

## SHORT COMMUNICATION

### Live stranded fin whale *Balaenoptera physalus* in Libyan waters reported via social media platform

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#### Abstract

A live movie was streamed by a recreational fisherman on social media on 2 August 2020 featuring a fin whale *Balaenoptera physalus* stranded alive off the coast of Bomba Bay, 70 km east of Derna, Libya. This short note highlights the importance of social media for recording and monitoring marine megafauna in remote and scarcely-surveyed regions.

**Keywords:** Citizen Science, megafauna, surveillance, live stream, parasites

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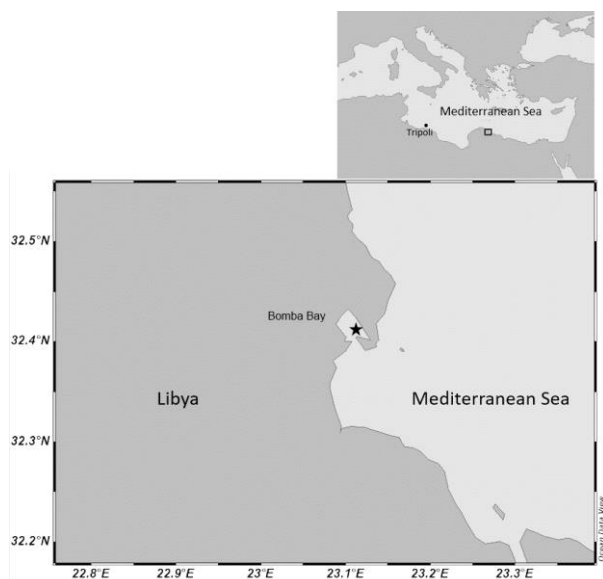
The fin whale *Balaenoptera physalus* (Linnaeus, 1758) is a cosmopolitan marine mammal species with a population present in the Mediterranean Sea (Notarbartolo di Sciara *et al.* 2016) where it is considered vulnerable (ACCOBAMS 2020; Panigada and Notarbartolo di Sciara 2012). The second largest cetacean worldwide, it is long-lived reaching up to 90 years in age (Lockyer *et al.* 1977 in Rossi *et al.* 2014). Fin whales are often found stranded, as in Libya where reportedly stranding events have taken place along its coastline (Boisseau *et al.* 2010).

Social media platforms and citizen science projects increasingly serve as an alternative, cost effective and retrospective resource for the study of megafauna (Pace *et al.* 2019; Gibson *et al.* 2020). In Libya, megafauna strandings attract the interest of the general public with social media platforms, a perfect outlet for sharing images and movies of such events, already used as an additional tool for assessing marine biodiversity of its long and often remote coastline (Rizgalla and Crocetta 2020).

Fin whales are affected by copepods of the genus *Pennella* (Oken, 1815) including the large ectoparasitic *Pennella balaenoptera* (Koren and Danielssen, 1877) (Copepoda: Pennellidae), often seen on the skin of whales in high densities (Çiçek *et al.* 2007). *Pennella balaenoptera* are long tube-like parasites that anchor their heads deeply in the skin leaving the posterior body freely (for detailed description see Çiçek *et al.* 2007). These parasites are believed to weaken the animal when present in high densities, leading to stranding events (Raga and Sanpera 1986).

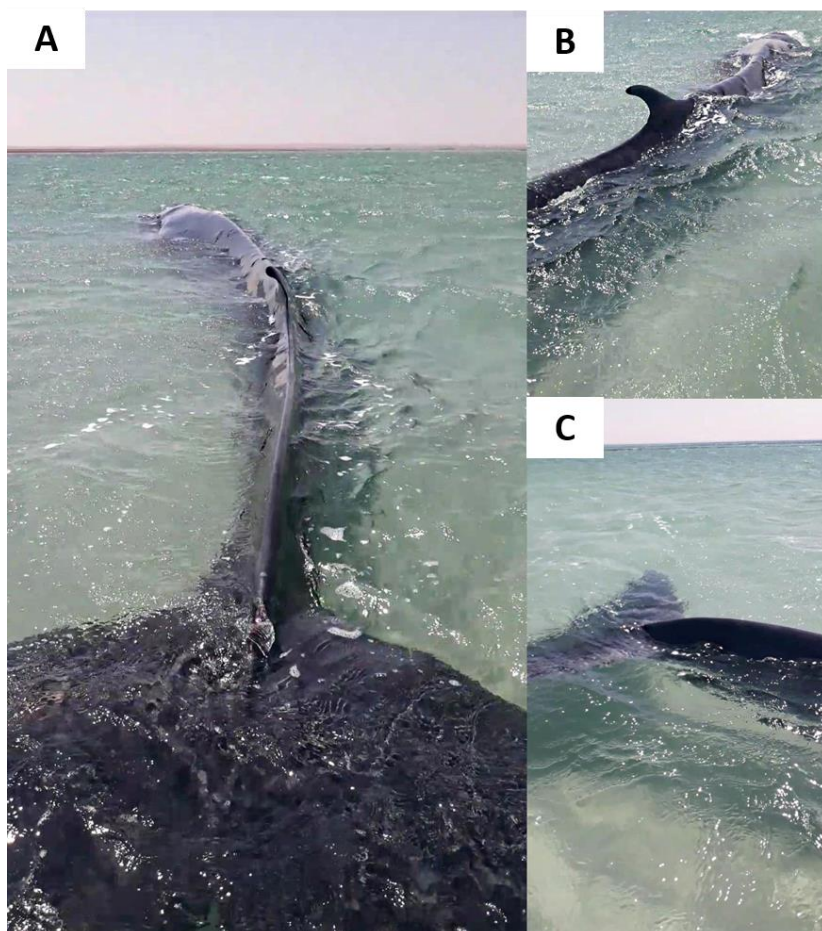
As part of a project assessing marine biodiversity in Libyan waters a recent fin whale live stranding event posted on various social media groups is described in this report.

A fin whale stranded alive on 2 August 2020 off the coast of Bomba Bay (70 km from Derna) in the east of Libya (32°24'55.7"N 23°06'59.5"E) (Figure 1). The whale was spotted by the recreational fisherman Mr. Rafa Alkarimi who streamed a live video on a social media group called ‘‘Professional fishing in the Mediterranean’’. Following the live stream, a crowd gathered at the stranding site, resulting in additional movies and images being shared in various social media platform groups. Some of these posts show a crowd of people sitting on the animal in proximity to the blowhole, and even using it as a platform to jump from. The author contacted Mr. Alkarimi on the same day and the social media platform ‘‘Libyan Variety, Just For Fun (in Arabic)’’ was contacted thereafter to obtain additional images, information, and permission for the use of both video and photo materials.



**Figure 1.** The location of fin whale stranding in the east of Libya off Bomba Bay (star).

The fin whale was found stranded in about 1 m of water (Figures 2 and 3) and measured approximately 15-16 meters (measured in strides). The animal was alive and showed no visible external injuries, although the body condition seemed that of a lean individual (Figures 2 A, B). Along the right and left side of the body 8-9 embedded ectoparasitic parasites belonging to the genus *Pennella* were evident. The copepods were seen in both still and video imagery (Figure 4). The parasites were torn when pulled and adequate samples were not obtained. Mr. Alkarimi returned upon the author's request to the stranding site for a sample of the parasite, but the whale had reportedly been helped to go back into deeper waters and was not seen since.



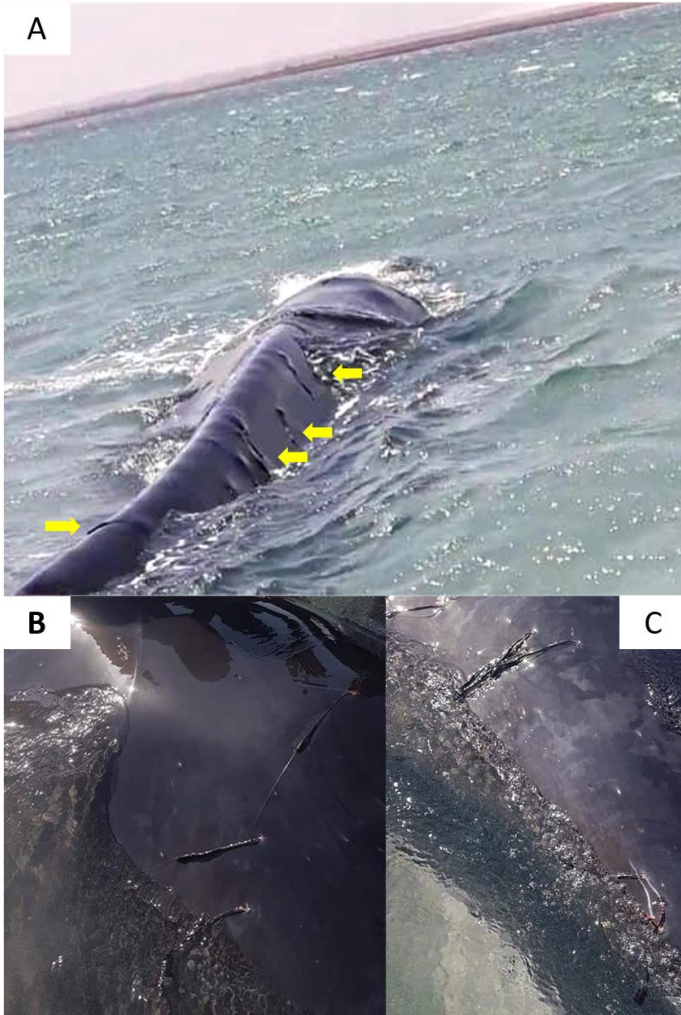
**Figure 2.** Fin whale stranded off the coast of east Libya. (A) Dorsal view showing almost the entire length of the animal approximately 15-16 m with a prominent ridge running from fin to tail flukes. (B) Dorsal fin typical to that of a fin whale. (C) Tail stock and submerged tail flukes. Photo: Rafa Alkarimi.



**Figure 3.** View of the (A) tail and dorsal fin and (B) blowholes with a single ridge running to the rostrum.

Photos: (A) Rafa Alkarimi; (B) Libyan Variety, Just For Fun (a social media platform)

Whale strandings are reported to occur in Libyan coastal waters (Boisseau *et al.* 2010; SPA/RAC 2013). A number of reasons could lead to whale stranding, such as underlying health conditions (Raga and Sanpera 1986). While it was not possible to identify the parasitic copepod observed in the present study to species level from the imagery alone, some of its morphological features identify it as belonging to the *Pennella* genus and the author tentatively identifies it as *P. balaenoptera*, a species known to infect fin whales in the Mediterranean Sea, sometimes in high densities (Raga and Sanpera 1986; Çiçek *et al.* 2007). While only 9-10 parasites were observed in the present study, a heavier infestation cannot be excluded. Libya's extended coastline, a lack of funding for marine research, and the ongoing political unrest in the region, mean that citizen science projects and social media posts offer an alternative resource, allowing real-time recording of a stranding event which would otherwise remain unreported. Data driven from social media requires meticulous fact checking (AAP Factcheck 2019), and often positive identification can be difficult due to unclear photographs (Rizgalla *et al.* 2016). However, the report of the stranded fin whale emphasises the crucial role social media and citizen science projects can play when quantifying marine biodiversity in Libyan waters (Rizgalla *et al.* 2016; Rizgalla and Crocetta 2020), and how these platforms can be very effective for the documentation and monitoring of marine megafauna in coastal areas (Cigliano *et al.* 2015; Pirota *et al.* 2019).



**Figure 4.** Fin whale showing (A, B & C) 9-10 embedded parasites belonging to the genus *Pennella* (Oken, 1815).

Photos: (A) Rafa Alkarimi, (B&C) Libyan Variety, Just For Fun (a social media platform)

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