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The first record of the Mediterranean monk seal (*Monachus monachus* Hermann 1779) in the marine coast of the Gaza Strip, Palestine

Abdel Fattah N Abd RabouDOI: <https://doi.org/10.22271/23940522.2023.v10.i3a.964>**Abstract**

During at least three days, extending from May 31 to June 2, 2023, a specimen of the Mediterranean Monk Seal (*Monachus monachus* Hermann, 1779) appeared for the first time in the coastal waters and on the shores of the Gaza Strip, Palestine. The current modest study aimed to identify this rare event through field and media observations. The specimen has appeared in three locations along the coast of the Gaza Strip. The information obtained from Gazan fishermen indicated that it is about two meters long, in good health, fast-moving and swimming. Despite the widespread controversy about the identity of the specimen, is it the "Yulia" seal that appeared on Jaffa beach in central Palestine in May 2023, or another specimen subject to an international experiment as claimed by the General Directorate of Fisheries at the Palestinian Ministry of Agriculture, Gazans showed good protection for the seal, which made it pass safely during its tour in the marine environment of the Gaza Strip. In conclusion, given the many clues collected by the author, it is closer to believing the Israeli version that the seal of the Gaza Strip is the same "Yulia" that appeared in Jaffa and some coastal cities in central Palestine. The care and protection with which the seals were received along the Palestinian coast extending from Lebanon in the north to Egypt in the south must be applied to all marine creatures, especially those that are threatened and endangered.

Keywords: Mediterranean Monk Seal, *Monachus monachus*, first record, Yulia, Gaza Strip, Palestine**1. Introduction**

Most Pinnipeds, commonly known as seals, prefer the cooler waters of the Northern and Southern Hemispheres as their streamlined bodies are adapted for efficient swimming. Seals spend most of their lives in the water but usually come ashore to mate, give birth, molt, or escape from predators (Reijnders *et al.*, 1988 and Castro, and Huber, 2007) ^[50, 20]. Among the Pinnipeds, the Mediterranean Monk Seal (*Monachus monachus* Hermann, 1779) is one of the rarest species in the world. It is estimated that 700 or fewer isolated individuals live in three or four sub-populations in the Mediterranean (Karamanlidis *et al.*, 2016 and Bundone *et al.*, 2019) ^[38, 17]. There have been reports of dozens of individual sightings of Monk Seals along the waters and coasts of the Mediterranean Sea of Palestine (Scheinin *et al.*, 2011; Bundone *et al.*, 2016 and Roditi-Elasar *et al.*, 2021) ^[16, 55]. In a very recent work, Abd Rabou *et al.* (2023) ^[2] sheds light on the arrival and stay for several days of a female specimen of a Mediterranean Monk Seal, locally called "Yulia," on the shores of Jaffa, Palestine. Some Israeli media indicated that "Yulia" after her stay in the beaches of Jaffa, reappeared on the beaches of cities located north or south of Jaffa (Danan, 2023a and b) ^[21-22]. In fact, the Mediterranean Monk Seal has been studied extensively in several countries bordering the Mediterranean Sea or the eastern Atlantic Ocean. Most of these studies focused on some aspects of the ecology, biology, threats and conservation of the animal (Androukaki *et al.*, 1999; Adamantopoulou *et al.*, 1999, 2000, and 2011; Dendrinou & Demetropoulos, 2000; Güçlüsoy and Savaş, 2003a and b; Güçlüsoy *et al.*, 2004; Dendrinou *et al.*, 2008; Gücü *et al.*, 2009; IUCN, 2012; Saydam, 2018; Badreddine *et al.*, 2020; Zangaro *et al.*, 2020; Beton *et al.*, 2021; Kurt and Gücü, 2021; Nicolaou *et al.*, 2021; Dendrinou *et al.*, 2022; Pietrolungo *et al.*, 2022; Panou *et al.*, 2023 and Saydam *et al.*, 2023) ^[12, 10, 6-8, 24-26, 31-33-35].

Some scientific studies indicated the occurrence of very limited species of marine mammals such as baleen and toothed whales in the marine waters of the Gaza Strip, as well as the stranding of some of them on the beach (Kerem *et al.*, 2012 and Abd Rabou *et al.*, 2021 and 2023) ^[1, 39].

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None of the scientific studies indicated the occurrence or passage of the Mediterranean Monk Seal in the marine waters of the Gaza Strip, but local reports arbitrarily indicated the possibility of its occurrence (Euroconsult and IWACO, 1994 and MEnA – Ministry of Environmental Affairs, 2001). The current study aims to record the first actual appearance of a live specimen of the Mediterranean Monk Seal (*Monachus monachus* Hermann, 1779) for very short periods of time along the coastal waters and beaches of the Gaza Strip extending from May 31, 2023 to June 2, 2023. The importance of this modest and short study lies in its being the first to record this occasional occurrence of the Mediterranean Monk Seal in the coastal waters of the Gaza Strip.

2. Methodology

To document this rare event, the current study relied on following several Palestinian and Israeli news websites and social networking sites that reported the arrival of the Mediterranean Monk Seal (*Monachus monachus* Hermann, 1779) in the coastal waters and on the shores of Gaza Strip, Palestine. The researcher made many contacts with the competent authorities, especially the staff of the General Directorate of Fisheries at the Ministry of Agriculture, the Maritime Police and some fishermen to obtain as much information as possible concerning the seal in question. Unfortunately, every time the Mediterranean Monk Seal was seen, it would rush back to the marine environment for fear of harm from fishermen or vacationers, and therefore this was not documented in photos or videos. However, it seems that one of the fishermen was able to take a photo and a video clip of the Mediterranean Monk Seal as it left the beach, heading to the coastal waters in the Rafah Governorate, southern Gaza Strip. In the meantime, the researcher was able to write about the subject, and publish those photos and the video clip through some Palestinian news sites and social networking sites (<https://www.alwatanvoice.com/arabic/news/2023/06/02/1523804.html>).

3. Results

3.1. The arrival of the Mediterranean Monk Seal to the Gaza Strip

Almost two weeks after the appearance of the Mediterranean Monk Seal (*Monachus monachus* Hermann 1779) named "Yulia" on the beaches of Jaffa and some coastal cities in central Palestine, the General Directorate of Fisheries at the Palestinian Ministry of Agriculture and the Fishermen's Union announced on May 25, 2023 that a specimen of the Mediterranean Monk Seal would arrive soon to the marine waters of the Gaza Strip, and recommended the Gazans and the Palestinian fishermen not to attack or harm it, as it is considered one of the most endangered marine mammals in the world. This announcement came based on international contacts stating that Italian, Greek and Turkish scientists are conducting a scientific experiment on the behavioral ecology of the Mediterranean Monk Seal, as a tracking device was placed on the animal. Since that announcement, the people of Gaza or Gazans have been keen to see the Mediterranean Monk Seal in the waters or beaches of the Gaza Strip, because it will be the first time that the arrival of this mammal to the Gaza Strip is recorded. In the midst of this, a specimen of the Mediterranean Monk Seal has been sighted at least three times along the Gaza Strip, both in offshore waters and on the shores, as follows:

1. **North of the Gaza Strip:** At approximately 11:00 am on Wednesday (31/5/2023), the fishermen on the seashore in the North Gaza Governorate reported to the General Directorate of Fisheries at the Ministry of Agriculture, that they had clearly seen a live specimen of the Mediterranean Monk Seal in the marine waters, 70 - 80 meters from the beach, and because the beach was crowded with vacationers, the seal was forced by fishermen to return to the sea hoping that the beach vacationers would not harm it. In fact, this rare and amazing event was the first reported record of the occurrence or passage of the Mediterranean Monk Seal in the marine waters of the Gaza Strip. Because of the nature, suddenness and speed of the event, no one was able to photograph this great scene, especially since the seal specimen did not reach the shore.
2. **Middle of the Gaza Strip:** In the late evening hours of Wednesday (31/5/2023), fishermen from Deir Al-Balah in the middle of the Gaza Strip contacted and confirmed that they had seen a stretched object lying near the beach that they thought at first glance might be a man. The fishermen approached that stretched body until it became clear that it was a seal and it fled at great speed into the seawaters. No one was able to photograph the scene because of the seal's speed on the one hand and its presence in times of near-total darkness on the other hand.



Fig 1: A snapshot of the Mediterranean Monk Seal on the seashore of Rafah, southern Gaza Strip

3. **South of the Gaza Strip:** On the morning of Friday (2/6/2023), at exactly 6:20 am, a fisherman whose identity is known went to his place of work on the seashore in Rafah, southern Gaza Strip, about 1,000 meters north of the Egyptian borders. As soon as the fisherman and his colleague approached a rock on the shore located near a pipe to drain

semi-treated wastewater into the sea, they heard a strong breath, turned around and found a seal lying, resting and hiding behind the rock. As soon as the seal sensed the presence of the fishermen, it quickly fled into the seawater. Fortunately, this scene was documented with a quick photo shoot (Figure 1) and a very short video. The two fishermen confirmed that the seal was in very good health and was very fast on the beach and in the seawater, so they were hardly able to take a photo and a video of it.

3.2. Description of the seal specimen

In fact, due to the limited time in which the specimen of the Mediterranean Monk Seal was seen in the coastal waters and/or the beaches of the Gaza Strip, no one was able to take photos or give a full description of this rare creature, especially in the two scenes that occurred in the north and middle of the Gaza Strip. In Rafah, located in the far south of the Gaza Strip, the scene looked somewhat different as the fisherman was able to take a photo and a short video clip and thus tells about some of the characteristics of the specimen he saw. In general, most fishermen, who saw the seal, explained that the general description of this seal is not far from the description of the "Yulia" seal, which remained for 2 – 3 weeks on the shores of Jaffa and some coastal cities in central Palestine. Most of the Gazan fishermen who were contacted confirmed that the length of the seal specimen that appeared in the Gaza Strip was about two meters, which is close to the length of Jaffa "Yulia", which was about six feet long. The fishermen were amazed at the speed of movement of the seal specimen, whether on the beach or while swimming in the marine waters, which indicated the very good health condition enjoyed by the seal. Rafah's fisherman said the seal's color was blond, with a slightly darker color on the animal's back. The front of the animal in the facial region was somewhat shrouded in brown, and this is indeed what Figure 1 showed. With regard to the process of molting, by which the seal replaces its winter coat with a new one, none of the fishermen in the Gaza Strip mentioned anything because they were completely ignorant of it.

3.3. Is the Gaza Seal the same as the Jaffa "Yulia" Seal or a new specimen?

Around the middle of May, 2023, the Mediterranean Monk Seal, which was called "Yulia", docked on the shores of Jaffa to settle there for a few days (Figure 2), then "Yulia" began back-and-forth operations from the sea to the shore and back along the Palestinian coast to the north and south of the city of Jaffa. In total, "Yulia" stayed on this voyage for 2-3 weeks until she disappeared and sailed to other destinations. In fact, the Israeli news websites and newspapers were tracked by the author, almost all of which indicated that the Jaffa "Yulia" is the same seal that appeared on along the coasts of the Gaza Strip from May 31 to June 2, 2023. This was evident from the following headlines of Israeli and foreign newspapers and news websites:

1. The Times of Israel: Famous seal Yulia surfaces in Gaza after Israeli beach tour (May 31, 2023).
2. Ynetnews.com: Yulia briefly sighted on Gaza shore (May 31, 2023).
3. The Times of Israel: Rare celebrity seal Yulia believed spotted on Gaza shore for first time (June 1, 2023).
4. News in Germany: Animals: The Monk Seal Yulia becomes a border crosser in the Middle East conflict (June 1, 2023).

5. The Times of Israel: Rare seal Yulia spotted on Gaza shores, appears headed to Egypt (June 3, 2023).

On the other hand, the General Directorate of Fisheries at the Ministry of Agriculture expressed a contrary opinion about the specimen of the Mediterranean Monk Seal that was seen in the coastal waters and beaches of the Gaza Strip. This was evident from the volume of Facebook posts and Palestinian news sites. They said that the specimen that appeared in the coastal waters of the Gaza Strip belongs to the seal or seals that are being studied by an international team consisting of Greek, Italian and Turkish scientists who are looking at the behavioral ecology of the Mediterranean Monk Seal that sails in the Mediterranean and is tracked by devices attached to the animal's body and linked to satellites. This was clear from the following headlines published in Arabic on some Palestinian news websites:

1. Maannews.net: The "seal" animal arrives on the coast of Gaza as part of an "international tracking program" (May 31, 2023).
2. Panet.com: Fishing authorities in Gaza: "A seal has arrived on the shores of Gaza" - Israeli sources: "There is no confirmation that it is Yulia" (May 31, 2023).
3. Alwatanvoice.com: The first record of the Mediterranean Monk Seal in the marine waters of the Gaza Strip (May 31, 2023).



Fig 2: The Mediterranean Monk Seal "Yulia" resting on Jaffa beach and showing signs of molting [Photo: Guy Levian]

3.4. Gazans showed positive attitudes towards the seal of the Gaza Strip

The Gazans, especially the staff of the General Directorate of Fisheries, fishermen and the marine police, showed positive attitudes towards the guest Monk Seal, as they are often the first to deal with it in the marine or coastal environments. This was evident through the following:

1. The Gazans expressed longing and joy at the prospect of seeing the Mediterranean Monk Seal through Facebook posts and other social media, especially because the seal in question is rare and endangered and there are not many of its individuals worldwide.
2. The competent authorities of the Gaza Strip were keen not to harm the incoming seal or endanger it through their instructions and advice to the Gazan public using news websites and social media.
3. The competent authorities recommended the Palestinian public, if the seal comes to the beach, not to approach it too much because it is afraid of humans, and not to photograph it using bright flashes because such flashes may confuse it, as well as not to take Domestic Dogs (*Canis familiaris*) near them, although Palestinians do not

have such behavior.

- The fishermen dealt responsibly with regard to the seal specimen that appeared in the coastal waters of North Gaza Governorate, by returning the seal to the sea for fear of harm from vacationers.

4. Discussion

The Mediterranean Monk Seal (*Monachus monachus* Hermann, 1779), which arrived in the coastal waters and sometimes on the beaches of the Gaza Strip in the period enclosed between 5/31/2023 and 2/6/2023, is one of several hundred of these globally endangered marine mammals that currently live in the Mediterranean Sea, Aegean Sea and Northeast Ocean Atlantic (Gücü *et al.*, 2004; Dendrinis *et al.*, 2007; González, 2015; Karamanlidis *et al.*, 2016 and Fioravanti *et al.*, 2020) [38, 31, 25, 29]. The importance of the Mediterranean Monk Seals is due to their exposure to extinction resulting from their historical hunting, overfishing, deliberate killing, accidental falls in fishing gear, habitat destruction and pollution in addition to the impacts of climate change as shown in many studies (Androukaki *et al.*, 1999; Güçlüsoy *et al.*, 2004 and Karamanlidis *et al.*, 2016) [10, 38, 35]. Mediterranean Monk Seals commonly inhabit coastal caves in Greece, Turkey and other countries because the caves provide the life and protection requirements needed for seals (Güçlüsoy *et al.*, 2004; Dendrinis *et al.*, 2008; Pires *et al.*, 2008; Bundone, 2010; Inanmaz *et al.*, 2014 and Bundone *et al.*, 2022) [26, 35, 15, 16, 48, 36]. These requirements are difficult to meet in some eastern Mediterranean countries such as Syria, Lebanon and Palestine and as a result Mediterranean seals rarely go to the sunny beaches of these countries (Mo *et al.*, 2003; Scheinin *et al.*, 2011; Bundone *et al.*, 2016 and 2021; Badreddine *et al.*, 2022 and Saad and Mahfoud, 2022) [16, 55, 26, 52, 12] with the exception of very limited numbers of them that may visit the waters and beaches of several eastern Mediterranean and north African countries (Bertram, 1943; Ouerghi *et al.*, 2001; Mo *et al.*, 2003 and 2011; Badosa *et al.*, 2006; Adamantopoulou *et al.*, 2011; Scheinin *et al.*, 2011; Notarbartolo di Sciarra and Fouad, 2012; Alfaghi *et al.*, 2013; Bundone *et al.*, 2016; Farrag *et al.*, 2019; Badreddine *et al.*, 2020; Roditi-Elasar *et al.*, 2021 and Saad and Mahfoud, 2022) [16, 55, 51, 13, 49, 8, 52, 12], the most recent of which was the Mediterranean Monk Seal "Yulia" that visited the waters and coasts of central Palestine (Abd Rabou *et al.*, 2023) [2].

There is no doubt that the Gaza Strip, during the past few days, was most likely ready for the arrival of the Mediterranean Monk Seal, whether it was "Yulia" that left the Jaffa coast for unclear destinations, or the one that was announced by the General Directorate of Fisheries at the Palestinian Ministry of Agriculture that it will reach soon the Gaza Strip coming from north. This rare event occurred as the seal specimen was seen for at least three times in various locations along the Gaza coast. What was difficult for the Gazans to comprehend was the weak documentation of the arrival of the seal specimen, whose arrival is an important historical and environmental event in the Gaza Strip. In comparison, the Jaffa seal "Yulia" has become an Israeli, regional and international celebrity because of the hospitality with which it was received, as well as the provision of security, comfort and a suitable atmosphere for "Yulia", whether in Jaffa or the cities bordering it to the north and south (Abd Rabou *et al.*, 2023) [2]. In fact, "Yulia" was full of filming, documenting, and celebrating in and around Jaffa, which enabled people from all over the country to attend her

rare event, which may not be repeated in the near future (Abd Rabou *et al.*, 2023) [2].

In fact, the population crowding in the Gaza Strip (about 6,000 people per square kilometer) may be a factor in the pressure exerting on the beaches, and thus the difficulty in the arrival of specimens of rare animals such as seals and even sea turtles to the shore of the Gaza Strip. The relatively decent Gazan beach suffers from mismanagement, as it is full of restrooms, chalets, vacationers' tents and other buildings. Perhaps this is what caused the current seal specimen to settle near the sewage discharging pipe in Rafah, southern Gaza Strip, as vacationers often stay away from these places. It is worth noting that the coast along the Gaza Strip is teeming with dozens of wastewater discharging pipes, which spill their content, whether treated, semi-treated or untreated, into the marine environment, causing its pollution (Abd Rabou *et al.*, 2007 and Abd Rabou, 2013) [1, 3]. Unfortunately, the joy of the Gazans was not complete with this rare and ecologically important event, as the guest specimen of the Mediterranean Monk Seal rarely came out to the beach at times when no one noticed it except by chance. It was not seen by the public or those interested in it, and the documentation with photos or video clips appeared very poor. Joy lacks in this event, like the rest of the events taking place in the Gaza Strip, and joy is never complete.

This rare event left no room for the people of Gaza to celebrate or follow up scientifically or in the field, such as the event that Jaffa "Yulia" enjoyed. All that remains is whether the seal seen in the Gaza Strip is the "Yulia" of Jaffa or a new specimen being studied and monitored internationally using animal-linked, satellite devices. The author is very disappointed that the scene of the guest seal was not completed, and perhaps future scenes may be better and better documented. By any means, this rare and important event is the first publicly reported record of the occurrence or passage of the Mediterranean Monk Seal in the Palestinian marine waters of the Gaza Strip, ending a decades-long debate over the presence or absence of this rare and globally endangered species in the Mediterranean waters of the Gaza Strip, Palestine (Euroconsult and IWACO, 1994 and MENA – Ministry of Environmental Affairs, 2001) [27].

In conclusion, there is debate about the identity of the Mediterranean seal specimen that visited the Gaza Strip for at least three days. Is it the same "Julia" which visited Jaffa and the coasts of central Palestine, or is it a new specimen? Most of the Israeli media focused on the fact that the seal of the Gaza Strip is the same as the Jaffa "Yulia", guided by the opinions of capable Israeli scientists who confirmed the matter due to their extensive experience in the field of marine mammals and due to the strength of their naval fleet. The General Directorate of Fisheries at the Palestinian Ministry of Agriculture claimed that the seal coming to the Gaza Strip was not "Yulia" but rather a specimen subject to a study by an international team composed of Turkish, Greek and Italian scientists. This preliminary and modest scientific study primarily aims to document the presence or passage of the endangered Mediterranean Monk Seal in the marine environment of the Gaza Strip, regardless of its true identity, which it may reveal in the near future. The author collected many clues and conclusions indicating that he adopts the Israeli version that the seal of the Gaza Strip is "Yulia". It would be difficult to expect the arrival of two specimens of a very rare and globally endangered creature in no more than three weeks along the Palestinian coast on the Mediterranean.

The close length of the two specimens and the brown color in their fronts indicate that they are mostly one specimen that moved from the northern countries to Palestine, and it may reach Egypt and the coasts of North African countries in the near future (The Times of Israel, 2023). Of course, no one can predict the fate of the seal during its long tour, but on the other hand, everyone wishes this seal and its limited population groups distributed in certain coasts around the Mediterranean, protection and prosperity, because extinction is a difficult and dangerous matter that no one desires.

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