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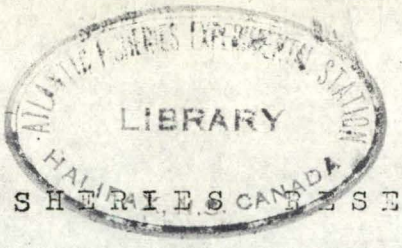

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MANUSCRIPT REPORTS OF THE BIOLOGICAL STATIONS

No. 295 & 296

Title

Report on the Examination of Atlantic Salmon Eggs and Brown Trout Eggs for Presence of B. salmonicida

Author

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REPORT ON EXAMINATION OF BROWN TROUT EGGS FOR PRESENCE OF B. SALMONICIDA

D.C.B. Duff

Two lots of trout eggs have been received and examined for presence of B. salmonicida. In neither case was the bacterium found.

Lot #1. Brown trout eggs, received from Cowichan Lake Hatchery, B.C., January 20, 1932. Number of eggs, 32.

Lot #2. Trout eggs received from Nelson, B.C., February 10, 1932. Number of eggs, 58.

Technic: (i) The water in the shipping bottle was decanted from the eggs into a sterile flask. The eggs were transferred to a flask containing 100 c.c. sterile water. Flask was corked and agitated vigorously. Water from this decanted into another sterile flask, and eggs transferred to sterile petri plate.

(ii) Successive dilutions of the original water, and of the water in which eggs were agitated, were made, using a 10 c.c. sample to 90 c.c. sterile tap water, etc., etc. Three 1 c.c. samples of each dilution were plated in plain nutrient agar, pH 7.0, and incubated at 25°C.

(iii) Each washed egg was broken with sterile forceps into a tube of melted agar at 45°C., and mixed. Of this, 0.5 c.c. was transferred to another tube of melted agar. Both tubes poured into sterile petris, and incubated at 25°C.

(if) After 6 days incubation, representative colonies of any colony types showing brown pigment of any sort were spread on agar plates. This was done regardless of whether any diffusible pitment was in evidence. The spread plates were examined daily for pigment production. Stained films of the organisms were also examined.

Results:

Lot #1. Only one type of brown pigmented colony, composed of Gram negative rods, was found on these eggs. The brown appeared only in the colony itself, and did not diffuse into the surrounding medium. After 7 days the brown colonies became bright golden yellow. The fermentation reactions of this organism were compared with those of the culture of B. salmonicida maintained in this laboratory, and are recorded below.

	Dextrose	Levulose	Lactose	Galactose	Mannite	Raffinose	Inulin
Lot #1 bacterium	+	+	+	+	-	+	+
B. salmonicida	+	+	-	+	+	-	-

The organism in question therefore does not correspond with B. salmonicida, which produces a diffusible, chocolate-brown pigment, does not become orange-yellow, and which ferments different carbohydrates.

Lot #2. One only type of brown pigmented colony. Description same as for the organism of Lot #1, except that raffinose was not fermented. B. salmonicida was uniformly absent.