

Behavior and response of Japanese catfish (*Silurus asotus*) in captivity provided with an artificial microhabitat

Abstract

Rearing of Japanese catfish (*Silurus asotus*) requires special considerations for designing of facilities and management. Information on its biology in natural environment provides ideas for developing suitable culture systems. For this species, underwater artificial microhabitat structures are needed to perform its normal behavior. The fish shows distinct preferences for some designs based on visual cues and its decision to make use of these structures is guided by other cues probably related to light and water flow. Microhabitat structures can make a real difference to managing stress of captivity in this species. Absence of a suitable structure causes 'habitat bottleneck' that develops aggressive behavior. However, the intraspecific antagonistic behavior gives way to social tolerance among conspecifics. Microhabitat metrics is important in addition to physical attributes of the structure so as to allow social grouping in the fish under favorable conditions.