

Plastic, with its pervasive use and lack of biodegradability, has posed one of the most daunting threats to our modern ecosystem.

Now, researchers are saying the environmental menace has its own natural predator: the mealworm.



[According to a study published in Environmental Science and Technology](#), waxworms, or Indian mealmoths, “were capable of chewing and eating [polyethylene] films.”

The scientists isolated two bacterial strains, *Enterobacter asburiae* YT1 and *Bacillus sp.* YP1, from the worm’s gut. They then incubated the strains over 28 days, observing that “viable biofilms” formed and the polyethylene films’ hydrophobicity decreased—meaning that they became more adept at mixing with or dissolving in water.

To make this groundbreaking discovery, researchers analyzed the feces of mealworms on a

diet of Styrofoam using [gel permeation chromatography](#) and a variety of spectroscopy techniques. They found that the mealworm's gut bacteria were most crucial in this process.

"When researchers fed mealworms antibiotics and then plastic, that plastic was not degraded," [CNN reported](#).

EcoWatch revealed that in the Los Angeles area alone, 10 metric tons of plastic fragments—like grocery bags and soda bottles—are carried into the Pacific Ocean every day. It comes as no surprise, then, [that we humans have produced more plastic in the last decade than during the whole of the last century, or that enough plastic is thrown away each year to circle the earth four times](#).



[Co-author Wei-Min Wu said](#), "Our findings have opened a new door to solve the global plastic pollution problem."

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