



Study of the otoliths in the stomach contents of the Atlantic spotted dolphin (*Stenella frontalis*) in the Canary Archipelago

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Introduction

The Atlantic spotted dolphin is an endemic species of the Atlantic Ocean. Its diet is based mainly based on mesopelagic fishes.



Fig. 1 Adult of Atlantic spotted dolphin (Foto Teo Lucas)

Material and methods

This study analysed the stomach content of 25 dolphins (*Stenella frontalis*) that strandend in the Canary Islands among 1994 and 2015. A total of 2233 otoliths were analyzed and identified. The total number 221 remained unidentified.

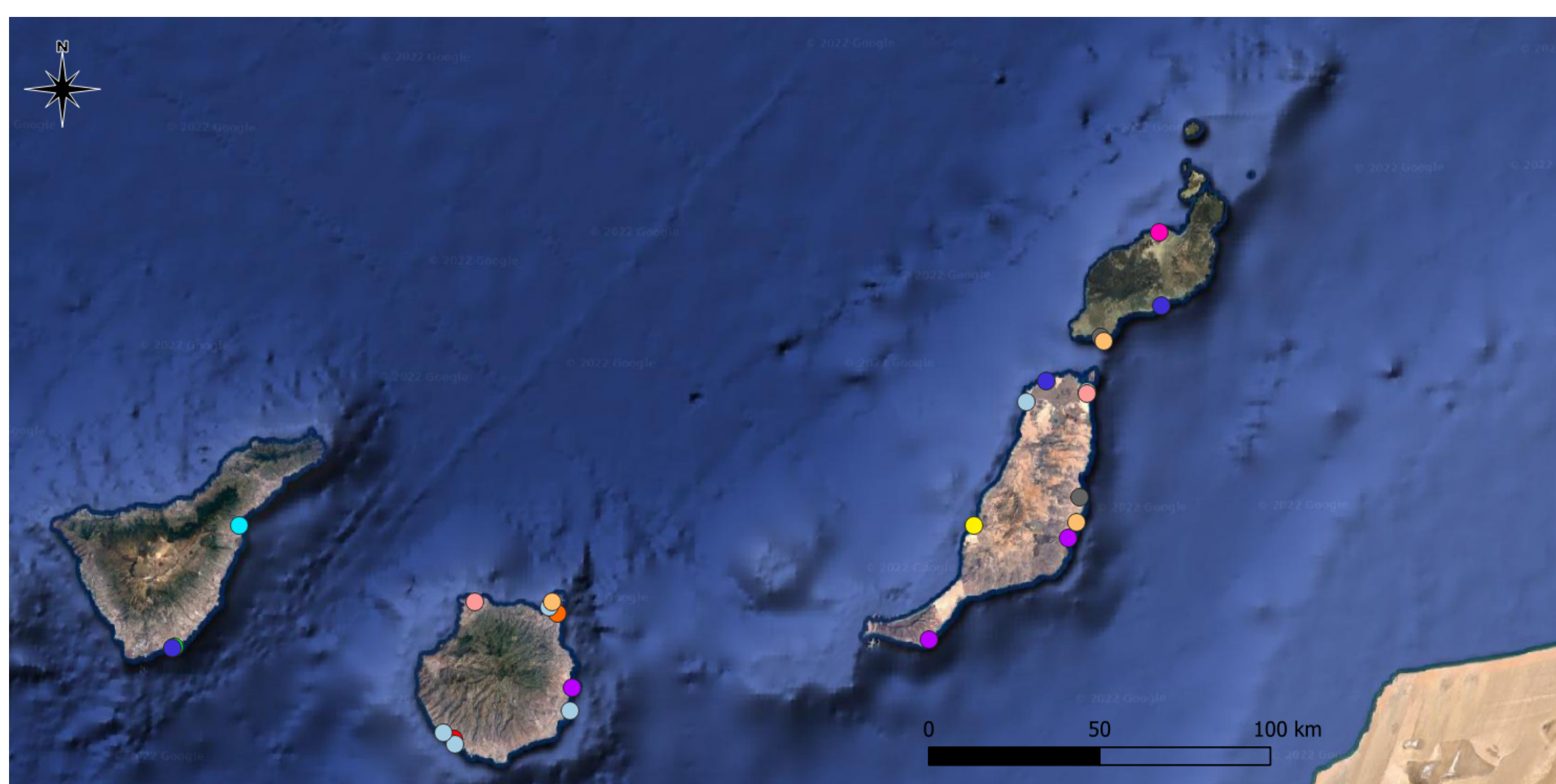


Fig. 2 Location of the 25 Atlantic spotted dolphin (*Stenella frontalis*) stranded from 1994 to 2015.

Results

The most predated species was *Hygophum taanigi* who belongs to Myctophidae family.

Percentage of otoliths per families

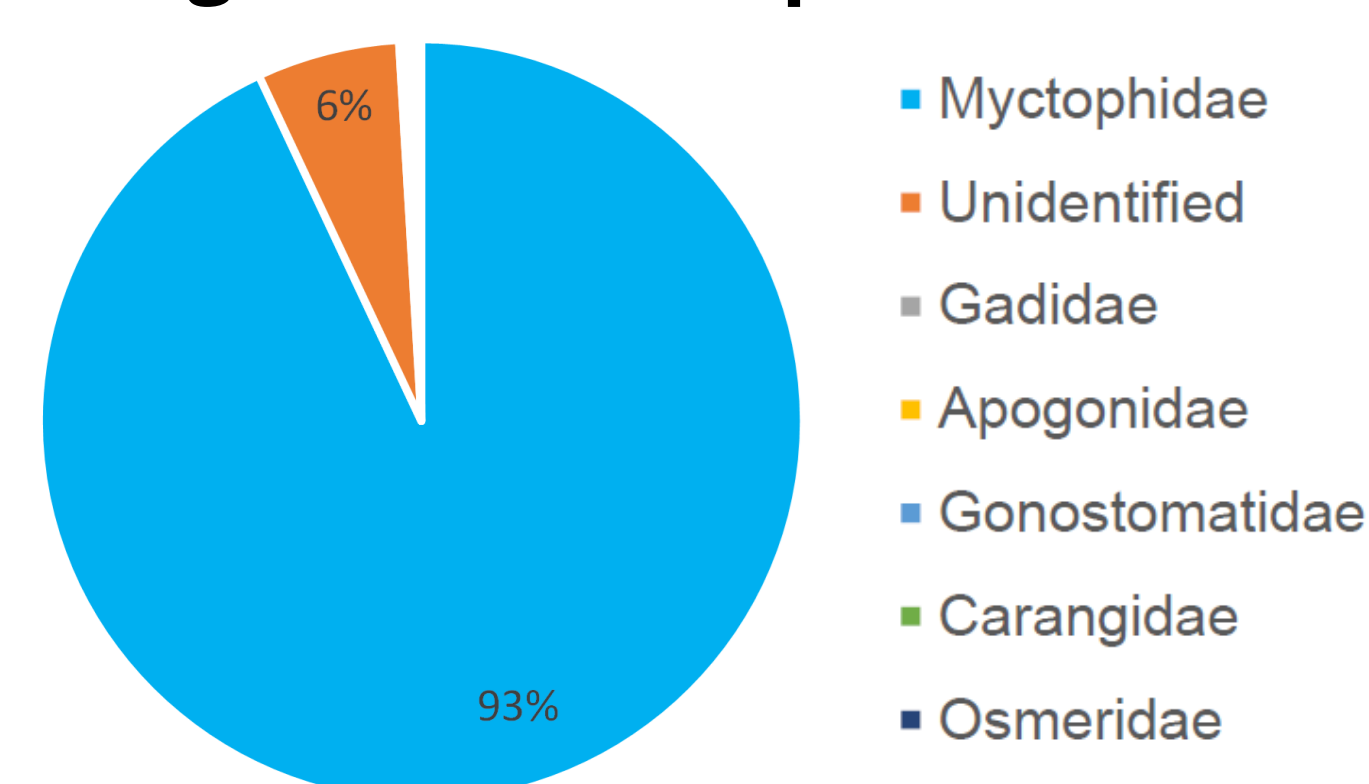


Fig. 3 Percentatge of otoliths belonging to myctophidae family predated by the Atlantic spotted dolphin (*Stenella forntalis*)

Percentage of Myctophidae otoliths

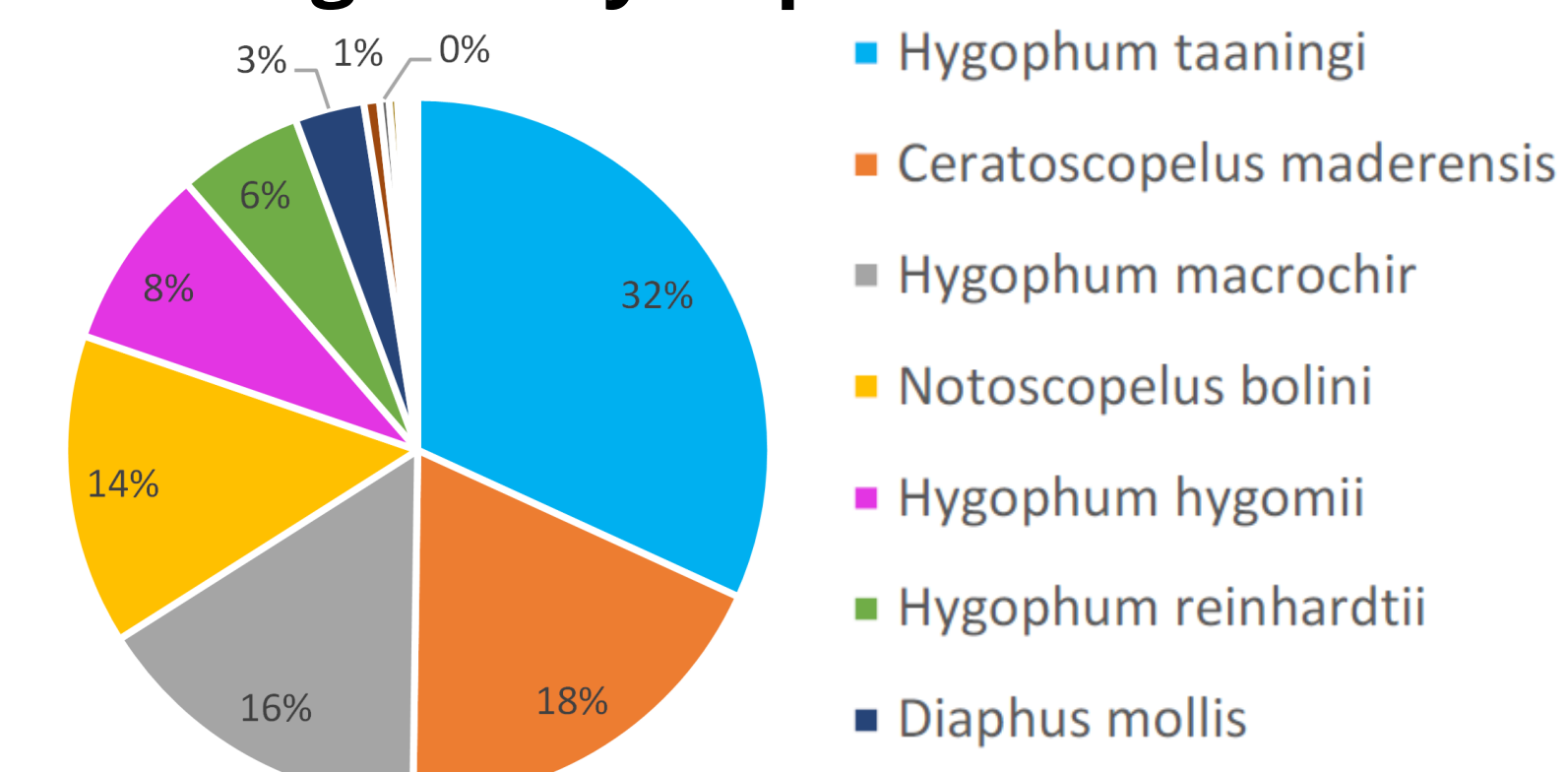


Fig. 4 Percentatge of otoliths belonging to the different families predated by the Atlantic spotted dolphin (*Stenella forntalis*)

Conclusions

The main objective was quantify the prey (fish) preyed by dolphins based on the morphological characteristics of the otoliths in order to know the trophic preference of the species in the archipelago, just us evaluate the abundance and diversity of species along a period of 21 years. Otoliths identification were classified according to their morphological characteristics with the aid of a binocular lens.



Fig. 5 Otolith from Hygophum taanigi

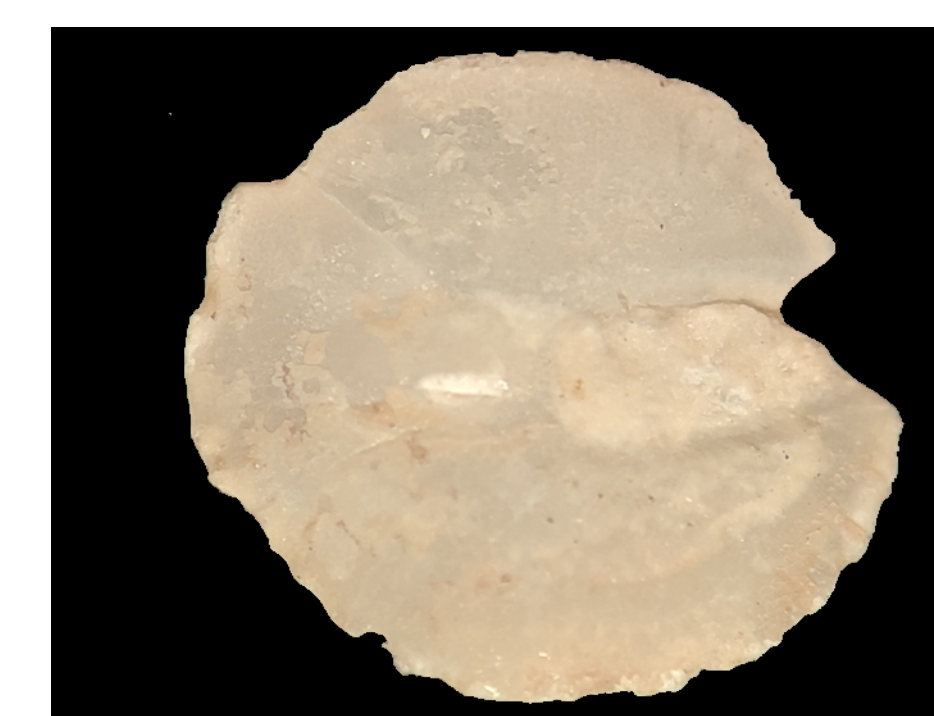


Fig. 6 Otolith from Diaphus metopoclampus



Fig. 7 Otolith from Gonostoma denudatum