

*Artist Zaria Forman has travelled to parts of the globe most of us only dream of visiting. Her goal? To bring awareness of climate change by immortalising affected landscapes too remarkable to ignore.*

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## The Art of Preservation

Zaria Forman appraises the slender white aircraft chocked on the runway apron – NASA’s modified DC-8 that she will soon board alongside a crew of dedicated scientists, bound for the southernmost part of the globe. It’s October 2016 and Operation IceBridge’s first flight of the year to Antarctica is preparing to depart from Puntas Arenas airport, Chile. In the two weeks that follow, the pilots will perform careful swoops of the frozen cap, covering the Foundation Ice Stream in the Pensacola Mountains, The Getz Ice Shelf (the largest Antarctic ice shelf along the south-east Atlantic-Pacific coastline), and the fissured hulk of the Hull Glacier on Antarctica’s Ruppert Coast. The scientists aboard extensively survey the region from a cruising altitude of 457 metres, amassing crucial data before spring thaw depletes Antarctica’s resplendent hoary bib.

“NASA invited me to join their Operation IceBridge, an airborne science mission that has been mapping ice changes at both poles for the past decade,” Zaria explains. “I joined them in the fall of 2016 on flights over Antarctica, and then again in the spring of 2017 over Greenland and parts of Arctic Canada.”

Sitting aft of the aircraft, Zaria points her lens to the frigid tract beyond the bright square window and schnicks away. She rises, peers at computer screens alive with shape and colour, and questions the scientists observing them. On occasion, she ventures into the cockpit, folding herself between pilots and control panels to capture the magnificent, gelid terrain below.



“Some of the drawings inspired by this experience were born from photographs taken from the window of NASA’s flying laboratory”, she says. “But other material came from cameras that are fixed to the belly of the plane, pointing downward. These images are one of the mapping tools IceBridge uses to track ice changes over time. So, in a way, these drawings represent the body of evidence that helps scientists understand how climate change is affecting our planet.”

As the largest aerial survey of Earth’s polar ice ever launched, IceBridge’s ongoing mission is to map changing patterns of sea ice, glaciers and ice sheets. The DC-8 – like NASA’s P-3 prop plane used to monitor Greenland’s rapidly deteriorating icescape – is a modified passenger aircraft equipped with highly sensitive technology: laser altimeters to measure discrepancies in ice elevation; radars to study ice layers and the bedrock beneath; a gravimeter and magnetometer to examine subaquatic beds undetectable by radar; and mapping instruments such as GPS and navigation.

The data retrieved has been revelatory. NASA’s climate change scientists have calculated that since 1970, Arctic sea ice has shrunk at an average annual rate of close to 54,000 square kilometres. That equates to losing a hunk bigger than the size of Denmark every year over the past four decades. Antarctica is showing similar recession.

“The rate at which the whole of Antarctica is shedding ice has tripled over the past decade”, Zaria says. “These IceBridge missions are

collecting critical information that can tell us how this ice loss is occurring – and what these changes mean for sea-level rise and coastal communities around the world.”

On IceBridge, as on other trips, Zaria documents, taking thousands of photographs she will later sift through and use to produce drawings that encapsulate and propagate what she now considers her life’s mission: to convey the urgency of climate change through her work.

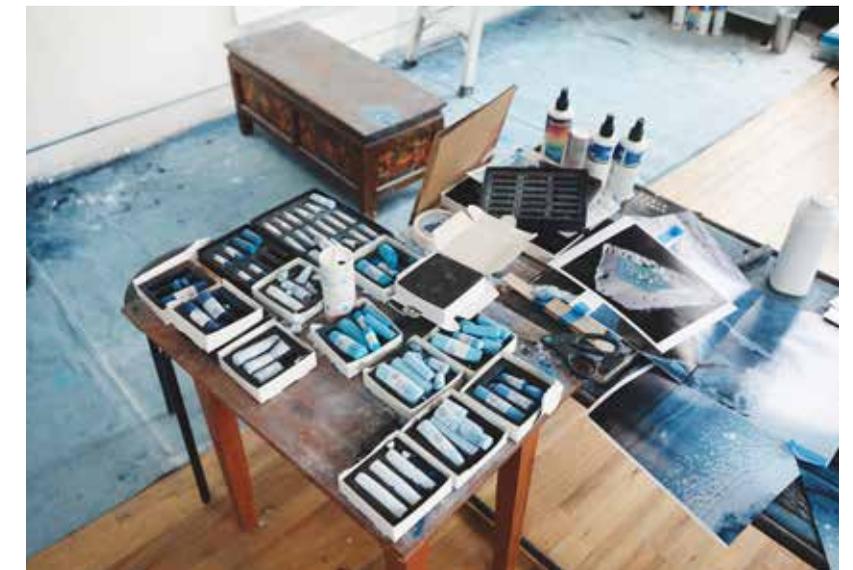
#### The Process

Back in Brooklyn, Zaria cycles to her studio in Bedstuy through Prospect Park, the second largest green wedge in the borough, just a block from her apartment. At 213 hectares, its south side is almost fully submerged by a glittering 24-hectare lake. In her white-walled studio, opposite east-facing windows doused through with morning sunlight, a vertical work in progress hangs: 275 centimetres high, 173 centimetres wide. The piece, an aerial view of ice, further illuminated by her studio’s spotlights, is one of a series inspired by images from Operation IceBridge, due to exhibit at Winston Wächter Fine Art, New York, on 25 October, 2018. Zaria has been developing the collection since late 2017, shortly after returning from IceBridge’s fly over of Greenland’s fjords.

Each technically exacting work – a perspective of the Poles very few artists (in some cases none) have seen before – comprises the most abstract series she has ever produced. Eight to 10 hours a day she applies pastel to paper with her fingers and



**Top right:** Zaria in her studio working on her artwork of Weddell Sea off the tip of the Antarctic Peninsula.





**“That’s what I’m trying to do: just create a moment for viewers to have a connection and let it touch their emotions and, ideally, inspire them to take action”**

palm, mixing, spreading, blending. Left to right. Top to bottom.

“If you see a time-lapse of my work it looks like a printer printing something or like a typewriter writing it out,” she laughs. “I go from left to right and top to bottom just because of the nature of soft pastel. I’m a righty, so draw left to right. I go top to bottom because the pastel dust [falls] below. I developed that habit early on. If I draw something in white and then work on something above in a dark colour, the dark falls on the white. I can usually blow it away but just to be extra safe I go from the top down.”

The paper, thick and sufficiently toothy to hold fine deposits of pastel, is delivered to her studio pre-mounted on huge panels (three metres wide at times) ready to hang, grid and draw on.

“My process has actually changed a little”, she says. “I [used to] decide the image first and then figure out the dimensions on paper based on the dimensions of the composition and how big I wanted to make it. Then I would cut the paper, tack it on the wall and go. But now I’m having my paper mounted ahead of time to a rigid surface. It’s a much safer process and better for the drawing in the long run even though it’s way more expensive. I have to figure things out ahead of time so I can order the exact size panels that I want, and have an idea of what image is going to go on them. I look at pictures and print things out and then decide what to order and what to start with. I’m lining them up several months in advance which is very new for me.”

Her photographs – and memory of the experience – inform the creative process that begins with a deft sketch of the topography, and then the build-up of extraordinary detail that can take 200 - 250 hours. The result, though difficult to articulate, comes close to inexplicably alive. Inextricably haunting. Ancient and vast. Surreal, in as much as one can almost believe there is a venerable knife of ice protruding from the wall. Zaria’s compositions of leaden skies, frozen cathedrals and midnight waters captivate, as beautiful things always do, to the point of wanting to deny them nothing.

“Psychology tells us that we take action and make decisions based on our emotions, more than anything else”, Zaria reflects. “Art can touch our emotions so deeply and so instantly. If I can create a time and place for people to just have a moment with the glacier or with a beautiful iceberg; just stand there and contemplate it, and appreciate its beauty, then, when [they] fall in love with it and have a connection, [they will] want to protect and help it. That’s what I’m trying to do: just create a moment for viewers to have a connection and let it touch their emotions and, ideally, inspire them to take action [against the climate change crisis].”

## The Purpose

A year before joining NASA's Operation IceBridge, Zaria took to the stage and delivered a seven-minute TED Talk that concluded to a standing ovation from the audience. She was one of 10 illustrious speakers over the two-day gathering, falling alphabetically on the agenda between NASA's Planetary Science Division director and Pixar's director of photography. The segment, aptly named Science and Wonder, was part of the very first TED event in New York City open to the public. Expectedly, it sold out.

In black, Zaria cast a subtle figure against the stage's panorama of the night sky. Her words on climate change held the attention of a discernibly invested audience that barely appeared to blink in the blue dark. It was a compelling narrative of loss on a personal and global level that defined her art and ostensibly moved listeners. With the rise of plaudits, audience members stood, one by one. In less time than it takes to soft boil an egg to perfection (around 10 minutes according to Heston Blumenthal's online recipe), Zaria's passion and prodigious talent had made the plight of a planet in crisis definitively real.

She recalls one indelible year almost a decade prior: "The severity of the climate crisis really hit me when I visited Greenland for the first time in 2006. I felt both the power and the fragility of the landscape there. The sheer size, majesty, and beauty of the icebergs is humbling. The ice fjords are alive with movement and thunderous cracking – reminders of their destructive capabilities. Yet while their threatening potential is evident, so is their vulnerability: I could see the ice melting under the unseasonably warm sun.

"The severity of the situation was brought to light even more clearly in conversations I had with locals. Their landscape is transforming so drastically that they are forced to adapt in order to survive. They spoke of vast ice fjords that are not freezing as they once did, challenging the lifestyle of the subsistence hunting communities that dot the coastlines. The fjords are the communities' hunting grounds for seal, walrus, and other animals that provide sustenance, warmth and other crucial items necessary for Arctic survival. Insufficient ice severely limits their hunting grounds."

Meanwhile, thousands of miles from Greenland, an equally disturbing issue has arisen just north of the equator. The Maldives, a chain of 26 atolls in the Indian Ocean, stand powerless against concurrently rising sea levels that are predicted to drown this flattest, lowest point of the globe by century's end. In an effort to track the ice melt of Arctic glaciers, Zaria visited the islands in September 2013. The previous year, she had returned to the source of the meltwater on an expedition she led up Greenland's north-west coast to retrace the 1869 journey of American painter William Bradford and to artistically document the rapidly changing Arctic landscape. Her subsequent stint in the Maldives, photographing the ocean and talking to locals, informed a powerful body of work depicting vivid foaming waves and shore wash – the ubiquitous end of dying monoliths over 10,500 kilometres away.

If scientists are to be believed – and we emphatically hope they are – more damning evidence of climate change can be seen in the increase of extreme weather events such as bushfires, cyclones, droughts



## Quick Q&A

### What paper do you use?

Legion 100 pure cotton paper exclusive to Legion Paper.

### And your pastels?

Soft pastels by Unison Colour, a tiny little family-owned company in the UK, north of London.

### Best advice to your younger self?

Discover what you really care about, what you really love, and what means a lot to you and make that your work. Be really passionate about the work you're doing ... that's what it's all about.

## Above:

Final artwork: Jakobshavn Glacier, Greenland, 69° 47' 31.092"N 49° 47' 31.7076"W, April 29th, 2017, 68 x 102 inches, soft pastel on paper, 2018. Image courtesy of the artist Zaria Forman.

and floods. A recent paper by the European Academies Science Advisory Council (EASAC) reports that "global floods and extreme rainfall events have surged by more than 50% this decade and are now occurring at a rate four times higher than in 1980. Other extreme climatological events such as storms, droughts and heatwaves have increased by more than a third this decade and are being recorded twice as frequently as in 1980."

In her bright and open corner, Zaria determinedly uses her remarkable gift to bring awareness on an epic scale. "Artists play a critical role in communicating climate change, which is arguably the most important challenge we face as a global community", she says. "I believe art can facilitate a deeper understanding of crises, helping us find meaning and optimism amid shifting landscapes." 🌱