

INTERIOR DEPT.

UNIVERSITY OF HAWAII

Department of Zoology

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August 13, 1968

Mr. Stewart L. Udall
Secretary of the Interior
Government of the United States of America
Washington, D. C.

Dear Secretary Udall:

The enclosed article in this evening's Honolulu Star-Bulletin has stimulated me to write this letter to you. I am sending copies of this letter to Dr. Donald C. Matthews of this University and Dr. Edward E. Held of the Radiation Laboratory, University of Washington, Seattle, who like myself have been interested in the biology of the coconut crab for many years. I feel it is correct to say that between the three of us we know more about the biology of coconut crabs than any other group of persons in the world. I am also sending a copy of this letter to Dr. F. Raymond Fosberg of the Atoll Research Board, of the Smithsonian Institution, Washington, D. C.

I do not believe that it is necessary to exterminate the population of coconut crabs on Bikini Atoll. In the first place, such a program would be very difficult to carry out effectively because when the crabs molt they remain buried beneath the ground for periods as long as a month and possibly longer in the case of large crabs. Thus the extermination program would have to be carried out for many months to be effective. To deny the Bikini Islanders access to their Island while this difficult, wasteful, unnecessary and expensive program was being carried out certainly does not make sense.

Even more disturbing to me is the idea of destroying an important source of food in the atoll ecosystem. As it is these Island people lead difficult lives with food levels frequently barely meeting the subsistence needs of the community.

I believe that only the larger, older crabs are radioactive. This is because they were exposed to the early high levels of radiation, and the radio strontium has been maintained in their bodies because they eat their old exoskeletons at each molt. Younger animals recruited into the population since the Atomic testing period at Bikini should not be radioactive. Dr. Held has published figures indicating that a

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Mr. Stewart L. Udall

Page 2

medium sized crab, with a carapace length of about 4 inches is about 5 years old. Crabs of this size and probably considerably larger should be free of radioactive contamination, and they represent an important, exploitable and safe food source for the Bikini people. Dr. Held, whose research lies in this area, could substantiate my tentative conclusion.

Thus the older animals should be retained in the population as a breeding stock, while younger, smaller animals could be exploited for food by the Bikini people. Since nothing is known about the recruitment of young crabs, the possibility exists that each atoll is a "closed system" with the marine larvae of the coconut crabs being retained in the lagoon. Data on the length of larval life and on the circulation pattern of the Bikini lagoon indicate that this could be so. Thus extermination of the adult population of hermit crabs may very well result in extinction of this species on this atoll.

I urge you to reconsider the desirability of the notion to exterminate the coconut crabs on Bikini Atoll. To me the idea seems totally wrong and uninformed. Certainly education with regard to a food item is better than wholesale destruction, perhaps forever, of an important food resource. I am completely confident that the Chiefs of the Bikini people would be able to control the capture of coconut crabs as communal sharing of food resources is part of the way of life of these people.

If there is any way that I can be of further help, please call on me. Again, I beseech you to reconsider the ill-advised plan to exterminate an important food source for the people of Bikini Atoll.

Sincerely yours,



Ernst S. Reese, PhD
Associate Professor
of Zoology
University of Hawaii