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**Sensorial and skeletal ontogenesis: A useful tool for the optimization of larval rearing of new candidate species for aquaculture**

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The first attempts of rearing the new finfish species for aquaculture is often based on a trial and error approach that too often is money and time consuming, for the high mortalities and the low quality of the produced fish, due to unsuitable conditions during larval differentiation and growth (i.e., unsuccessful initial feeding, cannibalism, deformities). However, knowledge on fish larvae behavior, trophic ecology and needs is almost impossible to be achieved into the wild, especially for marine pelagic fish, and the larval behavior showed in 'forced' environment, like the tanks, may be altered. The study of ontogenesis of sense organs (involved in perception and selection of food items) and skeleton (influencing swimming capabilities) is a precious tool to acquire information on the larval ecology, thus allowing the individuation of specific needs to be satisfied for the larva survival. Fins and vertebrae skeletogenesis marks the acquisition of peculiar, species-specific swimming behavior that must be considered in evaluating what are the best rearing tanks/conditions, whilst the ontogenesis of sense organs involved in trophic behavior may indirectly furnish some evaluable elements on trophic ecology. Ontogenetic data on *Thunnus thynnus*, *Seriola dumerili* and some Sparids are presented in order to furnish some indication for optimizing the larval rearing conditions.

## **Biography**

Clara Boglione is at present Adjunct Professor in Applied Ecology at the Experimental Ecology and Aquaculture Laboratory of the University of Rome Tor Vergata, Italy. Her research activity mainly deals with basic knowledge on fish larvae ontogenesis through the study of embryonic and larval development, morphological evaluation of finfish juveniles from aquaculture, the effects of environmental stress on fish larval ontogenesis, growth model and morphological variability in wild and reared finfish juveniles, normal and anomalous developmental processes in fish.

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## **Notes:**