



Artificial Photoperiod Influence on Survivability, Pigmentation and Hematological Parameters in Live-Bearer Ornamental Fish, *Poecilia sphenops*

Bela Zutshi and Aradhana Singh

Department of Zoology, Aquaculture Laboratory
Bangalore University, Bengaluru-560 056, India
E-mail: bela_zutshi@yahoo.co.in

Abstract: Effect of photoperiod manipulation was conducted on survival, body color and hematological parameters of *Poecilia sphenops*, Red eyed orange molly (average weight 0.52 g) reared in laboratory under three photoperiods viz., long (18L:6D) and short (12L:12D and 10L:14D) regimes for 60 days with constant light intensity of 1500 lux on the water surface. All fish groups were fed with formulated feed. At the end of 60 days experiment the survival rate was 100% and no mortality was observed. The body colour showed bright skin colour measured by higher values of carotenoid content of fish group exposed to long photoperiod. Significant higher values of RBC, Hb, MCHC and MCV was noted in fish exposed to long-day photoperiod when compared to those exposed to short-day photoperiods. No significant difference was observed in PCV of different experimental groups whereas WBC showed significantly lower values in 18L: 6D when compared to 12L:12D and 10L:14D. Therefore, results confirmed that long-day manipulated photoperiod was effective in enhancing skin color in *P. sphenops* without any measurable stress and mortality.

Keywords: Photoperiod, *Poecilia sphenops*, Survival rate, Skin color, Hematological parameters
