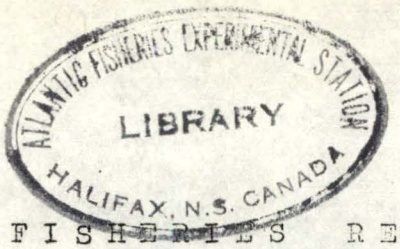

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Title

CONTROL OF THE FISH LOUSE, ARGULUS

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Control of the fish-louse, Argulus

(information furnished by Dr. C. B. Wilson)

1. The increase in the number of the Argulids can be prevented either by killing the females before they lay their eggs or by destroying the eggs before they hatch. The ripe female leaves her host and deposits her eggs in rows upon some smooth surface at or near the bottom, where they hatch in three to five weeks. If suitable artificial surfaces like tiles or bricks are supplied in abundance they can be removed from time to time and the eggs they have accumulated can be destroyed. This destroys the eggs before they can hatch.

2. The females can be killed before laying their eggs providing the water in which the infested fish are kept can be changed. This is done by mixing certain chemicals with the water making a solution of definite strength, in which the fish are left for 24 hours and then removed. Dr. Tung-pei Chen of the Fisheries Experiment Station at Canton, China has found by careful experiment that the best chemical to use for such a solution is Ammonium Chloride. If mixed in the proportion of 1 part Chloride to 2.000 parts water it will not injure the fish but will kill all the Argulids within 24 hours. This method will kill the ripe females before they can lay their eggs, but of course can be used only where the water can be controlled.

3. Certain small fish like top minnows and dace feed upon the free living larvae of Argulus and thus destroy many of them before they are large enough to fasten onto a trout. The introduction of such fish into breeding ponds will help to keep the parasites down.

4. The free living larvae of Argulus are strongly attracted by a powerful light. If such a light be fixed over the surface of the water these larvae

will be attracted to its immediate vicinity and can be removed by tow nets or very fine dip nets.

Copied from Dr. Tung-Pai Chen's paper.

Methods of Prevention. "Prevention is better than cure" is especially true of fish parasites. To prevent the occurrence of Argulus it is most important to keep the pond in a clean sanitary condition. Before stocking, the ponds should be drained and lime applied to the bottom. Eighty pounds of lime should be used for each acre. Water can be let in the next day and the ponds can be stocked in three or four days.

Local pond keepers generally use teaseed meal for treating fish infected with Argulus. For each acre of water surface, two and a half feet deep, forty pounds of the meal is required."

Dr. Chen then records experiments with solutions of Sodium Chloride, Ammonia, Ammonium Chloride, Copper Sulphate, Formaldehyde, Potassium Permanganate and Teaseed Meal and concludes,-

"Infection of Argulus foliaceus is common with freshwater fishes around Canton.

The number of Argulus can be kept down by previous sterilization of the ponds and by the introduction of small fishes into the ponds.

Teaseed meal is entirely unsuitable for the treatment of fish infested with Argulus.

Of all the killing agents tested Ammonium Chloride gave the best result. For practical purposes 1 part to 2.000 parts of water is advised."