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SHORT PAPER

The First Documented Record of Genus Mustelus (Chondrichthyes: Triakidae) in the Black Sea

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Abstract

Two specimens of Starry smoothhound, *Mustelus asterias* Cloquet, 1821 were captured from three miles off the coast of Şile (south-western Black sea) on 19 November 2000 at a depth ca. 90 m. This paper is on the presence of *M. asterias* in the Black Sea.

Keywords: *Mustelus asterias*, Black Sea, Chondrichthyes, Triakidae.

Mustelus (Chondrichthyes: Triakidae) Cinsinin Karadeniz'den İlk Kaydı

Özet

Şile kıyılarının 3 mil açığından (Karadeniz'in güneybatısı), *Mustelus* cinsine ait olan *M. asterias* Cloquet, 1821 türünün iki bireyi 19 Kasım 2000 tarihinde yaklaşık 90 m derinlikten elde edilmiştir. Bu makale Mustelus cinsinin Karadeniz'deki ilk kaydı ile ilgilidir.

Anahtar Kelimeler: *Mustelus asterias*, Karadeniz, Chondrichthyes, Triakidae.

The Family Triakidae was called houndsharks. They are usually occuring in oceans and seas. Triakidae divided into two subfamilies, Triakinae and Galeorhininae. Subfamily Triakinae is represented by three genus (*Mustelus*, *Scylliogaleus*, *Triakis*) (Nelson, 2006). Genus *Mustelus* is widely distributed in temperate and tropical seas (Compagno, 1984a). At least twenty two species are identified in the genus Mustelus, three of which have been reported in the Mediterranean Sea. These species are *Mustelus asterias* Cloquet, 1821, *Mustelus mustelus* (Linnaeus, 1758) and *Mustelus punctulatus* Risso, 1826 (Branstetter, 1989; Bauchot, 1987). *M. asterias* is known in the Mediterranean Sea and the Sea of Marmara but hitherto unrecorded from the Black Sea (Quignard and Tomasini, 2000; Kabasakal, 2002; Fricke *et al*., 2007; Keskin, 2010), even if some doubtful information of their presence has been indicated (Geldiay, 1969 in Bilecenoğlu *et al*., 2002; Froese and Pauly, 2009). This paper deals with the Starry smoothhound, *Mustelus asterias* as the first documented record of species of genus *Mustelus* in the Black Sea.

On 19 November 2000 two specimens as one male and one female of *M. asterias* was caught by using turbot net three miles off the coast of Şile (south-western Black Sea) (Figure 1). They were captured at a depth ca. 90 m and preserved in 5% formalin solution and deposited in the Istanbul University, Science Faculty, Hydrobiology Museum, Istanbul [IUSHM 36200-62 (Figure 2) and IUSHM 36200-82]. All characteristics were measured to the nearest 0.01 mm with a dial caliper, follow as Compagno (1984b) and are given Table 1.

Other morphological characters are as follows: Body considerably slender. Head gently flatten as dorso-ventral. Snout long, mouth shape triangular and teeth arranged like a pavement. Dorsal fins similar in shape, second slightly smaller. Midpoint of first dorsal fin closer to pectoral fins than pelvic fins. According to Branstetter (1989) *M. asterias* distinguished from congenerics by having inter-nostril distance 1.2-1.3 times nostril width. It has been calculated in the caught specimens as 1.16 (♀) and 1.19 (♂). All morphometric values, our obtained, showed little disparities to Compagno (1984a). *M. asterias* can be barely distinguished to congenerics by having small white spots on dorsal. Samples were

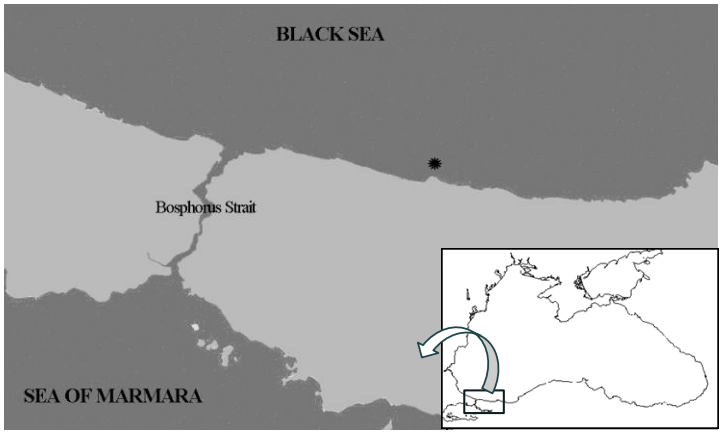

Figure 1. Map showing the capture locality of *Mustelus asterias* in the Black Sea.

Figure 2. *Mustelus asterias*, ♀, IUSHM 36200-62, TL 318 mm, in the Black Sea.

Table 1. Morphometric characters and their percentages of the total length of the *Mustelus asterias* specimens in the Black Sea

Morphometric Characteristics	36200-62 (mm)(♀)	Percentages of the total length	36200-82 (mm)(♂)	Percentages of the total length
Total length	318		351	
Fork length	268	84.3	305	86.9
Precaudal length	244	76.7	274	78.1
Pre-second dorsal length	179	56.3	198	56.4
Pre-first dorsal length	88	27.7	92	26.2
Head length	62	19.5	75	21.4
Prebranchial length	52	16.4	58	16.5
Prespiracular length	40	12.6	44	12.5
Preorbital length	24	7.5	24	6.8
Prepectoral length	64	20.1	71	20.2
Prepelvic length	136	42.8	145	41.3
Snout-Vent length	135	42.5	153	43.6
Preanal length	192	60.4	216	61.5
Interdorsal space	68	21.4	80	22.8
Dorsal-Caudal space	40	12.6	46	13.1
Pectoral-Pelvic space	60	18.9	64	18.2
Pelvic-Anal space	45	14.2	50	14.2
Anal-Caudal space	31	9.7	34	9.7
Vent-Caudal length	102	32.1	119	33.9
Prenarial length	12	3.8	13	3.7
Preoral length	23	7.2	24	6.8
Eye length	14	4.4	15	4.3
Eye height	7	2.2	8	2.3
Intergill length	14	4.4	16	4.6
First gill slit height	8	2.5	9	2.6
Second gill slit height	9	2.8	8	2.3
Third gill slit height	8	2.5	8	2.3
Fourth gill slit height	7	2.2	8	2.3
Fifth gill slit height	7	2.2	6	1.7
Pectoral anterior margin	42	13.2	47	13.4
Pectoral radial length	36	11.3	38	10.8
Pectoral base	14	4.4	17	4.8
Pectoral inner margin	28	8.8	30	8.5
Pectoral posterior margin	36	11.3	38	10.8
Pectoral height	38	11.9	44	12.5
Pectoral length	38	11.9	40	11.4
Subocular pocket depth	2	0.6	2	0.6
Dorsal caudal-fin margin	70	22.0	74	21.1
Preventral caudal-fin margin	30	9.4	32	9.1
Upper postventral caudal-fin margin	26	8.2	28	8.0

Table 1. (continued)

Morphometric Characteristics	36200-62 (mm)(♀)	Percentages of the total length	36200-82 (mm)(♂)	Percentages of the total length
Lower postventral caudal fin margin	5	1.6	8	2.3
Caudal fin fork width	18	5.7	21	6.0
Caudal fin fork length	26	8.2	30	8.5
Subterminal caudal fin margin	15	4.7	19	5.4
Subterminal caudal-fin width	12	3.8	14	4.0
Terminal caudal-fin margin	21	6.6	27	7.7
Terminal caudal-fin lobe	26	8.2	33	9.4
First dorsal-fin length	42	13.2	47	13.4
First dorsal-fin anterior length	37	11.6	41	11.7
First dorsal-fin base	32	10.1	37	10.5
First dorsal-fin inner margin	12	3.8	13	3.7
First dorsal-fin posterior margin	36	11.3	37	10.5
Second dorsal-fin length	40	12.6	42	12.0
Second dorsal-fin anterior length	30	9.4	33	9.4
Second dorsal-fin base	29	9.1	33	9.4
Second dorsal-fin inner margin	9	2.8	11	3.1
Second dorsal-fin posterior margin	25	7.9	27	7.7
Pelvic-fin length	34	10.7	36	10.3
Pelvic-fin anterior length	23	7.2	24	6.8
Pelvic-fin base	19	6.0	24	6.8
Pelvic-fin inner margin	17	5.3	20	5.7
Pelvic-fin posterior margin	21	6.6	24	6.8
Anal-fin length	29	9.1	33	9.4
Anal-fin anterior length	20	6.3	23	6.6
Anal-fin base	20	6.3	22	6.3
Anal-fin inner margin	11	3.5	12	3.4
Anal-fin posterior margin	15	4.7	17	4.8
Head height	27	8.5	30	8.5
Trunk height	30	9.4	32	9.1
Abdomen height	28	8.8	31	8.8
Caudal peduncle height	10	3.1	11	3.1
First dorsal midpoint-pectoral insertion	26	8.2	29	8.3
First dorsal midpoint -pelvic origin	36	11.3	35	10.0
Pelvic midpoint-first dorsal insertion	30	9.4	30	8.5
Pelvic midpoint-second dorsal origin	35	11.0	39	11.1
Second dorsal origin-anal origin	11	3.5	14	4.0
Second dorsal insertion-anal insertion	2	0.6	4	1.1
Mouth length	10	3.1	11	3.1
Mouth width	25	7.9	29	8.3
Upper labial furrow length	8	2.5	9	2.6
Lower labial furrow length	5	1.6	6	1.7
Nostril width	24	7.5	26	7.4
Internarial space	9	2.8	10	2.8
Anterior nasal flap length	5	1.6	6	1.7
Clasper outer length			12	3.4
Clasper inner length			21	6.0
Clasper base width			3	0.9
Interorbital space	23	7.2	27	7.7
Spiracle length	4	1.3	5	1.4
Eye spiracle space	2	0.6	3	0.9
Head width	39	12.3	43	12.3
Trunk width	27	8.5	34	9.7
Abdomen width	24	7.5	33	9.4
Tail width	15	4.7	19	5.4
Caudal peduncle width	5	1.6	6	1.7

captured in the sandy-muddy bottom, also Compagno (1984a) mentioned to *M. asterias* found sandy and gravely bottom, depth of the littoral area to least 100 m.

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