



Subscribe Now
As low as \$1.49/week

Sign In



Podcasts

Newsletters

Today's paper

This copy is for your personal non-commercial use only. To order presentation-ready copies of Toronto Star content for distribution to colleagues, clients or customers, or inquire about permissions/licensing, please go to: www.TorontoStarReprints.com

HEALTH & WELLNESS

Researchers picked up 1,300 pieces of discarded PPE in west-end Toronto in a month

By **Christine Sismondo** Special to the Star

Mon., Jan. 25, 2021 | 4 min. read

Article was updated 4 days ago

Although we don't usually see the full extent of it until the spring melt, this city's streets get pretty grungy in the winter.

Thanks to this year's lack of snow (thus far), we're getting the full picture of just how bad it is, from pandemic puppy poop to discarded take-out containers and plenty of scattered masks, antiseptic wipes and plastic gloves.

Several University of Guelph researchers are warning us, though, that it's more than just an eyesore. This small avalanche of discarded personal protective equipment (PPE) we're experiencing — once you realize the long-term repercussions — is actually far worse than it looks.

"I remember coming across a post from someone north of Toronto in early March about a robin entangled in a face mask," says Justine Ammendolia, an environmental scientist currently based in Toronto. "It became this whole community endeavour with people climbing up a tree to untangle it. And I thought, 'wow, this is really weird, we're literally just a few weeks into this and we're already starting to see the impact on wildlife.'"

Ammendolia, whose research focus is on plastics and the environment, was supposed to be spending 2020 studying the level of micro-plastics in sea bird moms and chicks off the coast of Alaska, thanks to a grant from "National Geographic." Like everyone else in the world, her plans were put on hold but, on her daily walks in west-end Toronto with partner, Jacquelyn Saturno, the pair came up with a pivot project when they noticed an alarming number of discarded gloves and masks. They decided to collect and track it — and they recently published [their results](#) in the journal "Environmental Pollution."

In a little over a month of daily three-hour forays, the pair documented (and removed) over 1,300 pieces of discarded PPE in six locations, including two grocery store parking lots, the area around the hospitals of University Avenue, and on the Humber River Trail. The latter is of particular interest (and concern), because the PPE will morph from being merely a blight into an environmental and human health hazard once it gets into the water system.

“These are not microplastics, since they haven’t been broken down by the environment yet,” explains Shoshanah Jacobs, a professor in the Department of Integrative Biology at the University of Guelph, who worked on the project with Ammendolia and Saturno, as well as two other researchers from the University of Georgia, Jenna Jambeck and Amy Brooks. “But the idea is that, if they remain as litter within the environment, they *will* be broken down and that could create a massive, pulse-like, global injection of microplastics into the environment that we’re going to see over the coming years and coming decades.”

Since we can’t get rid of life-saving masks, what can be done? Although the researchers emphasize that masking-up and maintaining good hygiene is the absolute first priority, since the human health benefits are paramount, there are still ways to reduce the impact.

“In the first month of our surveys, we found more gloves than masks and disinfectant wipes,” says Ammendolia. “That made sense once we thought about the fact that you need two pieces of PPE to cover two hands but, right from the beginning of the pandemic, the clear message to everyone was handwashing. Gloves represent a whole category of PPE that could be eliminated from widespread public use.”

Jacobs says that the mask data didn’t really surprise the researchers, since, as soon as masks were shown to be effective at lowering the risk of transmission, their use became more widespread and anyone, just looking at the ground, could tell people weren’t disposing of them properly. It was the gloves that surprised the researchers most, since they weren’t ever recommended for the general public by any of the health boards. There were even arguments made by infectious disease experts that glove-users would be less likely to wash their hands.

When it comes to disinfectant and masks, the researchers suggest there needs to be some educational outreach about how to use and dispose of them, starting with labels on packaging informing consumers that they’re made with plastics. Ammendolia says that, in addition to finding used masks on the ground, they saw them in all compartments of recycling/waste bins, indicating that people don’t know what to do with them.

Neither wipes nor disposable masks should be flushed, since that could lead to “fatbergs” in the sewer system (giant clogs of wipes, fat and other debris) as well as unleashing plastics into the rivers, lakes and oceans, which poses an immediate threat to wildlife and a long-term threat to human health.

Nor, for that matter, should they be left on the ground of a grocery store parking lot. But once they are, isn’t it the grocery store’s responsibility to keep the grounds clean? That’s one question raised by the researchers’ findings.

“We hope our work can help encourage some people to switch over to reusable items and get rid of any items that could be replaced with hand-washing,” says Ammendolia. “And also just to open up the discussion on accountability, particularly with commercial parking lots. We need to find more ways to keep plastics out of our water system, which was our main reason for doing this work.”

It might not be our top priority right now but we need to put it on the list, since the cost of prevention is always less than the cost of cleaning up a mess.



Christine Sismondo is a Toronto-based writer and contributor to the Star. Follow her on Twitter: [@sismondo](https://twitter.com/@sismondo)

More from The Star & Partners

Copyright owned or licensed by Toronto Star Newspapers Limited. All rights reserved. Reproduction or distribution of this content is expressly prohibited without the prior written consent of Toronto Star Newspapers Limited and/or its licensors. To order copies of Toronto Star articles, please go to: www.TorontoStarReprints.com
