

Effects of salinity and water quality parameters on the breeding and larva rearing of black molly *Poecilia sphenops* in laboratory condition

Abstract

A study was conducted to determine the effects of salinities (0, 3 and 6 PSU) and other water quality parameters on the breeding and larva rearing of black molly *Poecilia sphenops* (Valenciennes 1846) under laboratory condition. Each treatment was carried out in triplicates. Results showed that water salinity of 6 PSU represented the highest breeding success compared to salinities of 0 and 3 PSU. Nevertheless, no significant differences ($p > 0.05$) were observed at these three salinities for fry production in captivity. Moreover no significant differences were observed in weight increment when salinity raised from 3 to 6 PSU, however, these two treatments differed significantly when compared with 0 PSU. The survival rate was not significantly varied in comparison with 0 PSU. The highest total length increment was found at water salinity of 6 PSU followed by 0 and 3 PSU. Results on water quality parameters denoted no significant differences ($p > 0.05$) for all treatments except on ammonia (NH_3) rates. The highest ammonia level was found at 0 PSU followed by 3 and 6 PSU. The findings of the present study suggested to culture black molly (*P. sphenops*) in a slight saline condition from 3 to 6 PSU.

Keyword: *Poecilia sphenops*; Aquarium trade; Ornamental fish; Fry production; Malaysia