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**Diet and trophic level of the longnose spurdog, *Squalus blainville* (Risso, 1826) in the 25-nautical mile Fisheries Management Zone around the Maltese Islands.**

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**Abstract**

The longnose spurdog, *Squalus blainville* (Risso, 1826), is reported to feed on bony fishes, cephalopods and crustaceans but misidentifications have resulted in ambiguities. This study describes and quantitatively analyses the diet of *S. blainville* in waters surrounding the Maltese Islands and compares the results with other Mediterranean populations to identify any regional or temporal variation. Additionally, variations in dietary composition with season, maturity, size and sex are investigated for the Maltese population.

The diet of 255 individuals, collected from the 25-nautical mile Fisheries Management Zone around the Maltese Islands, was characterised using frequency of occurrence, wet weight and numerical occurrence of food items for sex, maturity, size and seasonal categories. Mediterranean International Trawl Survey (MEDITS) data for the period 2007-2015, which was derived from samples collected within the Food and Agriculture Organisation of the United Nations's (FAO) General Fisheries Commission for the Mediterranean (GFCM) Geographical Sub-Area 15 (GSA 15), were analysed to identify any relationship between sex, maturity and depth. *S. blainville* fed on prey items belonging to four main groups: Crustacea, Mollusca, Teleostei and Sipuncula.

Mollusca had the highest % IRI (Index of Relative Importance) for the total sample (52.5% of the IRI) and second were teleosts (% IRI =41.4). In terms of habitat, 63.51% of the identified prey categories were demersal, followed by benthic (28.65%) and then pelagic prey categories (7.84%). The highest dietary overlap was observed between seasons, and between immature and mature females; least overlap was between mature and immature males. An increase in size results in more predation especially on cephalopods. Mature and immature individuals were recorded at all depths. Our results indicate that there is some variation in diet between sexes and between maturity stages both in prey items and in the relative contribution of benthic, demersal, and pelagic prey.

Keywords: elasmobranchs; Squalidae; stomach contents analysis; Index of Relative Importance; GSA 15; central Mediterranean.

**1. Introduction:**

The longnose spurdog, *Squalus blainville* (Risso, 1826), is a squaliform shark distributed in tropical and temperate waters with a wide range that includes the Mediterranean, the eastern Atlantic (from the Bay of Biscay to South Africa) and the western Atlantic (from the United States to Argentina) (Cannizzaro *et al.*, 1995; Ebert and Stehmann, 2013; Kousteni and Megalofonou, 2011). Off the southern coast of Sicily, this species had a wide occurrence and a preference for the outer shelf and the epi-bathyal (50-677 m) (Ragonese *et al.*, 2013; Serena *et al.*, 2005).

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