ICES/PICES 6ZPS 2016/ W4

Microplastic ingestion by decapod larvae

Katie Reilly[1], Elaine Fileman[1], Alice Wilson McNeal[1], Penelope Lindeque[1], Matthew Cole[1,2]

[1] Plymouth Marine Laboratory

[2] University of Exeter

Microplastics are a widespread and increasingly acknowledged problem in the marine environment and are reported to have detrimental impacts on the feeding, health and survival of a range of marine biota. Decapod larvae are the juvenile form of a range of commercially important crustacean species and also play a fundamental ecological role in the ecosystem. We investigated the uptake and impact of microplastics on decapod larvae commonly found in the western English Channel. First, we demonstrated the capacity for a range of decapod larvae to ingest microplastics; second, we conducted a feeding experiment to ascertain any significant impact on decapod larval feeding when exposed to microplastics and third we used enzymatic digestion methods to reveal the presence of microplastics in field samples of a range of decapod larvae from the western English Channel. The results of these investigations will be discussed.

Keywords: microplastics, decapod larvae, uptake, ingestion

Contact author: Elaine Fileman, Plymouth Marine Laboratory, ese@pml.ac.uk