

Larval rearing and feeding behavior of African Catfish, *Clarias gariepinus* under dark conditions

Abstract

The present study was conducted to elucidate the relationship between the larval feeding behavior of African catfish, *Clarias gariepinus* and their sensory organs. We also sought to reduce the cannibalism and improve larval rearing methods for this species. The feeding behavior of intact and streptomycin-treated larvae was examined under light and dark conditions using *Artemia nauplii*. The ingestion rates under light versus dark conditions did not vary significantly; furthermore, no difference was observed between intact and streptomycin-treated larvae. These results showed that the feeding behavior of *C. gariepinus* depends on chemo-sensory senses rather than visual or mechanical senses. In addition, the larvae were reared under normal light conditions (following a diurnal cycle) and continuous dark conditions from the hatching day until they were 20 days old. Although, there was no significant difference, the trials under continuous dark conditions tended to have higher survival rates than those under light conditions. Moreover, the larvae reared under dark conditions showed the same growth rate as those under light conditions. The observations of larval behavior in the present study showed that larval activity increased under dim light conditions; the number of fish resting on the bottom of the aquaria decreased and fewer larvae were bitten by other individuals than under light conditions. The results of this study suggest that higher activity of *C. gariepinus* under dark conditions reduced the rate of cannibalism and resulted in higher rates of survival compared to light conditions. This study suggests that the survival rate of *C. gariepinus* larvae can be improved under dark or dim light conditions with low larval densities and adequate access to food. © 2011 Academic Journals Inc.