

The Larvae and Juvenile Development of Haddock,
Melanogrammus aeglefinus Cultured in Atlantic
Canada

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Introduction

The haddock, a cold water gadoid fish, *Melanogrammus aeglefinus* (L.) is found in Europe and the western Atlantic Ocean from the Strait of Belle Isle across to Gaspé and southward encompassing the Grand Bank to North Carolina and generally inhabit cool-temperate to subarctic waters from inshore regions the edge of the continental shelf (Coad, 1995). So an understanding of the basic biology of this fish is essential. In this report, larval and juvenile development were described from a series of reared specimens to provide early developmental biology and more information on the identification of the larval and juvenile of this species.

Materials and Methods

Haddock larvae were hatched and reared at the National Research Council's Aquaculture Research Station, Sandy Cove, Nova Scotia (Park and Johnson, 2002; Park et al., 2003; Park et al., 2003; Park et al., 2004). Larvae and juveniles were removed from larvae rearing tank until 70 days after hatching periodically. Growth in total length of fish was investigated by von Bertalanffy (1938) growth expression.

Results and Conclusions

The total length (TL) of fish indicated continuous growth, described by the growth expression $Y=4.07 e^{0.037t}$ ($R^2=0.9978$). The newly hatched pre-larvae were 4.77~5.14 mm in TL with ellipsoid yolk. In 16 days after hatching, larvae attained 6.03~6.95 mm in TL, and absorbed the yolk completely to become post-larval stage, but first heterotrophic food could be in 7 days after hatching already. Post-larval stage continued during 16~52 days after hatching with development of organs attachment. In 61 days after hatching with 37.3~44.0 mm in TL, the fries became a juvenile stage respectively having small teeth, lateral line, and a black blotch on the flank same as adults, but chin barbels was not development yet. It was presumed that haddock changed food and ecological behavior after metamorphosis from this time.

References

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