

ANTARCTIC EDGE

70° South

A Film by Dena Seidel

Documentary / 2014 / 72 Minutes / Digital



FIRST RUN FEATURES

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Synopsis:

Antarctic Edge: 70° South is a thrilling journey to the bottom of the Earth alongside a team of dedicated scientists. In the wake of devastating climate events like Superstorm Sandy and Hurricane Katrina, oceanographer Oscar Schofield teams up with a group of world-class researchers in a race to understand climate change in the fastest winter-warming place on earth: the West Antarctic Peninsula. For more than 20 years, these scientists have dedicated their lives to studying the Peninsula's rapid change as part of the National Science Foundation's Long-Term Ecological Research Project.

Filmed in the world's most perilous environment, *Antarctic Edge* brings to us the stunning landscapes and seascapes of Earth's southern polar region, revealing the harsh conditions and substantial challenges that scientists must endure for months at a time. While navigating through 60-foot waves and dangerous icebergs, the film follows them as they voyage south to the rugged, inhospitable Charcot Island, where they plan to study the fragile and rapidly declining Adelie Penguin. For Schofield and his crew, these birds are the greatest indicator of climate change and a harbinger of what is to come.

Antarctic Edge: 70° South was made in collaboration between the Rutgers University Film Bureau and the Rutgers Institute for Marine and Coastal Sciences. A unique inter-disciplinary educational project bridging art, science and storytelling, *Antarctic Edge* was funded in part by the National Science Foundation.

About the director:

DENA SEIDEL is an award winning documentary filmmaker, published short story author, as well as the creator and designer of the first film major at Rutgers University. She is the director of the Rutgers Film Bureau and the Rutgers Center for Digital Filmmaking.

With a grant from the National Science Foundation, Dena spent six weeks in Antarctica directing and filming the feature length documentary *Antarctic Edge: 70° South* that was completed with the participation of 14 undergraduates.

In 2012, Dena partnered with local PBS station NJTV to create the new series "NJ Docs" which premieres original student-faculty made films. This series launched in February 2012 with "*Atlantic Crossing: A Robot's Daring Mission*" a feature documentary directed by Seidel that premiered at the Smithsonian and has aired more than 400 times on PBS. First Run Features has acquired the rights to Atlantic Crossing and another Rutgers Center for Digital Filmmaking project, *The War After*, a powerful one-hour documentary featuring ten U.S veterans transitioning from active duty to the challenges of civilian life.

In addition to launching *Antarctic Edge: 70° South* in theaters, First Run will also release all three titles into the educational, non-theatrical, television and cable, and home entertainment markets.

Director's Statement

It is with pleasure to present our feature-length documentary ***Antarctic Edge: 70° South***. This documentary combines innovative science, dramatic imagery and two decades of scientific collaboration into a compelling character-driven narrative. Our filmmakers had unprecedented access to critically important climate research in the fastest winter-warming place on earth: the West Antarctic Peninsula. In fact, **this is the first time in history that the Long-Term Ecological Research (LTER) project at Palmer Station has ever been documented on film** – a once-in-a-lifetime opportunity for viewers to get an inside look into the mecca of rapid climate change science. Living day-to-day with world-renowned scientists in this remote and dangerous landscape, our cameras capture the everyday decisions, challenges and anxieties of scientists on a historic mission. Willing to take risks in pursuit of new and important discoveries, these researchers push the limits of their science and come to terms with the sacrifices necessary to study and ultimately prepare for global climate change.

For the last twenty-years, oceanographer Oscar Schofield and his team have witnessed rapid change in this region. Winter sea ice has declined by three months and temperatures have increased by 11 degrees Fahrenheit, six times greater than the global average. In 2014, scientists declared Antarctic ice sheet melt unstoppable, placing the pressure on Schofield and his team.

Studying climate change in the most remote part of the world presents our scientists with serious challenges as they travel through Antarctica's perilous terrain for six weeks on an icebreaker. Their mission: to study the vulnerable wildlife populations along the West Antarctic Peninsula, particularly the Adelie Penguin whose populations have declined by 90%. For Schofield and his crew, these declining birds are the greatest indicator of climate change and a harbinger of what is to come. While navigating through 60-foot waves and dangerous icebergs, these scientists must travel south to a rugged and inhospitable island called Charcot with an arsenal of cutting-edge technology that will revolutionize how climate change is studied. There, they hope to study a fragile Adelie population living in a true polar climate.

There is urgent need to improve science communication to the general public. Too often research narratives fail to illustrate the excitement, challenges and passion required to explore the planet. As such, the Rutgers Film Bureau has partnered with the Rutgers Institute for Marine and Coastal Sciences to create a multi-tiered documentary film project featuring the transformative science of the National Science Foundation's LTER project at Palmer Station.

Antarctic Edge: 70° South directly engaged undergraduate film students throughout the pre and post-production of the film. The Rutgers Film Bureau provides hands-on learning experiences for students to craft and shape important science stories for the screen and to collaborate with scientists working to solve problems in the environment and society. Our exciting teaching model offers students the opportunity to learn science while they develop professional skills as science communicators.

Meet the Scientists

OSCAR SCHOFIELD is a biological oceanographer, interested in understanding how the ocean physics and chemistry regulates plankton ecology. Oscar has been traveling to Antarctica since his days as a graduate student, and has witnessed the West Antarctic landscape change drastically over the course of his professional career. As a professor of bio-optical oceanography, Oscar uses cutting-edge technology to study the dramatic changes of the West Antarctic Peninsula.

HUGH DUCKLOW is a biological oceanographer, lead principal investigator of the Palmer Antarctica Long Term Ecological Research Project and co-director of the Ecosystems Center of the Marine Biological Laboratory in Woods Hole, Massachusetts.

DEBBIE STEINBERG is a zooplankton ecologist, studying the effects of climate change on zooplankton communities in the West Antarctic Peninsula, and how these community changes may affect ocean food webs and biogeochemistry. She has worked in number of marine environments including coastal California, the Antarctic, the Sargasso Sea, the subtropical and subarctic North Pacific, the Amazon River plume, and the Chesapeake Bay.

DONNA FRASER is a seabird ecologist who studies the changing populations of Antarctic birds, particularly the Adelie penguin, whose populations have decreased by over 80% around Palmer Station. Donna relies on innovative technology to track these seabird populations and their response to the West Antarctic's rapid climate change.

JENNIFER MANNAS is a wildlife ecologist studying the shifting population dynamics of Adelie penguins along the West Antarctic Peninsula. She is currently working as a Fisheries Biologist for Oceans Associates contracted through NOAA to study the predator prey relationship between seabirds and salmon on the Columbia River.

DAVE JOHNSTON is a biological oceanographer and marine conservation biologist who focuses on foraging ecology and habitat needs of marine vertebrates in relation to global climate change and pressing conservation issues. By studying the behaviors of whales in the West Antarctic Peninsula, Dave can assess how regional climate change impacts animals of higher trophic levels.

To learn more about the scientists of Antarctic Edge, visit: <http://beyondtheice.rutgers.edu/meet-the-scientists/>

Director/Producer	Dena Seidel
Executive Producer	Rick Ludescher
Co-Producer	Steve Holloway & Xenia Morin
Associate Producers	Karina Daves & Ryan Harris
Field Producer	Chris Linder
Cinematography	Chris Linder & Dena Seidel
Editors	Steve Holloway, Dena Seidel, & Ryan Harris
Animation	Shane Whilden & Ryan Harris
Music	Isaiah McNeill
Graphic Design	Adam Nawrot
Assistant Producers	Vincent Bradley Gabrielle Gatdula Taban Khan Amber Nelson Stephanie Wong
Assistant Editors	Olympia Christofinis Jamie Flores Vivero Gabriela Elise Darrel Gordon Stacy Martinez John Riggio Ted Selden Kyra Willans
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