

A review on the early life history and ecology of Japanese sea bass and implication for recruitment

Abstract

Recruitment in marine fishes is regulated largely by the demographic changes that occur during the early life stages; therefore, a thorough understanding of early life stages is essential for predicting recruitment variability in fishes. Japanese sea bass (JSB), *Lateolabrax japonicus*, is a coastal marine fish distributed in East Asian coastal waters, and is regarded as highly important for commercial and recreational fisheries, for marine and brackish water aquaculture as well as for stock enhancement. JSB is a typical estuarine dependent temperate fish, which spawns in shelf areas and coastal embayments and the larvae and juveniles are dispersed and transported into shallow nearshore habitats and estuaries where they spend the early life. In this paper, we provide insight into the early life history and ecology of JSB through a revision of the available information and using the data we obtained from a relatively long-term research. We review and discuss the distribution and habitat use, food and feeding, age and growth, mortality and recruitment of larval and juvenile JSB in coastal waters around Japan. We extend our discussions in all available dimensions: habitat-specific, ontogenetic, and spatio-temporal, and highlight the importance of nursery habitats. We also discuss the implications of early life history for recruitment of JSB as well as the possible effects of climate change. At the end, we point out potential areas for future research.