

The neglected role of intraspecific variation in plastic pollution research

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ABSTRACT

In the last decade, climate change research has taught us that neglecting intraspecific (genetic and/or phenotypic) diversity limit our understanding of the impacts human activities have on life on Earth. Evidence has demonstrated that consideration of variation below the species level is an absolute prerequisite for a comprehensive understanding of the impacts of anthropogenic pressure, the likely consequences for wider ecosystems, and efficient management strategies. Plastic litter has rapidly emerged as a worldwide threat seriously jeopardizes biodiversity. Yet, to date, research has predominantly focused on the effects of plastics on species as the primary unit of measure. Studies investigating how, or to what extent, plastic pollution affects diversity below the species level are lagging behind. In this perspective piece, we argue that, by overlooking the role of intraspecific variation in plastic pollution research, the consequences of this new, and ever growing, ecological threat could be oversimplified and underestimated.

Keywords: genetic, phenotype, marine, interspecific

Thème(s) :

- 1/ Sources, Niveaux de contamination, Modélisation
- 2/ Mécanismes de transformation des plastiques
- x3/ Impacts des plastiques et risques sur les organismes et les écosystèmes
- 4/ Conception de polymères à plus faible impact environnemental, Solutions
- 5/ Approches sociologique, socio-économique, nouveaux modèles économiques