LUMPFISH (CYCLOPTERUS LUMPUS) CRYPTOBIOSIS

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Since parasites with direct development cycle can accumulate very quickly in aquariums with closed system and thus cause great fish mortality, it is necessary to study parasitofauna of each fish species and perform preventive measures in order to successfully keep fish in artificial environment.

We have seen this once again when purchased young Lumpfish through the "AquaLogo" Company. In 2019 we received shipment with artificially bred Lumpfish from the White sea (Cyclopterus lumpus). The nutritional state of the fish was very pour; some specimens were exhausted. Ichthyopathological research of the dead lumpfish showed a very large number of flagellates, Cryptobia dahlii (more than 30-40 sp. within sight) in samples from the stomach and intestines membrane mucous.

The cause of Lumpfish death was cryptobiosis. Cryptobiosis is a disease caused by flagellates, protozoa parasites belonging to the class of flagellates, the order Bodjnidea, the family Bodonidae, and the genus Cryptobia. Reproduction of flagellates is carried out by longitudinal division; infection of fish occurs without intermediate hosts. In natural environment Lumpfish are described to be carrier of Cryptobia. In conditions of closed system Cryptobia caused the disease and death of fish.

Traditional methods of treatment (introduction of medicines with food, carrying out long-term medical treatment) did not improve the condition of Lumpfish. In this situation, we were forced to apply an unusual method of treatment. We had to introduce the medicine straight into the stomach using a catheter. To monitor the effectiveness of treatment we also had to take the contents of the stomach with the use of the catheter followed by microscopy.

Conducted treatment proved to be effective against Lumpfish cryptobiosis and helped to avoid large mortality.

If necessary, this method of treatment can also be tried for other non-stressed fish species.