

Diet and feeding strategy of the Mediterranean spearfish *Tetrapturus belone* (family: Istiophoridae)

Battaglia P.¹, Malara D.¹, Fontana C.¹, Pedà C.¹, Brogna M.², Romeo T.^{1,3,4}

¹Stazione Zoologica Anton Dohrn, Sicily Marine Centre, Contrada Porticatello 29, 98167 Messina, Italy

²Sea Life Care International, Catania, Italy

³Stazione Zoologica Anton Dohrn, Sicily Marine Centre, Via dei Mille 46, 98057 Milazzo (ME), Italy

⁴Italian National Institute for Environmental Protection and Research, Via dei Mille 46, 98057 Milazzo (ME), Italy

Presenting author: Pietro Battaglia

Presenting author email: pietro.battaglia@szn.it

Tetrapturus belone (family Istiophoridae) is a large migratory fish distributed in the Mediterranean, whose biology and ecology are still poorly studied. Like other top predators, it exerts control over lower trophic levels, playing an important role in the marine food web. The objective of this study is to examine the trophic ecology of *T. belone* by analyzing the composition of the diet through the analysis of stomach contents, determine the importance of each prey, analyze the feeding strategy of this predator in the study area. Overall, 59 stomach samples were collected from individuals ranging between 110 and 200 cm LJFL, caught in the Straits of Messina and adjacent areas of the southern Tyrrhenian Sea. The most abundant prey were the epipelagic fish *Engraulis encrasicolus* (%N = 16.18) and *Sardinella aurita* (%N = 14.71). Values of the Percentage Index of Relative Importance (%IRI) suggested that the most important organisms in the diet of *T. belone* were *S. aurita* (%IRI = 29.09), *Belone belone* (%IRI = 27.10), *Argonauta argo* (%IRI = 14.57) and *E. encrasicolus* (%IRI = 12.17). The analysis of the feeding strategy showed that small pelagic fish and needlefish were the dominant prey categories, highlighting a specialist predation by *T. belone* on these food items. The results of this study provide important baseline for proper management of this fishery resource in the study area and in general in Mediterranean waters.