The first record of southern ocean sunfish, *Mola ramsayi* from Northern Oman Sea, Iran

Yasemi, M. [1] and Nazari Bejgan, A.R [2]*

Received: August 2013 Accepted: December 2013

1-Department of Fisheries and Aquatics, Institute of Technical and Vocational Higher Education of Jahad-e-Agriculture, Tehran, Iran

2-Higher Education Center of Jahad-e-Agriculture Hormozgan,Bandar Abbas, Iran.

*Corresponding author's email: yasemi_m@yahoo.com

Keywords: Southern ocean sunfish, *Mola ramsayi,* Oman Sea, Iran

This report provides the first record of the *Mola ramsayi* from the northern Oman Sea, Iranian waters. The order Tetradontiformes contain the Molidae family that is a diverse marine fish group and contains eight families, 64 genera, and 320 species (Nelson, 2010). Ocean sunfish or molas belong to the family Molidae. These species are epipelagic in nature (Matsuura, 2002). The molid species are characterized in having a distinctive laterally compressed shape, two fused teeth in jaws, no spines in dorsal and anal fins, no caudal peduncle; caudal fin lost; posterior and end of body reduced to a leathery flap or pseudo-caudal (clavus). Johns and Britz (2005) tested the hypothesis that the clavus is 1) a highly modified caudal fin, or 2) formed by highly modified elements of the dorsal and anal fins. Based on ontogenetic elements, they concluded that the later is correct, that is formed by modified elements of the dorsal and anal fin, and that the caudal fin is lost in molids. Jawad et al. (2010) provide a literature review on Molidae family in which goes back to the earliest descriptions by Linnaeus (1758) and by Koelreuter (1766). Since then, 19 genera and 54 species of sunfish have been proposed (Parenti, 2003). The comprehensive taxonomic revision of the family is that of Fraser-Brunner (1951) in

which he distinguished five species in three genera: *Ranzania laevis, Masturus oxyuropterus, Masturus lanceolatus, Mola mola and Mola ramsayi*. At present, according to Nelson (2010) there are four recognized species (excluding *Masturus oxyuropterus)*.

[Downloaded from jifro.ir on 2026-11-11]

[DOR: 20.1001.1.15622916.2014.13.1.20.0]

The previous reported on distribution pattern of *M. ramsayi* is in the southern oceans, south-west Pacific: Australia and New Zealand, south-east Pacific: Chile and south-east Atlantic: South Africa. Al-Ghais (1994) recorded this species from the United Arab Emirates waters and the last record was reported from the southern waters of the Oman Sea, Sultanate of Oman by Jawad et al. (2012). In the present study, we record *M. ramsayi* for the first time from the northern Oman Sea, Iranian waters; and it is the fourth record for this species from the northern hemisphere and the third for the Oman Sea as the study area. The Oman Sea with an area of 94000 km^2, and a depth reaching 3200 m, connects the Persian Gulf to the Indian Ocean through the Arabian Sea. The Oman Sea is in the subtropical zone lying almost entirely between the latitudes of 24° and 30°N and longitudes of 56° 30′ to 61° 25′E (Valinssab et al., 2006).

A single 145 cm total length, and weight 156 kg specimen of *M. ramsayi* (Fig. 1) was found at a depth of 85m on the coasts of Jask Port, 400 km east of the Bandar Abbass, center of the Hormuzgan province in the northern Oman Sea, Iran (Fig. 2) during a midwater trawl survey in June 2012.

The geographical position of sampling area was 57° 31' E / 25° 31'N, about 17 nautical miles offshore.



Figure 1: a) *Mola ramsayi*, 145 cm TL, caught in the Oman Sea, b) showing clavus

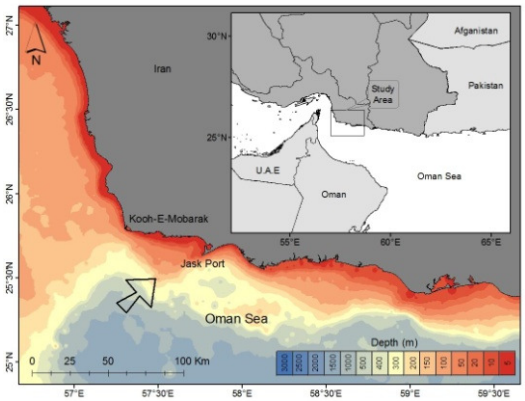


Figure 2: Map of study area in the northern Oman Sea

[Downloaded from jifro.ir on 2026-11-11]

[DOR: 20.1001.1.15622916.2014.13.1.20.0]

There are two species in the genus *Mola* consist of *Mola ramsayi* and *Mola mola*. Occurrence of sunfishes in the Persian Gulf and Oman Sea are few in the past three decades (Asadi and Dehghani, 1986; Al-Ghais, 1994; Al-Baz et al., 1999; Jawad et al., 2010, 2011, 2012). The most dominant and occurrence species in the Oman Sea and the Persian Gulf (as other connected water body to the Oman Sea) is *Mola mola* but the other identified species, namely *Mola ramsayi* and *Ranzania laevis* have been observed rarely only for very few specimens (3-4 specimens) up to now. Morphometric and meristic data is tabulated in Table 1 and compared with those few specimens caught off United Arab Emirates, southern Oman Sea, India, and Chile.

Table 1: Morphometric and Meristic characteristics of *Mola ramsayi* from northern Oman Sea waters

Morphometric characters (cm)	Present study	Al-Ghais (1994) (UAE)	Bitro (2003) (Chile)	Mohan et al. (2006) (India)	Jawad et al. (2012) (Southern Oman Sea)
Total length (TL)	145	121.5	65-94	83.5	91.6
Standard length (%TL)	125(86.2)	NA	NA	NA	NA
Head length (%TL)	40.5(27.9)	NA	NA	NA	NA
Eye diameter (%TL)	6.5(4.5)	NA	4.5-6.1 (6.5-6.9)	4.2(5)	5(5.5)
Preorbital length (%TL)	19.0(13.1)	NA	9.0-12.8(13.6-13.9)	12(14.4)	13.5(14.7)
Preoperculum length (%TL)	42.0(28.9)	NA	NA	25(29.9)	27.7(30.2)
Predorsal fin length (%TL)	95(65.5)	NA	42.3-62.3(65.1-67)	54.4(65.3)	54(58.9)
High of dorsal fin (%TL)	66(45.5)	61(50.2)	31-50.5(47.7-53.5)	43.5(52.2)	47(51.3)
Distance between base of dorsal and anal fin	1540	NA	NA	126	1426
Prepectoral fin length (%TL)	48(33.1)	NA	24.5-33.8(33.8-37.7)	27.2(32.6)	31(33.8)
Height of anal fin (%TL)	68(46.9)	58.5(48.1)	30-50(46.2-53.0)	40(47.9)	44(48)

[Downloaded from jifro.ir on 2026-11-11]

[DOR: 20.1001.1.15622916.2014.13.1.20.0]

Continue table 2:

Preanal fin length (%TL)	92.5(63.8)	NA	43.0-62.5 (66.2-69.4)	NA	52(56.8)
Preanus length (%TL)	81(55.9)	NA	NA	55.5(66.5)	49.3(53.8)
Maximum body depth (%TL)	99(68.3)	NA	NA	60(71.9)	64(69.9)
Meristic characters					
Dorsal soft rays	19	NA	17	NA	19
Anal soft rays	17	NA	17	NA	17
Pectoral fin rays	12	NA	12	NA	12

NA: not available

We would express our sincere gratitude to Professor Randall to confirm the species identification. The authors would also like to thank M. Deldar, fisherman of fishing vessel for his cooperation for delivering the sunfish specimen.

References

Al-Ghais, S. M., 1994. A first record of *Mola ramsayi* (Osteichthyes, Molidae) for the United Arab Emirates. Tribulus 4, 22.

Asadi, H. and Dehghani, R., 1997. Atlas of the Persian Gulf and the Sea of Oman Fishes. Iranian Fisheries Research and Training Organization, Tehran: 179P.

Brito, J. L., 2003. Nuevos registros de *Balistes polylepis* (Balistidae), *Sphoeroides lobules* (Tetradontidae), *Mola mola* y *Mola ramsayi* (Molidae) en sau Antonio, Chile. *Invest, Marine Valparafso*, 31(1), 77-83.

Fraser-Brunner, A., 1951. The ocean sunfishes (family Molidae). *Bulletin of the British Museum (Natural History) Zoology*, 1, 87–121.

Jawad, L., Al-Mamry, J. and Kharusi, L.H., 2010. The slender sunfish, *Ranzania laevis* (Actinopterygiformes: Molidae), in the coastal waters of the Oman Sea. *Acta Ichthyologica et Piscatoria,* 40, 105–108.

Jawad, L. A., Hussein, S. A. and Bulbil, F., 2011. *Ranzania laevis* (Pennant,1776) (Tetraodontiformes, Molidae): a rare fish in marine waters of Iraq. *Journal of Applied Ichthyology,* 27, 1116–1118.

Jawad, L. A., Al-Mamry J. and Al-Kharusi, L., 2012. A record of sharp-tail *Mola*, *Masturus leceolatus* (Lienard, 1840) (Molidae) in the Sea of Oman. Marine Biodiversity Record, Marine Biological Association of the United Kingdom, Vol. 5; doi: 10.1017/S1755267212000462.

Koelreuter, I. T., 1766. Piscium rariorum e mus. petrop. Exceptorum descriptiones continuatae. Novi Commentarii Academiae Scientiarum Imperialis Petropolitanae, 10, 329–351, Pl. 8.

Linnaeus, C., 1758. Systema Naturae, ed. X. (Systema naturae per regna tria naturae, secundum classes, ordines, genera, species, cum characteribus,differentiis, synonymis, locis). Tomus I. Holmiae [Stockholm]:Editio decima, reformata, i–ii + pp.1–824.

[Downloaded from jifro.ir on 2026-11-11]

[DOR: 20.1001.1.15622916.2014.13.1.20.0]

Matsuura, K., 2002. Molidae. Molas (ocean sunfishes, headfishes). In Carpenter K.E. (ed.) FAO species identification guide for fishery purposes. The living marine resources of the western central Atlantic. Volume 3. Tokyo: FAO, pp. 2014–2015.

Mohan, S., Selvanidhi, S., Srinivasan, G. and Poovannan, P., 2006. *Mola ramsayi* (southern sunfish): a new record from Indian Waters.Marine Fisheries Information Service, Technical and extension series, Central Marine Fisheries Research Institute. No.189, 23-24.

Nelson, J.S., 2010. Fishes of the world. 3rd edition. New York: John Wiley& Sons, 600P.

Parenti, P., 2003. Family Molidae Bonaparte 1832—molas or ocean sunfishes. *Annotated Checklists of Fishes*, 18, 1–9.

Valinassab, T., Daryanabard, R., Dehghani, R. and Pierce, G.J., 2006. Abundance of demersal resources in the Persian Gulf and Oman Sea," Journal of Marine Biological Association. U.K, 86, pp.1455-1462.

Yasemi, M ., 2012. On record of the red cornet fish *Fistularia petimba* (syngnathiformes, fistularidae) in Jask port, the Oman sea. *Iranian Journal of fisheries science*, 11(**1**), 226-234.

[Downloaded from jifro.ir on 2026-11-11]

[DOR: 20.1001.1.15622916.2014.13.1.20.0]