UNIVERSITY OF WASHINGTON
APPLIED FISHERIES LABORATORY
FISHERIES CENTER
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NMB-4

Dr. Allyn H. Seymour
Marine Biologist
Division of Biology and
Medicine
U.S. Atomic Energy Commission
1901 Constitution Avenue N.W.
Washington 25, D.C.

Dear Al:

Following the discussions of the recent meeting in the offices of the Division of Biology and Medicine on the Rongelap problem and your letter of December 4, 1956, we have reviewed the role of crabs on the possible strontium-90 contamination.

As a result of our group thinking, we feel that the crab-Sr^{90} problem is soluble and offer the following suggestions in the hope that they will be helpful.

1. The Sr^{90} levels are high only in the land crabs.

2. The land hermit crab, Cenobita, is rarely used as food and should probably be dismissed as a hazard.

3. The coconut crab, Birgus, is used as food, but the population of coconut crabs on Rongelap Island is apparently small (none have been collected there), having been controlled by reduction of the number of animals that could survive in the young stages because of predation by chickens, pigs, etc.

4. Coconut crabs at other islands at Rongelap Atoll could be captured and carried out to sea for disposal. The coconut crab is a nocturnal animal which can be attracted to feeding stations baited with fish scrap, coconut oil, etc. By maintaining nightly patrols of the feeding staions for a few nights at each major island the coconut crab population could be reduced to an insignificant number.

5. The land hermit crab, Cenobita, has the same levels of activity as the coconut crab and could be used for periodic checks to determine any possible hazard resulting from reestablishment of the coconut crab populations.

6. Any excess of hermit crabs (Cenobita) could be collected at feeding stations and disposed of by removal and dumping in the open sea.

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Sincerely
Lauren R. Donaldson
Director

LRD:gb