

A HISTORICAL CATCH OF WHITE SHARK, *CARCHARODON CARCHARIAS*
(LAMNIFORMES: LAMNIDAE), IN THE SEA OF MARMARA (TURKEY)
FROM THE 1950s

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ABSTRACT

In the late 1950s, a white shark, Carcharodon carcharias (Linnaeus, 1758), was incidentally captured by tuna handliners off the coast of Burgazada. Currently, 58 white sharks have been reported from Turkish waters, which represents some 7.5 percent of the total Mediterranean records (n=773). The decrease in white shark sightings from the Sea of Marmara over the years is most likely linked to a strong decline of tuna populations in the same region. The present study is one of the many examples of effective use of internet-based records in white shark research.

Key words: white shark, *Carcharodon carcharias*, Sea of Marmara, historical record, bycatch

CATTURA STORICA DI SQUALO BIANCO, *CARCHARODON CARCHARIAS*
(LAMNIFORMES: LAMNIDAE), NEL MAR DI MARMARA (TURCHIA) DAGLI ANNI '50

SINTESI

Alla fine degli anni '50, uno squalo bianco, Carcharodon carcharias (Linnaeus, 1758), fu accidentalmente catturato da tonniere a mano al largo della costa di Burgazada. Attualmente nelle acque turche sono stati segnalati 58 squali bianchi, che rappresentano circa il 7,5 % delle segnalazioni totali per il Mediterraneo (n = 773). La diminuzione nel numero di avvistamenti di squali bianchi nel Mar di Marmara è molto probabilmente legata a un forte calo delle popolazioni di tonno nella stessa regione. Il presente studio è uno dei tanti esempi di utilizzo efficace dei dati disponibili su Internet nella ricerca sugli squali bianchi.

Parole chiave: squalo bianco, *Carcharodon carcharias*, Mar di Marmara, segnalazione storica, catture accidentali

INTRODUCTION

Large sharks and their hunters have always been a bankable commodity for the media, a guarantee for attracting the public interest (Francis, 2012). Due to logistical difficulties of studying a marine predator of that size, the white shark, *Carcharodon carcharias* (Linnaeus, 1758) has often been described as elusive (Huvneers *et al.*, 2018). For that reason, as well as the white shark's charismatic nature and dramatic interactions with humans, reports of the species tend to gain significant public attention. *C. carcharias* is an epipelagic shark, inhabiting coastal and offshore waters, from the surface down to a depth of 1300 m (Serena, 2005). While its contemporary Mediterranean distribution range extends over the entire region, the species is currently absent from the Sea of Marmara, where it had been a documented bycatch of bluefin tuna, *Thunnus thynnus* (Linnaeus, 1758), until the last quarter of the 20th century (De Maddalena & Heim, 2012; Kabasakal, 2003). With the advent of social media and the digitization of photographs of historical shark catches, which may be uploaded to the internet, researchers nowadays have more opportunities to access the historical material about events sunken into oblivion. In the present article, the author reports on a historical catch of white shark off the Prince Islands (Sea of Marmara), in the 1950s.

MATERIAL AND METHODS

An extensive research dealing with the identification of historical and contemporary records of *C. carcharias* in Turkish waters has been conducted since 2000, and the present article is part of this ongoing study, the

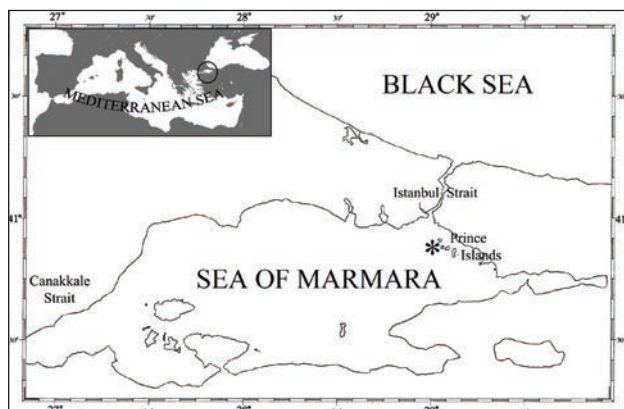


Fig. 1: Map depicting the approximate capture locality (*) of the white shark by tuna handliners off Burgazada, in the 1950s.

Sl. 1: Zemljevid obravnavanega območja s približno lokaliteto (*), kjer so tunolovci ujeli belega morskega volka pri Burgazadi v petdesetih letih prejšnjega stoletja.

results of which were published in previous years (relevant publications are summarized in Kabasakal, 2019). Species identification follows the criteria proposed by Serena (2005). Photographs of the here presented white shark are preserved in the digital archives of the Ichthyological Research Society. While the historical account of this great white shark is available at the link below, the author conducted online interviews with an elderly islander, Mrs. Maria Pilitoglou, who witnessed the capture of this specimen, to provide further evidence supporting the provenance of the historical catch: https://m.facebook.com/story.php?story_fbid=130023338618546&id=100048326409241.

RESULTS AND DISCUSSION

Sometime during the late 1950s, a white shark, *C. carcharias*, was captured by tuna handliners off the coast of Burgazada (Sea of Marmara; Fig. 1). Based on the principal descriptive characters (Serena, 2005), including large triangular teeth, strong and conical snout, (clearly depicted in Fig. 2), the present specimen was identified as *C. carcharias*. The length of the white shark was reportedly 4 m. Two recreational fishermen from Burgazada, Mr. Muvakkar Orhon and Mr. Selimpaşalı Ali, set out to sea to catch bluefin tuna by handline, which was the main method used in bluefin tuna fishery in the Sea of Marmara during the 1950s. In handling bluefin tuna, a large bonito, *Sarda sarda* (Bloch, 1793), was fixed on a chunky fishing hook. These were mostly hand-made, forged by blacksmiths. The scarcity of large high-quality, ready-to-use fishing hooks to be utilized by bluefin tuna handliners during that period was the main reason why incidentally captured white sharks had to be landed in order for the fishing hook to be removed from the animal's jaws with the least possible damage to it.

After baiting the hook with a bonito, the fishermen lowered the hook and line at a depth of around 30 m and waited for the bluefin tuna to bite. According to their statements, the fishermen were very experienced handliners, having captured over 300 bluefin tunas during the previous years, and several white sharks as well. The white shark that took the bait struggled with the hook and the fishermen for nearly two hours, then perished. After the animal had been landed on the Burgazada coast, one of the islanders, Captain Bebeko, detached one of its teeth; unfortunately, according to the interview with the Captain's daughter, Mrs. Maria Pilitoglou, this valuable sample was lost. Nevertheless, Mrs. Pilitoglou provided a clear description of the tooth, which was triangular in shape, with serrated edges, a well-known descriptive character of *C. carcharias*. Her statement is available on the social media at the following link: https://m.facebook.com/story.php?story_fbid=130023338618546&id=100048326409241.

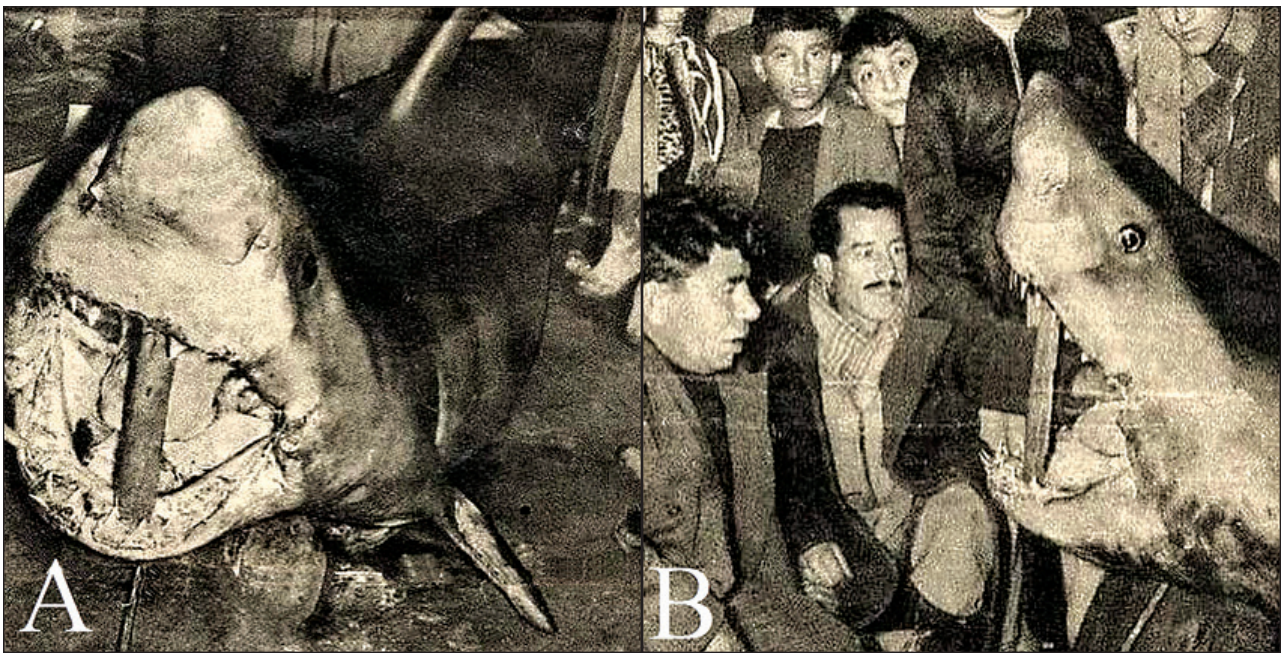


Fig. 2: Front view (A) and lateral view (B) of the captured white shark. Large triangular teeth and a strong and conical snout are clearly visible on both images. (Photo courtesy: Burgazisland Antigoni Burgazada archive). Sl. 2: Pogled od spredaj (A) in od strani (B) na ulovljenega belega morskega volka. Veliki trikotni zobje in močan ter koničast gobec so dobro vidni na obeh posnetkih (z dovoljenjem arhiva Burgazisland Antigoni Burgazada).

De Maddalena & Heim (2012) and Boldrocchi *et al.* (2017), reported on the records of 596 and 628 white sharks, respectively. In a recent study on the abundance and distribution of the white shark in the Mediterranean Sea, Moro *et al.* (2019) collected 773 records of white shark from several parts of the Mediterranean, dated between 1860 and 2016. Prior to the present study, 57 white sharks had been recorded from Turkish waters (Kabasakal *et al.*, 2018). The addition of the white shark presented herein raises this number to 58, which represents 7.5 percent of all Mediterranean records (Moro *et al.*, 2019). A close relationship between bluefin tuna and white shark occurrence in the Mediterranean Sea has been suggested by many researchers (Boldrocchi *et al.*, 2017; De Maddalena & Heim, 2012; Moro *et al.*, 2019). Indeed, the decrease in white shark sightings in the Sea of Marmara over the years and the strong parallel decline of tuna populations in the same region (Kabasakal, 2016) appears to confirm that. The last sighting of *C. carcharias* in the Sea of Marmara dates back to May 1985, preceding the records of last mass captures of bluefin tuna in Marmaric waters by only a year (Kabasakal, 2003, 2016).

Since the white shark is a critically endangered species in the Mediterranean and in some of its areas a protected species as well (Otero *et al.*, 2019, Serena 2005), the selection of an appropriate and non-destructive sampling for future studies of white sharks is of utmost importance; presently, the screening of the internet and social media seems to be an advantageous method. The expansion of the use of internet and social networks during the last 20 years has likely increased the probability of finding records of white shark captures (Moro *et al.*, 2019), and the present study is one of the many examples of the promising use of internet-based records in ichthyological research.

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ZGODOVINSKI PREGLED ULOVA BELEGA MORSKEGA VOLKA, *CARCHARODON CARCHARIAS* (LAMNIFORMES: LAMNIDAE), V MARMARSKEM MORJU (TURČIJA) IZ PETDESETIH LET

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POVZETEK

V zgodnjih petdesetih prejšnjega stoletja so belega morskega volka, *Carcharodon carcharias* (Linnaeus, 1758), naključno ujeli tunolovci ob obali Burgazada. Do sedaj je bilo 58 zapisov o pojavljanju belega morskega volka v turških vodah, kar predstavlja 7,5 % vseh sredozemskih zapisov ($n=773$). Upadanje v opazovanju belega morskega volka v Marmarskem morju v zadnjih letih je najverjetneje povezano z močnim zdesetkanjem populacij tunov v regiji. Pričujoča raziskava je eden od mnogih primerov učinkovite uporabe spletnih virov pri raziskovanju belega morskega volka.

Ključne besede: beli morski volk, *Carcharodon carcharias*, Marmarsko morje, zgodovinski zapis, prilov

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