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A comparison of neustonic plastic and zooplankton at different depths near the southern California shore

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ABSTRACT

Previous studies of neustonic debris have been limited to surface sampling. Here, we measure debris and zooplankton density at three depths in Santa Monica Bay, California, using one trawl survey before a rain event and one trawl survey shortly after a rain event. Surface samples were collected using a manta trawl, mid-depth samples using a bongo net, and bottom samples using an epibenthic sled. All collection devices were equipped with 333 micron nets. Density of debris was greatest near the bottom, and least in mid-water depths. Debris density increased after the storm, particularly at the sampling site closest to the shore, reflecting inputs from land-based runoff and resuspended matter. The mass of plastic collected exceeded that of zooplankton. However, zooplankton mass was three times that of debris when the comparison was limited to plastic debris similar in size to most of the zooplankton.

Full Text

ftp://ftp.sccwrp.org/pub/download/DOCUMENTS/AnnualReports/2003_04AnnualReport/ar10-moore_pg103-106.pdf