

# The first confirmed report of the harbour porpoise (*Phocoena phoceana*) in the Turkish Aegean Sea

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The harbour porpoise, *Phocoena phocoena*, is distributed throughout the continental shelf waters of the northern hemisphere. Although the species is known to occur in the Black Sea and the Sea of Marmara off the coast of Turkey, to date no porpoises have been reported along the Aegean Sea coast of this country. This paper provides the first reported stranding of the harbour porpoise on this coastline. This is however, not thought to provide evidence of a separate population, rather it is thought that it may be part of the Black Sea population. It may demonstrate a wider or possible re-distribution of its range than previously thought.

The harbour porpoise *Phocoena phocoena* (Linnaeus, 1758) is distributed throughout the subarctic and temperate continental shelf waters of the northern hemisphere (Rice, 1998). Although the species, categorized as endangered (Birkun & Fantzis, 2006), is known to occur in the Black Sea and in the Sea of Marmara off the coast of Turkey, to date, none have been reported along the Aegean Sea coasts of the country. This paper provides the first reported stranding of the harbour porpoise on this coastline.

On 11 October 2006, a member of the Fisheries Faculty of the Ege University, İzmir reported a stranded, unknown dead marine mammal in Urla, İzmir Bay, Turkey (38°21.4'N 26°47.7'E). The author arrived on site and examined the specimen externally. Locals in the vicinity confirmed that the animal had stranded two days previously. The condition of the carcass, in relation to the ambient temperature of this season showed that the animal died more than a week earlier, and as such, presented a severely decomposed state (Figure 1A). Photographs of the dead specimen were taken together with the following morphometric measurements: the total length of the specimen was 145 cm, and girth 74 cm. The skull of the specimen was recovered and skin samples were taken for future genetic studies. These were preserved at the Institute of Marine Sciences and Technology, Dokuz Eylül University.

The specimen was identified as an adult male harbour porpoise, *P. phoceana*, based on size and its conical head without a beak, all of which are characteristics of this species (Figure 1B). No necropsy was conducted and the actual cause of death was not determined. Although, the largest fishing fleet of the Turkish Aegean Sea harbours on the coasts of the İzmir Bay, the external examination of the specimen did not reveal any sign of fisheries interaction. When the area's surface currents are taken into consideration, it is plausible that the animal died within the İzmir Bay. The surface currents of the bay are highly dependant on the wind conditions, where northerly winds are predominant (Sayın, 2003). This was also demonstrated by the wind data obtained from Çigli Meteorological Centre from 1 to 10 October 2006 when the animal was assumed to have died and drifted on the surface. For this period, floating matter as large as the adult porpoise may have a velocity of 2 cm/s (1.7 km/d) towards the stranding locality in the Bay (Erdem Sayın, personal communication).

To date, eight cetacean species have been observed in the Turkish Aegean Sea, including the odontocetes, the common dolphin *Delphinus delphis*, Risso's dolphin *Grampus griseus*, sperm whale *Physeter macrocephalus*, striped dolphin *Stenella coeruleoalba*, bottlenose dolphin

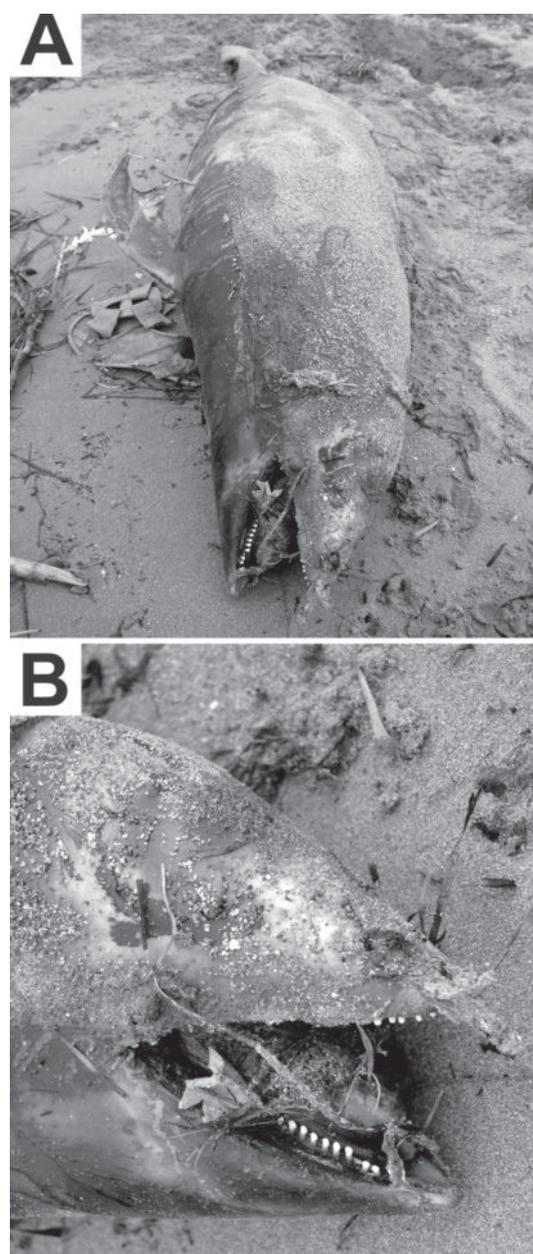


Figure 1. Harbour porpoise recorded in Urla (38°21.4'N 26°47.7'E), İzmir Bay Turkey on 11 October 2006.

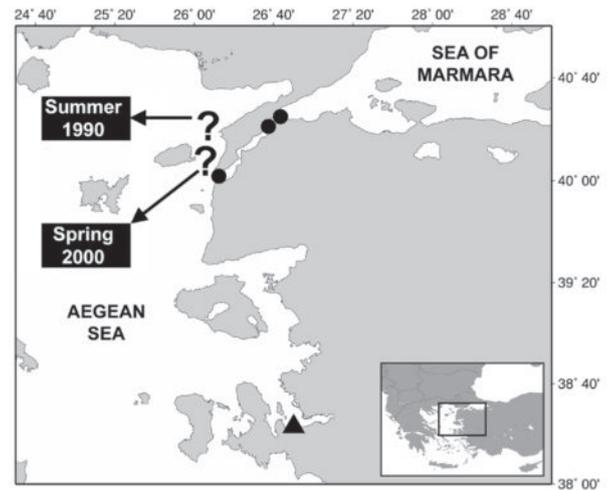
*Tursiops truncatus*, Cuvier's beaked whale *Ziphius cavirostris* and the false killer whale *Pseudorca crassidens* (Öztürk & Öztürk, 1998; Öztürk et al., 2001; Güçlüsoy et al., 2004). Only one mysticete species, the fin whale *Balaenoptera physalus*, was reported (Taşkavak et al., 1998). There was no evidence of the harbour porpoise in the Aegean Sea until the last decade. The presence of the harbour porpoise of the Black Sea population (Rosel et al., 2003) was reported earlier between the dates 1993 and 2000 from the Hellenic waters of the northern Aegean Sea (Frantzis et al., 2001). Although the species occurrence was confirmed in the Black Sea and the Sea of Marmara in Turkish waters (Deveciyan, 1915; Öztürk, 1996), to date, no direct evidence was obtained from the Turkish Aegean and Mediterranean Seas. At the beginning of the last century, Deveciyan, (1915) reported this species as being found rarely in these seas. More recently, three anecdotal sighting reports of the Black Sea fishermen, working around the Çanakkale Strait, potentially identified the species in the Aegean Sea (Güçlüsoy, 2006) (Figure 2), although, none of these sightings were confirmed. The stranding reported here provides the first confirmed presence of the species from the southernmost locality in the Aegean Sea. This is, however, not thought to provide evidence of a separate population, rather it is thought that it may be part of the Black Sea population reported earlier by Frantzis et al. (2001) and Rosel et al. (2003). It may demonstrate a wider or possible re-distribution of its range than previously thought.

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**Figure 2.** The locality of the confirmed and unconfirmed harbour porpoise records from the Turkish Aegean Sea (the triangle shows the confirmed record; question marks show the unconfirmed records of 2–3 animals; dots show the possible movement of 10–15 harbour porpoises through Çanakkale Strait from north to south in the same day in July 1999). (Map source: seaturtle.org, Maptool.)