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NATIONAL GEOGRAPHIC

THE NEW COLD WAR
AS THE ICE MELTS, OLD RIVALS SCRAMBLE FOR POSITION

THE ARCTIC IS HEATING UP

THE CARBON THREAT
THAWING TUNDRA WILL SPEED UP GLOBAL WARMING

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This map shows the sea ice extent—the amount of ocean surface area covered by ice—in September 2012, its lowest point since record-keeping began in 1979.
NATIONAL SNOW AND ICE DATA CENTER; GREEN MARBLE

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An endless supply of plastic trash from a stretch of New York shoreline is assembled into sculptures that are colorful but sobering.
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IMAGE BY KEVIN GILL

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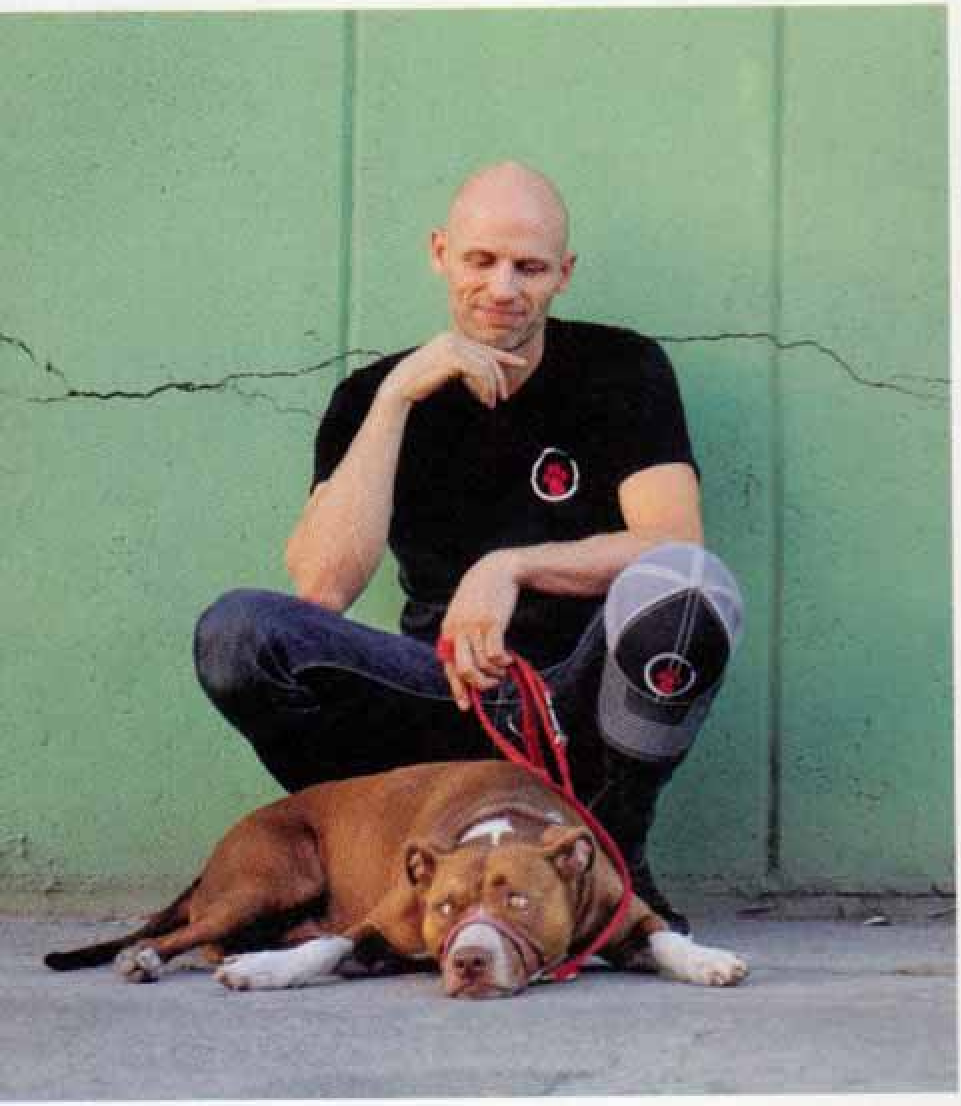

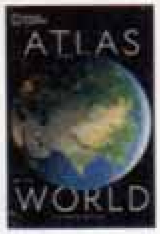

BOOKS

A new *Atlas of the World* to explore

The 11th edition of this classic reflects the state of the world today with authoritative maps, data-driven graphics, and much more. It's available October 1 wherever books are sold and at *shopng.com/books.*

TELEVISION

Plunge back into *Life Below Zero*

Back for a 12th season: *Life Below Zero*, the saga of tough Alaskans living off the grid. Witness scenes of whiteout snowstorms and encounters with man-eating carnivores. The new season premieres September 24 at 9/8c on National Geographic.

NAT GEO TRAVELER

Our music issue maps out 'sound journeys'

Travels with a hip-hop artist, musical quests and curiosities, a guide to global sound scenes —and each article is paired with a Spotify playlist. There's more on *Traveler's* sound journeys issue at *natgeotravel.com/music.*

NAT GEO WILD

Reforming the toughest canines on *Dog: Impossible*

The most aggressive, dangerous, and misunderstood canines—the ones that most trainers won't touch—are the dogs that Matt Beisner (above) takes on. Since transforming his own bad behaviors, Beisner says, he has dedicated his life to helping owners learn how to handle their dogs, as well as to rescuing and rehabilitating animals that others turn away. The six-episode series *Dog: Impossible* premieres September 8 at 10/9c on Nat Geo WILD.

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PHOTO: DAMON MOSIER, NATIONAL GEOGRAPHIC

SPECIAL ISSUE

The State of the Arctic

BY **SUSAN GOLDBERG** PHOTOGRAPH BY **KATIE ORLINSKY**

This Inupiat youngster accompanied a hunting party that unsuccessfully sought bearded seals in the Arctic Ocean near Utqiagvik (Barrow), Alaska. Warming weather has affected the Inupiat's hunts, the community's main source of food.

IN THE SPRING of 2018, my husband and I went to the Arctic on a National Geographic expedition. We'd never been before and were struck by the scale of its rugged beauty, the white-blue glaciers glinting in the midnight sun, and the abundant wildlife. I'll never forget seeing an enormous walrus face down a young polar bear (which wisely decided to move along).

I also won't forget the ship's captain, Leif Skog, announcing that we had traveled farther north than this expedition ever had before. We knew that was saying something—Skog had been navigating polar waters for four decades. How amazing, we initially thought.

And then, of course, the experience turned sobering as we realized why we'd gotten so far: because sea ice that normally halts the ship's northward progress had melted. In this issue we look at that and other effects of climate change on the Arctic, from shifting geopolitical power to thawing permafrost.

As soil a couple of feet deep goes from frozen to mush, the release of carbon could push climate change to a tipping point, writer Craig Welch reports in "The Threat Below" in this issue. With the Arctic warming much faster than the rest of the planet, Welch writes, "In 2017 tundra in Greenland faced its worst known wildfire." Meanwhile, "Lakselv, Norway, 240 miles above the Arctic Circle, recorded a blistering 32 degrees Celsius, or 90 degrees Fahrenheit. Arctic reindeer hid in road tunnels for relief."

Like what I saw in the Arctic, what you'll read here is thought provoking. May it also be galvanizing, spurring each of us to do what we can to slow the advance of climate change. Thank you for reading *National Geographic*. ▯

AS SOIL A COUPLE OF FEET DEEP GOES FROM FROZEN TO MUSH, THE RELEASE OF CARBON COULD PUSH CLIMATE CHANGE TO A TIPPING POINT.

PROOF

NATIONAL GEOGRAPHIC

PHOTOGRAPHS BY **BARRY ROSENTHAL**

LOOKING AT THE EARTH FROM EVERY POSSIBLE ANGLE

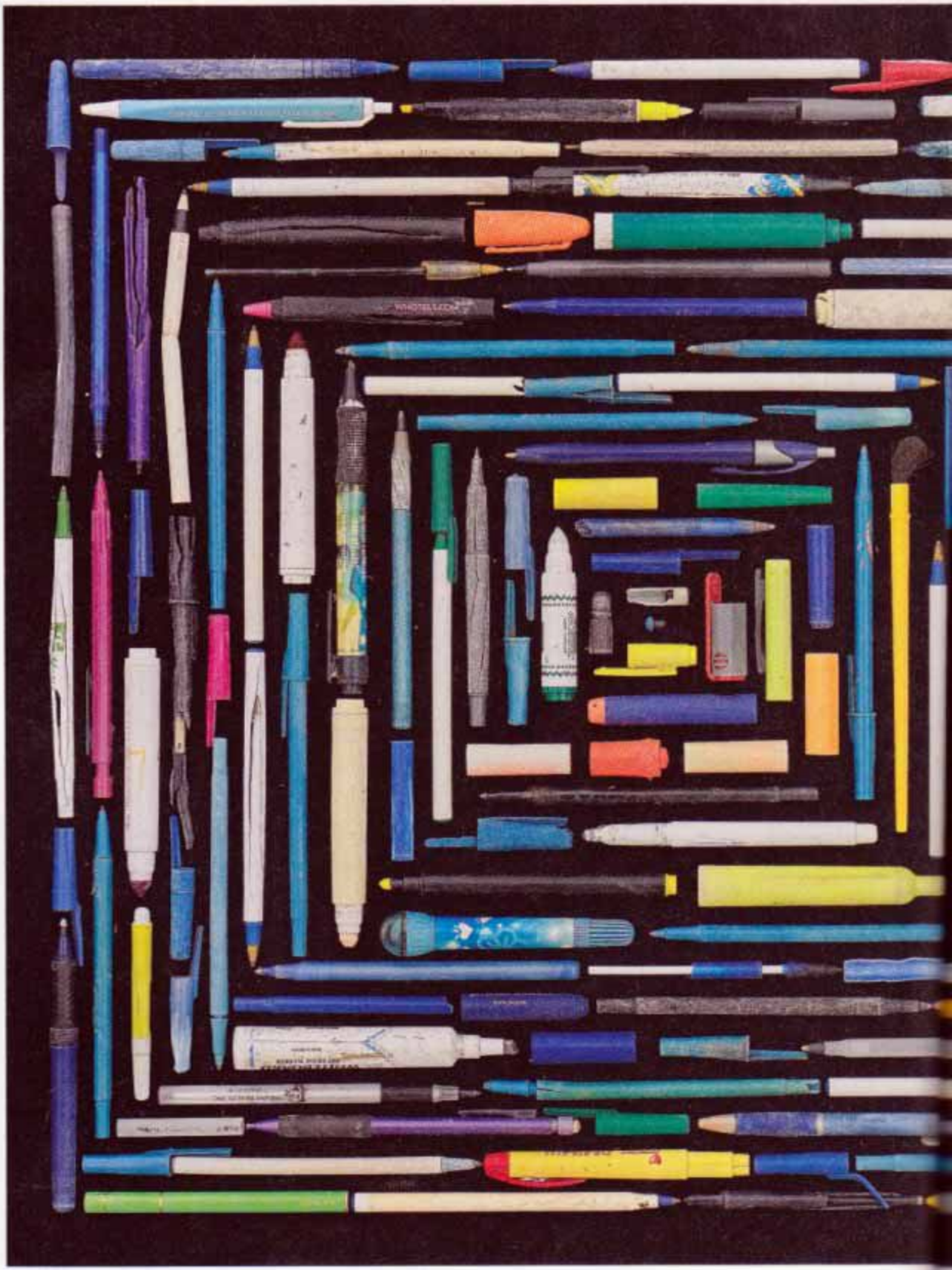
WHAT THE TIDE BRINGS IN

An endless supply of ocean trash provides the material for an ongoing art project.

VOL. 236 NO. 3

PREVIOUS PAGES: Artist Barry Rosenthal builds these assemblages to illustrate the extent of marine pollution. He keeps trash in his studio for months—sometimes years—until a critical mass of color emerges.

ABOVE: These objects have little in common beyond their shades of white—and their slow degradation by ocean waves, harsh sunlight, sand, and salt.



Rosenthal created an angular portrait out of pens, pencils, and markers. He finds the writing utensils strewn by the hundreds on a New York beach, many of them no longer usable.

Manufacturers design products such as plastic utensils and to-go cups to be used only once. But these items don't go away: Scientists believe some plastic trash lasts forever.

PLANET **OR** PLASTIC?

THE BACKSTORY

TRASH FROM A NEW YORK BEACH IS ASSEMBLED INTO VIBRANT AND SOBERING SCULPTURES.

BEACHES ACROSS THE PLANET share many characteristics: sand, water, ocean breezes—and plastic. At Floyd Bennett Field in Brooklyn, New York, the coastal area where artist Barry Rosenthal goes collecting, trash piles up fast and in layers, as if at an archaeological site.

Plastics will indeed be the artifacts of our era, particularly in oceans, where the material invades ecosystems and floats around the world. More than five trillion pieces of plastic already fill the seas, with some nine million tons added each year.

Rosenthal observed how bottles, toys, and food wrappers fade, wear out, yet never disappear. He started building and photographing sculptures of ocean trash to illustrate the problem of marine pollution. Eventually he began to gather the detritus to use as his art materials, cleaning a small section of the coast over and over again. "I started to just collect as much as I could and go back to my studio to sort it out," he says. Each sculpture has a theme, by color, shape, or intended use, such as the motor oil containers below.

A project begun for aesthetics has acquired a second purpose: raising social and environmental awareness. Now Rosenthal travels to speak about ocean pollution and what might help clean it up. The most meaningful advance, he says, would be to rethink our method of consuming.

"We need a paradigm shift in all packaging design," he says. "Not just plastic bags and straw bans to make people feel good." –DANIEL STONE

Learn more about plastic waste and take the pledge to reduce it at ***natgeo.com/plasticpledge***.