



ADVENTURE SCIENTISTS

EXPLORE. COLLECT. PROTECT.

Hello Microplastics Adventurers!

Thank you for collecting water samples with the Adventure Scientists' Worldwide Microplastics project. Your efforts are helping us understand the distribution and concentration of microplastics in the world's waters, while also building the largest microplastics dataset ever. Principal Investigator Abby Barrows has processed your microplastics samples, and we're excited to share the results of your work!

Lab Process

First, let me briefly explain the process your samples go through in the lab. Once Abby receives your sample, she vacuum pumps each sample over a filter. After the filter has dried, Abby uses a microscope at 45x magnification to look for pieces of microplastic that are less than 5 millimeters. Moving along the grid lines, the filter is systematically counted, with each plastic piece categorized based on shape (round, microfiber, other) and color (blue, red, black, transparent/white, other). The final count for the sample is divided by the sample volume. This calculation helps to standardize the results, as incoming water samples are often not exactly one liter of water.

Project Results

To date, 1693 of 2167 samples analyzed (78%) contained microplastics. 87% of marine samples contained plastic, while 53% of freshwater samples contained plastic. 24,502 pieces of microplastic have been counted. On average, we are finding 9 plastic pieces per liter of water. You can check out the number of pieces per liter in each individual sample on the map on our [microplastics page](#).

Note: In the results listed here, we report the total microplastic pieces found in your sample. However, for many of our calculations and for the online map, we report the total pieces per liter. As such, your microplastic total on the map may appear different from your total below.

Also, please let us know if your sample isn't located in the correct place on the map, so that we can fix it for you.



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Expedition-Specific Results

10k-Everglades

[Jordan Snyder](#) and *Martina Sestakova*

Ten Thousand Islands, Everglades National Park



Jordan is a lifelong sailor and adventurer. Martina and he have also collected water samples for the Worldwide Microplastics Initiative on their Base Camp expedition in the Chesapeake Bay.

Jordan and Martina collected four samples, which contained seven pieces of microplastic: one blue fiber, one red fiber, two clear fibers, two black fibers, and one blue, purple, and clear fiber.

Arctic Orphans

Oskar Landi

Svalbard, Norway

Oskar is a professional photographer. He took his sample while participating in an art and science residency program sailing in the Svalbard archipelago.

Oskar collected one sample, which didn't contain any microplastics.

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Chocka
Courtney Neumann
Australia



Courtney previously worked for Adventure Scientists as the Microplastics Assistant. She took her samples while she traveled around Australia.

Courtney collected five samples, which contained two pieces of microplastic: one black fiber and one black and clear fiber.

Final Final
Danielle Chase, Lena Picard, Skip Zimbalist, Paula Zimbalist
Intracoastal Waterway, Florida

Danielle is the Director of Programs and Lena is the Associate Director of Programs for [International SeaKeepers Society](https://www.seakeepers.org/).

Danielle and the crew collected two samples, which contained three black microfibers.

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Panama to Hawaii

Dan Marshall, Nick Forsberg, Tom Trevan, David Huybers

Pacific Ocean

Dan, Nick, Tom, and David collected their samples while sailing from Panama City to Hawaii with a stop at Christmas Island in between.

Dan and crew collected seven samples, which contained one clear microfiber.

[S/V Migration](#)

Bruce Balan and Alene D. Rice

East Asia

Bruce and Alene collected their samples while sailing through the South China Sea and the East China Sea on to Japan.

Bruce and Alene collected 17 samples, which contained 51 pieces of microplastic: 12 blue fibers, five red fibers, 15 clear fibers, 18 black fibers, and one yellow fiber.

SNACS (Southern New England Atlantic Coastal Survey)

Richard Souza

Massachusetts

Ric is a respiratory therapist. He took his samples while kayaking in waterbodies in and along the coast of Massachusetts.

Ric collected two marine samples, which didn't contain any microplastic. Ric also collected two freshwater samples, which contained one clear microfiber.

[Surf Explore](#)

Erwan Simon

Papua, Gabon, and Madagascar

The surfEXPLORE team specializes in producing groundbreaking exploration projects to create surf travel media while conveying important environmental and social messages. You can read more about Erwan and surfEXPLORE in his Field Notes [blog](#).

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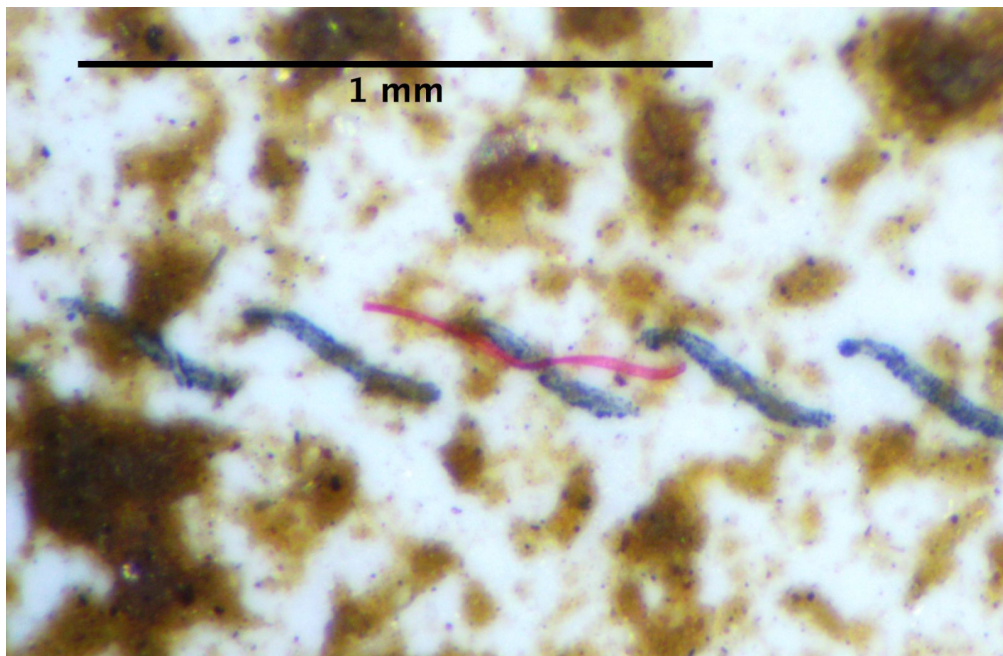
Erwan collected four samples, which contained 8 pieces of microplastic: one blue fiber, two red fibers, one transparent fiber, two black fibers, one black and clear fiber, and one multicolored fragment.

Team Fleece

Jamie Farrell, Lola Bushnell, Carter Cortazzi

Potomac River

Jamie, Lola, and Carter are all students at Georgetown who study the environment. You can read more about the team's expedition in their Field Notes [blog](#).



Red microfiber from sample one.

Jamie, Lola, and Carter collected eight samples, which contained nine pieces of microplastic: one red fiber, two blue fibers, one blue fragment, and five black fibers.



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TOPtoTOP

Meret Jucker, Salina Schwörer, and Andri Schwörer
Northwest Passage

Meret is currently studying conservation and ecology at university.



Blue fiber from sample three.

Meret, Salina, and Andri collected ten samples, which contained 710 pieces of microplastic: 258 blue fibers, four blue fragments, 52 red fibers, 290 clear fibers, 72 black fibers, four white fibers, four green fibers, nine yellow fibers, seven purple fibers, one purple fragment, five orange fibers, two blue and clear fibers, and two red and white fibers.



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Project Trends

Though we're finding an average of 9 pieces per liter for the project overall, there is much more microplastic in marine samples. The concentration of microplastic in marine samples is over 12 pieces per liter. This is much greater than the concentration in freshwater samples, which is over 1 piece per liter.

Another interesting trend we're seeing is 90 percent of the microplastic we've counted is fibrous: the pieces are thread-like or line shaped. Finding a majority of these fibers in samples could suggest that microfibers are the primary microplastic input into waterways.

Thanks so much, again, for your dedication to this program and our shared waterways!