

carried off both at the top and the bottom to take care of any that do not fall directly to the bottom. Infected fish, in warm weather, it is stated, may be cured in this way in a week or ten days and further epidemics prevented by quarantining new stock in running water. In some instances swiftly flowing streams may be fenced off and used for this purpose by leaving the fish in the enclosure until cured.

Tadpoles and goldfish kept in tanks with fishes subject to this disease have been found extremely helpful in keeping it down since they prey on the parasites for food.

NERVE CURRENTS HEARD ON RADIO INSTRUMENT

The electric current that shoots along a nerve fiber has been detected by means of radio apparatus, according to Dr. E. D. Adrian of Cambridge University, who described before a meeting of the Physiological Society his method of using a three-tube instrument to make his delicate measurements.

It had long been known, he said, that the passing of messages down a nerve caused an electrical disturbance. But it had only been possible to record the effects from a large number of fibers at once, for example, the thousands of fibers from an eye, or to a muscle. The results obtained were therefore as confused as would be the superimposed records from all the telegraph wires between London and Manchester. Dr. Adrian's new apparatus makes it possible for the first time to obtain records in a rapidly moving photographic plate of the impulses passing along a single fiber.

In conjunction with Dr. Zottermann, a Norwegian neurologist, Dr. Adrian recorded the results of stimulating a sense organ connected to the brain by a single fiber. The sense organs in the skin which give information as to touch, pain, and temperature, are too near together for this to be easy. Those in the muscles subserving the so-called muscular sense are farther apart, and by stretching a frog's muscle, it was found possible to stimulate a single one. The impulses were all of the same size, but as the muscle was stretched, their frequency was increased from ten to fifty per second. Differences of intensity are in fact transmitted through the nerves as differences of rhythm.

This is the first occasion on which the message passing along a nerve has been decoded, and the experiment opens up a new field of neurology, in the opinion of physiologists here. Within the next few years it should be possible to read the main types of messages entering and leaving the nervous system, and the time has been brought measurably nearer when it will be possible to record the actual events in the brain which are the physical correlate of consciousness.

Black opals are becoming rare.
