Global modeled sinking characteristics of biofouled microplastic

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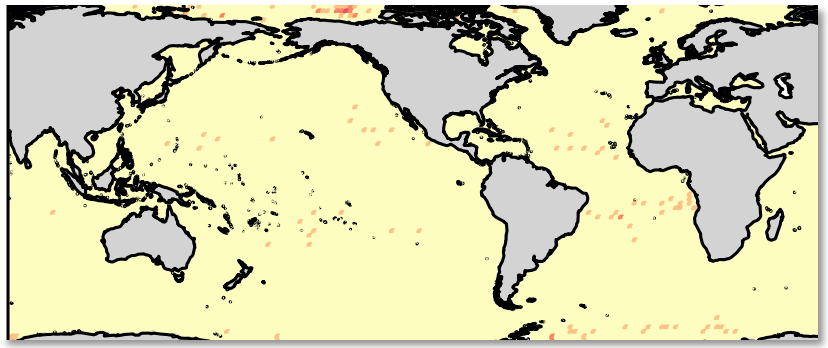
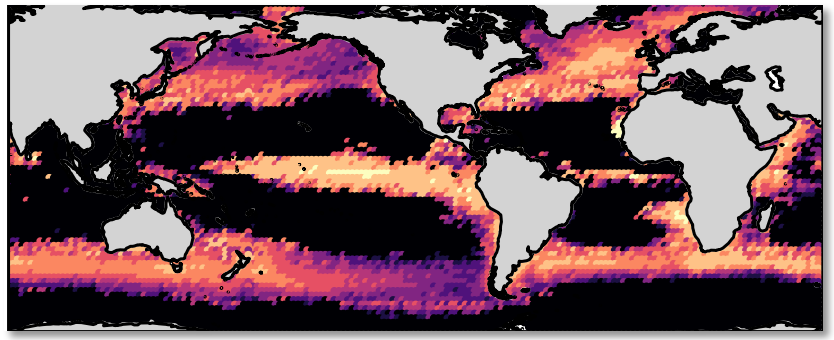
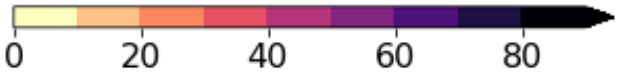
Microplastic radius = 0.1 µm



Microplastic radius = 1 mm





# of days until particles start sinking

Question: Can biofouling help explain the *missing* 99% of ocean plastic?

Aim: Estimate how long until microplastic starts sinking (if at all) when subject to advection & biofouling *(Kooi et al. 2017)*

Main findings:

1. Particles' **initial size** affects sinking more than initial density
2. Particles of **0.1µm sink immediately** around the globe
3. Particles of 1mm stay at the surface for 90 days in **subtropical gyres** (due to low algal concentrations)

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