

Closed Stock Company  
GIDROSTROY

## PROGRAM

For otolith tagging of Chum and Pink for hatchery cycle of 2007-2008

Goal of project: Determine methodology and conduction of otolith tagging for hatchery product for identification of the hatchery population of Pink and chum salmon on the Kuril and Reidovo salmon hatcheries.

Content of the first level of the project (25 October – 20 December, 2007)

1. Analyze the conditions for incubation of chum and pinks at the Reidovo and Kurilisk hatcheries for previous years for choosing (approximately) the tagging technique (study the data, collected by the specialists for the Salmon Hatchery)
2. Select samples of otoliths from pinks and chums used in the 2007 run (amounts: pinks 850 ea, Chum- 1650 ea):  
Open the skull cavity;  
Identify and remove otolith;  
Fixing the otoliths into the scale books.
3. Analyze microstructures of the otoliths for productive Chums and pinks from 2007 generation before tagging. Amount of material: Pinks- approximately 150 otoliths from each salmon hatchery, chum approximately 150 otoliths from each salmon hatchery.  
-Fix otoliths of adult salmon to slides  
-Prepare otoliths of adult salmon on slides for further analysis for factors for the individual structural elements (for selection of tagging plan)
4. Analyze otoliths of pink and chum embryos before tagging (approx 600 samples):  
--извлечение and fixing to subject glass embryonic otoliths  
--preparation embryonic otolith samples;  
--Analyze embryonic otolith structures.
5. Direct supervision of the thermal treatment for pink and chum among the hatchery lot presented by the representative of the scientific organization. Roe tagging according to the tagging plan for pacific salmonoids in Russia in 2007.

6. Operational analysis of pink and chum embryonic otolith microstructures after marking for assessment the quality of the rings from procedure methods. (aprox 600 samples)
  - извлечение and fixing to sample slide embryonic otoliths
  - preparation of the embryonic otoliths for evaluation of the tagging quality.
  - Study of the incubation effects and formative factors on the quality of the methodology.

Content of the second stage of the Study (from December 20 to July 1, 2008)

1. Analysis of the microstructures of the embryonic portion of the otoliths of producer chum and pink from the nearest water and from the Salmon hatcheries of Reidovo and Kuriljsk for establishing the characteristic structures of the otoliths for various waters---aprox 2400 otoliths.
  - Preparation of adult otolith samples for digital images:
  - Analysis of the otolith structure.
2. Preparation of the digital images of juvenile salmon otoliths into the database of NPAFC:
  - Fix samples of the juvenile tagged from the lot (May, feeding period);
  - извлечение and fixing of embryonic otoliths
  - Preparation of otolith samples of juvenile chum and pinks for digital images.
3. Analysis of embryonic otolith microstructure of for pinks and chum in early and late lots for evaluation for tagging in the forthcoming years.
4. Write the Summary report.

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