

Can beach cleans do more than clean up litter?

June 17 2016, by Alan Williams



Credit: University of Plymouth

Volunteer beach cleans may only make a small contribution to the presence and prevalence of marine litter but could have numerous benefits to those involved and to the environment, new research suggests.

The study – published in *Environment and Behaviour* – examined the well-being and educational value of beach cleans, and their impacts on individuals' behavioural intentions, and how that compared to other

coastal activities such as rock pooling, or walking.

All three coastal activities were associated with positive mood and pro-environmental intentions, with beach cleaning and rock pooling particularly linked to higher marine awareness.

The study – Can Beach Cleans Do More Than Clean-Up Litter? Comparing Beach Cleans to Other Coastal Activities – was led by Dr Kayleigh Wyles, with the research being conducted as part of her PhD at Plymouth University and completed in her role as a Post-Doctorate Research Fellow at PML. It was funded through a grant awarded to Plymouth University in 2010 by the Natural Environment Research Council and the Economic and Social Research Council.

Dr Wyles commented:

"Many organisations hope that their volunteers enjoy participating in clean-up activities, learn something new and continue similar behaviours that help the environment, but this study begins to test these additional benefits. Whilst beach cleans are designed to tackle a prominent and increasing environmental issue ([marine litter](#)), we were able to demonstrate that they are not only beneficial for the local coastline directly by removing individual pieces of rubbish. They are also beneficial to both the individual (in terms of being an enjoyable and meaningful as well as educational experience) and the environment (as individuals reported a greater intention to engage in more environmentally responsible behaviours)."

The research was undertaken by randomly allocating participants to one of three coastal activities, with them being asked to answer a range of questions before and after their activity and again a week later. Participants either engaged in a beach clean to collect and record litter found on beaches, a rock pool ramble exploring the shoreline for wildlife, or a coastal walk. From this, the scientists were able to examine

a change in response and imply whether the changes are due to the environment (all activities responding similarly) or due to the activity / beach clean itself.

Though some of the benefits from beach cleans were found in the other coastal activities, beach cleans specifically were found to be different from the other activities in three ways:

- beach cleans were found to be especially meaningful;
- people were more confident in their knowledge about the marine environment after engaging in citizen science (recording individual items of marine litter during the beach clean or recording the abundance of marine organisms during the rock pool ramble);
- a greater impact on people's intention to engage in future beach cleans.

The scientists looked at well-being (e.g. mood and meaningfulness), people's awareness about the marine environment and marine litter (both self-reported and via a multiple choice quiz) and their behavioural intentions at three time points.

This research is crucial to further understand why natural environments, particularly the coast are beneficial to humans and to promote beach cleans as valuable not just for the [environment](#), but also the volunteers.

Professor Richard Thompson, Professor of Marine Biology at Plymouth University and an internationally renowned expert on marine litter, said:

"There is no one answer to solving the problem of marine litter, but the public are absolutely key – we all use plastics in our everyday lives so small changes in behaviour by a lot of people can have a huge effect. The challenge is to reverse some 60 years of training for the throwaway

society we live in today, lessening the environmental and societal impacts of marine litter, and initiatives such as beach cleans can play a big role in increasing awareness of the problems and potential solutions."

More information: K. J. Wyles et al. Can Beach Cleans Do More Than Clean-Up Litter? Comparing Beach Cleans to Other Coastal Activities, *Environment and Behavior* (2016). [DOI: 10.1177/0013916516649412](https://doi.org/10.1177/0013916516649412)

Provided by University of Plymouth

Citation: Can beach cleans do more than clean up litter? (2016, June 17) retrieved 27 April 2024 from <https://phys.org/news/2016-06-beach-litter.html>

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