

## SCIENTIFIC NOTE

### Upside down sea- a grey host in the Central Tyrrhenian Sea Gaglioti M.

The grey whale *Eschrichtius robustus* (Lilljeborg, 1861) belongs to the suborder of Odontocetes, is a very rare marine mammal in the middle latitudes (Jones et al., 2012; Perrin W.F. 2021).

It is currently protected from the main internationally recognized conservation measures such as the Marine Mammal Protection Act (MMPA), the IUCN Red List where is mentioned as Least Concerned (Cooke J.G., 2018) and the Appendix I of the Convention on International Trade in Endangered Species. To date the effective impacts of climate change on baleen whales are almost unknown, but it is considered one of the largest threats facing high latitude regions where many gray whales forage. Most notably, the timing and distribution of sea ice coverage is changing dramatically with altered oceanographic conditions. Any resulting changes in prey distribution could lead to changes in foraging behavior (Dunham et al., 2002; Moore et al., 2003), nutritional stress, and diminished reproduction for gray whales (Perryman et al., 2002). Additionally, changing water temperature and currents could impact the timing of environmental cues important for navigation and migration (Nelson et al., 2008).

On 14 April 2021 an unusual sighting occurred in the nearby of the Circeo Man and Biosphere Reserve, exactly in the east coast of Ponza Island (Frontone beach), approximately 20 nautical miles apart from San Felice Circeo coast. The unique recognized occurrences of this species in the Mediterranean Sea happened in 2010 off the Israeli Mediterranean shore and then in Spanish Mediterranean waters and probably both the observations are linked to the same specimen (Scheinin et al., 2011).

The first observers of the recent Central Tyrrhenian Sea occurrence have been Giuseppe Mazzella and his son Vincenzo who documented the encounter and shared the video on a social network (Fig.1). For four days from the first reporting, thanks to the collaboration between institutions and some citizen scientists, the animal has been tracked throughout its movement in the southward direction toward the Gulf of Naples where it has been closely observed also by the staff of the main Marine Protected Areas of this portion of the Central Tyrrhenian Sea, before its departure in the direction of Procida where then lost his tracks.

At a first glance this episode highlighted the positive attitude toward the collaboration aimed at documenting this unusual event. In few hours from social networks, websites of local institutions, research institutes and protected areas the first video reached thousands of visualizations followed by additional reports.

Besides, some of the observers get also in touch with the animal driven from the instinctive feeling, even though it is not properly the right approach considering that is a wild animal already stressed and evidently disoriented. Indeed, considering that this cetacean is a typical of the northern Pacific coasts and its distribution is usually limited to this high latitude regions, its occurrence in the Mediterranean Sea beside its occurrence in very shallow waters, is reasonably due to some difficulty



Figure 1 Screenshot from a video documentation shared on social networks (Image Credits: Vincenzo Mazzella)

or problems. For this reason, as a general rule is essential do not cause disturbance or annoyance in the attempt to follow or photograph these animals even though the instinct dictated by the emotion would lead to not respect this code of conduct.

## References

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