

9 April 1972
Aleipata, WS

George Balaza
HIMB
PO Box 1067
Kaneohe, Hawaii 96744

Dear George,

I was glad to hear that the 20 young Hawksbill turtles which we shipped from here arrived safely in Hawaii.

Our project here is primarily concerned with restocking the Hawksbill population by attempting to eliminate the high fatality rate young turtles are presumed to experience during their first few days of life. We carefully remove the nests which we find from the nesting beaches, transplant them to our hatchery, and then raise the hatchlings for a month after emergence. They are then released beyond the reef in deep water where they will hopefully be safe from the reef fish.

The specimens that you have are unique in that they were from a clutch that hatched out naturally on the nesting beach and was discovered just prior to emergence. This occurred on 14 February 1972 on Nuulua Is., Western Samoa. Of 213 eggs, there were exactly 200 hatchlings, 2 deformed embryos, and 11 infertile eggs. The incubation period is not known for this particular clutch, but one that had ~~hatched~~ hatched on the same day back at the station had an incubation period of 64 days. The measurements we took for the turtles of the clutch you have represented are as follows:

Carapace length:	Range	30-42.5 mm	Aver.	40.8 mm
"	width:	" 28.5-33.0	"	29.9
Plastron length:	"	30.5-33.5	"	32.3
Head width:	"	14	"	14

These measurements were recorded by my co-worker, Wayne Witzel. Weights were not taken due to the lack of a scale.

The turtles you have were fed chopped fish and razor clam (Penna) until shipment, which is the standard feed at the moment. Obviously this is a rather expensive way to achieve our ends, and we are presently experimenting with a biscuit made of mashed ripe bananas and fish meal that has been dried in the sun. We have used this as a feed for some older turtles which we have kept for a year, but have yet to try it on the young turtles. As bananas are plentiful here, and fish meal is imported as pig feed, we find this to be a cheap source of turtle feed. Unfortunately, it tends to foul the water in the tanks quickly, and as we can't afford to have constantly circulating sea water, this presents a severe handicap. We also plan to experiment with fish meal suspended in gelatin, which would probably not foul the water as quickly, but also would be too expensive for us here.

I feel certain that we will eventually work out a diet which consists primarily of the banana-fish meal biscuit, which, with the right proportions of each ingredient, will not quickly disintegrate in the water.

For a while disease was a problem with a group of turtles which

we had kept for several months. Due to pump problems, their water was not changed as often as necessary, and this may have been one of the causes of the disease. However, no doubt the diet was also partially responsible. The disease took the form of ulcers on the head, neck and flipper regions. It was either a fungus or a bacteria, possibly the latter as the ulcers appeared to improve with the application daily of the penicillin cream Neosporin.

It was this disease which caused us to abandon of hopes of establishing a turtle ranch, where we had hoped to raise turtles for export to Japan as a tourist item. We could envision this disease as a recurring problem which, due to our isolation from institutions which could conceivably help us combat it, would continually deplete the numbers of turtles, thus making the project both cruel to the turtles and uneconomically feasible to the government or private investor. Also, this project will soon be turned over to local personnel, who would have a much more difficult time combating this problem.

This problem could possibly be eliminated if the turtles were kept in pens in the lagoon, but that is an entirely different proposition. For Samoa, in particular, it would probably not work out well as Samoan tradition decrees that anything which is in the sea is community property, so theft would be a considerable problem.

All the hatchlings that we release are marked by removing one of the marginal plates. Each year we plan to remove a different marginal plate; last year it was the 8th plate on the ~~left~~ right hand side; this year it is the 8th plate on the left side. If you ever hear of anyone recovering a turtles ~~some~~ marked we would greatly appreciate it if you could inform us about it.

We hope to hear from you again soon,

~~_____~~ esp. about any nutritional aspects of turtle raising
you should come up with

Sincerely yours,

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Alan C. Banner
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