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## **Coastal species found living and reproducing in the Great Pacific Garbage Patch**

VICTORIA, BC — Marine invertebrates that usually only inhabit coastal areas of the western Pacific Ocean have been found living and reproducing on plastic debris in the high seas, says a paper co-authored by a Royal BC Museum curator.

A paper published April 17 in *Nature Ecology & Evolution* titled “Extent and reproduction of coastal species on plastic debris in the North Pacific Subtropical Gyre”—an area of the ocean more commonly known as the Great Pacific Garbage Patch—details new findings surround the life and reproductive habits of some unexpected marine invertebrates.

Henry Choong, Curator of Invertebrate Zoology at the Royal BC Museum, is a co-author in this publication. The study was led by Linsey Haram, a science fellow at the National Institute of Food and Agriculture and formerly of the Smithsonian Environmental Research Center, which is also involved with this project.

The authors suggest that this discovery indicates that species originating on the coast are capable of surviving and reproducing on plastic debris that may have travelled thousands of miles over several years and may represent a new type of ecological community in the ocean, something they have dubbed a ‘neopelagic community’.

“This project was developed as a follow up to our previous work on the floating debris that landed on the shores of North America and Hawaii following the 2011 Japanese tsunami, where we found hundreds of coastal Japanese species arriving after 1-10 years, largely on plastics,” says Choong. “This work involves a large group of interdisciplinary scientists and non-profits studying the biology and physics of the eastern North Pacific Subtropical Gyre.”

More research is needed to understand how the species survive and the ecological and evolutionary consequences.

“Our findings show that coastal species are clearly capable of living, surviving, and reproducing in the open ocean with the aid of plastic pollution, because plastic provides a more permanent, non-biodegradable ‘home’ for them,” says Choong.

The Royal BC Museum is active in research on biological rafting on oceanic debris and is the repository for the 2011 Japanese tsunami marine debris biological collection.

MEDIA RELEASE

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