

water drawn off for the eleventh time; air bubbling through it very rapidly. Moribund in ten minutes.

Placed in this extract about a dozen worms gathered from the mud in water about three feet deep. These animals were massed together and lying among the roots of aquatic plants. The moment the solution touched them they separated all over the bottom of the watch glass, wriggling in all directions and voiding their faeces. In three hours they were all dead. So were two small phyllapod crustaceans which happened to be along with the worms.

June 24th. Placed a batch of about fifty aquatic worms in cedar extract drawn off for the twelfth time. At first great wriggling ensues with evacuation of faeces; then constrictions occur in each segment of the body, making the animal look somewhat like a string of beads; then the hinder end appears to disintegrate but leaves the front end living and moving; finally the head dies. In two hours most of them were dead, but in a few the head was still alive.

June 25th. At 9.15 a.m. placed a tadpole one inch long in cedar extract drawn off for the twelfth time. Apparently dead in fifteen minutes, but revived in about an hour when returned to fresh water.

Up to this time all experiments with cedar extract had been conducted with what might be considered as saturated solutions; that is, the solution used was siphoned off from the bottom of the aquarium where the sawdust was lying and where the dark colour showed the extract to be the strongest. From this date the experiment was varied by throwing out all the water, filling up the aquarium with fresh water and allowing the bag of sawdust to float at the top of the water. In this way the solution was uniform in colour and strength throughout the aquarium. The animals were then as a rule placed in the aquarium and usually swam about below the floating sawdust bag.

June 27th. Mr. Halkett, an officer of the Department of Marine and Fisheries, arrived to-day from Belleville, bringing with him about 100 black bass fry. The weight of one of these of medium size was found to be 135 milligrams; its length one inch.

Placed two of these fry in cedar extract drawn off fourteen times. Both appeared to be dead in two minutes. Placed in fresh water they did not revive.

June 28th. Two black bass fry in cedar extract drawn off sixteen times from the same sawdust, died in two hours.