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BOOK OF ABSTRACTS

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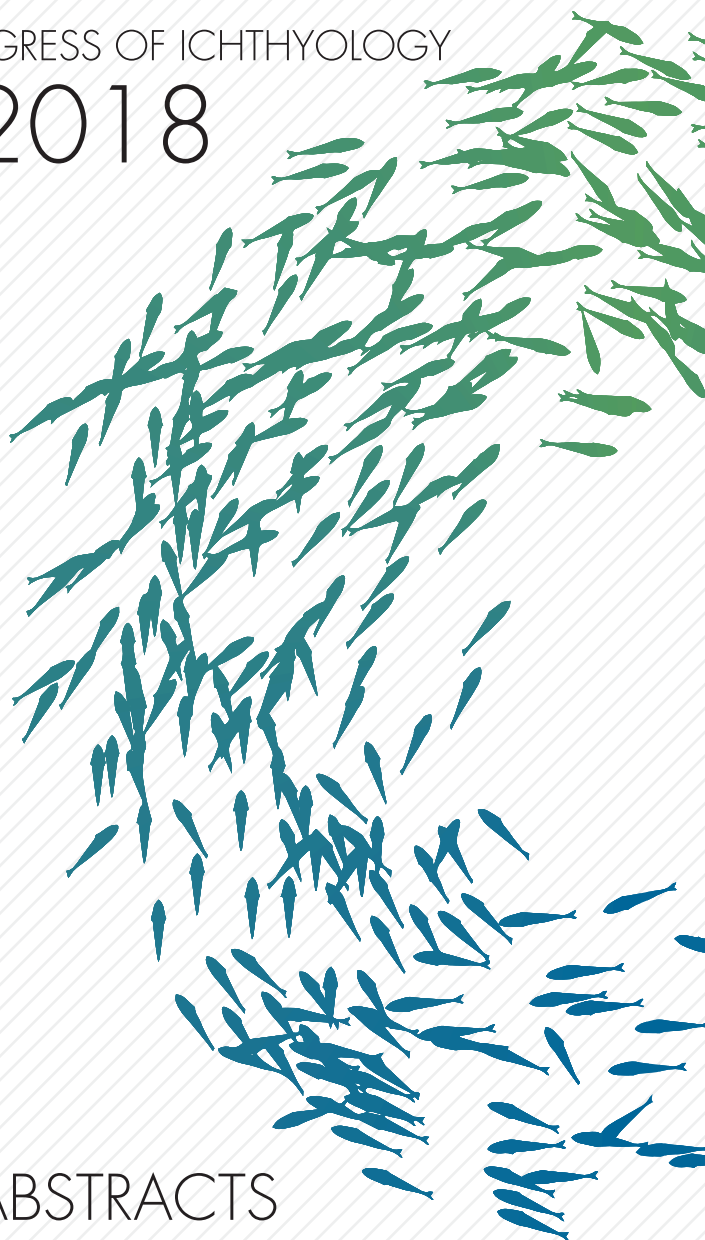
WHERE RIVERS MEET THE OCEAN

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ESTIMATED MATERNAL ISOTOPIC NICHE IN ATLANTIC BLUEFIN TUNA LARVAE (*Thunnus thynnus*) IN MEDITERRANEAN SPAWNING AREA

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Atlantic bluefin tuna (ABT, Thunnus thynnus Linnaeus, 1758) mainly reproduces in the NW Mediterranean Sea (MED) and the Gulf of Mexico (GOM), being categorically differentiated for fisheries assessment and management in Western and Eastern ABFT stocks. Stable isotope analysis (SIA) has proven useful in evaluating the diet and trophic relationships in marine ecosystems. The current study shows that the ontogenetic evolution of the stable isotope content in fish early life stages can also be used to infer isotopic information from the breeders. Studied larvae were collected from two distinguished hydrological sites, the Spanish Levantine shelf and Balearic Island spawning area. An isotopic maternal transmission model for ABT was used to provide estimates of maternal isotopic signatures from nitrogen and carbon isotopes values analyzed in preflexion larval stages from aquaculture facilities. Maternal isotopic trophic widths have been estimated using SIBER package (Stable isotope Bayesian ellipses in R) of SIAR (Stable Isotope Analysis in R). Maternal isotopic niche are discussed under a comparative ecosystem approach. This pioneering methodology will allow estimates of the nutritional status of the spawners through the $\delta 15N$ and $\delta 13C$ signature of their offspring opening new research horizons that can begin to estimate the maternal trophic characteristics that influence larval survival, growth and condition with a direct effect on recruitment.