
Abstract: Feeding intensity, diet composition, selectivity, energy ingestion and dietary niche breadth of larval Atlantic bluefin tuna *Thunnus thynnus* were studied on the eastern Mediterranean spawning grounds of the species. Larval *T. thynnus* were collected in the Balearic Archipelago (north-west Mediterranean Sea) during 2004 and 2005 using surveys specific for larval scombrids. Larvae between 2·6 and 8·7 mm standard length (LS) are diurnal feeders, and 94% of the guts collected during daylight hours were full. The mean ±s.d. number of prey per gut was 7·1 ± 5·7, with mean ±s.d. ranging from 3·0 ± 1·6 in the smallest
*T. thynnus* larvae to 11·1 ± 5·8 in 5·0–6·0 mm LS larvae. Up to 21 prey were found in a single larval gut (5·0–6·0 mm LS) at the end of the day. Larvae progressively selected larger prey and exhibited increased carbon content concurrent with preflexion development of feeding and locomotory structures. Larvae of 5·0–6·0 mm LS exhibited positive selection of cladocerans over other prey (Chesson's index), whereas copepod nauplii dominated the diets of earlier stages. The dietary niche breadth measured increased initially but decreased at c. 5·5 mm LS. Appendicularians were found in the diet of larger larval sizes, but no piscivory was observed. Results are discussed in light of the sparse existing data for larval *T. thynnus* and other larval tuna species.

Keywords: diet, fish larvae, morphometry, selectivity.