Summary of Egg Sampling at Williams and Scully Creeks from 1939 to 1953.

In past years the number of eggs carried into these creeks by sockeye has been estimated through sampling a number of females and determining their average egg content. This average times the number of females passed upstream has been used to represent the potential egg deposition.

It is known that a relationship exists between the number of eggs contained by a female and her fork length. This relationship has been measured (following pages) and applied to a method of determining the potential deposition on the basis of past sampling and on the average lengths of females in future escapements. The application of this method will reduce the demand on fence personnel and also result in greater conservation of the sockeye.

A comparison of the sampling carried out at the two creeks was made. This was complicated somewhat by the fact that Scully fish were sampled at a considerable distance upstream and in some instances partially spawned fish were encountered. In order to eliminate this effect, fish which were noted as partially spawned were not included in the treatment of the sample.

Conclusions:

(1) There exists no significant difference between the mean egg content and mean length of Williams and Scully fish sampled.

(2) A close positive relationship exists in both samples between egg content and fork length.

(3) The potential egg deposition at Williams Creek may be estimated with as great, if not greater accuracy by using the relationship $Y = 121.6x - 3311.5$ than by the "egg sampling" method used in the past.

(4) The presence of partially spawned females at Scully demands continued egg sampling in order that an accurate estimate of deposition be made.