

UNIVERSITY OF FLORIDA
GAINESVILLE, 32603

COLLEGE OF ARTS AND SCIENCES
DEPARTMENT OF ZOOLOGY

April 7, 1967

Saturday Review, Inc.
380 Madison Avenue
New York, New York 10017

Gentlemen:

Two weeks ago I read your issue of March 11 with more enjoyment than any magazine had given me in a long time. Today I opened your April 8 issue and saw the Olin advertisement with the picture of the forest and the heading, "If You Think This Is Beautiful Wait Till We Chop It All Down." I looked for a humorous twist to the eye-catching statement; but the Olin people were not joking. The advertisement is a grotesque effort to sell the idea that tree farms are not just necessary disruptions of natural landscape, like corn fields and parking lots, but are a substitute for forest, and actually superior to the original thing. Not merely superior in producing pulpwood. Biologically and aesthetically superior. More perfect, more beautiful, more eternal, one gathers.

I can't make out whether the ad is a cynical attempt to brainwash the public, or is just honest ignorance of an unbelievably puerile sort. But in either case the main blame lies not with the exploiter straining for self justification, but with Saturday Review for selling space to purveyors of irresponsible deception. I am writing to tell you how disappointed I am to see this strange breakdown in the judgement of a magazine I have admired.

Obviously your science editor never read the Olin ad. But it is not just principles of ecology and wildlife management that are violated in it. Olin is evidently out to wreck one of the humanities: the intelligent appreciation of original, naturally organized nature. For a magazine dedicated to the humanities, Saturday Review's connivance in the messy campaign is a sorry thing to see.

Sincerely yours,


Archie Carr

AC:es

Dr. Archie Carr
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Missing Page 1

In any event, I have learned much from my Cayman trip and now must utilize my information and abilities to combat any attempts to build a prematurely conceived Hawaiian turtle farm stocked with hatchlings from the Caribbean, the Trust Territories or any one of a number of locations that the promoters have suggested as a source for their "seed" stock. To compound matters, the State Board of Land and Natural Resources has again delayed action on our pending marine turtle protection regulation.

Although trying not to be over confident, I tend to think that the green and loggerhead will be placed on the Federal endangered species list. This may solve our Hawaiian problems as my interpretation of the 1973 Endangered Species Act leads me to believe that an animal on the foreign list may not be legally taken in any of the States. I have requested clarification on this matter from Washington.

As I indicated to Dr. Ehrenfeld, Mariculture officials have stated that their "farm-reared" products must be exempted from importation restrictions if endangered status is obtained or the venture will fail. Also the pending California bill must be passed so that products can be sold in that State. I would greatly appreciate names and addresses of any influential legislators in California to which I can submit testimony on this matter.

While on Cayman I had the opportunity to observe the turtle butchery and market, as well as learn a few things about the fishing off Nicaragua. I found the people to be very friendly and open about their activities, much the opposite of our local Hawaiian fishermen. A Mr. Henry Bush sells the turtle parts in the Georgetown market-place and it was indicated that he regularly sends you tags. I observed three tags during my stay (8975, 9519 and 7240) all taken during the week of January 21 by the vessel "Cayman Pilot." A position of latitude $14^{\circ} 6' N$, longitude $82^{\circ} 38' W$ was given to me by the Captain, however he seemed a little uncertain at the time. Three boats are presently engaging in turtle activities, each making a trip approximately once every four weeks and returning with 80 to 100 greens. Of the animals I observed, about one in eight were males. I would guess all to be sexually mature. Eggs 0.2 to 1.0 cm diameter were seen to be developing in most of the females butchered. Two hawksbill were among the catch (one measured approx. 35 cm straight C. L. and had sold for U. S. \$25). Every so often a loggerhead is taken. During my stay 38 of the larger greens escaped from an in-water enclosure at West Bay (much to my pleasure).

I believe that an interesting and informative article could be written based on a trip taken on one of the Cayman turtle boats. I explored this possibility with one of the captains and found him very receptive. The support for such a ten-day trip would be minimal (probably less than \$2,500) and I would greatly appreciate your opinion on the value of such a documentation before I consider asking an agency for support.

Dr. Archie Carr
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Another point of interest is the fact that farmed turtle does not undersell wild turtle on Cayman Island itself. Choice wild beast steak sells for \$1.50 per lb while the farmed product goes for \$2. A luxury restaurant owner indicated that the wild meat has better flavor and texture and he preferred to serve this item to his customers. No Cayman local that I spoke to preferred the farmed animal. Most objected strongly to eating it.

Possibly you are already aware of much of the information I have presented, however I pass it for whatever it is worth.

With best regards.

Sincerely,

George H. Balazs

mk

UNIVERSITY OF FLORIDA
GAINESVILLE, 32601

COLLEGE OF ARTS AND SCIENCES
DEPARTMENT OF ZOOLOGY

January 8, 1973

Dr. George H. Balazs
Hawaii Institute of Marine Biology
P. O. Box 1346
Coconut Island
Kaneohe, Hawaii 96744

Dear Dr. Balazs:

I regret that I will be out at Ascension Island at the time of your proposed visit. In any case, however, I am not involved in the experimental rearing of sea turtles, and would have little information to share with you. Mariculture, Ltd. of Grand Cayman is now the ranking repository of such data, and some smaller advances have apparently been made by Dr. David Ehrenfeld, Department of Biology, Barnard College, New York 10027; Dr. Robert Shoop, Institute of Environmental Biology, University of Rhode Island, Kingston, Rhode Island 02881 and Dr. Nicholas Mrosovsky, Ramsay Wright Zoological Lab, 25 Harbord Street, Toronto 5, Ontario, Canada.

Sincerely yours,


Archie Carr
Graduate Research Professor

AC;es

UNIVERSITY OF FLORIDA
GAINESVILLE, 32601

COLLEGE OF ARTS AND SCIENCES
DEPARTMENT OF ZOOLOGY

January 18, 1973

Mr. George Balazs
Animal Nutritionist
Hawaii Institute of Marine Biology
P. O. Box 1346
Coconut Island
Kaneohe, Hawaii 96744

Dear Mr. Balazs:

Many thanks for your letter of January 15, with the material on marine turtles in the Hawaiian Islands and your proposals for protecting them. In general the amended version of the proposed legislation seems good. Personally, I would prefer to see a complete moratorium on the taking of all sea turtles throughout the Hawaiian Islands until a careful survey of breeding, feeding and basking populations could be made. This no doubt entered your deliberations, however, so I judge the proposed regulations are simply the strongest you and Dr. Radovsky believe you can swing at present. In any case your proposal would clearly bring a great improvement over the present situation.

To an outsider like myself, the most conspicuous aspects of the Hawaiian sea turtle situation are the dramatic gaps in present nesting distribution, and the decline the species must have undergone there during the past century. I believe that you failed to mention anywhere that the hawksbill, which by the way is mainly carnivorous in most of its range, is classed as an endangered species by the Survival Service Commission of the IUCN.

I am very glad to see this awakening of interest in Hawaiian sea turtles and hope you will be given the support you need.

Sincerely yours,



Archie Carr
Graduate Research Professor

AC;es

Balazs

March 29, 1973

Dr. Archie Carr
Department of Zoology
University of Florida
Gainesville, Florida 32601

Dear Dr. Carr:

Thank you for your letter of January 18, dealing with the marine turtle situation in Hawaii. My efforts to obtain protection for our turtles continues and at present regulations are under consideration by the Department of Land and Natural Resources. In addition, a House Bill (1635) is before the legislature which requests research funds for a 3-year intensive study on all aspects of Hawaii's turtle population. Although the State's financial picture is not presently all that promising, the bill has received surprising support thus far.

Our nutrition studies on the green hatchlings which were transported from French Frigate Shoals have proved valuable for the evaluation of experimental diets. These animals are now 6-months old and are kept in 10' diameter flow through sea water tanks. Since Hawaii's turtles are apparently the only sea turtles which still bask, I was interested in determining if our young turtles would haul out. Cement blocks were stacked up in the tank so that they rose several inches above the surface, with one side sloping gently into the water. Each day since this has been set up numerous animals pull themselves out and bask for extended periods. It is not unusual to see turtles crowded one on top of another on these blocks. My observations tend to confirm that the animals are particularly attracted to sunlight. More animals are found on blocks which are in direct sunlight than those located in shaded areas. I would very much be interested in knowing if you are aware of any observations of this nature having been made in other areas of the world. I have been unable to find any references relating to this behavior in young marine turtles and am contemplating writing the observation into the form of a technical note.

Any assistance you are able to give me will be greatly appreciated.

Sincerely,

George H. Balazs

mk

UNIVERSITY OF FLORIDA
GAINESVILLE, 32601

COLLEGE OF ARTS AND SCIENCES
DEPARTMENT OF ZOOLOGY

July 11, 1973

Mr. Anthony Fisher, Director
Mariculture, Ltd.
Newplace Framfield
Sussex, England

Dear Mr. Fisher:

Thank you for your interesting letter of 4 June 1973. I hope you will excuse the delay in my reply, which was written shortly after your letter came and until now held up by an interlude at our turtle station in Costa Rica.

As to the prospect of Mariculture being given active "support" by the species-survival kind of conservationist, I can only repeat the opinion I have expressed to you before--that endorsement by such people could rationally be expected only when it could be clearly shown that Mariculture is improving the survival outlook of wild populations of sea turtles.

As a quondam lover of green turtle soup I would like to see it available in the market. Also, I share your concern over seeing mankind better fed. Moreover, as one who has valued friends in Mariculture, Ltd. I would, other things being equal, rejoice to see it work out its problems and prosper. But as Technical Director of the Caribbean Conservation Corporation and Chairman of the IUCN Marine Turtle Group, and as a chap who has more or less quit eating turtle as a gesture in recognition of its decline, it would be completely irrational of me to come forth in support of your enterprise so long as it (1) takes eggs from sanctuaries and natural nesting grounds and (2) fails to saturate markets, bring down prices, and so, demonstrably to reduce the amount of turtling that goes on in the world.

I should point out that I think the salient aspect of our relationship to date is not that I do not support Mariculture, but rather that I have not actively raised my voice in opposition. Both here and in Costa Rica I am questioned with increasing insistence by people who are puzzled to know what is going on down at Tortuguero--why the hard-won green turtle sanctuary there is being raided for eggs for exportation by a foreign commercial enterprise; and whether the Caribbean Conservation Corporation may not in some hidden way be involved with that enterprise. I anticipate more such questioning when during the coming turtle season we are visited by three trainees who are to be attached to the government turtle programs in the Bahamas, Ecuador, and the Galapagos Islands. The two young Bahamians and an Ecuadorian will spend ten days at our

Mr. Anthony Fisher

Station familiarizing themselves with turtle nesting ecology, with our tagging procedures, and with local turtle legislation and enforcement problems. I have been wondering how to explain to these people our seeming acquiescence in the exportation of turtle eggs from the sanctuary for international commerce.

Despite this spread of puzzlement among onlookers, and my own uneasiness over the egg harvests, I have made no move whatever to stir up San José against your operation. Perhaps I couldn't create serious obstacles if I tried; but the point is, I consider that all of us survival people have actually been leaning over backwards by refraining from generating the disagreeable struggle that our active political and diplomatic intervention would surely involve. To me that attitude practically constitutes "support" for you and is, as I said, becoming somewhat awkward to rationalize.

The most persuasive evidence that Mariculture deserves the support of conservationists would be a realistic prospectus showing (1) projected evolution to complete self-sufficiency with respect to egg needs within a short time; and (2) a predictable production schedule that will saturate markets for turtle products--meat as well as the various by-products of your enterprise--and depress prices to the point that both poaching and legal turtling are made unprofitable. Failure to meet these stipulations automatically makes Mariculture one of various adverse factors in the survival outlook of the green turtle.

So I still see no reason why an individual whose main concern with sea turtles is enhancing the chances of survival of the various wild species and subspecies should be expected to sing the praises of Mariculture, or to do anything other than deplore, and perhaps try to stamp out, international traffic in sea turtle products. That those of us in organized sea turtle conservation have not undertaken any such campaign ought to seem an extraordinary example of temperance and indulgence.

The tagging work that your egging teams have done at Ascension, Surinam and Tortuguero has been an important contribution to the study of green turtle ecology. I am most grateful for the data you have furnished, and sincerely wish I could reciprocate with a strong endorsement of your whole operation. On the other hand, I honestly can't understand why Mariculture should expect to get the backing of species-survival people until it has been clearly shown that you are improving and not degrading the future of wild sea turtle stocks.

With best personal regards,

Archie Carr
Graduate Research Professor

UNIVERSITY OF FLORIDA
GAINESVILLE, 32601

COLLEGE OF ARTS AND SCIENCES
DEPARTMENT OF ZOOLOGY

December 4, 1973

Mr. Fernando R. Quirós, Economist
Corporación Costarricense de Desarrollo
Apartado 10323
San Jose, Costa Rica

Dear Mr. Quirós:

Thank you for your letter of 14 November, telling of the interest of CODESA in the possibility of establishing in Costa Rica a large-scale turtle-farming project patterned after that of Mariculture, Ltd. of Grand Cayman.

The importance of the green turtle as a potential source of protein for man has always seemed to me to be its essential herbivorousness. Except for the seacows, it is the only edible animal that naturally harvests the vast expanses of underwater pasturage that occur throughout the tropical world. Mariculture, Ltd. shortcircuits this fundamental virtue of *Chelonia*, however, and feeds its turtles a factory product, keeping them in tanks on shore to which sea water is pumped at great cost, and getting its eggs from sanctuaries (Tortuguero, Ascension Island and Surinam). I am told that the Mariculture investment is now around five million dollars, that more is required, and that they are searching for a site for a second plant similar to the first.

As you suggest, Mariculture has had some success in producing fertile eggs from captive turtles, but they are still nowhere near the necessary goal of maintaining enough mature, egg-producing adult turtles to support a viable program of commercial production.

It seems to me that green turtle farming faces imposing obstacles. Certainly, any effective effort of this kind is bound to require large amounts of very patient capital. And because sea-turtles are a diminishing resource that is being increasingly exploited, any venture that introduces them into international commerce is sure to receive the critical attention of conservationists everywhere.

I enclose a copy of a letter of mine that may give you additional background for your pondering of this complex matter. If other questions that you think I might answer occur to you, please let me know.

Sincerely yours,

Archie Carr
Archie Carr
Graduate Research Professor

AC/fs
Enclosure
cc: Guillermo Cruz B.

UNIVERSITY OF FLORIDA
GAINESVILLE, 32601

COLLEGE OF ARTS AND SCIENCES
DEPARTMENT OF ZOOLOGY

December 4, 1973

Dr. George H. Balazs
Marine Biologist
University of Hawaii at Manoa
P.O. Box 1346 - Coconut Island
Kaneohe, Hawaii 96744

Dear Dr. Balazs:

I regret the delay in my reply to your letter concerning the Hawaiian turtle legislation, which arrived when I was in Australia.

This is an advance, although I am sorry Hawaii is unable to declare a moratorium on all turtling until a management program with some promise of stability could be worked out. Actually, as scarce as turtles appear to be in the islands they ought to get complete protection. Perhaps this is simply not politically practicable, as is, I am ashamed to say, the case in Florida. I would add, however, that a law restricting the taking of big turtles is likely to be better than one protecting only little ones. The demographically important turtles are the big breeders that have run the predation gauntlet and are furnishing new turtles for the population. Protecting little turtles is commendable, but really it comforts people more than it helps the species involved.

Nevertheless, you certainly deserve strong personal congratulations for what has been accomplished in Hawaii.

Sincerely yours,

Archie Carr

Archie Carr
Graduate Research Professor

AC/fs

December 5, 1973

Dr. Archie Carr
Graduate Research Professor
College of Arts and Sciences
Department of Zoology
University of Florida
Gainesville, Florida 32601

Dear Dr. Carr:

You may be interested to learn of the progress that is being made in obtaining protection for sea turtles around the eight major Hawaiian Islands. On September 21st a public hearing was held in Honolulu on proposed regulation 36 and public response was greatly in favor of this measure. After subsequent approval by the Governor's Animal Species Advisory Commission, the proposed regulation came before the Board of Land and Natural Resources where the chairman, Mr. Sunao Kido, quite unexpectedly refused to act until additional public hearings were held. To use his own words, "However meritorious the issue, we shouldn't rush into it." This move required that legal notices be reissued in the newspapers along with the mandatory waiting periods. Hearings will now be held on the Islands of Kauai and Maui on the evening of December 5th and on Hawaii on the 6th, after which the measure will again go before the Land Board.

I am very optimistic about the passage of this regulation. Public interest and concern has been steadily increasing and I am happy to say that a new "sea turtle awareness" has developed throughout the State. The credit for a large portion of this public arousal must be given to several fine science writers on the staff of our local newspapers.

You will note that a section 2c has been added to the proposed regulation which allows for the possession and sale of eggs or progeny of captive green sea turtles.

State funds (\$50,000) have apparently been committed to an organization (Pryor Corp.) here in Hawaii for the pilot development of a green turtle and oyster farm. This is supposed to be

Dr. Archie Carr
December 5, 1973

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an attempt to provide new industry to the North Kohala section of the Island of Hawaii where sugar has recently gone out of business. The section of their project proposal dealing with turtles points to the "successes" of Mariculture, Ltd. as an example of what can be accomplished. It has not been revealed where eggs or hatchlings will be obtained, however I know that they will not come from the Hawaiian Islands National Wildlife Refuge. I imagine they will be brought in from other nesting areas far removed from Hawaii. I seriously question the wisdom of such an introduction. Section 2c was included in the proposed regulation due to pressures from these prospective sea turtle farmers, however the placement of the word "progeny" rather than merely "allow the selling of farm reared turtles" was included at my urging. I do not know if the wording will remain intact in view of the pressures that will undoubtedly develop for the use of hatchlings from natural nesting beaches. Any assistance that you can give me will be greatly appreciated.

In the event that you have not already seen the leaflet "New hope for the green sea turtle," I have enclosed a reproduction. This was sent to me by the Bank of Virginia Company which assumed I had not heard of Mariculture, Ltd. The underlines in the text of this advertisement/publication were for my own purposes. I have found much of the information to be very glossy and cannot accept a great deal of what is stated, at least based on my own studies and review of the literature to date.

Best wishes for the holiday season.

Sincerely,

George H. Balass

GHB:md

Encls.

December 12, 1973

Dr. Archie Carr
Graduate Research Professor
Department of Zoology
University of Florida
Gainesville, Florida 32601

Dear Dr. Carr:

Today I received your letter of December 4 which, after checking my files, I find to be the same date of my last correspondence to you. Hopefully you will have the opportunity in the near future to give advice on some of the points mentioned in that letter.

I also believe that a complete moratorium on the taking of turtles in Hawaiian waters is justified at this time, however both cultural and political factors would make this, in my opinion, next to impossible to achieve.

Small groups of lower income people on nearly every island are known to depend from time to time on turtle for at least a portion of their meat. During a recent public hearing the spokesman for a Hawaiian group from Molokai supported the regulation intact and felt that it should be strongly enforced for all residents of the State - except people on Molokai! His reasoning was that the people of his island practiced a type of conservation that ensured a supply in the sea when necessary. After the meeting he agreed with me when I pointed out that very little conservation awareness has been exhibited at other locations in the State and that the "take all you can, while you can" attitude displayed by fishermen selling to tourist restaurants was destroying the population for all of us.

I am aware of the fact that initial turtle regulations put into effect in both Tonga and Fiji gave protection to animals larger than 36 inches, however I was informed several months ago that changes had been made to protect animals less than 36 inches. I am in agreement with the biological reasoning of protecting the breeders but tend to feel that such a restriction would give less overall protection under our Hawaiian conditions.

Dr. Archie Carr
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December 12, 1973

By far, most of the animals sighted and being taken are under 36 inches. The mean weights of the "reported" animals (and we now know that fewer than 20% are reported) have ranged from 150 to 107 lbs over the past four years. Large (breeder) turtles are not often seen, are more difficult to capture and are considered less palatable by some individuals. It would seem desirable to allow sub-adults the opportunity to reach reproductive size and breed at least once or twice before being subjected to hunting. If smaller animals were made legal, far greater numbers would be removed from the population due to their greater availability. I suppose that a case can be made for both viewpoints. The important factor is that commercial taking of all sizes must be eliminated in Hawaii. The personal gain incentive appears at this time to be the major factor of our turtle exploitation and it will surely continue to increase if left unchecked.

You may be interested to learn that the proposed regulation only prohibits the selling of green turtle taken from Hawaiian waters. Attempts were made to prohibit the selling of both imported and locally taken turtles, however the State Attorney General advised against this, indicating it might be unconstitutional. California does have such a law but I do not know if it is enforced.

Thank you for taking the time to confer with me on this matter.

Sincerely,

George H. Balazs (M.S.)

mk

UNIVERSITY OF FLORIDA
GAINESVILLE, 32611

COLLEGE OF ARTS AND SCIENCES
DEPARTMENT OF ZOOLOGY

December 18, 1973

Mr. Irvin S. Naylor, President
Mariculture, Ltd.
R. D. 9
York, Pennsylvania 17402

Dear Mr. Naylor:

Thank you for your interesting letter giving your views on the potential role of Mariculture, Ltd. in conserving the green-turtle and explaining the developmental problems that Mariculture faces. Your letter makes some telling points in a case that has heretofore been somewhat fuzzily reasoned.

There is no doubt that green turtle farming, grounded on adequate pilot research, holds promise as one recourse in the campaign to save natural sea turtles. I have believed this for 25 years. However, my belief was based on the assumption that prospective culture projects would be non-profit, experimental exercises disciplined to refrain from commercial production until pilot studies had shown the feasibility of rearing young turtles to sizes at which they would in nature have become herbivorous. The two-year olds would then be pastured or pen-fed on marine spermatophyte vegetation. In this way the herbivorousness of the animal--which is the essential element in its potential as a protein source for man--would be exploited. Concurrently with the foregoing, pen-reared breeding stock would be developed, both to furnish all eggs needed to sustain a viable industry, and as material for the selection of an improved farm animal distinct from all wild stocks. While this technology was being worked out a realistic marketing prospectus would determine whether the profit necessary to keep the industry alive could be made without either expanding existing markets that could not be flooded, or creating new ones. It has seemed to me from the outset that the most crucial proof of the effectiveness of a farm in promoting green turtle survival would be its motivation and ability to lower the prices paid to poachers and legal hunters for turtles taken in the wild.

Those were my ideas about turtle farming back in the days when we were providing hatchlings for the Schroeders' Islamorada project, which was ancestral to your present enterprise. Your files will show that

Mr. Irvin S. Naylor
Page 2
December 18, 1973

Mariculture grew out of the meeting between the Schroeders and Mr. Anthony Fisher. Thus, my thoughts about the relation of turtle farming to wild-species survival have been continuously known to your administration since Schroeder, at my suggestion, was first approached by Mr. Fisher.

I am reminding you of this because of my surprise at the suggestion in your present letter that I urge a California legislative committee to withdraw legislation prohibiting the importation of green turtle products. In effect, the request is that I support your effort to establish new markets for turtle products in the relatively virgin territory of California. I am sure that a man able to compose as forceful and articulate a letter as yours must see the lack of logic in that request.

Up to now my only knowledge of the California situation has been a request for my opinion on the turtle legislation sent by Mr. Roderic Tuttle on September 12. I was on the verge of leaving for Australia at the time and my reply was somewhat perfunctory, consisting essentially of a copy of a letter I had written Mr. Fisher, who had inquired why I had not supported the work of Mariculture. If you have not read that letter, I hope you will do so. Since it was written the only change I find in the situation is that 12,000 eggs have now been produced in your breeding pens, by turtles of varying origins, histories and periods of captivity. This is a solid achievement, although not, as you know, a final solution to your egg-production problems. Meanwhile, like good businessmen, you have gone steadily ahead with the improving, diversifying and advertising of your turtle by-products. Developing markets for by-products is sound business practice, but your innovations in that line are sure to generate increased pressure on natural turtles throughout their range. You point out that you have not stimulated a rise in the price of green turtle soup. This is really irrelevant, because I hear that your non-edible products--oil, leather, tortoiseshell, decorative whole shells, mounted turtles and the like--now bring you more profit than the meat and calipee you sell. Moreover, your production of remarkably good "tortoiseshell" from captive green turtles has exacerbated the problem of protecting another species, the hawksbill.

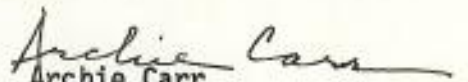
So during the past five years, while watching the amazing progress of Mariculture, Ltd., I have found it increasingly hard to ignore the evidence that sea-turtle conservationists really ought to be doing everything possible to discourage international commerce in sea turtle products.

Mr. Irvin S. Naylor
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December 18, 1973

I have not done that. Instead, as I pointed out to Mr. Fisher in the letter referred to, I have, perhaps to a reprehensible degree, refrained from any effort to mount such a campaign. I am a zoologist and not an activist, and I dislike confrontation between objective scholarship and vested enterprise. I am somewhat surprised that Mariculture has not seemed to take due comfort out of my relative quiescence, amounting by now almost to acquiescence, and that of some of my colleagues in the world species-survival fraternity.

I sincerely regret the difference of views between us. If I could see solid evidence that your organization is making it a prime procedural requisite to avoid any move that could hinder stewardship of wild sea turtles, I would be delighted. You-all have accomplished an organizational *tour de force* at Grand Cayman. I wish I could take advantage of the research opportunities that your enterprise could provide. I believe, however, that if you will take another look at a recent advertising leaflet of yours urging people to hang your prepared green turtle shells on their walls you will see why Mariculture's expanding program makes me uneasy, and will perhaps agree that I would be dull-witted to encourage California to help the spread of a disastrous vogue by opening its borders to the importation of green turtle products.

Sincerely yours,


Archie Carr
Graduate Research Professor

AC:dg

UNIVERSITY OF FLORIDA
GAINESVILLE, 32601

COLLEGE OF ARTS AND SCIENCES
DEPARTMENT OF ZOOLOGY

December 20, 1973

Dr. George H. Balazs
Hawaii Institute of Marine Biology
P.O. Box 1346, Coconut Island
Kaneohe, Hawaii 96744

Dear Dr. Balazs:

Many thanks for your letter. It's easy for an outsider to be visionary, but I can certainly sympathize with you over the difficulty of imposing a complete turtle fishing moratorium there. I still think you need one though.

Anyway, keep up the good work.

Sincerely yours,


Archie Carr
Graduate Research Professor

AC/fs

UNIVERSITY OF FLORIDA
GAINESVILLE, 32601

COLLEGE OF ARTS AND SCIENCES
DEPARTMENT OF ZOOLOGY

January 4, 1974


Dr. George H. Balazs
Hawaii Institute of Marine Biology
P.O. Box 1346, Coconut Island
Kaneohe, Hawaii 96744

Dear Dr. Balazs:

Many thanks for the copy of your wife's excellent letter to Saturday Review/World regarding its sickeningly uncritical acceptance of dangerous nonsense.

Just as a coincidental curiosity, I enclose a copy of an old letter of mine complaining of their dimwitted outlook. I'm afraid it's chronic. I wish your wife would write an article about Saturday Review.

Sincerely yours,


Archie Carr
Graduate Research Professor

AC/fs
Enclosure

February 4, 1974

Dr. Archie Carr
Graduate Research Professor
Department of Zoology
University of Florida
Gainesville, Florida 32601

Dear Dr. Carr:

As you are probably already aware, Dr. Ehrenfeld allowed me to present his forthcoming paper "Conserving the Edible Sea Turtle: Can Mariculture Help?" at the recent World Mariculture Society Meeting which was held in Charleston, South Carolina during the week of January 21. After the conference I spent four days on Grand Cayman (at my own expense) attempting to gain insight on the motivations, aims and status of Mariculture, Ltd.

I was received in a very hospitable manner and was fortunate enough to have many long discussions with employees and consultants in addition to a major stock holder. I have conveyed some of the impressions received on this trip in a letter (February 1) to Dr. Ehrenfeld of which a copy has been sent to your office. As I have mentioned in past correspondence, promoters in Hawaii are keen on creating another turtle farm patterned after the Grand Cayman operation. State support is being requested and I fear that the bureaucrats may believe the ridiculous statements put forth in the proposal and therefore pour taxpayer's dollars into the project. In my opinion, the cause for all this excitement by the promoters to start a turtle farm stems from the promotional literature which has been widely distributed by Mariculture, Ltd., and accepted as the truth throughout the U. S. and many countries of the world. The misinformation, bending of the truth and out-and-out garbage presented in these brochures has made the average person who knows very little about sea turtles feel confident that these "once endangered reptiles are now safe due to the fine work of that sea turtle farm in the Caribbean." I have documented this through my own experience by spending a day at the farm and casually talking with visitors from several of our States. All had read the literature given to them at the gift shop and had absolutely no reason to believe that it was not a factual account of the company's activities. One might speculate that the Securities Exchange Commission would be interested in this case if stock were offered for sale by U. S. brokers.

MISSING PAGE 2

UNIVERSITY OF FLORIDA
GAINESVILLE, 32601

COLLEGE OF ARTS AND SCIENCES
DEPARTMENT OF ZOOLOGY

February 18, 1974

Dr. George H. Balazs
Hawaii Institute of Marine Biology
P.O. Box 1346, Coconut Island
Kaneohe, Hawaii 96744

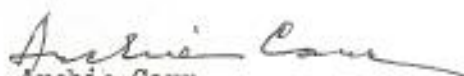
Dear Dr. Balazs:

Many thanks for your three recent letters. I'm glad you enjoyed your stay on Grand Cayman. As you say, the people there are mostly very pleasant.

Many thanks also for the information on our tags No's 8975, 9519 and 7240. Since the beginning of our Tortuguero project in 1954 the Cayman boats have been our best single source of tag returns. Now that the Nicaraguans have kicked out most foreign turtle boats it is the Miskito Indians who catch the Miskito Bank turtles, and it is mainly they who send in the tags.

I hope that Mariculture's proliferation scheme in Hawaii fizzles out. If the new proposed Federal legislation goes through I think they will find it hard just to stay alive on Grand Cayman.

Sincerely yours,


Archie Carr
Graduate Research Professor

AC/fs

UNIVERSITY OF FLORIDA
GAINESVILLE, 32601

COLLEGE OF ARTS AND SCIENCES
DEPARTMENT OF ZOOLOGY

February 19, 1974

Mr. Irvin S. Naylor, President
Mariculture, Ltd.
R. D. 9
York, Pennsylvania 17402

Dear Mr. Naylor:

In reply to your request of 6 February, I'll be glad to try to list the people who were sent copies of my earlier letter to you. During the period when Mariculture and its adversaries were involved in the California legal controversy, a great many people, besides yourself, telephoned or wrote to ask my opinion on the issue. It was only in your case that I addressed a carefully worded statement of my position. As the California hassle continued, I sent copies of that letter in answer to all inquiries. Additional copies went to some members of the Board of Directors of the Caribbean Conservation Corporation (so marked on the list) and to various associates on the Survival Service Commission.

I shall look forward to your reply to the letter involved with interest. You may be sure that if it presents clear new evidence that Mariculture can realistically be regarded as a favorable factor in the world outlook for Chelonia, I'll readdress myself to the people on the list with an enthusiastic endorsement of your enterprise.

Sincerely yours,


Archie Carr
Graduate Research Professor

AC/fs

Enclosure: List of recipients of Carr letter to Naylor, Dec. 18, 1973
cc: Persons listed on enclosure

Mr. Colin Phipps CCC
P. O. Box 3547
Tallahassee, Florida 32303

Mr. John H. Phipps CCC
P. O. Box 3547
Tallahassee, Florida 32303

Mr. Joshua B. Powers CCC
163 E. 81st Street
New York, New York 10028

Dr. James A. Oliver CCC
Director, New York Aquarium
Seaside Park - Coney Island
Brooklyn, New York 11224

Dr. Wayne King CCC
New York Zoological Society
The Zoological Park
185th Street and Southern Blvd.
Bronx, N. Y. 10460

Sir Peter M. Scott, Chairman
Survival Service Commission
Slimbridge
Glos. England

Mr. A. Mence, Executive Officer
SSC, IUCN Secretariat
1110 Morges
Switzerland

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

Prof. John R. Hendrickson
Department of Biological Sciences
University of Arizona
Tucson, Arizona 85721

Dr. Harold F. Hirth
Department of Biology
University of Utah
Salt Lake City, Utah 84112

Prof. Tom Harrisson
Mass Observation Archives
University Library
University of Sussex
Falmer, Brighton
BN19QQ ENGLAND

Mr. Tony Butler
Department of the Special
Minister of State
Canberra A.C.T. 2600
AUSTRALIA

Dr. H. Clay Frick
Alpine
New Jersey 07620

Mr. + Mrs. R. S. Fitter
The Fauna Preservation Society
c/o The Zoological Society of London
Regent's Park, NW 1, London
ENGLAND

Dr. George H. Balazs
Hawaii Institute of Marine Biology
P.O. Box 1346, Coconut Island
Kaneohe, Hawaii 96744

Dr. David W. Ehrenfeld
Dept. of Biology
Barnard College
New York, N. Y. 10027

Dr. Howard Campbell
Office of Endangered Species
Department of the Interior
Bureau of Sport Fisheries and Wildlife
Washington, D. C. 20240

Mr. Frank Lund
P. O. Box 541
Jupiter, Fl 33458

Sr. Guillermo Cruz B. CCC
Apartado 2259
San José, Costa Rica

Mr. G. R. Hughes
University of Natal
Durban, NATAL
So. Africa

Ms. Virginia Handley
The Fund for Animals
P. O. Box 2354
San Francisco, California 94126

Mr. Bill Collins, Jr.
North California Wildlife Committee
2933 Yorba St.
San Francisco, California 94116

PAGE 2

Mr. L. P. Smart, F.C.A
Marquand and Company
51 Queen Street
Melbourne 3000
AUSTRALIA

Prof. Bert Main
Department of Zoology
University of W. Australia
Perth, AUSTRALIA

Mr. Nigel Sitwell
The World Wildlife Fund
29 Greville Street
London EC1N 8AX ENGLAND

Mr. Joe Browder
Environmental Policy Center
324 C Street SE
Washington, D.C. 20003

Dr. Hugh L. Popenoe
International Programs
2001 McCarty Hall
University of Florida
Gainesville, Florida 32611

February 22, 1974

Dr. Archie Carr
Graduate Research Professor
Department of Zoology
University of Florida
Gainesville, Florida 32601

Dear Dr. Carr:

Thank you for the copy of your February 19 letter to Mr. Naylor with accompanying list of recipients of your previous correspondence. You may be interested to learn that while on Grand Cayman Mr. Naylor's letter to you dated December 7, 1973, was made available for my inspection. Although very eloquent, I felt that the entire content (and "plea" if you will) was motivated from an economic viewpoint and, in effect, presented a very weak case for his position. I indicated to the farm manager, Mr. Goddier, that I would like to have the opportunity to distribute Mr. Naylor's letter to associates along with copies of the correspondence you had sent. Mr. Naylor was immediately contacted in the States for approval. He agreed, but only with the stipulation that I supply him with a list of those persons that receive copies. I flatly refused this offer, whereby he then gave written permission for me to use the letter with no strings attached.

I have enclosed a copy of my correspondence to California Assemblyman Edwin Ziberg. In addition, some months ago our Hawaii State Fish and Game Director asked me to comment on a letter from John Hendrickson. I have enclosed copies for your reference.

Unfortunately, it is no longer possible to completely separate politics and science in a research career. A small portion of each of our daily activities must be biopolitically oriented if the general public and policy makers are to be made aware of the facts. Best wishes.

Sincerely,

George H. Balazs

mk

Enclosure

UNIVERSITY OF FLORIDA
GAINESVILLE, 32601

COLLEGE OF ARTS AND SCIENCES
DEPARTMENT OF ZOOLOGY

September 25, 1974

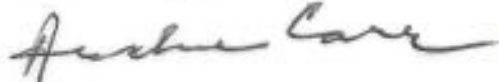
Dr. George H. Balazs
Hawaii Institute of Marine Biology
University of Hawaii at Manoa
P. O. Box 1346
Coconut Island, Kaneohe, Hawaii 96744

Dear Dr. Balazs:

Many thanks for the copy of your letter to Peter Pritchard with the clear and customarily forceful analysis of a dismally cloudy activity.

I hope your letter got the deserved circulation among potentially interested people, pro and con.

Sincerely yours,



Archie Carr
Graduate Research Professor

AC/fs

UNIVERSITY OF FLORIDA
GAINESVILLE, 32611

TRANSLATED

COLLEGE OF ARTS AND SCIENCES
DEPARTMENT OF ZOOLOGY

October 7, 1974

Lic. Humberto Caballero
Director, Dirección de Recursos Renovables
Comayaguela, HONDURAS
Central America

Estimado Señor:


I am writing you to ask the cooperation of your office in the difficult problem of saving, and perhaps eventually rehabilitating the nesting colony of Lepidochelys olivacea, the olive ridley, on the Pacific coast of Honduras. As the enclosed copy of an old article of mine will show, I have been concerned with this population for many years. Moreover, the doctoral research of my former student, Dr. Peter Pritchard, extensively involved the Honduranian colony. It has seemed evident for years that the exploitation that this species is undergoing in Honduras, which amounts to the taking of virtually every egg laid during the entire nesting season, is completely blocking the reproduction of the Honduranian population. The turtles that now nest there must be only old ones that matured before the current practice of taking one hundred percent of each season's eggs had developed.

I am sure that it will seem logical to you to conclude, as I have, that it is only a matter of a short time before Lepidochelys disappears from the waters of your country. Since sea turtles have a homing tendency and attachment for a natal shore, it may never be possible to reestablish the colony from other sources.

It is for these reasons that I am taking the liberty of asking you to consider the possibility of declaring a complete moratorium on all sale of eggs taken from the beaches of your country. Such a move would not only save the Honduranian ridley colony but would serve as a model for foresighted conservation of the species in the waters of other countries within its geographic range.

As a one-time five-year resident of your beautiful country I felicitate your able efforts to preserve the abundant natural assets of Honduras and sincerely hope that Lepidochelys will not disappear from the picturesque shores of the Gulf of Fonseca.

Sincerely yours,


Archie Carr
Graduate Research Professor

AC/fs
Enclosure
cc: Dr. Jan Peter Johnson

UNIVERSITY OF FLORIDA
GAINESVILLE, 32611

COLLEGE OF ARTS AND SCIENCES
DEPARTMENT OF ZOOLOGY

October 9, 1974

Ms. Luz P. Castro
Head, Wildlife Management Section
Parks, Range and Wildlife Division
Bureau of Forest Development
Diliman, Quezon City, Philippines

Dear Ms. Castro:


I have recently learned with astonishment and concern that, at a time when conservationists are doing everything possible to slow the alarming decline of world populations of the green turtle, the Philippine Government has issued permits for the taking of 25,000 green turtles in the Sulu Sea. The Philippine population of Chelonia, and the contiguous stocks in Bornean waters are one of the only large assemblages of green turtles left in the world. Although nobody has reliable census data for the whole region, I can on general principles assure you that if the harvest that is permitted in your licenses were to be realized, extirpation of the species from this stronghold could be expected within a decade. The process would take that long only because of the moving in of successive age-groups of new breeders from the current backlog of immature turtles.

To those of us who have dedicated time to the difficult work of saving Chelonia mydas as a resource and a wild species, this move of your government dashes the hope that resided in the important Sulu Sea green turtle colony. I want to urge you to consider what steps might be taken to rescind the permits that have been issued, and to declare a complete moratorium on sea turtle hunting in Philippine waters while working out an effective management plan with appropriate agencies in Sabah and Sarawak.

I sincerely hope that you will urge all officials concerned to give this critical situation their careful consideration.

Separately I am sending you some publications on aspects of sea turtle conservation.

Sincerely yours,


Archie Carr
Graduate Research Professor

AC/fs

UNIVERSITY OF FLORIDA
GAINESVILLE, 32611

DEPARTMENT OF ZOOLOGY
223 BARTRAM HALL
904-392-1107

February 22, 1977

Dr. George H. Balazs, Jr.
University of Hawaii at Manoa
Hawaii Institute of Marine Biology
P.O. Box 1346 Coconut Island
Kaneohe, Hawaii 86744

Dear George:

By all means send my name to the National Geographic as a character witness. The idea is great, absolutely sound, feasible and sure to yield important results. As proof of my sincerity, and also proof that there's a destiny that shapes our ends I must tell you that only yesterday Karen and I were talking of possible ways to keep her in sea turtle ecology with a physiologic cast, and I said I thought she ought to ask you about the possibility of going out to Pearl and Hermes with some telemetric aids and finding out why green turtles bask there.

No crap--only yesterday it was. Obviously, it was logistically a total pipe dream, and one that you and Whittow are in far better shape than we to undertake. So I really do think you've got a fine project, and I'll be delighted to tell the National Geographic people so.

We are on the verge of publishing a biggish report on the first 21 years at Tortuguero. When the manuscript takes final shape we'll send you a preprint. I'm pretty sure that if tag loss doesn't bother you too much, returns from your tagging are certain eventually to reveal some stirring things.

Karen sends regards, as I do.

Sincerely yours,


Archie Carr

AC:lw