMB) as project advisor, and that the project was conducted under the auspices of the Marine Option Program.

It was therefore with considerable surprise that I found the title page totally absent from your second draft.

3. When I consented to serve as your formal project advisor (and recommended that funds be allotted), one of my principal reasons for doing so was to be of direct service to the Marine Option Program in its effort to support promising student projects. I would therefore like to express my displeasure for your weak 'acknowledgement' of the Marine Option Program's role in your study.
4. Several spelling and grammatical errors have been pointed out in the text; please note especially that the word data is plural.
5. If you still have the regression formulae, please include them in Figure 3.

MEMORANDUM

Mike Lay
Bob Wright

April 1, 1977
Page -2-

In addition to the above comments, I would like to note for your information that I have seen a copy of the letter which Bob Wright wrote to John McMahon on 11 January. It is my judgement that the contents of the communication were not an accurate portrayal of the problems encountered.

Please return the corrected report directly to me at an early date so that I may fulfill, as soon as possible, my final responsibilities to this project. Each of your signatures should appear on the title page adjacent to your typed names.

GHB:ec

bcc: John McMahon

March 28, 1977

Dr. Nicholas Mrosovsky
Department of Zoology
University of Toronto
Ramsay Wright Zoological Laboratories
25 Horbord Street
Toronto, M5S 1A1, CANADA

Dear Nicholas:

The enclosed short write-up has been prepared as a contribution to the next IUCN Marine Turtle Newsletter. Except for perhaps minor editorial changes, I hope you will find it interesting and acceptable.

I fully agree with your comment that the Newsletter should be used as a forum for debate of significant issues. In this respect, I am giving the leatherback issue some further thought.

The Newsletter should also continue to contain a balanced number of notes/articles dealing with pertinent conservation problems and possible solutions. I would personally not want to see the major emphasis be placed on research. Of course, we all know that the two areas overlap considerably.

I should state that, in my opinion, the two Newsletters thus far issued have been excellent. You should be proud of the job you are doing!

Sincerely,

George H. Balazs
Jr. Marine Biologist

GHB:md

Enclosure

UNIVERSITY OF HAWAII AT MANOA
HAWAII INSTITUTE OF MARINE BIOLOGY
P. O. BOX 1346
KANEOME, HAWAII 96744

March 28, 1977

The Institute of Ethnology
Academia Sinica
Nankang, Taipei
Republic of China

Dear Sir:

I would like to obtain a copy of your publication entitled "Turtle Sacrifice in China and Ocesnia" (Monograph No. 20, 1972) by Shun-Sheng Ling. If available, an English version would be preferred.

Thank you in advance for your assistance with this request.

Sincerely,

George H. Balazs
Jr. Marine Biologist

GHB:md

March 24, 1977

Mr. Derek Green
Charles Darwin Foundation
for the Galapagos Isles
Casilla 58-39
Guayaquil, Ecuador

Dear Derek:

Thank you for your letter of 15 February which arrived here in Hawaii during mid-March as predicted. With respect to your enquiry, Nicholas was only partially correct when he told you that I have found an absence of growth in juvenile Hawaiian Chelonia. It is true that some of the measurements of recovered turtles have not revealed growth. However, I did not personally take either the original or the recovery measurements, therefore for the present time these data must be viewed with caution. The ecology of juvenile green turtles found in the sea, as well as land basking in the Leeward chain, is a major focus of my work here in Hawaii. One of the important objectives is of course to establish growth rates under natural conditions. It is my feeling that at least several more years will be necessary in order to collect the required data.

Concerning your own findings of non-growth, there is apparently some inconsistency with respect to interpretation of observations. You mention that there is no reason to suspect that the turtles were not feeding, however you also state that the animals recovered showed heavy algal growth. It seems to me that this latter point is indeed suggestive of non-feeding.

I would be glad to have a limited number of dried and pressed algae samples identified for you from time to time. Only small amounts need to be sent.

I would be interested to learn exactly what brand and size tag you are using and exactly where the tag is applied on the flipper. Perhaps you could mark the enclosed diagram and return it to me at your convenience.

Sincerely,

George H. Balazs
Jr. Marine Biologist

GHB:dd
Encl.

March 22, 1977

The Honorable John Nejedly
Chairman, Senate Committee on Natural
Resources and Wildlife
State Capitol
Sacramento, California 95814

Dear Senator Nejedly:

You may recall that on February 15th I submitted testimony to your office in strong opposition to California Senate Bill No. 49 (relating to the continuation of the sale of turtle products from Cayman Island).

My purpose for writing to you at this time is to ask for your assistance in obtaining copies of annual reports that have been submitted to the California Department of Fish and Game by the Cayman Turtle Farm (previously known as Mariculture, Ltd.). I have noted in documents which you previously sent to me that under existing California law such permittees are required to submit an annual report. Although I have reviewed numerous reports and articles issued from Cayman Island over the past several years, I have not seen the reports that have been formally filed to comply with California law. I would imagine that at least two reports have been made since the original law was enacted in 1974. If any duplicating costs are involved, I will of course be most willing to reimburse your office.

Thank you in advance for any help that you can provide in this matter.

Sincerely yours,

GEORGE H. BALAZS
Jr. Marine Biologist &
Principal Investigator
Hawaiian Green Sea Turtle Mgmt. Study

GHB:ec

March 23, 1977

Dr. Frank J. Radovsky
Acting Director
Bernice P. Bishop Museum
P. O. Box 6037
Honolulu, Hawaii 96818

Dear Dr. Radovsky:

A recent request to give a presentation on sea turtles at Kamehameha School has once again inspired me to seek out slides of polynesian artifacts either made from or representative of sea turtles. You will undoubtedly recall that I wrote to you on this subject last May, and that in July you responded with cautious optimism. At this time, I would like to follow up on your response by giving you a list of the artifacts I am interested in having photographed. Such a list follows:

1. bracelet (No. 1304) which is composed of thin turtle shell plates;
2. turtle ornament carved from ivory (No. C.9371);
3. net spacer from Napuka, Tuamotu Islands (slide enclosed);
4. assortment of turtle shell fishhooks (as listed in Figures 224 and 225 of Arts and Crafts of Hawaii-VII. Fishing by Te Rangi Hiroa);
5. composite trolling fishhook with turtle shell barb;
6. turtle shell necklaces from the Caroline Islands (slide enclosed);
7. spoon or scoop of turtle bone from Fiji (slide enclosed);
8. chief's necklace from New Britain (slide enclosed).

Dr. Frank J. Radovsky
Page Two
March 23, 1977

If such photography can be arranged, I believe it would be most valuable to have as full a frame view of each item as possible.

Thank you in advance for whatever assistance you are able to provide to this request.

Sincerely,

George H. Balazs
Jr. Marine Biologist

mk
Enclosures

March 29, 1977

Mr. David Bettencourt
Brown and Bettencourt
Suite 1100
Financial Plaza of the Pacific
Honolulu, Hawaii 96813

Dear Mr. Bettencourt:

As requested during our telephone conversation of
23 March, I am sending you copies of several articles
dealing with marine turtle biology and conservation.

Please feel free to call upon me if I can be of
further assistance.

Sincerely,

George H. Balazs
Junior Marine Biologist

GHB/cfh

enclosure

March 22, 1977

Mr. John Roshti
1333 Broadway
New York, N. Y. 10018

Dear Mr. Roshti:

It is my understanding that you were one of the first commanding officers of the U. S. Coast Guard LORAN Station at French Frigate Shoals during the 1940's. For the past four years I have been conducting ecological studies of green sea turtles that breed at French Frigate Shoals. I would be most appreciative if you would be willing to pass on to me any information that you may recall about the presence, numbers and activities of sea turtles during your tour of duty.

Enclosed is a complimentary copy of a color booklet which I recently published. Hopefully you will find it interesting and enjoyable.

Sincerely,

George H. Balazs
Jr. Marine Biologist

GHB:md

Encl.

March 22, 1977

Mr. William E. Rainey
Department of Zoology
University of California
Berkeley, California 94720

Dear Bill:

I apologize for taking so long to answer your letter of 9 February. Normally I pride myself on being a responsive letter writer, however, in your case I fell behind due to two weeks of field work at Kure Atoll (located at the very end of the Hawaiian chain), and a three week consultancy assignment in the South Pacific.

I found the information provided in your letter and in the IUCN Newsletter to be both interesting and informative. I have several frozen green and hawksbill turtles here at the Institute that I would be happy to sample for body fat. At your earliest convenience, please send instructions and the necessary vials. Based on my experience, the request for blood samples presents a different set of problems. I therefore do not want to make a commitment on this aspect at the present time. I would, however, like to have you describe your sampling technique.

Enclosed is a copy of my Biological Conservation article, as well as a complimentary copy of my commercially published color booklet.

Sincerely,

George H. Balazs
Jr. Marine Biologist

GHB:md

Encls.

March 21, 1977

Dr. Guy Motha
Programs Director
South Pacific Commission
P. O. Box D5
Noumea Cedex
New Caledonia

Dear Dr. Motha:

As of today's mail delivery I have still not received the budget information for the three year funding period of the SPC's turtle project. You will recall that during our meeting in Suva on 23 February, you indicated that these data would be sent to me as soon as possible. I consider such information to be essential to my constructive review of the project. Unfortunately, details of funds received from SPC and expended at USP were not available from Uday Raj and could only be partly provided by Don Brandon for the Cook Islands' portion of the project. I therefore look forward to hearing from you on this matter at an early date so that completion of my final report can proceed as scheduled.

I appreciated having the opportunity to meet with you in person.

Sincerely,

George H. Balazs
Jr. Marine Biologist

GHB:ME

cc: R. Grandperrin

March 21, 1977

Mr. A. J. Mence
Programme Officer
International Union for Conservation
of Nature and Natural Resources
1110 Morges
Switzerland

Dear Tony:

In your letter of 19 January (copied to N. Mrosovsky) you informed me that there was not much new to report on the "Mariculture" front, and that, although you had thought there might be some discussion on the topic at the Kino Bay SSC meeting, time did not permit it. In your letter of 20 January, you again reiterated these same general sentiments, adding that it had not been possible to address the question of just how long the new company should be given to prove its predictions. My reason for writing to you at this time is to clarify and make further inquiries as to what transpired at Kino Bay. Confusion seems to exist on the subject. In a letter dated 24 February from Wayne King, I was informed that SSC actually withdrew its support of the Cayman operation at the Kino Bay meeting, and that the company was being informed of this fact in writing.

Concerning a closely related subject, Dr. Mrosovsky has sent for my examination a copy of the Cayman Turtle Farm Ltd. Report to IUCN. In reviewing this report I am at a disadvantage because I am not in possession of a copy of the "program" that was agreed by IUCN "would result in reproductive self-sufficiency for Cayman Turtle Farm Ltd. within 5 years." Nevertheless, conclusions stated in the report certainly are not substantiated by the data presented. The opening paragraph stated that "The purpose of this report is to show that results of the 1976 reproductive season have followed predicted levels." Additionally, the closing paragraph states "In conclusion we feel that the 1976 reproductive season was very successful." At considerable variance with these statements is the fact that production from farm reared stock (FRS) is shown to be substantially below predicated levels, in fact to such an extent that I fail to see how the yield of 51 hatchlings could be called a "very successful" reproductive season.

Mr. A. J. Mence
March 21, 1977
Page 2

Here in Hawaii we continue to be plagued with absurd pronouncements by authorized representatives of the Cayman operation - pronouncements that are clearly contrary to the IUCN Principals and Recommendations. For your information, I have enclosed a recent article from the publication Pacific Business News which illustrates this problem. Please give special attention to the clear intent to popularize and expand the market for sea turtle products (e.g. "...the first step is to get people accustomed to eating turtle meat..."). Needless to say, I would be pleased to see IUCN take some sort of action on this case.

Sincerely,

George H. Balazs
Jr. Marine Biologist

GHB:md

cc: W. King
A. Carr
N. Mrosovsky

Encl.

March 21, 1977

Mr. Robert C. Hughes
Chairman
National Wildlife Committee
Box 2471
Trenton, N. J. 08607

Dear Mr. Hughes:

Once again I am sending for your examination an article/advertisement from Hawaii dealing with the Cayman turtle culture operation. As you will note, the intent to expand the market for turtle products is certainly crystal clear. I urge your organization to do everything within its power to put a halt to this destructive promotional campaign.

Sincerely,

George H. Balazs
Jr. Marine Biologist

GHB:md

Encl.

March 21, 1977

Mr. Larry H. Ogren
Fishery Biologist
National Marine Fisheries Service
Southeast Fisheries Center
Panama City Laboratory
Box 4218
Panama City, Florida 32401

Dear Larry:

In going through my correspondence file, I find that over three months have now passed since I wrote to you urging that certain conceptual and budget plan changes be considered in the NMFS turtle program in order to make it truly national in scope as originally envisioned. Specifically, the focus of my recommendation was that funds for research not be confined solely to the NMFS Southeast Region as they have been, but rather a reasonable allotment be made to the Southwest Region for work in the State of Hawaii as well as U. S. possessions and territories in the Pacific. A copy of my earlier letter (12/16/76) has been enclosed for reference purposes. My main reason for writing to you at this time is to inquire as to the outcome of considerations that you and Dr. Ekberg may have given this matter, or the outcome of correspondence on the subject that may have been carried out with NMFS officials in Washington, D. C.

I want to thank your office for providing me with copies of tape recordings of the October 29th St. Petersburg turtle meeting held by NMFS. The information contained was both enlightening and useful. Unfortunately, as you may recall, one of the meeting's serious shortcomings was that no mention was made of the research requirements and importance of those U. S. turtle populations specified in my letter of December 16th.

Sincerely,

George H. Balazs
Jr. Marine Biologist

GHB:md

UNIVERSITY OF HAWAII AT MANOA
HAWAII INSTITUTE OF MARINE BIOLOGY
P. O. BOX 1346
KANELOHE, HAWAII 96744

March 21, 1977

Dr. Uday Raj
School of Natural Resources
University of the South Pacific
Suva, Fiji

Dear Dr. Raj:

I have been back in Hawaii for one week now, but regrettably I must say that I still have not received the material which I requested from you during our meeting on February 25th and 26th. It was my understanding that the items would be sent by air mail at your earliest opportunity. Hopefully, they have been posted and will arrive within the next few days. However, in the event that your busy University schedule has imposed a delay in assembling and sending off the material, I would like to again mention that the items of greatest importance to my review are:

- 1.) A copy of the letter from Dick Baird which outlines the research you were asked to conduct for the SPC turtle project;
- 2.) copies of reports that you have submitted to SPC (Dr. Grandperrin previously sent me several such reports, however, as I mentioned to you, I want to be absolutely certain that my file is complete); and
- 3.) a copy of your draft report entitled "Initial growth rates in green and hawksbill turtle hatchlings reared on artificial foods."

I want to thank you once again for your assistance and hospitality during my visit to Fiji.

Sincerely,

George H. Balazs
Jr. Marine Biologist

GHB:md

cc: P. Grandperrin

March 21, 1977

Dr. K. Radway Allen
Chief of Division
CSIRO
Division of Fisheries and Oceanography
P. O. Box 21
Cronulla, N.S.W. 2230
Australia

Dear Dr. Allen

I have only recently returned from my visit to Fiji and the Cook Islands for the purpose of reviewing the South Pacific Commission's turtle project. While in Suva, I had the opportunity to meet with Mr. Harry Sperling, Regional Fisheries Coordinator for FAO. During the course of our discussions I was informed that FAO is presently supporting a three month training program in turtles at Torres Strait for a native Cook Islander by the name of Mr. Teokotai Paitai. I was of course again told of this short term internship by the Director of Fisheries in the Cook Islands. Unfortunately, none of the parties involved were able to tell me the focus of Mr. Paitai's training, or how he is progressing in the program. Apparently no one has heard from him since his departure for Torres Strait about two months ago.

My reason for writing to you at this time is to find out what has been (or will be) involved in Mr. Paitai's program. If warranted by Mr. Paitai's performance and acquisition of knowledge at Torres Strait, I would like to stress in my final report to the South Pacific Commission the value of using his skills for further work with turtles in the Cook Islands. Now that my on site inspection has been completed, I can assure you that any work I would recommend for the Cook Islands would be directed more toward resource assessment than prolonged captive culture. This latter point should perhaps be kept confidential until my final report has been actually submitted to the Commission (at the end of April).

I look forward to receiving whatever information you or your

Dr. K. Radway Allen
March 21, 1977
Page 2

colleagues may have on Mr. Paitai's program.

Sincerely,

George H. Balazs
Jr. Marine Biologist

P.S. Enclosed is a recent copy of the IUCN/SSC Marine Turtle Newsletter. I have taken the liberty of submitting your name for the permanent mailing list in the event that you are not already on it.

GHB:md

Encl.

March 21, 1977

Mr. James I. Richardson
LCI Loggerhead Research
University of Georgia
Institute of Ecology
Athens, Georgia 30602

Dear James:

Again, many thanks for your informative letter on turtle tagging problems. I should mention that during my efforts to obtain Inconel Alloy 625 tags, Jim Haas of NBT indicated that die problems were too great to permit production of such tags in size 49 (the big ones). This presented no problem to me as I preferred the size 681 (intermediate size) in that they are equally suitable for both adult and juvenile turtles.

You mentioned finding "tooth marks" on returned tags. Any speculations as to their origin (marks from conical teeth or?)? I was also interested to hear of your success with a scalpel blade. However, I had always envisioned the main advantage of prepunching to be the removal of a pug of flesh, thereby hopefully encouraging the area to heal with a hole remaining in the flipper. This would help keep the tag out of intimate contact with corrosive unhealed tissue. I imagine that your chief reason for precutting with a blade is to prevent tag malfunction that would probably occur when self piercing through the tough leathery pad.

I was sorry to hear that the Jensen Beach Proceedings may not be available until the summer of 1978. Certainly there should be some criticism of such a delay. I do appreciate the abstracts which you sent. In my opinion, the results of your 12 years of careful research look exceedingly valuable. I noticed that you made a number of comparisons with George Hughes' work. If you are not already aware, you will be interested to learn that George feels he has identified two nesting loggerheads that had marginal plates clipped as hatchlings. The elapsed time is around four years, however, he is waiting for additional recoveries before publishing such a growth rate.

Mr. James I. Richardson
March 21, 1977
Page 2

I seldom take anyone with me during monitoring periods at French Frigate Shoals. In doing this, I lessen the human impact considerably, as well as ensure that each and every turtle receives my own personal attention. I catch up on sleep during the non-nesting months!

I have just returned from a two week consultancy assignment in Fiji, the Cook Islands and Western Samoa. Certainly much needs to be learned about turtles in these areas.

Sincerely,

George H. Balazs
Jr. Marine Biologist

P.S. Was there any evidence of turtles still nesting on the Dry Tortugas?

GHB:md

March 14, 1977

The Secretary
Government of Western Samoa
Apia, Western Samoa

Dear Sir:

On March 10 and 11 I was able to visit Western Samoa on my way home from a consultancy assignment for the South Pacific Commission in Fiji and the Cook Islands. My sole purpose for routing a return through your country was to meet with staff of your Fisheries Department to discuss the hawksbill turtle hatchery project at Aleipata. I have followed the progress of this experimental restocking project since its initiation in 1971. It was therefore with great pleasure that I finally had the opportunity to personally visit the facility and view the work being carried out.

I would like to commend the Government of Western Samoa for its support of this worthwhile endeavor in turtle resource management. The results that have been obtained thus far, while not conclusive, are nevertheless certainly most encouraging. The project is well conceived, and unique with respect to its involvement with the hawksbill turtle. Internationally, the project is a credit to your country, and hopefully you will be able to continue in its support during coming years.

Sincerely,

GEORGE H. BALAZS
Jr. Marine Biologist &
Principal Investigator,
Hawaiian Green Turtle Mgmt. Study

GHB:ec

cc: Western Samoa Fisheries Department

February 22, 1977

Ms. Nina Pierpont
4706 Yale Station
New Haven, Connecticut 06520

Dear Ms. Pierpont:

Thank you for your letter of 8 February. Again, I sincerely regret the situation which has come about. Unfortunately I do not have funds at this time to hire a research assistant.

You may be interested to learn that, for reasons too lengthy to describe in this letter, nearly all of my work in the remote Northwestern Hawaiian Islands has been, and will continue to be, carried out solely by me. Investigations of green turtles around the major inhabited Hawaiian Islands to date involve primarily volunteer undergraduate students and other enthusiastic, capable individuals under my supervision.

I wish you success in your future endeavors.

Sincerely,

George H. Balazs
Jr. Marine Biologist

mk

February 15, 1977

Senator John Nejedly
Chairman, Senate Committee on Natural
Resources and Wildlife
State Capitol
Sacramento, California 95814

Dear Senator Nejedly:

Thank you very much for sending me a copy of California Senate Bill No. 49 in response to my earlier inquiry. I have followed carefully the various courses of action taken by the promoters of commercial green sea turtle culture on Cayman Island. Twice I have visited the facilities, once as a member of an investigative task force of specialists assembled by the International Union for the Conservation of Nature (IUCN). After reviewing your proposed legislation with amendments dated 8 February, I want to communicate my opposition and urge your committee not to adopt this measure. It is my opinion that the State of California has gone to great lengths to aid a recently bankrupt foreign commercial enterprise that is intent on monopolizing and expanding world trade in sea turtle products. It is also my opinion that turtle culture, as practiced on Cayman Island, is not a biologically or ecologically sound proposition. Further, and perhaps most importantly, the activities of such an operation are not at the present time in the best conservation interests of the world's declining sea turtle populations.

In the event that it has not already been brought to your attention, I am enclosing a copy of the report prepared by the team of specialists that evaluated the Cayman turtle culture enterprise for IUCN in November of 1974. The report is enlightening, and it will be beneficial for you to read through it carefully. You will recall that it was in 1974 that the promoters and investors of the

Senator John Nejedly
Page Two
February 15, 1977

company first persuaded the California Legislature to enact a waiver for the sale of turtle products. Hopefully your committee will not see fit to further extend such an unjustified waiver.

Sincerely,

George H. Balazs
Principal Investigator
Hawaiian Green Sea Turtle
Management Study

mk
Enclosures
cc: Mr. R. Testa

February 14, 1977

Mr. Uiliamu Matagi
Manager, Turtle Hatchery
Fisheries Department
Apia, Western Samoa

Dear Mr. Matagi:

Mrs. Janie Hansen has given me your name as the person now in charge of the Western Samoa hawksbill hatchery. I have been interested in the activities and results of your project for some time. You may recall that in 1972, 20 hatchlings were sent to us here in Hawaii by Alan Banner for feeding and growth studies.

Most of my research efforts are now focused on determining the numbers and distribution of green turtles throughout the Hawaiian Islands. Enclosed are several publications covering this work which I hope you will find interesting.

Between February 21 and March 9 I will be visiting Fiji and the Cook Island in order to review the experimental turtle culture project that has been financially supported by the South Pacific Commission. If time permits, I would very much like to visit your hatchery in Western Samoa on my return to Honolulu. At the present time I do not know if this will be possible, but I plan to make every effort to include such a stopover in my itinerary.

Sincerely,

George H. Balass
Jr. Marine Biologist

mk
Enclosures

February 14, 1977

Dr. George Hughs
Natal Parks, Game and Fish
Preservation Board
P. O. Box/Posbus 662
Pietermaritzburg, South Africa 3200

Dear George:

Thank you for your speedy reply to my inquiry about Frazier's article. I hope you are able to find other such notched nesting loggerheads. When you do publish these data, I think it would be valuable to include close-up photographs of the notch in both hatchlings and adults.

My studies of strictly wild immature Chelonia consist of both straight and curved carapace measurements, as well as body weight. By "strictly wild," I mean juveniles and subadults captured directly from the sea with no previous experience of being held or reared in captivity. Captures are now being made in feeding pastures (and hopefully will be expanded considerably pending a WWF grant application) with a specially constructed scoop net, and by hand using SCUBA. My study areas thus far are French Frigate Shoals, Midway, Kure Atoll and the Ka'u district of the Island of Hawaii. About 175 turtles have been tagged. The slow growth rates mentioned in my last letter were from Midway and French Frigate Shoals, and encompass periods in excess of two years. Certainly more data are needed, however, the case for slow growth in Chelonia (at least under Hawaiian conditions) seems certain to me at this time.

When no one else was able to make a financial commitment to INCONEL tags, I proceeded alone to work with Jim Haas of NBT to complete an order. There were a number of difficulties, but I was finally able to obtain 3,000 of the size 681 tags. This intermediate size is best suited for juveniles and subadults. In addition, they are also being used on nesting adults. There have been no signs of corrosion in INCONEL tags applied to my eight captive Chelonia.

Dr. George Hughs
Page 2
February 14, 1977

Again, many thanks for the clarification of your loggerhead results. On the 21st of this month I will be traveling to Fiji and the Cook Islands for three weeks to look over their turtle situation.

Sincerely,

George H. Balazs
Jr. Marine Biologist

mk

February 10, 1977

BIOGRAPHICAL INFORMATION

GEORGE HARVEY BALAZS

Born: 26 February 1943, Detroit, Michigan

Married: 9 March 1963 to Linda Rae Evans

Degrees: B.S. in Animal Sciences, University of Hawaii, 1967
M.S. in Animal Sciences, University of Hawaii, 1969

Professional Positions: Research Assistant, Department of Animal Sciences, 1967-1969
Jr. Marine Biologist (R2-8), Hawaii Institute of Marine Biology, University of Hawaii, 1971-present

Societies: Sigma Xi - Research Society of North America
American Society of Ichthyologists and Herpetologists
Society for the Study of Amphibians and Reptiles

Services and Honors: Special consultant to the Survival Service Commission, International Union for Conservation of Nature (IUCN), for conference on commercial exploitation of marine turtles, November, 1974, Miami, Florida
Special consultant to the South Pacific Commission (Noumea) for evaluation of experiment turtle culture project in Fiji at the Cook Islands, February, 1977

- Publications:
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University of Hawaii at Manoa
Hawaii Institute of Marine Biology
P.O.Box 1346 - Coconut Island - Kaneohe, Hawaii 96744
Cable Address: UNIHAW

February 10, 1977

Mr. William Travis
Fisheries Officer
Ministry of Agriculture,
Forest and Fisheries
Suva, Fiji

Dear Mr. Travis:

At the request of the South Pacific Commission, I will be visiting Fiji between February 22 to 28 for the purpose of gathering information on the experimental turtle culture project. I look forward to meeting with you during this time to discuss matters of mutual interest.

Sincerely,

GEORGE H. BALAZS
Jr. Marine Biologist

GHB:ec

February 9, 1977

Dr. Edward O. Moll
Eastern Illinois University
Charleston, Illinois 61920

Dear Dr. Moll:

I would like to take this opportunity to compliment you for your interesting and informative article on Malaysian turtles which recently appeared in Herpetological Review. The facts contained therein will prove useful to my overall understanding of worldwide turtle conservation problems.

There were, however, two points in your article which hopefully you can clarify for me. Under the Usage section, it was stated that Malays are prohibited from eating turtle (reptile) meat by the Islam faith. I have been under the impression that there is no specific prohibition in the Islam faith, and that refraining from eating turtle meat was due to custom. Do you have any specific references that will help clear up this question? Also, in the Usage section, mention was made that Indians also eat turtle, where religion allows. I wonder if you can tell me what specific Indian religion does not allow turtle to be eaten?

Thank you in advance for whatever additional information you can provide on the points I have raised.

Sincerely,

George H. Balazs
Jr. Marine Biologist

GHB:md

UNIVERSITY OF HAWAII AT MANOA
HAWAII INSTITUTE OF MARINE BIOLOGY
P. O. BOX 1346
KANELOHE, HAWAII 96744

February 7, 1977

Mr. T. Marsters
Director of Fisheries
Marine Resources
P. O. Box 96
Rarotonga, Cook Islands

Dear Mr. Marsters:

At the request of the South Pacific Commission, I will be visiting Rarotonga between February 27 to March 7 for the purpose of gathering information on the experimental turtle culture project. I look forward to meeting with you during this time to discuss matters of mutual interest.

Sincerely,

George H. Balazs
Jr. Marine Biologist

GHE:md

February 7, 1977

Dr. Frank J. Schwartz
Professor of Zoology
The University of North Carolina
Institute of Marine Sciences
Morehead City, N. C. 28557

Dear Dr. Schwartz:

Thank you for your letter of 11 January concerning the paper which you presented at the sea turtle symposium. Recently I was informed by another participant that the Proceedings will not be published for at least several more months. Hopefully he is wrong.

In the event that there will be such a delay, I would be very interested to learn at an earlier date exactly what temperatures you are referring to in relation to lower critical temperature in the three species observed. Your results may very well be of importance to my studies of green turtles here in Hawaii where sea temperatures at times can drop considerably.

Sincerely,

George H. Balazs
Jr. Marine Biologist

GHB:md

UNIVERSITY OF HAWAII AT MANOA
HAWAII INSTITUTE OF MARINE BIOLOGY
P. O. BOX 1346
KANEHOE, HAWAII 96744

February 7, 1977

Mr. R. Stone
Chief Fisheries Officer
Ministry of Agriculture, Forest and Fisheries
Suva, Fiji

Dear Mr. Stone:

At the request of the South Pacific Commission, I will be visiting Fiji between February 22 to 28 for the purpose of gathering information on the experimental turtle culture project. I look forward to meeting with you during this time to discuss matters of mutual interest.

Sincerely,

George H. Balazs
Jr. Marine Biologist

GHB:md

UNIVERSITY OF HAWAII AT MANOA
HAWAII INSTITUTE OF MARINE BIOLOGY
P. O. BOX 1346
KANELOHE, HAWAII 96744

February 7, 1977

Dr. U. Raj
University of the South Pacific
P. O. Box 1168
Suva, Fiji

Dear Dr. Raj:

At the request of the South Pacific Commission, I will be visiting Fiji between February 22 to 28 for the purpose of gathering information on the experimental turtle culture project. I look forward to meeting with you during this time to discuss matters of mutual interest.

Sincerely,

George H. Balazs
Jr. Marine Biologist

GHB:md

UNIVERSITY OF HAWAII AT MANOA
HAWAII INSTITUTE OF MARINE BIOLOGY
P. O. BOX 1346
KANEHOHE, HAWAII 96744

February 7, 1977

Mr. Don Brandon
Turtle Project Officer
Marine Resources
P. O. Box 96
Rarotonga, Cook Islands

Dear Mr. Brandon:

At the request of the South Pacific Commission, I will be visiting Rarotonga between February 27 to March 7 for the purpose of gathering information on the experimental turtle culture project. I look forward to meeting with you during this time to discuss matters of mutual interest.

Sincerely,

George H. Balazs
Jr. Marine Biologist

GHB:md

February 4, 1977

Dr. James P. McVey
Chief, Micronesian Mariculture Demonstration
Center
Marine Resources Division
P. O. Box 359
Koror, Palau
Caroline Islands 96940

Dear Jim:

At the request of the South Pacific Commission, I will be visiting Fiji and the Cook Islands later this month for the purpose of making a constructive evaluation of their turtle culture project. In my final report I would like to take full advantage of the results and experiences of other such endeavors in the Pacific. I wonder if you can tell me if there are presently any experimental turtle culture projects in the Trust Territory? Several months ago I heard brief mention of a small project in Ponape. If one does indeed exist, I would greatly appreciate any details which you may have.

Give my best regards to Angie.

Sincerely,

George H. Balazs
Jr. Marine Biologist

GHB:md

UNIVERSITY OF HAWAII AT MANOA
HAWAII INSTITUTE OF MARINE BIOLOGY
P. O. BOX 1346
KANEHOE, HAWAII 96744

February 4, 1977

Dr. K. Radway Allen
Chief of Division
CSIRO
Division of Fisheries and Oceanography
P. O. Box 21
Cronulla, N.S.W. 2230 Australia

Dear Dr. Allen:

I am sorry to say that the South Pacific Commission unfortunately did not share my views on the value of visiting the Torres Strait turtle culture project. My forthcoming trip will therefore be confined to Fiji and the Cook Islands, the two locations where the South Pacific Commission has financially supported small experimental turtle projects. In my constructive evaluation I will nevertheless strive to take advantage of the results and experiences of other projects, such as at Torres Strait. For this I at least have the Carr-Main report and the information contained in your earlier letters.

I want to thank you for the gracious invitation extended in your letter of 4 January. Hopefully, at some date in the future, I will have the opportunity to visit Australia and tour your project.

Sincerely,

George H. Balazs
Jr. Marine Biologist

GHB:md

February 4, 1977

Mr. James Richardson
Little Cumberland Island
Loggerhead Research Project
University of Georgia
Institute of Ecology
Athens, Georgia 30302

Dear Mr. Richardson:

Thank you for your interesting and informative letter of 24 January. It is unfortunate that we did not establish communications six months ago, as the special order for INCONEL 625 alloy tags has already been completed. Both Jim Haas of NBT and myself contacted a number of turtle (and seal) researchers with the goal of a combined order. Strangely enough, there was little interest and I ended up being the only one to make a financial commitment for the production of these new tags. I now have 3,000 size 681 tags. Size 681 was chosen because of my focus on juvenile wild green turtles, and also for the simplified locking mechanisms. Additionally, it was discovered that the machinery at NBT for size 49 tags could not be easily modified to accept the more brittle INCONEL 625 alloy strip. Jim Haas had a very difficult time filling this special order and I have the highest praise for his efforts on my behalf. In fact, it was so difficult, that I may have the only INCONEL tags that will be manufactured for some time to come. Only time will tell if they represent a significant improvement.

Concerning some of the comments made in your letter:

1. My experience with Hawaiian green turtles indicates that the stirrup (or "bridge" as NBT calls it) can completely fail and the tag will often still remain well attached to the animal. I have recovered several tags that were not properly locked when originally applied, but nevertheless remained firmly attached for over eight years. I even had a difficult time getting them off with pliers! Your tags may have corroded away or have been removed by other turtles, but I would speculate that stirrup failure was not a significant loss factor.

Mr. James Richardson
Page Two
February 4, 1977

2. It is my understanding that size 49 tags are made with an internal locking mechanism so as to not present a snagging site on the outside of the tag. When the piercing end passes through the hole and bends over, a snagging site is produced. This can create problems for cattle (catching on wire fences?), and seals where the tag can get hung up in a fish net. I discussed this stirrup problem with Jim Haas sometime ago, and I feel fairly certain that with a large enough order he would modify his machinery and make the size 49 tags with the simplified pass through locking mechanism. You may want to explore this possibility.

3. Many of my turtles are recovered bearing partially crushed tags. This may be from other turtles, the turtle biting its own tag, or from puffer or other bony fish with powerful jaws. Because of such observations (also reported by Hughes in South Africa and Limpus in Australia), I would not want to use plastic tags.

Again, I appreciate the information you have passed on to me about your tagging work. The only question I have is, where exactly do you place your tag or tags on the limb of the turtle, and also do you prepunch a hole before tag application? Hopefully at some date in the future we will be able to meet in person and discuss other topics of common interest.

Sincerely,

George H. Balazs
Jr. Marine Biologist

mk

Enclosure

February 4, 1977

Professor F. H. Talbot
Director, Environmental Studies Program
MacQuarie University
North Ryde, NSW
Australia 2113

Dear Frank:

In response to your letter to David Stoddart concerning the need for a handbook on human impact on coral reefs:

I assume you're aware of the book that Ferguson-Wood and I edited on Tropical Marine Pollution. I don't feel that there is enough new information to expand on that effort yet. A handbook would, it seems to me, have to go over the same old ground with pretty much the same old information on which to draw. But perhaps I don't have an adequate idea of what you had in mind.

In my mind what we need much more than another rehash of the literature is some long hard thinking about how to go about doing environmental impact statements for coral reef communities. I'm very skeptical of the endless tables of data on species diversity along transects and other hard-won information of dubious predictive value that fills the pages of typical EIS's (including ones I've been involved in). I don't know how to do a good environmental impact analysis and I don't know any other coral reef biologist who does.

But there is a tremendous amount of literature being generated on how to do EIS's in other environments. And with time and consultation with the right people I believe that we could come up with some standard approaches requiring less effort and providing more useful information than the present haphazard approaches we use. In addition to the performance of more useful environmental surveys, we need to incorporate some basic economic, sociological and political realities in such studies. In the tropics money is seldom available to hire a specialist in each field to do these different things. The biologist is generally charged with doing all of them and he's not prepared.

Having said all that I'm afraid I'm not presently in a position to do much about it. I'm not only somewhat doubtful about getting funds to go to Miami, I'm also quite doubtful about having the time in the near future, to help organize and write such a handbook. But I'd sure like to see someone do it; at present we're floundering.

Sincerely,

cc: Dr. D. Stoddart

Robert E. Johannes

February 4, 1977

Michael Lay
General Delivery
Kailua, Kona, Hawaii 96740

Robert Wright
99 Punahale Street
Hilo, Hawaii 96720

Dear Bob and Mike:

I have gone over your draft report and made several comments and corrections. It is not my place to rewrite the text, but rather only to point out areas that need modification and/or improvement. The report is generally good and well written, however, it can be made better. One problem is the very noticeable difference in writing styles between the sections done by each of you. Please make an effort to have them flow together.

I am returning a copy of the report to each of you through John McMahon. John may also have comments to add. After you receive the report, get together as soon as possible, do the necessary work, and return the revised copy directly to me here at the Institute. I fully expect your revised copy to be in shape for typing by John McMahon's office without needing modification.

Please note that I plan to be visiting Fiji and the Cook Islands between 21 February and 9 March. If the revised copy arrives before my departure, I will make every effort to look it over immediately and forward it to John McMahon.

Sincerely,

George H. Balazs
Jr. Marine Biologist

GHB:md

ref. PRO 84/10/1

February 3, 1977

Dr. R. Grandperrin
Fisheries Adviser
South Pacific Commission
Post Box D5
Noumea Cedex
New Caledonia

Dear Dr. Grandperrin:

Your letter of 19 January was received on 1 February. As indicated in my cable dated 2 February, it will be necessary for me to delay departure until 21 February. There has been an illness in my family. I have made reservations as listed in your letter of 19 January, with the exception that all dates are advanced by one week. I hope that the MCO and the check covering per diem and travel allowances will be mailed as soon as possible so that no delay will be imposed.

I accept all of the conditions you have outlined and I will, of course, maintain confidentiality as listed on the material sent under separate cover.

My earlier suggestion to include in the itinerary other Pacific areas involved in turtle culture stemmed from the belief that results and experiences obtained elsewhere would be of direct benefit to solving the problems in Fiji and Cook Islands. I thought this would be particularly true for the Australian Torres Strait project where large sums of money have been expended. Although I will not be visiting Torres Strait, I will include in my final report the information obtained to date from the directors in Australia.

I will be in contact with Mr. Richard Shomura of the National Marine Fisheries Service before departure.

Sincerely,

George H. Balazs
Jr. Marine Biologist

mk

February 2, 1977

Dr. Milton M. Kaufman
President
Monitor, Inc.
Suit 931
1346 Conn. Ave., N.W.
Washington, D. C. 20036

Dear Dr. Kaufman:

My recent packet of Monitor information sheets contained an agenda for your 17 January meeting which made reference to a joint NMFS/FWS permit request relative to the Hawaiian monk seal. I am not presently aware of the details surrounding this application and, therefore, would greatly appreciate receiving full information.

Thank you very much for your assistance in this matter.

Sincerely,

George H. Balazs
Jr. Marine Biologist

GHB:md

February 2, 1977

U. S. Fish and Wildlife Service
Bird Banding Laboratory
Office of Migratory Bird Management
Laurel, Maryland 20810

Dear Sirs:

During a recent study of green sea turtles at Kure Atoll I had the opportunity to recover the following band numbers from dead albatross.

737-90703	737-47006
587-91550	767-52138
737-95121	767-49489
767-52046	667-52332
767-54205	737-93239
737-96236	737-99345
737-46087	
737-47110	

In addition, the enclosed two unreadable bands were also recovered.

All of the bands were removed from dead birds that were in various stages of decomposition. The cause of death could not be determined in any of the cases. All recoveries were made between 19 January and 1 February.

I would appreciate receiving reprints of any articles your agency may have published on the seabirds of Kure or the other Northwestern Hawaiian Islands.

Sincerely,

George H. Balazs
Jr. Marine Biologist

GHB:md

Encls.

February 2, 1977

Ms. Nina Pierpont
4706 Yale Station
New Haven, Connecticut 06520

Dear Ms. Pierpont:

I have only recently returned from two weeks of field work at Kure Atoll and had the opportunity to read your letter of 12 January. I was not at Coconut Island for several days before going on this trip to Kure; even though Dr. Bardach placed your letter to him (also dated 12 January) in my box I only saw it now and I must therefore tell you that your quest came as a complete surprise to me. Dr. Bardach is to blame only in part, circumstances did the rest.

Quite candidly, I believe that there would be a number of serious problems in having you involved in my project as an independent researcher for a one year period. First and foremost, I am not at all certain that I have the time to provide the assistance and guidance necessary to make the experience worthwhile to you. It is one thing to give directions to paid research assistants, but with a student such as yourself, a far more involved commitment on my part would have to be made. My involvement at this point in numerous other aspects of marine turtles is so extensive that I am extremely reluctant to make any further commitments. This past summer I served as project advisor to two seniors at the University of Hawaii at Hilo. Although rewarding in certain respects, I found it to be a very time consuming experience.

I am sorry to have to write such a discouraging letter at this date, however, it would have been best for you to correspond with me directly and immediately after talking with Dr. Bardach in early December. I do not know what time constraints you are working under, however, if there are additional points in this matter that you would like to bring to my attention for consideration, please feel free to do so.

Sincerely,

George H. Balass
Jr. Marine Biologist

GHB:md

February 2, 1977

Mr. Robert A. Childers
3040 Alder Circle
Anchorage, AK 99504

Dear Mr. Childers:

Dr. Johannes has passed on to me your letter of 19 January in view of the fact that I am conducting ecological studies of Hawaiian sea turtles and have interests in other turtle populations throughout the Pacific. As you are probably aware, the Trust Territory (Micronesia) covers a number of diverse island groups spread over an immense area of ocean. It is therefore difficult to give general answers to the questions you have asked. If you have not already done so, I suggest that you consult the following references:

1. Hendrickson, J. R. (1972) South Pacific Islands - Marine Turtle Resources. FAO, FI:SF/SOP/REG, 102/6, 15 pp.
2. Anon. (1957) Notes on the present regulations and practices of harvesting sea turtle and sea turtle eggs in the Trust Territory of the Pacific Islands. Anthropological Working Papers, Trust Territory of the Pacific Islands. 18 pp.
3. McCoy, M. C. (1974) Man and turtle in the Central Carolines. Micronesica, 10(2):207-221.

In addition, Dr. Peter Pritchard, a highly respected turtle biologist with the Florida Audubon Society, recently completed a one month survey of the sea turtle resources of the Trust Territory. It is my understanding that Peter's report will be published in the very near future. I therefore suggest that you contact him at the following address:

Florida Audubon Society
P. O. Drawer F
Maitland, Florida 32751

I do not feel that I can be of great assistance to you over the telephone, as you suggested in your letter. I would, however, be pleased to meet with you in person and enter into discussions should your trip take you through Honolulu.

Sincerely,

George H. Balazs
Jr. Marine Biologist

January 17, 1977

Colonel E. Van Netta
Commander
Kwajalein Missile Range
BMD Systems Command, Box 26
APO 96555

Dear Colonel Van Netta:

A request to Colonel Herwig, Chairman of the Environmental Working Committee, has resulted in my obtaining your name as the Commander of Kwajalein Atoll. Under a special grant from the State of Hawaii, I am conducting management-oriented studies of sea turtles occurring throughout the Hawaiian Archipelago. My research interests in turtles also encompass other areas of the Pacific. In 1973 I conducted a turtle survey at Canton Island for the Air Force, and last October I carried out an investigation at Enewetak under the auspices of the Mid-Pacific Marine Laboratory. At that time, I had the pleasure of meeting with your associate, Colonel Spicuzza.

My purpose in writing to you is to obtain information on the status of regulations in effect at Kwajalein relating to sea turtles. Your assistance in this matter would be greatly appreciated.

Sincerely,

George H. Balazs
Jr. Marine Biologist

GHB:md

January 14, 1977

Dr. George Hughes
Notal Parks, Game & Fish
Preservation Board
P.O. Box/POSEBUS 662
Pietemmaritzburg, South Africa 3200

Dear George:

Recently I came across an article in AFRICAN WILDLIFE LEADERSHIP NEWS (Spring 1976) by J. Frazier which states that you have documented sexual maturity in loggerheads at four years of age. I was previously unaware of this fact, and would greatly appreciate receiving any specifics that are available on the finding. I may have mentioned to you that my studies to date of strictly wild immature Chelonia indicate a very slow growth rate, usually less than 1/2 inch per year in straight line carapace length.

I hope that all your work is going well.

Sincerely,

GEORGE H. BALAZS
Jr. Marine Biologist

GBB:ec

January 14, 1977

Mrs. Marion Kim, Editor
SALTWATER AQUARIUM SOCIETY OF HAWAII
2777 Kalakaua Avenue
Honolulu, Hawaii 96815

Dear Marion:

Many thanks for your recent letter and copy of the MARINE AQUARIUM OBSERVER. I thought that your synopsis of my talk was excellent, and that the drawings provided nice examples. The inclusion of my turtle sighting report form is certainly greatly appreciated.

I very much enjoyed speaking to your group. If there is any way I can be of future assistance, please feel free to call upon me (tel. 247-6631 or 946-1760).

Sincerely,

GEORGE H. BALAZS
Jr. Marine Biologist

GBB:ec

January 14, 1977

The Honorable Charles T. Toguchi
Chairman, Ocean & Marine Resources Committee
House of Representatives
State Capitol - Room 320
Honolulu, Hawaii 96813

Dear Representative Toguchi:

Thank you very much for your recent correspondence concerning the creation of a new House Committee on the Ocean and Marine Resources. As the principal investigator of studies on Hawaiian sea turtles, I would be pleased to assist you in whatever way appropriate during the coming months.

Sincerely,

GEORGE H. BALAZS
Jr. Marine Biologist

GHB:ec

January 12, 1977

MEMORANDUM

To: Michio Takata, Director
Division of Fish and Game

From: George H. Balazs
Jr. Marine Biologist, HIMB

One of the early important findings of my green turtle surveys around the major islands is the identification of an aggregation of subadults in waters adjacent to the new reef runway. In view of the relatively small area involved, this could very well turn out to be the densest concentration of turtles around the Island of Oahu. The discovery was originally made by aerial spotting, however, I am now in the process of initiating underwater surveys of the area in order to obtain information of a more detailed nature. Questions that immediately arise in this interesting case are: 1) has the landfill construction of the runway destroyed valuable turtle feeding habitat, or has the construction somehow actually created environmentally conditions attractive to turtles? In other words, were turtles previously concentrated in this area, and 2) what effects, if any, will aircraft have on the turtles when the new runway is placed in service about one year from now? Hopefully we will eventually be able to answer these important questions.

My purpose in communicating this information to you at such an early date is twofold. First, I thought you would find it quite interesting. Normally there is a tendency to think of turtle aggregations today being principally located in remote areas, rather than virtually at our backdoor. Second, I thought you might want to alert your enforcement division of this finding so as to guard against any possible abuses.

I will pass on further information to your division as it becomes available.

GHB:ec

January 6, 1977

Mr. A. Frascella
Public Affairs Officer
Department of the Navy
Pacific Missile Test Center
Point Mugu, California 93042

Your reference: 0960
5720

Dear Mr. Frascella:

Under separate cover I am returning the film which your office sent to me on loan during early December. Unfortunately, I must inform you that, after four complete and careful viewings, I was still not able to find the footage showing sea turtles. I wonder if perhaps the wrong film was sent. A check into this matter would be most appreciated. I feel certain that the film sent does indeed deal with Barking Sands, however, there may be other reels covering this same environmental survey.

In April, 1976 Mr. George Nussear (code 3144) of your organization provided me with a copy of the report "A Study of Nearshore Marine and Beach Ecology, Pacific Missile Range Facility, Kauai, Hawaii" (December 1974) prepared by the Naval Oceanographic Office. I find that Illustration 1 (Bathymetry of Barking Sands nearshore area and locations of deep zone ecological transects) of the report was not included, and therefore would appreciate receiving a copy.

Thank you for your assistance in these matters.

Sincerely,

GEORGE H. BALAZS
Jr. Marine Biologist

GH3:ec
cc: Office of the Commander

January 6, 1977

Mr. Wolfgang Bayer
Wolfgang Bayer Productions, Inc.
Box 915
Jackson Hole, Wyoming 83001

Dear Mr. Bayer:

Thank you for your inquiry of 27 December. I would be pleased to assist you in whatever way feasible in the production of your film on wildlife in Hawaii. I should, however, point out that my specific area of research interest is marine turtles. Enclosed are several publications, including brochures on the Hawaiian Islands Wildlife Refuge, which you may find informative. You will note that entry into the Refuge units of the Northwestern chain is strictly controlled under the jurisdiction of the U.S. Fish and Wildlife Service. Inquiries concerning entry approval and transportation arrangements should be made to:

Mr. Palmer Sekora
Refuge Manager
Hawaiian and Pacific Islands
National Wildlife Refuges
337 Uluniu Street
Kailua, Hawaii 96744

I would be interested in viewing your film on the green turtles of Sabah. What sort of arrangements could be made?

Sincerely,

GEORGE H. BALAZS
Jr. Marine Biologist

GHB:ec

bcc: Palmer Sekora

January 5, 1977

To: Ronald B. Linsky
Director, Sea Grant (Spal 255)

From: George H. Balazs
Jr. Marine Biologist

As requested during our telephone conversation this morning the following paragraph can be substituted for the last paragraph on page 6 of my Sea Grant proposal.

It will be highly desirable for the Principal Investigator to attend a forthcoming meeting on sea turtles which will be sponsored by the National Marine Fisheries Service, Southeast Region. This will permit the presentation of project results thus far achieved, facilitate the exchange of information with other workers, and ensure representation for Hawaii in matters relating to the national sea turtle management program. A previous invitation (Oct. 1976) to a sea turtle meeting sponsored by the National Marine Fisheries Service could not be accepted due to an absence of travel funds.

mk

January 4, 1977

Captain Wayne H. W. Lee
Commander
Bellows Air Force Station
Headquarters 15th Air Base Wing (PACAF)
APO San Francisco 96553

Dear Captain Lee:

This is in response to your letter of 7 December requesting further information on my anticipated research activities on green sea turtles at your station. Answers to your specific questions are listed as follows.

1. The time period of the surveys is now planned to extend between 1 March 1977 - 1 March 1978.
2. It is anticipated that at least one visit per month will be necessary. Depending upon preliminary findings, it may be desirable to increase this frequency to once every two weeks.
3. The maximum duration of each visit will be the daylight hours of a single day. The day of week would be variable, dependent upon both my schedule for a particular month and congruency with your station's activities. Perhaps it would be acceptable for me to notify you 5-10 days in advance of each anticipated visit.
4. Depending upon preliminary findings, it may be necessary to use an inflatable boat and SCUBA gear in offshore waters.
5. I will be accompanied by a minimum of one and a maximum of three research assistants who are employees of the University of Hawaii. One of these individuals will always be Mr. Alan K. H. Kam.
6. My Hawaiian Green Turtle Management Study is sponsored by the Governor's Marine Affairs Coordinator and constituted through the Research Corporation of the University of Hawaii. Full liability insurance is therefore extended for all project activities.

Captain Wayne H. W. Lee

January 4, 1977

-2-

In a letter dated 21 October, 1976, Colonel O'Neal designated Mr. Res W. Comneford of Logistics Plans Division as my contact for matters relating to assistance which the Air Force may wish to provide to my green turtle research activities. It therefore seems appropriate for me to forward a copy of this correspondence to Mr. Comneford's office.

Thank you for your consideration of this request.

Sincerely,

GEORGE H. BALAZS
Jr. Marine Biologist

GBB:ec

cc: R. W. Comneford

January 3, 1977

Graduate Program Advisor
College of Fisheries
University of Washington
Seattle, Washington 98195

Dear Sir or Madame:

The purpose of this letter is to recommend Mr. Michael Lay for admission to your graduate program. My professional contact with Mr. Lay has been in the capacity of formal advisor to an undergraduate research project which he has recently conducted under the auspices of the University of Hawaii's Marine Option Program. During the course of this project Mr. Lay has sufficiently demonstrated to me that he possesses the initiative and ability necessary to succeed in graduate studies.

Please feel free to contact me if there are any specific questions I can answer concerning this recommendation.

Sincerely,

George H. Balazs
Jr. Marine Biologist

mk

January 3, 1977

Mr. Mike Lay
c/o General Delivery
Pahala, Hawaii 96777

Dear Mike:

Thank you for your explanatory letter of 18 December. As promised I have sent off a formal letter of recommendation to the Graduate Program Advisor, College of Fisheries, University of Washington.

Concerning the project report, you will probably recall that I had indicated during my last Big Island trip that I should be able to review and edit a completed draft copy before submission to the MOP office. In order to adhere to this reasonable plan, I am asking John McMahon to forward to me the full report when it is received.

Good luck on your application to graduate school.

Sincerely,

George H. Balazs
Jr. Marine Biologist

mk

