

Incidents of ingestion of plastic by marine fishes

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Although impacts of plastic pollution on fish through entanglement in discarded fishing gear and direct ingestion have been reported, the reports from India especially on ingestion of plastic by marine fishes are rare. Two instances of plastics observed in the stomachs of fishes caught from Gulf of Mannar off Thoothukudi, south-east coast of India are reported below.

During a routine biological analysis of a sample of pompano dolphin fish *Coryphaena equiselis*, the stomach of one of the fishes contained a plastic piece of 10.5 cm length and 6 cm breadth which weighed 0.65 g (Fig. 1). The stomach was otherwise empty. The fish landed on 30.11.2015 at Tharuvaikulam, Thoothukudi by the *murrelvala* (a gill net targeting belonids) was a male in advanced stage of maturity. It measured 30.5 cm in Fork length (FL) and weighed 359 g. The fish is normally carnivorous in nature, with the adults feeding on small fishes and squid.

In another instance, a piece of plastic having a length of 51 mm and width of 27 mm weighing



Fig. 1. *Coryphaena equiselis*

0.043 g was found inside the stomach of a sharp nose sardine *Amblygaster clupeioides* (Fig. 2). The fish was a male measuring 20 cm in length and was in the fully spent stage. Out of 103 numbers of these fishes analysed, stomachs of thirteen fishes contained food such as small gastropods, small crabs, megalopa larvae etc. The fish is normally a zooplankton feeder. The fishes were landed at Tuticorin Fishing Harbour on 21.12.2015 after being caught in a trawl net.

On examination of various species of fish with plastic debris in their stomachs from the coastal waters of southern New England it was found that



Fig. 2. *Amblygaster clupeioides*

only white opaque plastic spherules had been ingested indicating that they feed selectively (Carpenter *et al.*, 1972, *Science* 178 (4062): 749-750). In the present observations, the plastic pieces found in *C. equiselis* were white and opaque and those found in *A. clupeioides* were white and transparent. These pieces were in folded conditions. In both the cases, the fishing grounds were around 25 nautical miles away from the shore.