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MOLECULAR EPIDEMIOLOGY, SERODIAGNOSTIC STUDIES AND CONTROL OF DIFFERENT MORPHOMETRIC ISOPOD SPECIES IN DIFFERENT MARINE FISH HOSTS AND LOCALITIES IN EGYPT

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Isopods are protandrous hermaphrodite ectoparasitic crustaceans on the body surface, fins, and in the buccal or the branchial cavities of freshwater and marine fish species. Cymothoid isopods are serious parasites and currently affect huge number of lakes and fish farms all over the world. In Egypt, the problem of isopod invasion was detected in some inland lakes such as in lake Qarun (an inland closed basin of salt water in Fayoum governorate) where we practically proved that isopods were introduced to this lake with the fry dropped in it in year 2013. The problem in lake Qarun propagated in 2015 causing fish mortalities and severe marketing problems so that we put an applied strategy for limiting and control the spread of isopod infestation problem in the lake. Also, isopod invasion problem was noticed among fishes along the Egyptian north marine coastal regions as well as their corresponding lakes and farms. The present work was

designed to investigate the isopod invasion problem dealing with the molecular identification, sequencing and phylogenetic analysis of the different morphometric isopod species isolated from different hosts and from different localities in Egypt during our surveillance studies. SDS-PAGE was conducted on crude antigens prepared from different morphometric isopod species and also from different host origins where the polypeptide bands with their molecular weight were detected for each. Detection of the specific polypeptide band was used in diagnosis and protection against isopod species using Western blot. The present work gave spot light and drew a map for the isopod species infestation in Egypt that will be a guide for a control strategy development and application.

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