



Presence of short-beaked common dolphin (*Delphinus delphis*) population in the shallow waters of the south coast of Samos Island, Eastern Aegean Sea



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INTRODUCTION

Identifying the habitat used by a species is crucial for the development of **conservation measures** (1). In the Mediterranean Sea, the sub-population of short-beaked common dolphin (*Delphinus delphis*) is classified as Endangered in the IUCN Red List in 2003 due to its decline (2). However, available data and knowledge on this subpopulation is limited. *D. delphis* in the Mediterranean basin is known to be found in both pelagic and neritic environments, even though this species is normally found in deeper waters located offshore. In comparison, bottlenose dolphin (*Tursiops truncatus*) is usually observed in neritic environments (3).

AIMS This study focuses on the distribution and occurrence of a *D. delphis* population with a **high fidelity rate in the coastal zone**. This data will help to implement effective conservation measures and management strategies to avoid impending population decline.

MATERIALS & METHODS

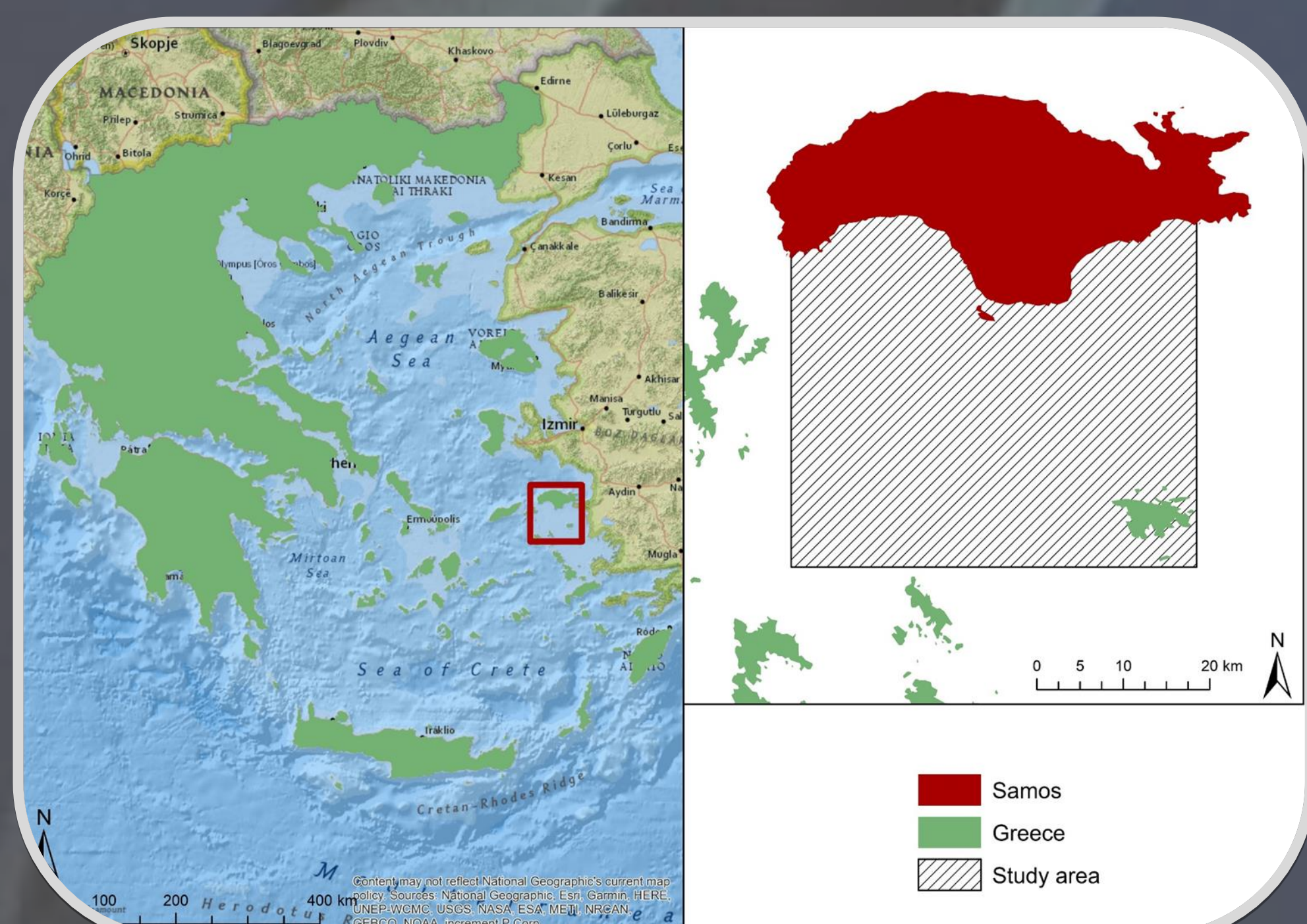


FIGURE 1: Location and area of study

The study area is located in the marine region between the islands of Samos and Lipsi, in the Eastern Aegean Sea. The *D. delphis* presence and distribution data was collected during 2016-2017 and was obtained from a total of **170 boat surveys**. Using **mark-recapture photo-identification** the individuals have been categorized for future sightings.

RESULTS

A total of 41 sightings of *D. delphis* in comparison to 15 sightings of *T. truncatus* were recorded during the years 2016-2017 (Figure 3). For the *D. delphis* population, a **photo-identification catalogue** was created, which included the resident pod census of **24 individuals mark-recaptured** (Figure 2).



FIGURE 2: Differences in the edge and coloration pattern of adult *D. delphis* dorsal fins.

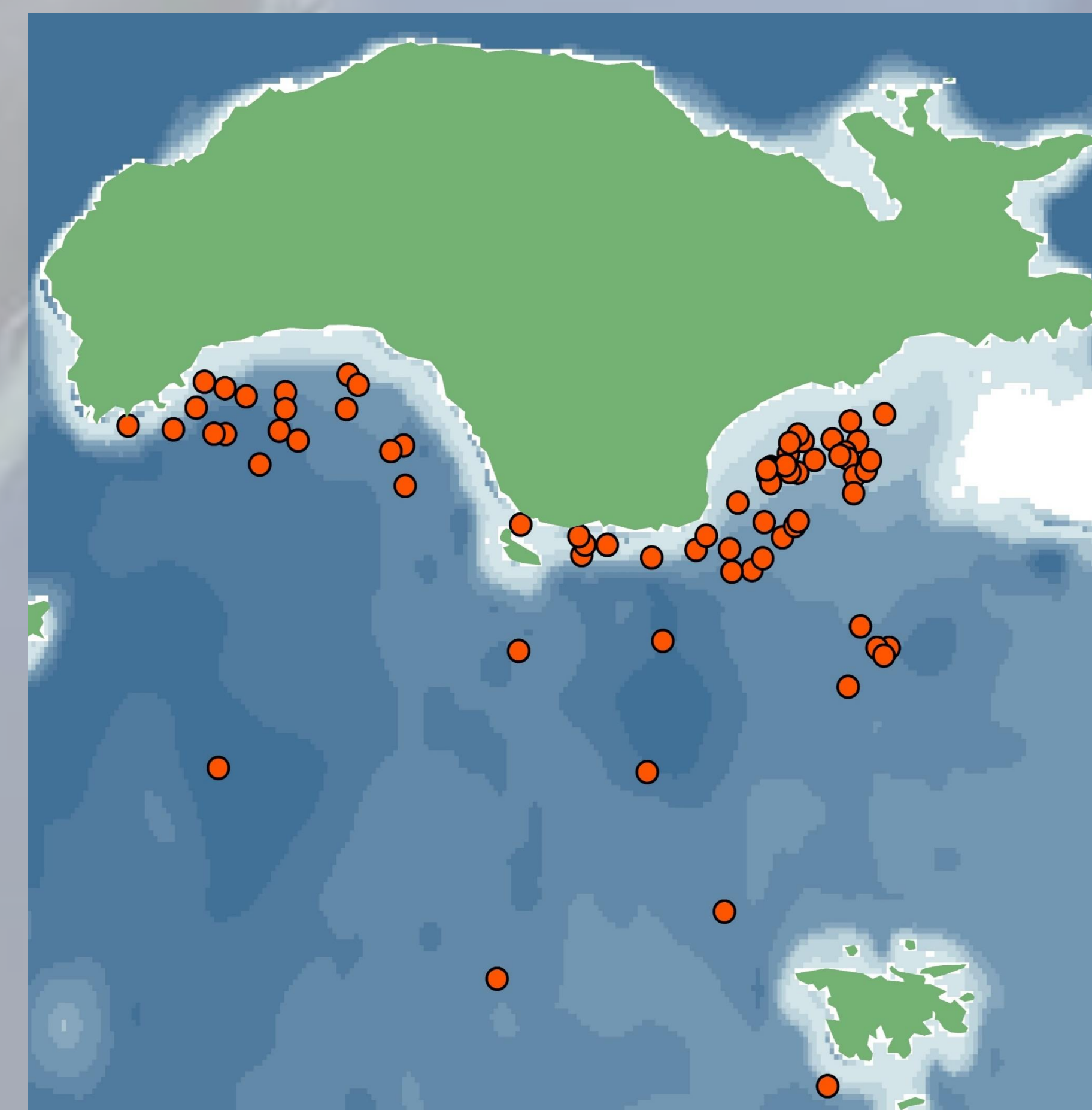


FIGURE 3: Presence and distribution of *D. delphis* during years 2016-2017.

DISCUSSION & CONCLUSION

Contrary to its typical habitat preference, results show that the most common coastal species studied is *D. delphis* instead of *T. truncatus*. Nevertheless, the **presence of *D. delphis* in shallow waters** has been reported in other regions out of the Mediterranean Sea (4). Additionally, this study has identified **24 individuals resident to the area**. Future research is required to determine **social structure, genetic diversity and population dynamics**.

More detailed knowledge of the prey distribution and the environmental parameters of the area is required to gain a better understanding of the influence on their respective habitats.

(1) Cañadas, A and Hammond, P., 2008. Abundance and habitat preferences of the short-beaked common dolphin *Delphinus delphis* in the southwestern Mediterranean: implications for conservation. *Endangered Species Research*, 4, 309-331

(2) Bearzi, G. 2003. *Delphinus delphis* (Mediterranean subpopulation). The IUCN Red List of Threatened Species 2003: e.T41762A10557372

(3) Bearzi G, Reeves RR, Notarbartolo di Sciara G, Politi E, Cañadas A, Frantzis A, Mussi B (2003) Ecology, status and conservation of short-beaked common dolphins *Delphinus delphis* in the Mediterranean Sea. *Mammal Rev* 33: 224-252

(4) Mason S, Salgado Kent C, Donnelly D, Weir J, Bilgmann K. 2016 Atypical residency of short-beaked common dolphins (*Delphinus delphis*) to a shallow, urbanized embayment in south-eastern Australia. *R.Soc. open sci.* 3: 160478