

## Plastic ingesta in a *Ziphius cavirostris* stranded in Sicily

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**Abstract.** The note report on the presence of large amount of plastic, reaching 222 g and a flattened surface of 3 m<sup>2</sup>, in the stomach of a Cuvier's beaked whale (*Ziphius cavirostris* Cuvier, 1823) female stranded in Letojanni (ME, Sicily) the 4 October 1997. Consideration on the large quantity of plastic debris in the Mediterranean as source of death to wildlife are discussed.

**Keywords:** Ziphiidae, *Ziphius cavirostris*, Stranding, Sicily, Mediterranean Sea.

Plastic debris are a worldwide problem (Derraik, 2002; Andrady, 2005). They are found to be lethal for a lot of different marine organism. All the sea vertebrates, from fish to sea mammals, are dangerously affected by the presence of plastic and it is assumed that a astonish large quantity of individuals die for their ingestion (Fry et al., 1987; Ryan, 1987; Fowler, 1987, Walker & Coe, 1990; Bjorndal et al., 1994). The problem is deeply felt in the Mediterranean sea, a overpopulated and over-crowded area with a close circulating of currents.

Here we describe the plastic ingesta found in the stomach of a stranded Cuvier's beaked whale *Ziphius cavirostris* found in Sicily.

Beaked whales are widely distributed in the Mediterranean Sea and strandings are quite commonly reported along peninsular Italy (Banca Dati Spiaggiamenti 2014 and 2015) and in Sicily (Insacco et al., 2016, in press). Few information are available on the ecology and feeding habits of this species in the Mediterranean Sea (Podestà et al., 2006, Podestà et al., 2016).

The animal was a female of 518 cm arrived dead close to the shore close to "Contrada Miliandò" in Letojanni (ME) the 4.10.1997. Skeleton is now preserved in Museo di Zoologia "la Specola" in Firenze and the stomach contents are stored in the collections of the Museo Civico di Storia Naturale in Comiso.

During necroscopy in the stomach were found 4 plastic bags for fish preparation o freezing, 3 white shopper bags, 1 green shopper bag, 1 black bags for dumping, 1 small white shopper (Figure 1).

The whole group of items was 222 grams. Flattered the plastic, the surface was close to 3 square meters. The stomach mucosae appear to be strongly damaged by the presence of these foreign bodies. Few cephalopods beaks were also present (Garibaldi



Fig. 1 – Plastic bags found in stomach of *Ziphius cavirostris*. Scale 1 meter.

et al., 2015). The poor nutritional condition can drive to the conclusion that probably plastic ingestion was the main cause of death.

The case is presented to increase the awareness and knowledge of similar situation. *Ziphius cavirostris* is often found with different foreign bodies in gut (Santos et al. 2001; Gomerčić et al., 2006) as well as other delphinids (Baird & Hooker 2000, De Pierrepont et al., 2005, Oliveira de Meirelles & Duarte do Rego Barros, 2007) or sperm whale *Physeter macrocephalus* (Roberts, 2003; De Stephanis et al., 2013; Podestà et al., 2015).

Despite the plastic pollution is a well-known problem from long time (Fowler, 1987) it's actually becoming so serious to be one of the top source of conservation threat for Mediterranean life (Cózar et al., 2015) as well as for the whole oceans (Allsopp et al., 2006; Ryan et al., 2009).

## RIASSUNTO

### **Plastica rinvenuta nello stomaco di uno *Ziphius cavirostris* spiaggiato in Sicilia**

La nota riporta il ritrovamento di una notevole quantità di plastica, di complessivi 222 g e per una superficie totale di 3 m<sup>2</sup>, nello stomaco di una femmina di Zifio (*Ziphius cavirostris* Cuvier, 1823) spiaggiatasi a Letojanni (ME, Sicily) il 4 ottobre 1997. Sono riportate considerazioni sul pericolo per la conservazione derivante dalle grandi quantità di detriti plastici presenti in Mediterraneo.

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