

Biological development and growth of amur catfish, *Silurus asotus* reared under controlled tropical condition

ABSTRACT

This study was conducted to investigate the biological development and growth of the Amur catfish, *Silurus asotus* at the early larval stage. The eggs and larvae were obtained via the artificial spawning technique. The findings showed that the eggs of the Amur catfish hatched 27 hr after fertilization (hAF) under temperature conditions of $26.9 \pm 1.3^{\circ}\text{C}$. The newly hatched larvae (4.71 ± 0.87 mm) had a large green yolk sac (0.99 ± 0.02 mm³), unpigmented eyes, undeveloped mouth, and closed anus with one pair of developed maxillary barbels. At the 30 hAH (7.01 ± 0.41 mm), the yolk sac continued to decrease (0.33 ± 0.08 mm³), the barbels elongated, the mouth opened, the lower jaw was movable, with the peristaltic movement of the small intestine detectable. At this point, the larvae started to feed on rotifer and formulated feed. At 72 hAH, larvae (9.02 ± 0.86 mm) had developed pectoral and dorsal fin and at 12 dAH (34.10 ± 0.89 mm) and entered the juvenile stage. This study concluded that the larval development and growth of the Amur catfish is relatively comparable to other tropical catfishes hence similar rearing techniques can be adopted to enhance the overall growth performance at the later stages.