

ABUNDANCE OF CUVIER'S BEAKED WHALE (*ZIPHIUS CAVIROSTRIS*) IN THE ALBORAN SEA

Rojas-Cirera, S. (1), Giménez, J. (2), Sabaté-Gil, MC. (1), Sáenz-García, E. (1), Ballesta, E. (1), Rivas, I. (1), Moral-Cendón, M. (3), Giménez-Mateo, G. (3), Xanxo-Prilló, R. (1), Jammes, F. (1), Baringo, F. (1), Salazar-Sierra, J. (1), de Stephanis, R. (1)

(1) CIRCE Cabeza de Manzaneda 3, Pelayo, 11390 Algeciras, Cadiz, Spain
(2) ICM-CSIC, Institut de Ciències del Mar, 08003 Barcelona, Spain
(3) Cetáceos y Navegación, 30860 Puerto de Mazarrón, Murcia, Spain

INTRODUCTION

Beaked whales, such as Cuvier's beaked whale (*Ziphius cavirostris*), are among the most elusive and poorly understood cetaceans (Fig. 1), due to their high diving ability and limited observation opportunities. Although there is some data on the distribution and abundance of these animals in the Mediterranean basin, their conservation status remains uncertain, and the species is classified by the International Union for Conservation of Nature (IUCN) as "data deficient". The eastern Alboran Sea has been identified as a priority area for research due to its high potential to host populations of Cuvier's beaked whales, however, this region remains poorly studied. In this study, we aim to estimate the abundance of Cuvier's beaked whales in the northern Alboran Sea.



Figure 1. Cuvier's beaked whale sighted during campaigns in the Alboran Sea

MATERIALS AND METHODS

Distance sampling was carried out in the area located between two Sites of Community Importance (SCI): "South of Almeria-Secco de los Olivos [SCI-ESZZ16003]" and "Alboran Sea" [SCI-ESZZ16005]. A sampling effort of 990 km was covered, 26 sightings of 83 individuals of Cuvier's beaked whale were recorded, of which 20 were used for the estimates (Fig. 2 & 3). For each sighting, the angle and distance of the animal from the vessel's trajectory were recorded. The ESW was calculated using a $G(0) = 0.20$.

RESULTS

After navigating 1337 km in line transect, 26 sightings of 83 individuals were obtained.

The detection curve starts with a high probability of detection at close range and gradually decreases with increasing distance (Fig. 4). The mean group size was 3.2 individuals (SD = 1.6), with a range of 1-7 individuals. The ESW was 495 m (CV = 0.22). The abundance estimate for Cuvier's beaked whale in the study area was 109 individuals (95% CI: 43-189).

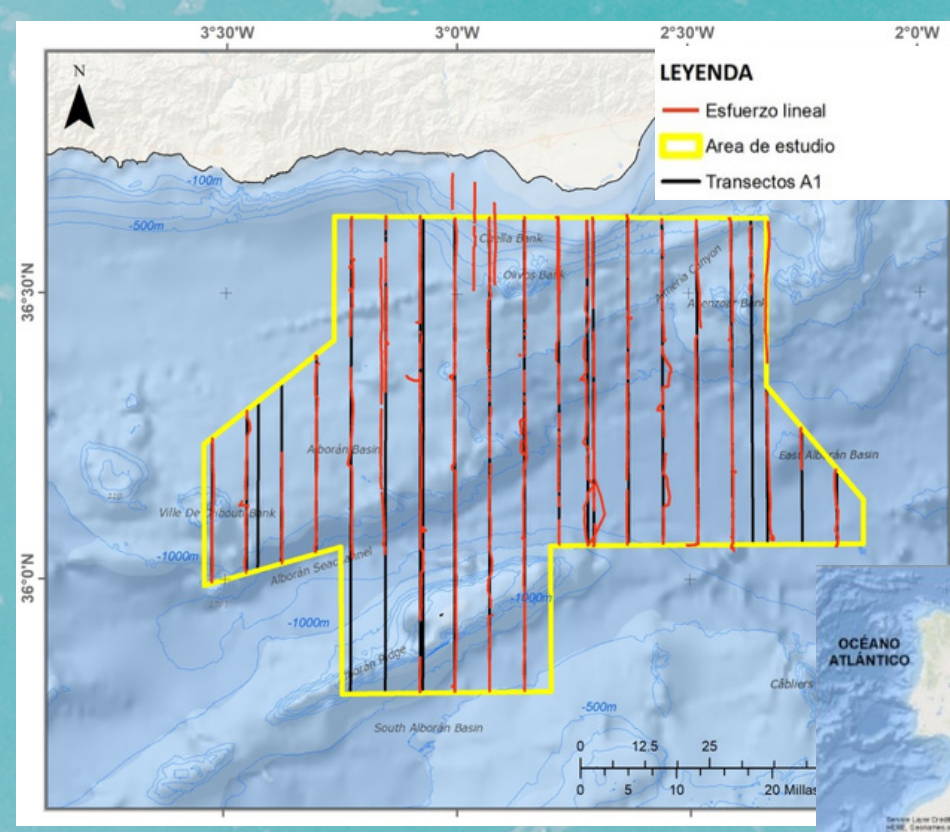


Figure 2. Linear effort made during the campaign in the Alboran Sea

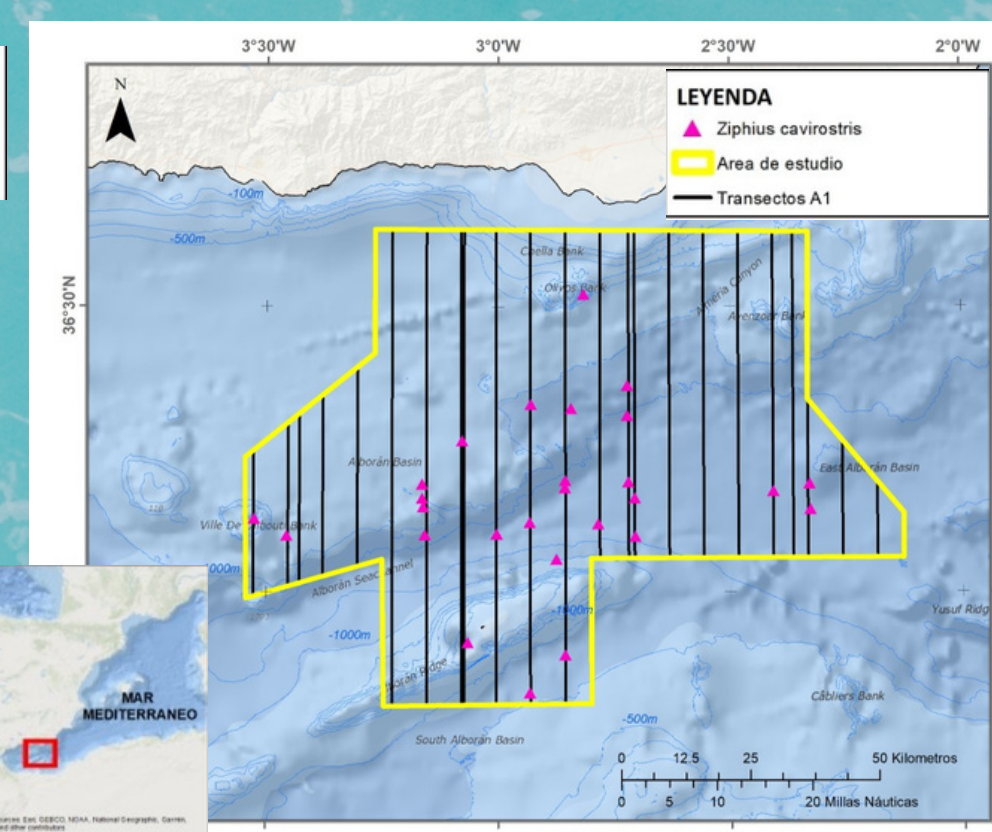


Figure 3. Cuvier's beaked whale (*Ziphius cavirostris*) sightings during the campaign in the Alboran Sea

CONCLUSIONS

Our results highlight that the northern Alboran Sea continue to be an important area for this elusive species.

The information obtained in this study is crucial for the delimitation of protected areas for the conservation of Cuvier's beaked whale in the Alboran Sea, which is probably one of the most important areas for the species in the Mediterranean.

Further studies are suggested to assess the health of the Cuvier's beaked whale population in the Alboran Sea and the need for conservation measures to protect the species.

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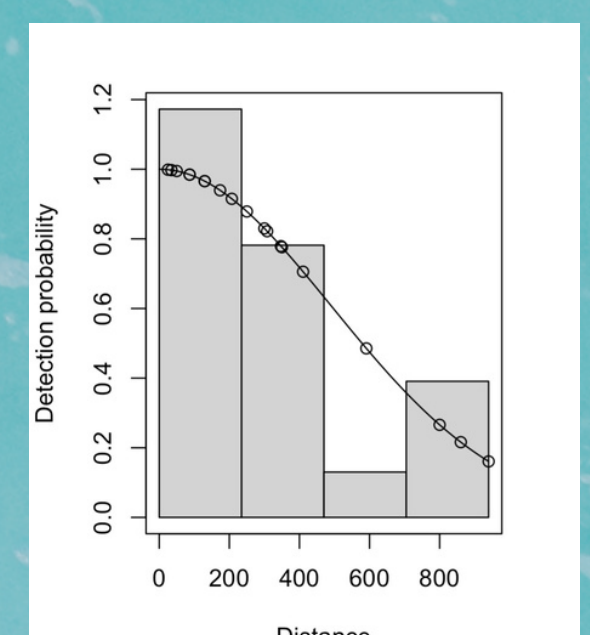


Figure 4. Detection curve represented graphically. The probability of detection decreases with increasing distance.