

NOTICE OF PUBLICATION



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RESEARCH REPORTS

Sustainable Aquaculture for a Secure Future

Title: Development of testis and digestive tract in longnose gar (*Lepisosteus osseus*) at the onset of exogenous feeding of larvae and in juveniles

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Abstract: The aim of this study was to describe the ontogenetic development of the testis and the alimentary tract in longnose gar (*Lepisosteus osseus*) related to fish size and age at the onset of exogenous feeding and late ontogenesis. Using light microscopy, testes were first detected histologically by the appearance of primordial germ cells 9 days after the first exogenous feeding [31-31.5 mm total body length(TL)] and presumptive seminiferous tubules (maleness characteristic) in fish of 107 mm TL. The present histological studies indicated that the alimentary tract of lepisosteids is completely functional at the beginning of exogenous feeding, several days before the completion of yolk absorption. Based on these results, we have concluded that garfish larvae/juveniles can be effectively trained to consume formulated diets at early stages, after and initial feeding of live food for 2-3 days (23.5 mm TL). Our findings provide evidence of the first controlled rearing of longnose gar using live and formulated diets, providing the possibility of experimental work with this non-teleost fish.

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