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TITLE: The Danube so colourful: A potpourri of plastic litter outnumbers fish larvae in Europe's second largest river

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ABSTRACT:

Previous studies on plastic pollution of aquatic ecosystems focused on the world's oceans. Large rivers as major pathways for land-based plastic litter, has received less attention so far. Here we report on plastic quantities in the Austrian Danube. A two year survey (2010, 2012) using stationary driftnets detected mean plastic abundance (n = 17,349; mean ± S.D: 316.8 ± 4664.6 items per 1000 m(-3)) and mass (4.8 ± 24.2 g per 1000 m(-3)) in the river to be higher than those of drifting larval fish (n = 24,049; 275.3 ± 745.0 individuals. 1000 m(-3) and 3.2 ± 8.6 g 1000 m(-3)). Industrial raw material (pellets, flakes and spherules) accounted for substantial parts (79.4%) of the plastic debris. The plastic input via the Danube into the Black Sea was estimated to 4.2 t per day.

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