

# MARINE LITTER INGESTION IN STRANDED SEA FAUNA OF GALICIAN COAST (NW Spain)



López A.<sup>1,2</sup>; Covelo, P.<sup>1</sup>; Puig-Lozano R.<sup>3</sup>; Vázquez, U.<sup>1</sup>; Pin X.<sup>1</sup>; **González, M.**<sup>1</sup>; Martínez-Cedeira, J.<sup>1</sup>

<sup>1</sup> CEMMA, Apartado 15, 36380 Gondomar, Spain.

<sup>2</sup> Biology Department/CESAM, University of Aveiro, University Campus of Santiago, 3810-193, Aveiro, Portugal.

<sup>3</sup> Atlantic Center for Cetacean Research, University Institute of Animal Health and Food Safety, University of Las Palmas de Gran Canaria (ULPGC), Canary Islands, Spain.

## INTRODUCTION

The coasts of Galicia constitute one of the points with the greatest marine biodiversity in the North Atlantic<sup>a</sup>. Its 1,498 km of coastline register an annual average of 256 strandings of different marine species<sup>b</sup>. However, little is known about the marine debris ingested by cetaceans, pinnipeds, sea turtles and sharks in this geographical area.

## MATERIAL AND METHODS

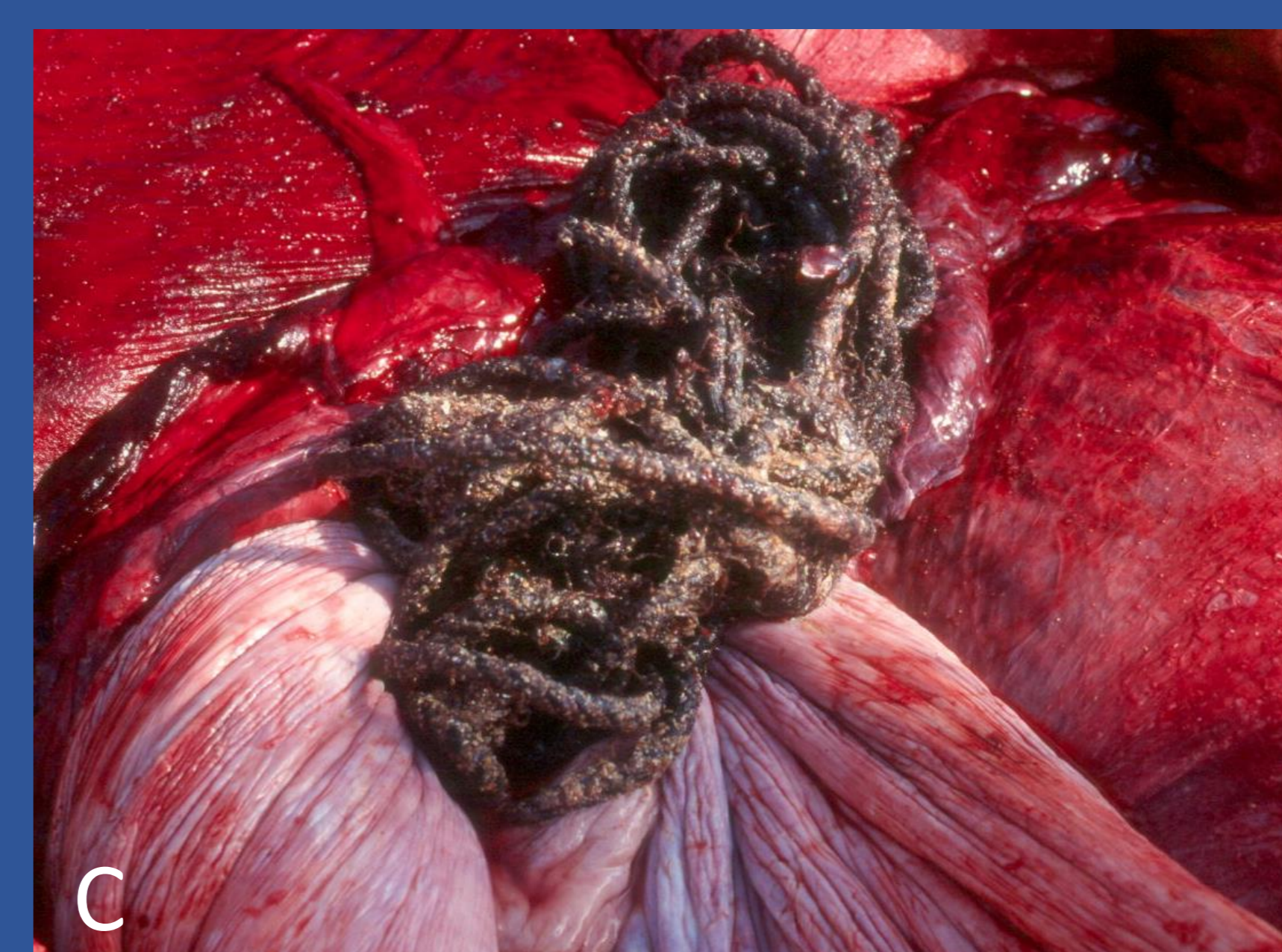
To assess the objective of identify the species affected by foreign body ingestion (macrolitter), we reviewed the stranding data, necropsy reports, and pictures from cetaceans, pinnipeds, turtles, and sharks that appeared on Galician coast from January 1990 to June 2022.

## RESULTS AND DISCUSSION

A total of 51 specimens from 17 species ingested marine debris: 28 cetaceans, 5 pinnipeds, 15 sea turtles, and 3 sharks.

**CETACEANS:** 45.8% (11 /24) of the recorded species were affected. A total of 28 specimens presented foreign bodies. A higher prevalence was detected in deep diving specimens, especially members of the Family Ziphiidae.

Shallow diver (9)	Deep diver (19)
Bottlenose dolphin – <i>Tursiops truncatus</i> (4)	Cuvier’s beaked whale – <i>Ziphius cavirostris</i> (9)
Striped dolphin – <i>Stenella coeruleoalba</i> (2)	Long-finned pilot whale – <i>Globicephala melas</i> (3)
Risso’s dolphin – <i>Grampus griseus</i> (1)	Sperm whale – <i>Physeter macrocephalus</i> (2)
Fin whale - <i>Balaenoptera physalus</i> (1)	Pygmy sperm whale – <i>Kogia breviceps</i> (2)
Minke whale – <i>B. acutorostrata</i> (1)	Blainville’s beaked whale – <i>Mesoplodon densirostris</i> (2)
	True’s beaked whale - <i>M. mirus</i> (1)

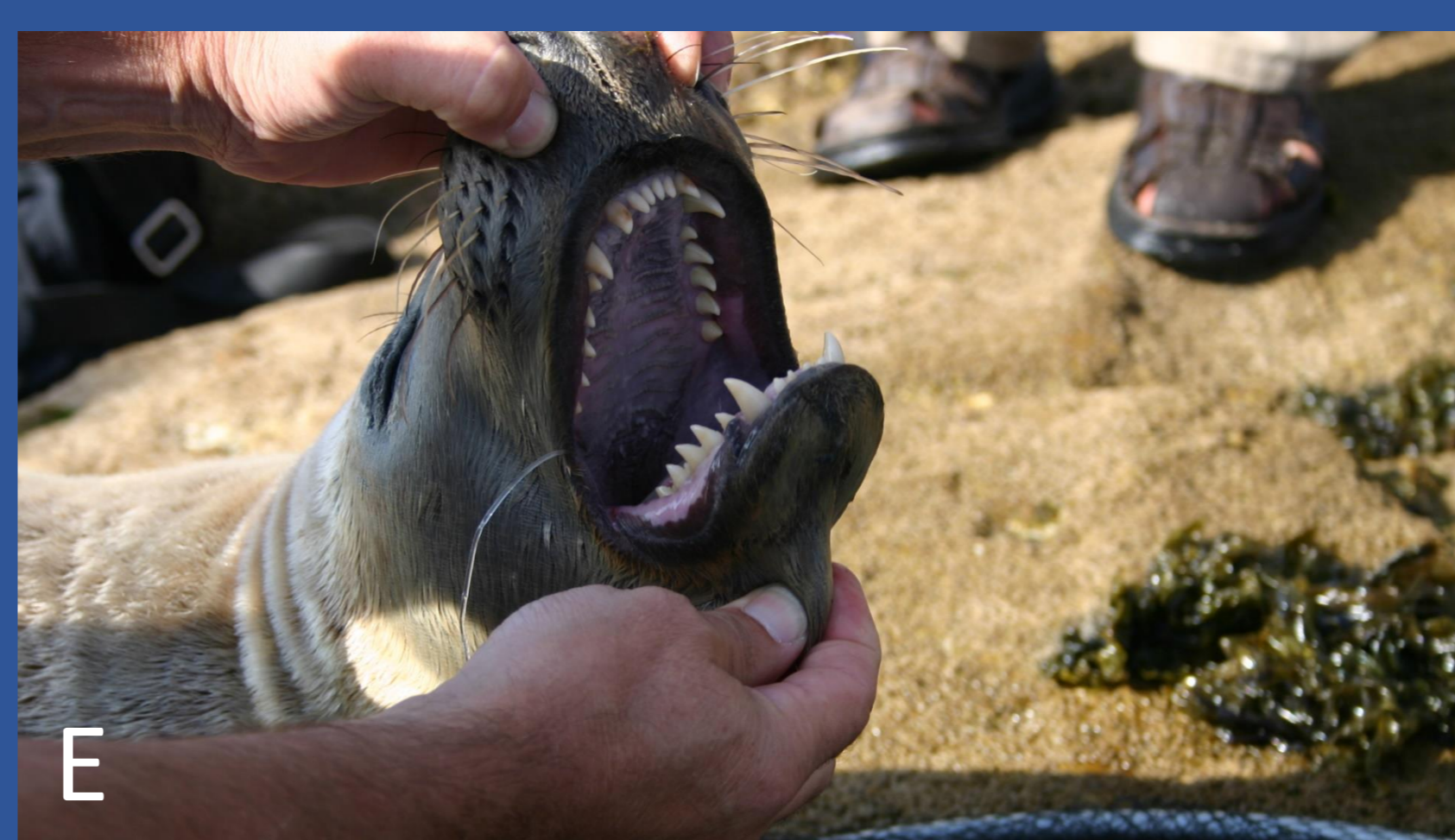


**PINNIPEDS:** 33.3% (2/6) of the recorded species were affected.

**SEA TURTLES:** 60% (3/5) of the recorded species were affected.

**SHARKS:** The basking shark (*Cetorhinus maximus*) were affected.

Pinnipeds (5)	Turtles (15)
Hooded seal - <i>Cystophora cristata</i> (2)	Loggerhead turtle – <i>Caretta caretta</i> (8)
Grey seal - <i>Halichoerus grypus</i> (3)	Leatherback turtle - <i>Dermochelys coriacea</i> (5)
	Green turtle - <i>Chelonia mydas</i> (2)



In most of the cases, the origin of the foreign bodies is undetermined. However, it mainly correspond with domestic and fishing materials. The pictures A-F show some examples.

Household materials	Fishing activity materials	Unidentified origin
Plastic bags (A, D) Textile (B) Plugs (F)	Fishing nets (C) Nylon (E) Hooks (E)	Plastic fragments (D,E) Fibers (F)



## REFERENCES

<sup>a</sup> López, A., Santos, M. B., Pierce, G. J., González, A. F., Valeiras, X., & Guerra, A. (2002). Trends in strandings and by-catch of marine mammals in north-west Spain during the 1990s. *Journal of the Marine Biological Association of the United Kingdom*, 82(3), 513-521.

<sup>b</sup> Covelo, P., Martínez-Cedeira, J. A., Llavona, Á., Díaz, J. I., & López, A. (2016). Strandings of beaked whales (Ziphiidae) in Galicia (NW Spain) between 1990 and 2013. *Journal of the Marine Biological Association of the United Kingdom*, 96(4), 925-931.