

January 22, 1973

To: Dr. Albert Benedict, Microbiology
Snyder 207

From: George H. Balazs, HDMB
Animal Nutritionist

Subject: Marine Turtle Nutrition Project

In reviewing my records on the Marine Turtle Nutrition Project which Dr. Ernie Ross and myself are conducting, I noted that 6 infertile turtle eggs were transferred from HDMB to your facility at the end of August and 8 more during the middle of September. It was my understanding that you were going to examine these specimens for the presence of antibodies.

I would very much like to know if any significant findings were made and whether or not the eggs were of benefit to you in your research. Any feedback information would be greatly appreciated.

Sincerely,

George H. Balazs
Animal Nutritionist

ns

cc: John E. Bardach
E. Ross

January 24, 1973

MEMORANDUM

TO: George H. Balazs
HIMB, Coconut Island

FROM: Albert A. Benedict
Chairman

SUBJECT: Marine Turtle Nutrition Project

In answer to your memo of January 22, yes we were able to detect a 5S immunoglobulin in the yolk--an immunoglobulin with a light heavy (H) chain. We were fortunate to have made this finding as the eggs were severely dehydrated.

When we write this up for publication, I shall give you plaudits for supplying the eggs and I will send you a reprint of the paper. In the meantime, thank you for your help.

Albert A. Benedict

AA3:msm

cc: John E. Bardach
E. Ross

SUPER SUPPLEMENT, INC.

301 W. 11th St., Kansas City, Missouri 64105

Telephone 474 4544—Area Code 816

Dr. Chase Wilson
President

June 23, 1972

Mr. Ernest Ross
Poultry Scientist
University of Hawaii
Henke Hall - Room 106
1825 Edmondson Road
Honolulu, Hawaii 96822

Dear Sir:

Thank you for your letter of June 15, inquiring about our pellet improver. Attached are various items which I believe will be of interest to you. If we can answer any questions or be of further service, please feel free to contact us.

seb
Enc.

Sincerely yours,

C. R. Jones
C. R. JONES

SUPER SUPPLEMENT, INC.
301 W. 11th St., Kansas City, Missouri 64105
Telephone 474 4544--Area Code 816

Dr. Chase Wilson
President

April 28, 1972

M I C R O L I T E S U C C E S S

1. One of the nation's largest feed manufacturers has now set up shipping schedules for 40 ton cars of Microlite to their multiple plant locations. Their tests showed
 - a. Improved nutrition
 - b. Top quality pellets
 - c. Less power used in pelleting
 - d. Other benefits as confirmed also by others listed below.

2. Another one of the nation's large multiple plant operations found
 - a. Less caking and bridging in bins
 - b. Reduced pelleting time
 - c. Greater "flowability" of finished feeds in mechanical feeding systems.

They are now ordering carloads of Microlite.

3. A strong, aggressive regional manufacturer reported, "This is the best product we have ever used in pelleting feeds." They are now ordering truckloads of Microlite.

4. A local manufacturer stated "We are now having trouble getting rid of other products that we already had on hand since we have started adding Microlite to feed for our farmers and ranchers. They like it!"

5. A quality manufacturer told us "Since we started adding Microlite to all of our swine feeds we have gone a long way toward developing healthier, better-doing pigs. We don't see the borderline mineral deficiencies that were previously prevalent. Tail-biting has about completely stopped. Needless to say, our farmers are happy with the results."

6. One of the country's leading protein and mineral block manufacturers is now using Microlite in all production. It is a great aid in making good firm blocks but at the same time prevents blocks from becoming too hard. This makes for good animal consumption with good palatability. Weather-cracking and checking is also reduced in the blocks.

These and other success stories are proving Microlite to be a valuable ingredient in the feed industry. It is now being used across the nation for improved feed manufacturing and better nutrition.

If we can give you any help or further information, please do not hesitate to write us or call us collect.

Sincerely yours,

SUPER SUPPLEMENT, INC.

Chase Wilson

CHASE WILSON
President

seb

SUPER SUPPLEMENT, INC.

301 W. 11th St., Kansas City, Missouri 64105

Telephone 474 4544—Area Code 816

Dr. Chase Wilson
President

June 2, 1972

MICROLITE REPORT

LESS COST!

IMPROVED NUTRITION !! -- is of paramount concern to everyone in the formula feed business. Because of this you will be much interested in the attached letter from Van-Pak Farms. This is one of Kansas' largest and most successful hog operations. They are doing a top job.

Minerals in Microlite are very highly available to the animal. They also appear to enhance the availability of other minerals in the feed -- this is improved nutrition from Microlite.

In addition to the high nutritive value of Microlite, it is a wonderful aid in pelleting to do the following:

1. Reduce pelleting time.
2. Reduce power requirements for pelleting.
3. Reduce wear on pellet dies.
4. Reduce caking and bridging of manufactured feed -- all feeds, but especially feeds containing urea.
5. Produces a good, hard, firm high quality pellet with no other binder added -- just Microlite.
6. Less Money!

Many feed manufacturers are now using Microlite in all of their feed formulas. This is helping their farmer feeders to improved nutrition!

Sincerely yours,
Chase Wilson

CHASE WILSON

seb
Enc.

VAN-PAK CONSTRUCTION, INC.

Contractors

BUFORD J. VAN LOENEN, PRESIDENT

P. O. BOX 28

HENRY PAKKESIER, JR., VICE PRESIDENT

PHONE 56

PRAIRIE VIEW, KANSAS 67664



April 24, 1972

Super Supplement, Inc.
301 West 11th St.
Kansas City, Mo.

Dear Dr. Chase Wilson:

We have been using Micro-Lite in our hog rations for over three years, and have found the results to be very favorable.

Our farrowing operation farrows approx. 3000 pigs per year. We use a 5% Micro-Lite formula, which we find to be very beneficial. Micro-Lite is fed in all sow rations. We find it helps in uniformity of pigs and also in the iron content required for their daily needs. The pigs are fed Micro-Lite at a 5% level in all of their feed. By using this feeding program we eliminated all iron shots and find that it curbs tail biting to a very minimum. Last year our farrowing operation had a 10.2 pig average, which we consider very good.

We think Micro-Lite has played an important part in our hog operation. When the hog price goes down we really appreciate what it is doing for us.

If at any time you desire more information, please feel free to call on us.

Very truly yours,

Van-Pak Farms

Buford J. Van Loenen
Buford J. Van Loenen
Co-owner

Van-Pak Farms, subsidiary to Van-Pak Construction, Inc.

Telephone: 913 973-2212

MICROLITE

USE MICROLITE TO

1. Supply improved nutrition.
2. Reduce pelleting time -- up to 30%, depending on formula.
3. Reduce wear on pellet dies.
4. Reduce caking and setting up in all feeds -- especially valuable in urea feeds -- up to high levels of urea.
5. Improve texture and flowability of all feeds.
6. Eliminate use of a pellet binder for a top quality pellet.
7. Improve palatability of all feeds.
8. Increase iron and hemoglobin level of bloodstream in baby pigs.
9. Improve egg shell quality and texture.
10. Improve total mineral metabolism.

CHEMICAL ANALYSIS OF MICROLITE

Si	21.41%	K	2.22%
Mg	13.20	Ca	3.69
Al	3.26	Ti	2.06
Fe	5.72		

RATE OF USAGE

All feed (swine, poultry, dairy, etc.) 50# per ton.
Low urea feeds (up to 35% protein equivalent) 75# per ton.
High urea feeds (up to 65% protein equivalent) 100# per ton.

For more information and for ordering Microlite, call or write

SUPER SUPPLEMENT, INC.

301 W. 11th St., Kansas City, Missouri 64105
Telephone 474 4544—Area Code 816



ALBERS MILLING COMPANY

A Division of Carnation Company

SUITE 204 • 800 WEST 47TH STREET
KANSAS CITY, MISSOURI 64112

Telephone: (816) PLaza 3-3286

February 3, 1972

Mr. C. R. Jones
Super Supplement, Inc.
301 West 11th Street
Kansas City, Missouri 64105

Dear "Chuck":

Experience with Microlite as a Nutrient Additive and Pelleting Aid

Micro-Minerals, better known as Microlite, is a special layered clay silicate that is mined from the ground and processed by the Micro-Lite, Inc. of Emporia, Kansas. It fits into the same general class as sodium bentonite and verxite, but it appears to have some unique properties which set it apart from the other above silicates.

My first close experience with the nutritive aspects of Micro-Lite was in testing it in swine rations at the Skyview Research Farm, Trenton, Missouri. The exploratory results showed that it was highly palatable to young baby pigs, and appeared to hold the hemoglobin and packed cell volume on a more constant level in baby pigs at the 4th or 5th day when used along with the iron injection at one day of age, compared when the Micro-Lite was not added to the sow's ration just prior to farrowing. Baby pigs relish the product very much. We followed the feeding of the Micro-Lite (Micro-Minerals) for the first four weeks of the baby pig's life and it appeared to hold up the hemoglobin level better than the controls under the experimental conditions. Additional work needs to be done to confirm these results. The effect appears to be due to the highly available Iron (Fe) in the layered silicate. However, the highly available Magnesium (mg) and Potassium (K) may have some associative effects. Other product users have reported favorable effects on swine responses in gains, less tailbiting, and health.

In a commercial exploratory test in the Eastern part of U. S., Micro-Lite was added to a mineral mixture or beef supplement as a preventative of grass tetany for beef cattle or dairy cattle that had previously experienced "grass" tetany, a disease associated with a lack of Magnesium. It was fed to the cattle in February prior to going on pasture. There were no control animals to compare with; only the previous record the year before was available to use as a yardstick. The five groups of animals tested on an observation basis did not come

February 3, 1972

down with "grass" tetany. These results are only indicative of the highly available Magnesium in Micro-Lite, and possibly of the Potassium. This needs further follow-up on how it should be programmed to get the best job done in the above areas. Again, this points out that products mined from good ole' earth previously considered inert or nutritionally inactive do show some significant nutritional benefits.

In addition to the possible nutritional effects observed in the above notations, the Albers Milling Company tested the pelleting aid, anti-caking and non-bridging effects of Micro-Lite in their own urea supplements or feeds. It has been observed that it makes a firm and hard pellet, prevents caking (urea bags stacked ten high for 30 days showed that the bottom bag crumbles easily), and reduced the bridging effect in bins. In addition, the pellet production time was reduced by 10% to 20% with no apparent increased wear on pellet dies. The urea pellet produced was also a nicer looking product. It should be pointed out that the right levels of Micro-Lite, pelleting controls and the ingredients being pelleted will definitely affect the quality of the pellet. These results are confirmed by certain other feed mills that have evaluated this product in pelleting tests.

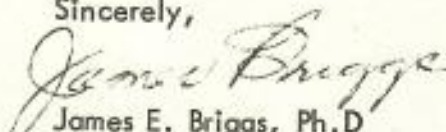
Micro-Lite has demonstrated excellent moisture-holding properties which may justify its position as an additive to prevent caking in mineral mixtures as well as urea-type feeds.

Other suggestions on the use of Micro-Lite as a beneficial additive may be in the area of tail-biting (few reports indicate such a factor) and dirt eating in ruminants.

More research is needed in the area of how it can best be programmed into various feed formulas for swine, beef, dairy, horses and poultry. Some real basic and practical research already completed has strongly indicated its potential nutrient additive value. Micro-Lite may be so unique because of its specific cation (Iron, Magnesium and Potassium) exchange ability within the digestive system of the animal, thus making it more highly available for use to the animal, compared with other trace mineral sources. Exploratory basic research in this area indicates the great possibility of Micro-Lite of performing this way which will set it apart from the other well known clay silicates on the market. Right now the potential looks good.

I believe that every feed manufacturer who is interested in improving the performance of livestock rations should study and test Micro-Lite intensely as to how it best works. In the meantime, the Micro-Lite Corporation should intensify its efforts to establish the best program for using Micro-Lite through applied research. I believe then the feed manufacturer and the Micro-Lite producer can be mutually benefited. The above product shows great promise in improving some of the weak points in building the best performing ration.

Sincerely,



James E. Briggs, Ph.D
Lab Mix Department
Eastern Specialty Division
Carnation-Albers Milling Company

seb

We have been using this product successfully for 18 months.

at
Rough please
send Results and disc

Weight Gain

The mean body weight gains and feed conversion ratios by three-week periods are shown in Table 2. The group receiving diet 305S grew at a greater rate than any of the other treatments. This was true for carapace length and width as well as for body weight gains. Figures 1, 2, and 3 show carapace length, carapace width, and mean body weight, respectively.

There was little difference in gains of ~~the~~ group 2 fed ^{diet 3035} the first period and Oregon moist pellet, the second period, and group 1 receiving diet 305S. There was also very little difference in rate of gain between groups 1 and 2 from the 3rd through the 6th periods when group 2 received ^{diet} 305V (305 + chicken viscera). After the 6th period group 1 continued to increase their gains in each period while group 2 as well as the control groups tended to slow up in their rate of gains.

There was considerable variation between the two ~~groups~~ control groups. Control group 1 grew so poorly during the first two periods that they were removed to the nursery where they received individual attention, a wider variety of food and an occasional trip to the beach. Under such ministrations they regained their appetites and were returned

$$\frac{1.06}{1.15} = \frac{1.06}{1.15}$$

to the experiment.

Control group 2, on the other hand, made good gains the first 3 periods. The rate of gain fell off, ^{however,} during the 4th period but gradually increased thereafter. ~~By the~~ ^{not quite} ~~the~~ ^{at the} ~~eight~~ ^{and 8th} ~~period,~~ ^{period,} when the rate of gain of the two control groups was approximately the same, control group 2 was changed over to a prepared food, diet 321 (Table 1). The rate of gain of this group for the 9th period was depressed somewhat as a result of the change in type of feed. However, after the adjustment to the feed was made the rate of gain ~~again~~ increased during the 10th period.

Feed efficiency

The groups receiving the formulated diets were generally less efficient in their food utilization than were the groups receiving the control diets of fish and squid. The efficiency of feed utilization of group 1 was fairly uniform throughout the study averaging 1.1 grams of dry feed consumed per gram of gain in body weight. Group 2 which received diet 305 plus chlorella viscum, was less efficient with an average feed conversion of 1.5. The ^{feed conversion of the} control groups averaged about 0.9 grams fish and squid (dry weight) per gram of body weight gain. The first period after control group 1 was switched to diet 321 the feed conversion was much poorer although the efficiency of utilization greatly improved during the following period, suggesting

an adaptation to the formulated feeds. This also appeared to be true for groups 1 & 2 which had poorer feed conversion ~~at~~ for the first period than during the subsequent periods.

Carapace measurements

Figure 1 and 2 show the relative carapace length and widths of the experimental groups while Figure 3 compares the body weights over the same period. There is a fairly constant ratio between carapace length and width.

Discussion

~~The greater growth observed during the experiment~~
~~resulting from the 20% increase in feed compared to~~
~~that of the control~~
~~It is apparent from the graphs that under~~
~~the light of this study, small and large~~
~~and not possible~~

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 penicillan 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 som marked we would greatly appreciate it if you could inform us about it.

We hope to hear from you again soon,

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

Sincerely yours,

al

Alan C. Banner
Fisheries Division
Agriculture Dept.
Apia, Western Samoa

Date	Group	Animals In Group	Mean weight, g	Mean length, mm	Mean width, mm	Weekly Increase			
						weight	length	width	
5/1	1	no change	48.0	64.5	54.8	8.2	3.1	3.0	146 143 137 131
	2	no change	54.9	68.1	58.2	7.7	3.2	2.6	
	3	no change	47.0	64.2	55.6	6.9	3.6	2.5	
	4	no change	41.7	60.7	51.6	5.6	3.2	2.7	
5/8	1	no change	56.2	67.8	57.8	8.2	3.3	3.0	155 175 175 155
	2	no change	62.6	71.4	60.8	7.7	3.3	2.6	
	3	no change	53.9	67.2	58.1	6.9	3.0	2.5	
	4	no change	47.0	63.2	54.0	5.3	2.5	2.4	
5/15	1	no change	66.0	72.2	61.2	9.8	4.4	3.4	135 135 135 135
	2	no change	72.2	74.6	63.2	9.6	3.2	2.4	
	3	no change	63.9	70.8	60.9	10.0	3.6	2.8	
	4	no change	56.9	68.5	58.6	9.9	5.3	4.6	
5/22	1	no change	72.4	75.5	64.9	6.4	3.3	3.7	142 142 142 142
	2	no change	74.4	76.2	64.5	2.2	1.6	1.3	
	3	no change	67.4	73.8	63.8	3.5	3.0	2.9	
	4	no change	62.1	71.7	61.5	5.2	3.2	2.9	
5/29	1	no change	83.0	79.0	67.1	10.6	3.5	2.2	146 143 137 131
	2	no change	82.4	78.1	67.6	8.0	1.9	3.1	
	3	no change	70.9	76.2	68.0	3.5	2.4	4.2	
	4	no change	73.6	75.7	64.4	11.5	4.0	2.9	
6/5	1	no change	98.8	83.8	70.6	15.8	4.8	3.5	146 143 137 131
	2	1,2,3,4,3/5-3	82.6	79.1	67.6	15.8	1.0	0.0	
	3	2,3,4	93.3	83.3	71.0	22.4	7.1	1.3	
	4	no change	89.2	81.0	68.9	15.6	5.3	4.5	
6/12	1	no change	109.0	88.0	73.9	10.2	4.2	3.3	146 143 137 131
	2	no change	90.4	81.4	69.4	7.8	2.3	1.8	
	3	no change	105.7	87.5	74.7	12.4	4.2	3.7	
	4	no change	96.9	84.2	71.2	7.7	3.2	2.3	

109.0 43
 90.4 18
 105.7 42
 96.9 40

88.0 15.8
 81.4 6.8
 87.5 16.7
 84.2 15.7

73.9 12.7
 69.4 6.2
 74.7 13.8
 71.2 12.6

146
 143
 137
 131

0.97
 1.21
 1.17
 0.81

Date	Group	Animals in group	Mean weight, g	Mean Length, mm	Mean width, mm	Weekly Increase		
						weight	length	width
6/19	1	no change	123.9	92.8	77.9	14.9	4.8	4.0
	2	no change	99.7	84.4	72.1	9.3	3.0	2.7
	3	no change	122.3	92.8	78.7	16.6	5.3	4.0
	4	no change	110.9	87.7	74.8	14.0	3.6	3.6
6/26	1	no change	144.8	98.5	81.2	20.9	5.7	3.3
	2	no change	110.2	88.0	74.0	10.5	3.6	1.9
	3	no change	138.3	98.0	82.0	16.0	5.2	3.3
	4	no change	129.2	93.0	78.0	18.3	5.3	3.2
7/3	1	no change	161.0	101.2	84.5	16.2	2.7	3.3
	2	no change	121.4	89.8	76.2	11.2	1.8	2.2
	3	no change	155.0	101.7	85.7	16.7	3.7	3.7
	4	no change	141.0	95.8	81.8	11.8	2.8	3.8
7/10	1	no change	176.1	105.2	87.5	15.1	4.0	3.0
	2	no change	130.7	92.9	79.0	9.3	3.1	2.8
	3	no change	176.5	107.7	89.7	21.5	6.0	4.0
	4	no change	158.6	100.7	84.7	17.6	4.9	2.9
7/17	1	no change	208	112	92	31.9	7	5
	2	no change	146	96	82	15.3	3	3
	3	no change	200	112	93	23.5	4	3
	4	no change	178	105	87	19.4	4	2
7/24	1	no change	229	116	95	21	4	3
	2	no change	158	103	84	12	7	2
	3	no change	211	115	95	11	3	2
	4	no change	190	106	90	12	1	3
7/31	1	no change	261	118	99	32	2	4
	2	no change	175	102	87	17	0	3
	3	no change	237	118	99	26	3	4
	4	no change	208	110	93	18	4	3

~~1.16~~
~~1.11~~
~~1.12~~
~~0.96~~
 0.86

15.6
 17.0
 18.0
 11.5
 15.0
 20
 17.1
 17.1

1.16

Date	Group	Animals in group	Mean weight, g	Mean length, mm	Mean width, mm	Weekly increase			
						weight	length	width	
21 8/7	1	no change	291	127	104	30	9	5	1.00
	2	no change	194	106	90	19	4	3	0.39
	3	no change	264	125	103	27	7	4	1.30
	4	no change	229	114	96	21	4	3	0.89
22 8/14	1	no change	335	-	-	44	-	-	-
	2	1,2,3,3-3/5	216	-	-	22	-	-	-
	3	no change	299	-	-	35	-	-	-
	4	5/1,1/2,3/1,5/2, 4,2/4	259	-	-	30	-	-	-
23 8/21	1	no change	373	-	-	38	-	-	-
	2	no change	234	-	-	18	-	-	-
	3	no change	324	-	-	25	-	-	-
	4	no change	280	-	-	21	-	-	-
24 8/28	1	no change	434	-	-	61	-	-	-
	2	no change	267	-	-	33	-	-	-
	3	no change	355	-	-	31	-	-	-
	4	no change	315	-	-	35	-	-	-
25 9/6	1	no change	496	153	122	62	26	18	1.06
	2	no change	300	124	104	33	18	14	1.25
	3	no change	404	145	118	49	20	15	1.23
	4	no change	362	134	111	47	20	15	1.01
26 9/13	1	no change	549	-	-	53	-	-	-
	2	no change	322	-	-	22	-	-	-
	3	no change	433	-	-	29	-	-	-
	4	no change	397	-	-	35	-	-	-
27 9/20	1	no change	608	-	-	59	-	-	-
	2	no change	342	-	-	20	-	-	-
	3	no change	460	-	-	27	-	-	-
	4	no change	437	-	-	40	-	-	-
28 9/27	1	no change	679	-	-	71	-	-	-
	2	no change	380	-	-	38	-	-	-
	3	no change	506	-	-	46	-	-	-
	4	no change	471	-	-	34	-	-	-

29
30

Date	Group	Animals In group	Mean weight, g	Mean length, mm	Mean width, mm	Weekly increase weight	Weekly increase length	Weekly increase width
10/4	1	no change	756	-	-	77	-	-
	2	no change	425	-	-	45	-	-
	3	no change	550	-	-	44	-	-
	4	no change	516	-	-	45	-	-
10/11	1	no change	811	184	148	53	31	26
	2	no change	447	145	119	22	21	15
	3	no change	567	169	135	17	24	17
	4	no change	559	160	133	43	26	22

10/18	1	no change	883	-	-	72	-	-
	2	no change	470	-	-	23	-	-
	3	no change	601	-	-	34	-	-
	4	no change	600	-	-	41	-	-
10/25	1	no change	953	-	-	70	-	-
	2	no change	496	-	-	26	-	-
	3	no change	642	-	-	41	-	-
	4	no change	639	-	-	39	-	-

11/1	1	no change	1020	203	162	67	19	14
	2	no change	499	152	124	29	7	5
	3	no change	673	180	145	31	11	10
	4	no change	671	173	141	32	13	8

length/width

1.25
1.23
1.24
1.23

wt/length

5.0
3.3
3.7
3.9

wt/width

1020
499
673
671

length

203
152
180
173

width

162
124
145
141

weight

67
29
31
32

length increase

19
7
11
13

width increase

14
5
10
8

33

32

December 6, 1972

Mr. Eugene Kridler
Bureau of Sports Fisheries
& Wildlife
Kailua, Hawaii 96734

Dear Gene:

Enclosed are copies of a letter from Senator Fong and a copy of a letter from J. P. Linduska responding to Fong's request for information. Apparently, the answer is still "No!".

They apparently overlook or misinterpret two factors: (1) We need the Hawksbills to make a comparative study. We have no way of knowing whether the requirements of the Hawksbill are the same as that of the greens. If they are, then we can use greens in further studies, but we have to run the initial studies to find out. And, (2) we have no intention of sacrificing these animals. We anticipate releasing at least 80-90% when our study is completed.

Thanks for your continued support.

Aloha,

Ernest Ross
Poultry Scientist

ER:esm

P.S. --- I think your testimony before the committee last Friday helped enlighten the committee members on the question of sea turtles, and I am sure will result in a positive recommendation for the protection of the turtles both in the 3 mile limit at French Frigate as well as among the major islands.

JOHN L. MCCLELLAN, ARK., CHAIRMAN

WARREN G. MAGNUSON, WASH.
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United States Senate

COMMITTEE ON APPROPRIATIONS
WASHINGTON, D.C. 20510

THOMAS J. SCOTT, CHIEF CLERK
WM. W. WOODRUFF, COUNSEL

November 28, 1972

Dr. Ernest Ross
College of Tropical Agriculture
University of Hawaii
Henke Hall, Room 106
1825 Edmondson Road
Honolulu, Hawaii 96822

Dear Doctor Ross:

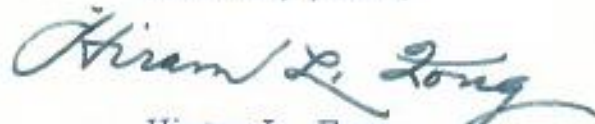
As a result of your October 2 letter, I wrote to the Bureau of Sport Fisheries and Wildlife to endorse the application to import hawksbill hatchlings for scientific study. I asked for a detailed explanation of the Bureau's rejection of the application and requested reconsideration of the matter.

I have now received the response of the Bureau, a copy of which is enclosed for your information. I regret the reply is not favorable.

If you have any further information or comment, I would be pleased to hear from you.

With aloha -

Sincerely yours,


Hiram L. Fong

HLF:lnk
Enclosure

UNIVERSITY OF HAWAII

Marine Programs

November 8, 1972

Mr. Keith Shriner, Chief
Endangered Species and International
Activities
Department of the Interior
1717 H. Street N.W.
Washington, D.C. 20240

Dear Mr. Shriner:

Despite the fact that I was in Washington for the Sea Grant Director's meetings October 24-25, I had to leave town before I was able to contact your office on a matter of considerable interest to your group and to those of us that are at the same time interested in the recovery of Hawksbill turtles and their utilization to satisfy food demands in some areas of the Pacific.

I understand that your office to date has taken a rather dim view of our plans to help in the process of the reestablishment of Hawksbills in Western Samoa. Our immediate goal is to provide nutritional and feed formulation advice that would enable an ongoing hatchery operation to provide a good ration in a form that could be mechanically fed.

My understanding of the Western Samoa project is as follows:

1. In response to fairly critical demands for additional supplies of protein the fisheries office has undertaken, among other programs, a direct hatchery operation for the Hawksbill turtle.
2. The situation is such that the Hawksbill and the green sea turtle have been extremely reduced in number in Western Samoan waters as a result of human activity--nearly complete population encroachment on shoreline nesting sites and capture for food and shell.
3. No green sea turtle nesting sites are known to the Fisheries officer in the principal islands of Western Samoa and only a few nesting sites are known for the Hawksbill.
4. The Fisheries officer has initiated a hatchery operation using a portion of the total Hawksbill clutches. The eggs are recovered in intact clutches surrounded by the sand in which they were laid. A special crate has been developed for this purpose resembling, if you will, a large cookie-cutter with a bottom panel that can be slid in from the side. A typical cycle in gathering eggs begins with an observation of a laying female. When the laying is over and the female has departed, the top of the clutch is found by

digging. When the location of the clutch has been determined, the "cookie-cutter" frame is pushed down into the sand so that a good quantity of the original sand is taken with the eggs. The original covering of sand is then placed back in the frame. With the frame in place, the sand around the outside is removed to allow a bottom panel to be inserted well beneath the clutch of eggs. The intact clutch and surrounding sand is then transferred to a fenced and protected hatchery site and "re-laid" at the same height above and distance from the sea.

5. Hatching percentages have been very good (ranging from 80 to 95% I believe).

6. Survival to one month of age under their feeding regime has also been good.

7. At one month of age the hatchlings are released. These total some 13,000 so far.

8. As the operation is new and turtles take some time to develop, there have been no dramatic demonstrations of success. However, several exciting observations of large "flocks" of young Hawksbills have been made. We can only surmise that this represents normal activity under more normal population densities since this is a phenomenon that the "old-timers" don't remember and definitely more young ones are being noticed.

9. The situation at the hatchery is such that with their very plain diet of fishmeal and ripe bananas we suspect that there is considerable room for improvement and we would like to help. Also in conjunction with developing a more complete ration we would propose to formulate that ration in pellets or "crumbles" that could be mechanically fed. Within the group working on aquacultural nutrition at the University of Hawaii, we think we have the concern and talent to succeed at our proposed plan.

To proceed we need your approval for an importation of a small number of Hawksbill turtles to make the Western Samoan program a greater success and to get this species off the Endangered Species List.

Therefore, I am asking that you run these plans through your mind again. I will phone you in a short while to get your personal feelings in the matter. If you would care to phone us, our number is:

(808) 9447331 or (808) 9410060

Sincerely,

John L. Lall
Coordinator, Advisory Services

cc: Dr. Ernest Ross, Department of Animal Sciences; Dr. Phillip Helfrich, Hawaii Institute of Marine Biology; Mr. Bill Travis, Fisheries Officer, Western Samoa; Mr. Gene Kridler, Wildlife Administrator, U.S. Dept. of the Interior.



United States Department of the Interior
FISH AND WILDLIFE SERVICE
BUREAU OF SPORT FISHERIES AND WILDLIFE
WASHINGTON, D.C. 20240

Honorable Hiram L. Fong
United States Senate
Washington, D. C. 20510

NOV 22 1972

Dear Senator Fong:

This responds to your letter endorsing Dr. Ernest Ross' request to import 300 to 400 hawksbill turtles for scientific study. Dr. Ross earlier submitted an application to our Bureau which we declined.

The hawksbill turtle is one of several sea turtles considered to be "threatened with worldwide extinction." It is named on the U. S. Department of the Interior's List of Endangered Foreign Fish and Wildlife as required by the Endangered Species Conservation Act of 1969 (16 U.S.C. 668aa; 83 Stat. 275). This act authorizes the Secretary of the Interior to issue permits to import such animals for scientific, educational, propagational, or zoological purposes.

Endangered species must be provided every assistance in their struggle for survival. Therefore, applications to import these creatures are subjected to a thorough review, especially if importation would result in death or loss of reproductive potential. In such cases the following minimal criteria must be met:

1. The applicant or his collaborators must be well qualified.
2. His demonstrated area of competence must be such that he would be expected successfully to carry out his proposal.
3. Adequate facilities must be available.
4. He must show that no non-endangered form could be substituted for the requested endangered species.
5. The results of his proposal would be expected to enhance the likelihood of the survival of that species.

Dr. Ross' application was reviewed carefully by personnel of this Bureau and by non-governmental scientists actively working in herpetological research. This review raised no significant questions concerning Dr. Ross' professional competence, facilities, or technical expertise. However, serious doubts were raised regarding the sacrifice of several hundred endangered animals, especially since the research could be conducted using non-endangered forms.

Dr. Ross was so notified by letter dated September 7, 1972.

We appreciate your interest in this matter and hope the above information will clarify our position. If we can be of further assistance to you, please feel free to call upon us.

Sincerely yours,

(sgd) J. P. Linducha

Associate Director

February 14, 1973

Honorable Hiram L. Fong
United States Senate
Washington, D.C. 20510

Dear Senator Fong:

Thank you for your letter of recent date with the news of the Bureau of Sports Fisheries' agreement allowing us to import several hundred hawksbill turtles for scientific purposes. This is good news, indeed.

Although we have not yet received the official permit, we are making plans for future studies.

Thanks again for your help in obtaining the permit.

Sincerely,

Ernest Ross
Poultry Scientist

ER:esm

JOHN L. MCCLELLAN, ARK., CHAIRMAN

WARREN G. MAGNUSON, WASH.
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MARK O. HATFIELD, OREG.
TED STEVENS, ALASKA

United States Senate

COMMITTEE ON APPROPRIATIONS

WASHINGTON, D.C. 20510

THOMAS J. SCOTT, CHIEF CLERK
WM. W. WOODRUFF, COUNSEL

February 1, 1973

Dr. Ernest Ross
College of Tropical Agriculture
University of Hawaii
Henke Hall, Room 106
1825 Edmondson Road
Honolulu, Hawaii 96822

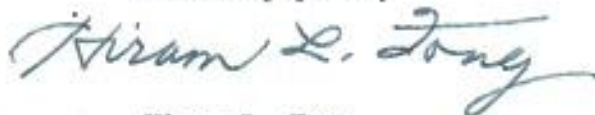
Dear Dr. Ross:

I assume that by now you have received word from the Bureau of Sports Fisheries and Wildlife on an agreement reached with the University of Hawaii on the importation of hawksbill turtles for scientific purposes. As you may recall, I wrote to the Bureau in your behalf last November on this subject. Although the reply was not favorable at that time, I am pleased that a successful agreement has now been reached which I trust will take care of the needs of your associates and yourself. A copy of the Bureau's latest letter is enclosed.

If I can be of further assistance, please let me know.

With aloha -

Sincerely yours,



HLF:lnc

Hiram L. Fong



ADDRESS ONLY THE DIRECTOR,
BUREAU OF SPORT FISHERIES
AND WILDLIFE

United States Department of the Interior
FISH AND WILDLIFE SERVICE
BUREAU OF SPORT FISHERIES AND WILDLIFE
WASHINGTON, D.C. 20240

In Reply Refer To:
FSF/SE
FSF 0618

JAN 26 1973

Dear Senator Fong:

This has further reference to our November 22 letter to you concerning Dr. Ernest Ross' request to import 300-400 hawksbill turtles for scientific study. A copy of our earlier correspondence is enclosed for your ready reference.

We have recently been in touch with Dr. Ross and his colleagues concerning their need for these turtles. As a result, we have reached an agreement that the animals may be obtained from captive sources, imported for nonlethal purposes and released into the wild upon termination of Dr. Ross' experiments. In view of this, we now have issued Dr. Ross the necessary permits to import these turtles.

We hope this information will be useful to you. If we can be of further assistance, please feel free to call upon us.

Sincerely yours,

(Sgd) E. V. Schmidt

DEPUTY Director

Honorable Hiram L. Fong
United States Senate
Washington, D.C. 20510

Enclosure



United States Department of the Interior

FISH AND WILDLIFE SERVICE
BUREAU OF SPORT FISHERIES AND WILDLIFE
WASHINGTON, D.C. 20240

ADDRESS ONLY THE DIRECTOR,
BUREAU OF SPORT FISHERIES
AND WILDLIFE

Received
12/18/72

Dr. Ernest Ross
Department of Animal Sciences
College of Tropical Agriculture
University of Hawaii
Henke Hall, Room 106
1825 Edmondson Road
Honolulu, Hawaii 96822

Dear Dr. Ross:

We have received your May 25 letter to the Director of the Bureau of Sport Fisheries and Wildlife in which you requested a reconsideration of your application to import a number of hatchling hawksbills for research purposes. We also have at hand Mr. Bill Travis's letter to Mr. Clinton Lostetter of our Portland Regional Office which indicates the specimens you wish to import would be produced in captivity.

Before reviewing your application further, we would appreciate your comments on the following specific items:

1. Will the hatchlings be from eggs produced in captivity or are they from eggs removed from the wild and subsequently hatched in captivity? In addition, would the turtles be released to the wild if they were not consigned to you?
2. From the material you have submitted to date, it is not clear whether or not the turtles will be sacrificed at the termination of your experiments. Please let us know specifically what disposition will be made of them when you have finished your experiments.
3. You will recall our earlier correspondence recommended that you first use a non-endangered form—perhaps the green sea turtle—as an experimental animal. We would appreciate receiving your comments as to why it is essential to utilize the hawksbill.

We will give your request further consideration upon receipt of this information.

Sincerely,

Earl B. Baysinger, Assistant Chief
Office of Endangered Species and
International Activities

UNIVERSITY OF HAWAII

College of Tropical Agriculture
Department of Animal Sciences

December 19, 1972

Mr. Earl B. Baysinger
Office of Endangered Species and
International Activities
Fish and Wildlife Service
Bureau of Sport Fisheries and Wildlife
U.S. Department of the Interior
Washington, D.C. 20240

Dear Mr. Baysinger:

Thank you for your letter of recent date. I appreciate the opportunity to clarify some of the points in my application.

(1) The hatchlings will come from Travis' Hatchery in Western Samoa. To my knowledge, there are no eggs produced in captivity anywhere in the world. The Samoan operation consists of transplanting intact nests from the wild and results in very high hatchability. The Western Samoa operation also involves feeding the hatchlings for the first month or so after which they are released to the wild. Mr. Travis has asked for assistance on the feeding phase and has offered facilities in Western Samoa for this purpose. However, the research would be much more meaningful if it could be carried out in our laboratories here where the necessary formulations and chemical analyses can be made. After our preliminary studies here, we hope to be able to use Mr. Travis' facilities to carry out field studies on promising formulations.

(2) Our agreement, worked out with Mr. Kridler of the Honolulu office of BSW and the Portland office, was to release the animals at the termination of the study after consultation with members of the local BSW office. While this procedure was first outlined in our proposed study with green sea turtles, we intended to follow the same procedure in our subsequent studies with the hawksbill turtles, consulting as well with Mr. Travis of Western Samoa concerning the most suitable areas for release of the turtles.

(3) Since there has been virtually no research done on the nutritional requirements of sea turtles, there is no way of knowing how much the requirements of the different genera may vary. We know that among domestic animals nutritional differences have been noted between strains of the same breed. Inasmuch as the request for assistance was for feeding the hawksbill turtle, it seemed desirable to make a comparative study using both the green and the hawksbill. Our present studies with the greens are providing us with much information on the nutritional requirements of the green sea turtle

but we don't know how much of it will apply to the hawksbill. Since the hawksbill is the endangered species, we feel it is important to work with it in anyway that would increase its chances for survival. By learning how best to feed the hawksbill, we can help those conservationists working to increase their numbers.

If there is any further information that I can provide, please feel free to call on me. Be assured that I share your concern for our endangered species. My interest in sea turtles was stimulated a number of years ago when on sabbatical leave at the University of Florida. We rescued some baby loggerhead turtles stranded on the beach in some seaweed and nursed them back to health. A visit later to a turtle hatchery where hatchlings were fed and later released showed the need for nutritional information.

Thanks again for your reconsideration.

Sincerely yours,



Ernest Ross

ER:hsm

January 4, 1973

Mr. Gene Kridler
Wildlife Administrator
Bureau of Sport Fisheries
& Wildlife
337 Ulunui St.
Kailua, Hawaii 96734

Dear Gene:

Enclosed for your information is the letter I received from Mr. Baysinger and my reply. I haven't had any reply as yet but will keep you informed.

Aloha and best wishes for the New Year.

Sincerely,

Ernest Ross
Poultry Scientist

ER:esm

Encls.

December 19, 1972

Mr. Earl B. Baysinger
Office of Endangered Species and
International Activities
Fish and Wildlife Service
Bureau of Sport Fisheries and Wildlife
U.S. Department of the Interior
Washington, D.C. 20240

Dear Mr. Baysinger:

Thank you for your letter of recent date. I appreciate the opportunity to clarify some of the points in my application.

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(2) Our agreement, worked out with Mr. Kridler of the Honolulu office of BSW and the Portland office, was to release the animals at the termination of the study after consultation with members of the local BPSW office. While this procedure was first outlined in our proposed study with green sea turtles, we intended to follow the same procedure in our subsequent studies with the hawksbill turtles, consulting as well with Mr. Travis of Western Samoa concerning the most suitable area for release of the turtles.

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Thanks again for your reconsideration.

Sincerely yours,

Ernest Ross

ER:hsm



United States Department of the Interior

FISH AND WILDLIFE SERVICE
BUREAU OF SPORT FISHERIES AND WILDLIFE
WASHINGTON, D.C. 20240

ADDRESS ONLY THE DIRECTOR,
BUREAU OF SPORT FISHERIES
AND WILDLIFE

Received
12/18/72

Dr. Ernest Ross
Department of Animal Sciences
College of Tropical Agriculture
University of Hawaii
Henke Hall, Room 106
1825 Edmondson Road
Honolulu, Hawaii 96822

Dear Dr. Ross:


We have received your May 25 letter to the Director of the Bureau of Sport Fisheries and Wildlife in which you requested a reconsideration of your application to import a number of hatchling hawksbills for research purposes. We also have at hand Mr. Bill Travis's letter to Mr. Clinton Lostetter of our Portland Regional Office which indicates the specimens you wish to import would be produced in captivity.

Before reviewing your application further, we would appreciate your comments on the following specific items:

1. Will the hatchlings be from eggs produced in captivity or are they from eggs removed from the wild and subsequently hatched in captivity? In addition, would the turtles be released to the wild if they were not consigned to you?
2. From the material you have submitted to date, it is not clear whether or not the turtles will be sacrificed at the termination of your experiments. Please let us know specifically what disposition will be made of them when you have finished your experiments.
3. You will recall our earlier correspondence recommended that you first use a non-endangered form-perhaps the green sea turtle-as an experimental animal. We would appreciate receiving your comments as to why it is essential to utilize the hawksbill.

We will give your request further consideration upon receipt of this information.

Sincerely,


Earl B. Baysinger, Assistant Chief
Office of Endangered Species and
International Activities

October 2, 1972

The Honorable Hiram L. Fong
U.S. Senate
Washington, D. C. 20510

Dear Senator Fong:

In cooperation with the Hawaii Institute of Marine Biology, the Bureau of Sports Fisheries and Wildlife, and the Sea Grant program, we have initiated a project to study the nutrition of the green sea turtle. The results of this project will have immediate application for conservationists who are feeding hatchlings for release, and long-range implications for the aquacultural potential of sea turtles. This research with the green sea turtle is presently in progress.

After the nutrition project was proposed, we received requests for nutritional help with Hawksbill turtles from both Western Samoa and Micronesia. We then decided to expand the project to include the hawksbill and other marine turtles. However, since the Hawksbill turtle is on the endangered list, it was necessary to make an application to the Director, Bureau of Sports Fisheries & Wildlife, Washington, D.C. in accordance with Title 50, Wildlife and Fisheries, Part 17, etc. This application was subsequently denied. A copy of the Bureau's letter of denial and my reply are enclosed for your information.

Your assistance in getting a reversal of the Bureau's ruling would be greatly appreciated.

Sincerely yours,

Ernest Ross
Poultry Scientist

ER:esm

Encl.



UNITED STATES
DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
BUREAU OF SPORT FISHERIES AND WILDLIFE
WASHINGTON, D.C. 20240

ADDRESS ONLY THE DIRECTOR,
BUREAU OF SPORT FISHERIES
AND WILDLIFE

Dr. Ernest Ross, Poultry Scientist
Department of Animal Sciences
College of Tropical Agriculture
University of Hawaii
Henke Hall, Room 106
1825 Edmondson Road
Honolulu, Hawaii 96822

SEP 7 1972

Dear Dr. Ross:

I am writing in reply to your August 10 letter concerning your application to import 300 to 400 hawksbill turtles.

We carefully have reviewed your proposal within our Bureau and have requested the opinions of knowledgeable herpetologists outside the Bureau. We have concluded that the proposal does not warrant the removal of these endangered turtles from the wild. No questions concerning either the validity of your proposal nor your qualifications were raised; however, it was felt it would be wisest to conduct the experiments utilizing nonendangered forms such as the green turtle.

Sincerely yours,

Acting Assistant Director

September 25, 1972

Director
Bureau of Sport Fisheries
and Wildlife
U.S. Dept. of Interior
Washington, D.C. 20240

Dear Sir:

This is in reply to the September 7 letter of Mr. Martinson concerning my application to import 300 to 400 hawksbill hatchlings for scientific study. Mr. Martinson referred only to my letter of August 10 and not to my original application of May 25 at which time I provided more details as well as a project outline of the proposed study. In the event that some of the original material has not been received, I would like to present the following information together with a request for reconsideration of my application.

1. This proposal, under the auspices of the Hawaii Institute of Marine Biology, is to study the nutrition of the hawksbill turtle along with the green and other sea turtles when sources become available.
2. Nutritional studies presently under way with green hatchlings and previous studies with other species indicate a very high survival rate. This means that appreciable numbers of hawksbill turtles can be released when the study is completed or when the numbers need to be thinned. The release of these turtles will be under the direct supervision of personnel from the local office of the Bureau of Sport Fisheries and Wildlife.
3. Some of the world's leading turtle experts have estimated that only one hatchling out of every 100-200 will survive the rigors and dangers of early predation to become adult turtles. Therefore, the 300-400 hatchlings we require represent only a handful of mature turtles. Based on release studies carried out in Western Samoa, a large percentage of turtles released beyond the reef at one month of age were observed to have survived to yearling size. Thus, it is anticipated that many more turtles would be returned to the sea as a result of our program than would have naturally survived.

4. The nutritional data obtained from the proposed research will be directly applicable to current conservation efforts in Western Samoa and Micronesia on behalf of the Hawksbill.
5. While facilities have been offered to do this research in Western Samoa, more substantial data could be collected if the research were carried out in close proximity to our own laboratories. The Government of Western Samoa permits the taking of Hawksbill hatchlings for research purposes.

I trust that reconsideration of this application will result in a positive decision.

Thank you for your cooperation in this matter.

Sincerely,

Ernest Ross

ER:esm

cc: Gene Kridler

August 24, 1972

Mr. Eugene Kridler
Wildlife Administrator
Bureau of Sports Fisheries
& Wildlife
337 Uluniu St.
Kailua, Hawaii 96734

Dear Gene:

Enclosed are two (2) copies of my correspondence to the Director of the Bureau of Sports Fisheries & Wildlife in Washington pertaining to my application for the importation of several hundred hawksbill hatchlings for research purposes. To date, I have not had any reply.

Your assistance in tracking the progress of this request through the Washington maze would be greatly appreciated.

Aloha,

Ernest Ross
Poultry Scientist

ER:esm

Encls.

August 10, 1972

Director, Bureau of Sports
Fisheries & Wildlife
U.S. Department of Interior
Washington, D.C. 20240

Dear Sir:

During the latter part of May of this year, I sent an application for the importation of endangered species for scientific and preservation purposes in conformity with Title 50, Wildlife and Fisheries, Part 17--Conservation of Endangered Species and Other Fish or Wildlife, 17.12(b). In addition, I sent a copy of a proposed project outline for the study of the nutritional requirements of the Pacific green turtle. The proposal was to expand the study to include turtles of other species, since requests for feed information had been received from Samoa and Micronesia.

We are presently starting our experiment with green turtles and would very much like to include the hawksbill to make this a comparative study, which would make it much more valuable. However, we have not had any word from your office and wonder whether it is possible that my letter has not been received.

I would greatly appreciate a prompt reply and if my letter has gone astray, I will be happy to send a copy of the material.

Sincerely yours,

Ernest Ross
Poultry Scientist

ER:esm

cc: L.E. Perry, Acting Regional Director

May 25, 1972

Director, Bureau of Sports
Fisheries & Wildlife
U.S. Department of Interior
Washington, D.C. 20240

Dear Sir:

The enclosed application for the importation of endangered species for scientific and preservation purposes is being submitted as suggested by Mr. L. Edward Perry, Acting Regional Director of the Portland office. Also attached is a copy of a proposed project outline for the study of the nutritional requirements of the Pacific green turtle. It is now proposed to expand this study to include other species of sea turtles. The Hawksbill turtle is of special interest because of requests for feeding information received from conservation groups in Samoa and Micronesia.

Your prompt consideration of this request would be greatly appreciated. We are most anxious to start the project.

Sincerely yours,

Ernest Ross
Poultry Scientist

ER:esm

Encls.

APPLICATION FOR THE IMPORTATION OF AN ENDANGERED SPECIES
FOR SCIENTIFIC AND PRESERVATION PURPOSES

DATE: May 22, 1972

APPLICANT: Ernest Ross
Department of Animal Sciences
University of Hawaii
1825 Edmondson Road
Honolulu, Hawaii 96822

NUMBER OF SPECIMENS

AND SPECIES: 300-400 hatchlings of Eretmochelys imbricata squamata
Agassiz (Hawksbill).

PURPOSE: To study the nutritional requirements of this and other sea turtles
(see attached copy of proposed project outline).

TRAVEL ARRANGEMENTS:

Animals will be transported in insulated urethane containers. The floor will be covered with a one-inch thickness of foam rubber that will be saturated with water prior to shipment. If shipment should be delayed, additional moistening may be necessary. Hatchlings will not require food for 7-10 days post hatching. Air vents will be provided in the container. Immediately upon arrival, hatchlings will be transferred to sea water aquaria.

FACILITIES:

Hatchlings will initially be kept on campus at the University of Hawaii in an air conditioned room provided with sea water aquaria. Temperature and light will be regulated according to experimental plan. Filtered sea water will be provided in aquaria and for use in feeding containers. As the hatchlings outgrow the aquaria, they will be transferred to the facilities of the Hawaii Institute of Marine Biology at Coconut Island. There, they will be cared for in outdoor units provided with filtered sea water which will continuously flow through the units. At later stages, the well-developed turtles will be placed in large rearing ponds on the island.

APPLICANT'S QUALIFICATIONS:

The applicant obtained his Ph.D. in nutrition at the Ohio State University and for the past 15 years has been engaged in nutrition and management research with poultry at the University of Hawaii. While on sabbatical leave in 1969-70 in Florida, the applicant became interested in the nutrition of sea turtles. While in Florida, he visited the laboratory of Dr. Archie Carr, the ^{CP}Arretta Foundation on Sanibel Island and reared several loggerhead turtles.

The applicant will also be working closely with personnel from the Hawaii Institute of Marine Biology.

ACQUISITION AND DISPOSAL OF TURTLES:

Contacts have been made for the acquisition of Hawksbill hatchlings in Samoa and some of the Micronesian Islands. Disposition of animals no longer needed for research will be carried out after consultation with the local office of the Bureau of Sports Fisheries and Wildlife.

CERTIFICATION:

I hereby certify that the foregoing information is complete and accurate, to the best of my knowledge and belief. I understand that this information is submitted for the purpose of obtaining an exemption from the requirements of the Endangered Species Conservation Act of 1969 (83 Stat. 275), and that any false statement hereon may be subject to the criminal penalties of 18 U.S.C. 1001.

SIGNATURE:

Ernest Ross



UNITED STATES
DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
BUREAU OF SPORT FISHERIES AND WILDLIFE

1500 N. E. IRVING STREET
P. O. BOX 3737
PORTLAND, OREGON 97208

May 18, 1972

Mr. Ernest Ross, Poultry Scientist
University of Hawaii
1825 Edmondson Road
Honolulu, Hawaii 96822

Dear Mr. Ross:

We have received your request concerning permission to import several hundred hawksbill hatchlings over a period of a year or more for the purpose of carrying out a nutritional study of the Pacific green turtle and hawksbill turtle.

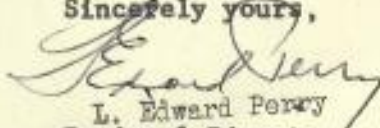
Questions of this nature are coordinated at our Washington office level because we are dealing with endangered species and a centralized approach for the issuance of permits is the most functional operating method.

We have attached Title 50, Wildlife and Fisheries, Part 17--Conservation of Endangered Species and Other Fish or Wildlife, ^{17.12(b)} in which you may wish to review 17.12(b). In the interest of time, may we suggest that you prepare a letter to the Director, as mentioned in this section, fulfilling the requirements as they are listed in the attached section 17.12.

To speed up your request we are forwarding a copy of your recent letter to the Director alerting them of your request and the fact that you will be submitting the other detailed requirements shortly.

Thank you very much for your kind comments concerning the assistance received from Mr. Kridler there in Hawaii.

Sincerely yours,


L. Edward Percy
Acting Regional Director

Attachment

I hereby certify that the State of (.....) from which the fish or wildlife named hereon originated, does not, to the best of my knowledge and belief, issue certificates, tags, or other documents showing that such fish or wildlife was lawfully taken, transported, or sold. I also certify that such fish or wildlife was lawfully taken, transported, or sold in the State from which it originated. I am aware that a false statement hereon may be subject to the criminal penalties of 18 U.S.C. 1001.

(c) The provisions of this section do not apply to the export of migratory birds for which export permits may be obtained pursuant to § 16.9 of this chapter.

§ 17.9 Marking of packages or containers.

(a) Any package or other container holding fish or wildlife which is shipped, transported, carried, brought, or conveyed in interstate or foreign commerce must be marked, labeled, or tagged so as to plainly indicate the name and address of the shipper and the consignee, and, except for interstate shipments of furs, hides, and skins, the number and kind of the contents. This requirement shall not apply to packages or other containers holding shellfish and fishery products imported for commercial purposes, or mink, chinchilla, silver fox, blue fox, rabbit, or nutria for which a certification is inserted on the Form 3-177 required by § 17.4(b) in the case of importation, or for which a separate signed certification accompanies the shipping documents in the case of interstate movement or exportation, to the effect that the animal was bred and kept in captivity for commercial purposes.

(b) (1) In any case where the marking or other identification of the package or other container under this section indicating in any way the contents thereof would create a significant possibility of theft of the package or its contents, the Director may, upon request of the owner thereof or his agent provide an identification symbol to be used in lieu of such marking, labeling, or tagging.

(2) Applications for use of an identification symbol must be dated and in writing, and should be submitted to the Director, Bureau of Sport Fisheries and Wildlife, United States Department of the Interior, Washington, D.C. 20240. The application must contain the following:

- (i) Name and address of the applicant;
- (ii) Designation of the item or items to be imported, transported, etc., including species or subspecies, method(s) of shipment, and description, such as "tanned hides;"
- (iii) Estimated frequency and place(s) of importation;
- (iv) A statement of the reasons why marking, labeling, or tagging of a package to be imported, transported, etc., would create a significant possibility of theft of the package or its contents, including appropriate statistics, affidavits, or other documents;

(v) A suggested mark or commercial symbol to be used by the applicant in identifying shipments of fish or wildlife;

(vi) A certification in the following language:

I hereby certify that the foregoing information is complete and accurate, to the best of my knowledge and belief. I understand that this information is submitted for the purpose of obtaining an exemption from the marking and labeling requirements of 18 U.S.C. 44 and regulations promulgated thereunder, and that any false statement hereon may be subject to the criminal penalties of 18 U.S.C. 1001.

(vii) The signature of the applicant.

(3) Upon approval of an application for the use of an identifying symbol, the Director shall assign such a symbol. This symbol must be shown on every package or container used by the applicant for the shipment, transportation, carriage, bringing, or conveyance of fish or wildlife in interstate or foreign commerce. The symbol must also appear on all shipping documents, and on any documents required by this part to accompany the fish or wildlife.

(4) The applicant shall, from the date of notification of the symbol, maintain complete and accurate records of all fish or wildlife which were shipped, transported, carried, brought, or conveyed in interstate or foreign commerce and which were identified by means of such symbol. The records shall include the number, species or subspecies, description of the package or container, method of shipment, time and place of shipment, and general description of the items. Such records shall be open to inspection, auditing, or copying by any authorized employee of the Bureau of Sport Fisheries and Wildlife at any time during regular business hours.

§ 17.10 Importation of endangered species—general restrictions.

Except as provided elsewhere in this part, no person may import from any foreign country into the United States any species or subspecies of fish or wildlife which appears on the Endangered Species List. For the purposes of this section, importation shall include entry into a foreign trade zone, or any transit of or transshipment through any portion of the United States.

§ 17.11 Endangered species list.

(a) The species or subspecies of fish or wildlife shown on the Endangered Species List are deemed to be threatened with worldwide extinction. The List may be revised from time to time as additional data becomes available which shows, to the Secretary's satisfaction, that a species or subspecies should be added to or removed from the List.

(b) The Bureau of Sport Fisheries and Wildlife shall receive and maintain data regarding endangered species and subspecies of fish and wildlife. At least once every 5 years, said Bureau shall conduct a thorough review of the Endangered Species List. Any proposed revisions to the List shall be published

in the Federal Register, with an opportunity for interested persons to submit written comments and suggestions.

(c) (1) Any interested person may at any time submit a request for a review of any particular listed species or subspecies. Such requests must be dated and in writing, and should be submitted to the Director, Bureau of Sport Fisheries and Wildlife, United States Department of the Interior, Washington, D.C. 20240. In order to be considered, requests must show in full the following information:

(i) Name and address of the person making the request;

(ii) Association, organization, or business, if any, represented by the person making the request;

(iii) Reasons why the person making the request, or the persons he represents, should be considered to be an "interested person;"

(iv) Designation of the particular species or subspecies in question;

(v) Narrative explanation of the request for review and justification for a change in the status of the species or subspecies in question;

(vi) Complete supporting data for the request;

(vii) Signature of the person making the request.

(2) If it is determined that the request has presented substantial evidence warranting a review, a finding to that effect shall be published in the Federal Register. Such finding shall give notice and opportunity to all other interested persons to participate in the review of the particular species or subspecies, by submission of written data.

§ 17.12 Importation of endangered species—exceptions.

(a) Commercial permit:

(1) In order to avoid undue economic hardship, any person importing any species or subspecies shown on the Endangered Species List, for commercial purposes, under any contract entered into prior to the effective date of the Federal Register notice placing such species or subspecies on the Endangered Species List, may apply for a permit allowing the importation of such fish or wildlife. The application shall be dated and in writing and submitted to the Director, Bureau of Sport Fisheries and Wildlife, United States Department of the Interior, Washington, D.C. 20240, and must contain the following:

(i) Name and address of the applicant;

(ii) Designation of the item or items to be imported including species or subspecies, number, weight, method of shipment, and description, such as "tanned hides;"

(iii) Purpose of the importation;

(iv) Copy of the contract under which such fish or wildlife is to be imported, showing the name and address of the seller or consignor, date of the contract, contract price, number and weight, and description of the item;

(v) If live fish or wildlife are involved,

include a detailed description of the type, size, and construction of the container, arrangements for feeding, watering and otherwise caring for the fish or wildlife in transit, and arrangements for caring for the fish or wildlife on entry into the United States;

(vi) Copies of contracts for the importation of fish or wildlife of the same or similar species or subspecies for the calendar year immediately preceding the date of the contract in question;

(vii) A statement of the reasons why failure to fulfill the contract in question would lead to economic hardship, with all supporting documents;

(viii) A certification in the following language:

I hereby certify that the foregoing information is complete and accurate, to the best of my knowledge and belief. I understand that this information is submitted for the purpose of obtaining an exemption from the requirements of the Endangered Species Conservation Act of 1969 (83 Stat. 275), and regulations promulgated thereunder, and that any false statement hereon may be subject to the criminal penalties of 18 U.S.C. 1001.

(ix) The signature of the applicant.

(2) Any permits granted pursuant hereto will be strictly limited to allow importation only as necessary to avoid undue economic hardship, and in any case shall not be valid for more than 1 year from the effective date of the FEDERAL REGISTER notice placing such species or subspecies on the Endangered Species List.

(3) If a permit is denied, the applicant shall have 20 days after the date of the letter containing notice of such denial in which to request a full hearing regarding the application for such permit.

(b) Zoological, educational, scientific, or preservation permit:

(1) Any person importing any species or subspecies on the Endangered Species List for zoological, educational, and scientific purposes, or for the propagation of such fish or wildlife in captivity for preservation purposes, may apply for a permit allowing the importation of such fish or wildlife. The application shall be dated and in writing, and submitted to the Director, Bureau of Sport Fisheries and Wildlife, United States Department of the Interior, Washington, D.C. 20240. It shall contain the following information:

(i) The name and address of the applicant;

(ii) The number of specimens and the common and scientific names (genus and species) of each species or subspecies of fish or wildlife proposed to be imported;

(iii) Complete statement of the purpose of such importation;

(iv) If live fish or wildlife are involved, include a detailed description of the type, size, and construction of the container, arrangements for feeding, watering, and otherwise caring for the fish or wildlife in transit, and arrangements for caring for the fish or wildlife on entry into the United States;

(v) The address and a complete description of the facilities where such fish or wildlife will be kept;

(vi) A statement, if applicable, of the applicant's qualifications and previous experience in caring for and handling captive live wildlife;

(vii) A copy of the contract or other arrangements under which such fish or wildlife is to be imported, showing the name and address of the seller or consignor, date of the contract, contract price, number and weight (if available), and description of the items;

(viii) A certification in the following language:

I hereby certify that the foregoing information is complete and accurate, to the best of my knowledge and belief. I understand that this information is submitted for the purpose of obtaining an exemption from the requirements of the Endangered Species Conservation Act of 1969 (83 Stat. 275), and that any false statement hereon may be subject to the criminal penalties of 18 U.S.C. 1001.

(ix) The signature of the applicant.
(2) Permits shall comply with all terms, conditions, or restrictions prescribed in the permit.

(c) Permits issued pursuant to this part shall not be construed to authorize the importation or other acquisition, possession, transportation, or disposal of fish or wildlife contrary to any applicable Federal or State laws or regulations and do not relieve or eliminate responsibility for complying with any applicable health, quarantine, agriculture, customs permit, or other requirements imposed by the laws or regulations of the other duly authorized Federal and State agencies.

§ 17.13 Assessment and hearings.

(a) Prior to the assessment of a civil penalty pursuant to section 4 of the Act or 18 U.S.C. section 43(c), a notice of proposed assessment issued by the Director shall be served personally or by registered or certified mail, return receipt requested, upon the person believed to be subject to a penalty (the respondent). The notice shall contain (1) a concise statement of the facts believed to show a violation, (2) a specific reference to the provisions of the statute and regulations allegedly violated, and (3) the amount of penalty proposed to be assessed. The notice shall advise the respondent that he is entitled to a hearing before the assessment is made, but that he may waive a hearing and have the assessment made without a hearing. The notice shall inform the respondent that he has 20 days from receipt of the notice in which to request a hearing or to waive it. The request or waiver shall be in writing and addressed to: Solicitor, U.S. Department of the Interior, Washington, D.C. 20240, copy to the Director, Bureau of Sport Fisheries and Wildlife, U.S. Department of the Interior, Washington, D.C. 20240. The notice shall further inform the respondent that if he does not respond to the notice within the 20 days allowed, he shall be deemed to have waived his right to a hearing

and to have consented to the making of an assessment without a hearing.

(b) With his request for a hearing or with his written waiver of a hearing, the respondent may submit objections to the proposed assessment. He may deny the existence of the violation or ask that no penalty be assessed or that the amount be reduced. He must set forth in full the reasons for the relief that he seeks, including a statement of all facts supporting his request.

(c) If a written waiver of a hearing is timely made, or if a hearing is deemed to have been waived as provided in paragraph (a) of this section the Secretary shall proceed to make an assessment of a civil penalty, taking into consideration such showing as may have been made by respondent pursuant to paragraph (b) of this section. If, despite the waiver of a hearing, the Secretary believes that there are material facts at issue which cannot otherwise be satisfactorily resolved, he may refer the case to a hearing examiner as provided in paragraph (e) of this section.

(d) If a request for a hearing is timely made by the respondent in accordance with paragraph (a) of this section, the Secretary shall reconsider the proposed assessment and may rescind the proposed assessment or change the amount thereof. The Secretary shall promptly notify the respondent of any rescission of the proposed assessment, or of any change in the amount proposed to be assessed, or that the proposed assessment remains unchanged. Except in cases where the proposed assessment has been rescinded, the respondent may, within 15 days after receipt of the notice, notify the Secretary of the renewal of his request for a hearing. If the respondent fails to make a timely renewal of his request for a hearing, the proposed reassessment or assessment shall become final.

(e) Where a renewed request for a hearing has been timely made, or the Secretary determines, pursuant to paragraph (c) of this section, that a hearing should be held, the case shall be transmitted to the Hearings Division, Office of Hearings and Appeals, Department of the Interior, for assignment to a hearing examiner appointed pursuant to 5 U.S.C. sec. 3105. Notice of the assignment will promptly be given to the parties and thereafter all pleadings, papers, and other documents in the proceeding shall be filed directly with the examiner, with copies served on all adverse parties in the case.

(f) All hearings shall be conducted in accordance with 5 U.S.C. sec. 554. If the respondent fails to appear at the hearing, he will be deemed to have consented to a decision being rendered on the record made at the hearing. The transcript of testimony and exhibits, together with all papers and requests filed in the proceeding, shall constitute the exclusive record for decision. Copies

UNIVERSITY OF HAWAII

College of Tropical Agriculture
Department of Animal Sciences

August 10, 1972

Director, Bureau of Sports
Fisheries & Wildlife
U.S. Department of Interior
Washington, D.C. 20240

Dear Sir:

During the latter part of May of this year, I sent an application for the importation of endangered species for scientific and preservation purposes in conformity with Title 50, Wildlife and Fisheries, Part 17--Conservation of Endangered Species and Other Fish or Wildlife, 17.12(b). In addition, I sent a copy of a proposed project outline for the study of the nutritional requirements of the Pacific green turtle. The proposal was to expand the study to include turtles of other species, since requests for feed information had been received from Samoa and Micronesia.

We are presently starting our experiment with green turtles and would very much like to include the hawksbill to make this a comparative study, which would make it much more valuable. However, we have not had any word from your office and wonder whether it is possible that my letter has not been received.

I would greatly appreciate a prompt reply and if my letter has gone astray, I will be happy to send a copy of the material.

Sincerely yours,



Ernest Ross
Poultry Scientist

ER:esm

cc: L.E. Perry, Acting Regional Director

May 12, 1972

Mr. John D. Findley
Regional Director
Bureau of Sports Fisheries
& Wildlife
P.O. Box 3737
Portland, Oregon 97208

Dear Mr. Findley:

As you know, we have proposed a research project to study the nutrition of the Pacific Green Turtle, and we are grateful for your assistance in helping us get turtle eggs for hatching from the Hawaiian chain.

In order to get as much information as possible about the subject, we have been talking and corresponding with people interested in turtles. We have found considerable interest in our proposed research, especially among people who have been feeding hatchlings for later release. More recently, I spoke with some Micronesians (from the Trust Territory) who also expressed an interest in the project; although they referred to the Hawksbill as well as the Green Turtle. We have also learned that attempts are presently being made to feed Hawksbill hatchlings in both Samoa and Koror for later release.

While it seems desirable to include the Hawksbill turtle under our proposed nutritional study we realize that as an endangered species it would first be necessary to obtain the necessary permission to import these hatchlings. I have discussed this matter with Mr. Kridler, and he suggested that I route this request through you.

The Hawksbill hatchlings would be handled in the same manner as proposed for the Green Turtle in our Project Outline with prior Bureau consultation re disposal. The inclusion of the Hawksbill turtle in this study (and possibly other species later on) would enable us to do a comparative study of the nutritional requirements of these species making an even more valuable contribution. It is also very possible that this type of comparative study could shorten the time required to obtain the essential nutritional information.

May 12, 1972

We trust that it will be possible to obtain permission to import perhaps several hundred Hawksbill hatchlings over a period of a year or so for the purpose of carrying out this research. Since it would not be necessary to carry all the hatchlings through the full term of the nutritional study, it may be possible to release numbers of the turtles at different ages. This is a proposal of Dr. Hirth in order to study the relative survivability of turtles released at different ages.

Thank you for your assistance in this matter.

Sincerely yours,

Ernest Ross
Poultry Scientist

ER:esm

cc: Mr. Kridler

April 19, 1972

Mr. Eugene Kridler
Wildlife Administrator
Bureau of Sport Fisheries
& Wildlife
337 Ulukou Street
Kailua, Hawaii 96734

Dear Mr. Kridler:

Enclosed are three (3) copies of the proposed turtle nutrition project. Please note that a paragraph has been included under the procedure section concerning the handling of the eggs, and another paragraph at the end of this section on consultation with the Bureau of Sports Fisheries and Wildlife and semi-annual progress reports, as requested.

As I mentioned in my previous letter and over the phone, we are interested in all phases of turtle culture and will be considering these other aspects as we go along even though we have not spelled out all the details in the Project Outline.

We have several aquaria available so that on very little notice we would be able to take care of almost any number of hatchlings that you may be able to obtain. Useful information would include date of hatch, location of hatch and whether they are all from the same hatch. We are formulating experimental turtle diets and have a supply of frozen squid and fish on hand to serve as control diets.

We will also need some information concerning incubation of eggs. It would be helpful if we had the following information well in advance of the arrival of the eggs: (1) mean depth to bottom of egg pit, (2) mean dimensions of egg pit (3) mean temperature of the sand taken about the average depth of the egg pit, (4) humidity or moisture content of sand in egg pit, (5) mean air temperature, mean high and mean low during hatching season, (6) mean rainfall during hatching period (7) mean relative humidity, (8) sample of sand from hatching area, and (9) mean ocean temperature.

Mr. Eugene Kridler

- 2 -

April 19, 1972

It would probably be very desirable for me and Mr. Balazs to get together again with you and Mr. Olsen to go over some of our requirements. We may have some recording equipment that may be useful in obtaining some of the needed information.

Please contact me or Mr. Balazs if there are further questions or points that we can clarify.

Sincerely yours,

Ernest Ross
Poultry Scientist

ER:esm

cc: Dr. Bardach
Dr. Helfrich
Mr. George Balazs