

~~CONFIDENTIAL~~

SUMMARY OF OPERATIONS ON CONTRACT NO. W-28-094-eng-93
FOR THE MONTH OF NOVEMBER 1947.

81149
15808
DEC 10 1947
4223
R

I. The basic program of the Applied Fisheries Laboratory, of measuring the effect of X-rays upon aquatic organisms, again shared the efforts of the staff, with the completion of the preliminary evaluation of the Bikini material. 403935

OPENNET ENTRY	
<input type="checkbox"/> Authorized for Public Release	Date: 7/11/95
By: B. A. F. G. G. G. G.	
Entered in OpenNet	Date:
By:	Date:
<input type="checkbox"/> Not Authorized for Public Release	Date:
By:	Date:

*Sections I and II.

Early in November two more marked control male chinook salmon were recaptured, making a total of 38 irradiated- and control-stock chinooks re-taken in 1947. Eight control and seven irradiated egg lots were obtained. One control egg lot (#13) and one egg lot (#14) from irradiated stock were recognized at the time of spawning as consisting of poor eggs that would have been discarded in ordinary hatchery procedure. By December 2, 1947, almost complete mortality had been suffered by both of these egg lots. When these two egg lots are eliminated from consideration, the percentage mortality of egg lots from irradiated stock (16%) is significantly (1%-2% level) greater than that of the controls (3%), the value of "t" being 3.0 for 11 degrees of freedom.

These eggs will hatch during December and additional data will be available. We are making a detailed study of the degree of development of all the embryos that die before hatching. Detailed studies will also be made of all malformed embryos.

DEPARTMENT OF ENERGY DECLASSIFICATION REVIEW	
SINGLE REVIEW AUTHORIZED BY:	DETERMINATION (CIRCLE NUMBERS):
<i>B.A. F. G. G. G.</i>	1. CLASSIFICATION CHANGED
REVIEWER (ADD): 11-2-94	2. CLASSIFICATION CHANGED TO:
NAME: <i>B.A. F. G. G. G.</i>	3. CONTAINS NO DOE CLASSIFIED INFO
DATE: 11-14-94	4. CORRELATE WITH:
	5. CLASSIFICATION CANCELLED
	6. CLASSIFIED AND BRACKETED
	7. OTHER (SPECIFY):

Sections III and IV.

Observations have continued at Cultus Lake, B. C. Canada, where the entire run of salmon is being checked for the presence of marked fish. In the

* Section numbers refer to the Project Chronology Chart, revised January 9, 1947.

fall of 1943 sockeye salmon adults were exposed to 100 r doses of X-rays. Some fish were used as "controls". The young fish produced from these fish were reared at the laboratory until migration size, when they were marked by the removal of the adipose fin and a ventral fin. The young fish were then transported back to Cultus Lake and migrated to sea. It was expected that the survivors would return from the sea this fall as adults. To date, no marked fish have been recorded from this experiment.

II. Experimental work with microplankton and food chain studies has had to await the completion of other projects before it again becomes an active part of our program.

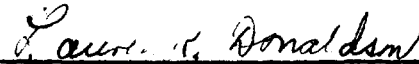
III. The data collected at Bikini during the resurvey of 1947 has been summarized into a preliminary report and copies have been forwarded to the Atomic Energy Commission for distribution to responsible agencies.

"Radiobiological Resurvey of Bikini Atoll during the Summer of 1947."
by Applied Fisheries Laboratory, University of Washington, November 1947.

IV. During the month contact was maintained with the Hanford Engineering Works, especially the personnel of the 146 Building. Chinook salmon eggs were transferred from the coast to the 146 Building to be used in continuation of the monitoring studies and for new exploratory studies.

Mr. Wendell K. Crane, Assistant Chief, Research Branch, Atomic Energy Commission, Richland, visited the Applied Fisheries Laboratory to review the program and discuss administrative problems.

Capt. Don F. Riordon, Oak Ridge, and Fairman M. Sherry, Property Division Atomic Energy Commission, Richland, visited the laboratory to check on property and the records being maintained at the laboratory.


Lauren R. Donaldson
Director of Contract
No. W-28-094-eng-33

~~SECRET~~

423 15000
NOV 19 1947

SUMMARY OF OPERATIONS ON CONTRACT NO. W-28-094-eng-33
FOR THE MONTH OF NOVEMBER 1947.

I. The basic program of the Applied Fisheries Laboratory, of measuring the effect of X-rays upon aquatic organisms, again shared the efforts of the staff, with the completion of the preliminary evaluation of the Bikini material.

OPENNET ENTRY	
<input type="checkbox"/> Authorized for Public Release	Date: 7/1/47
By: <i>W.F.G. Gosling</i>	
Entered in OpenNet	Date:
By:	
<input type="checkbox"/> Not Authorized for Public Release	Date:
By:	

*Sections I and II.

Early in November two more marked control male chinook salmon were recaptured, making a total of 38 irradiated- and control-stock chinooks re-taken in 1947. Eight control and seven irradiated egg lots were obtained. One control egg lot (#13) and one egg lot (#14) from irradiated stock were recognized at the time of spawning as consisting of poor eggs that would have been discarded in ordinary hatchery procedure. By December 2, 1947, almost complete mortality had been suffered by both of these egg lots. When these two egg lots are eliminated from consideration, the percentage mortality of egg lots from irradiated stock (16%) is significantly (1% level) greater than that of the controls (3%), the value of "t" being 3.0 for 11 degrees of freedom.

These eggs will hatch during December and additional data will be available. We are making a detailed study of the degree of development of all the embryos that die before hatching. Detailed studies will also be made of all malformed embryos.

Sections III and IV.

DEPARTMENT OF ENERGY DECLASSIFICATION REVIEW	
SINGLE REVIEW AUTHORIZED BY: <i>A.A. Dingell 11-2-94</i>	DETERMINATION (CIRCLE NUMBER(S))
REVIEWER (ADD): <i>A.A. Dingell</i>	1. CLASSIFICATION CHANGED
NAME: <i>A.A. Dingell</i>	2. CLASSIFICATION CHANGED TO:
DATE: <i>11-14-94</i>	3. CONTAINS NO DOE CLASSIFIED INFO
	4. COORDINATE WITH:
	5. CLASSIFICATION CANCELLED
	6. CLASSIFIED INFO GENERATED
	7. OTHER (SPECIFY):

Observations have continued at Cultus Lake, B. C. Canada, where the entire run of salmon is being checked for the presence of marked fish. In the

* Section numbers refer to the Project Chronology Chart, revised January 9, 1947.

fall of 1943 sockeye salmon adults were exposed to 100 r doses of X-rays. Some fish were used as "controls". The young fish produced from these fish were reared at the laboratory until migration size, when they were marked by the removal of the adipose fin and a ventral fin. The young fish were then transported back to Cultus Lake and migrated to sea. It was expected that the survivors would return from the sea this fall as adults. To date, no marked fish have been recorded from this experiment.

II. Experimental work with microplankton and food chain studies has had to await the completion of other projects before it again becomes an active part of our program.

III. The data collected at Bikini during the resurvey of 1947 has been summarized into a preliminary report and copies have been forwarded to the Atomic Energy Commission for distribution to responsible agencies.

"Radiobiological Resurvey of Bikini Atoll during the Summer of 1947."
by Applied Fisheries Laboratory, University of Washington, November 1947.

IV. During the month contact was maintained with the Hanford Engineering Works, especially the personnel of the 146 Building. Chinook salmon eggs were transferred from the coast to the 146 Building to be used in continuation of the monitoring studies and for new exploratory studies.

Mr. Wendell K. Crane, Assistant Chief, Research Branch, Atomic Energy Commission, Richland, visited the Applied Fisheries Laboratory to review the program and discuss administrative problems.

Capt. Don F. Riordon, Oak Ridge, and Fairman M. Sherry, Property Division Atomic Energy Commission, Richland, visited the laboratory to check on property and the records being maintained at the laboratory.

Lauren R. Donaldson
Lauren R. Donaldson
Director of Contract
No. W-28-094-eng-33