

## Traces: Plankton on the Move

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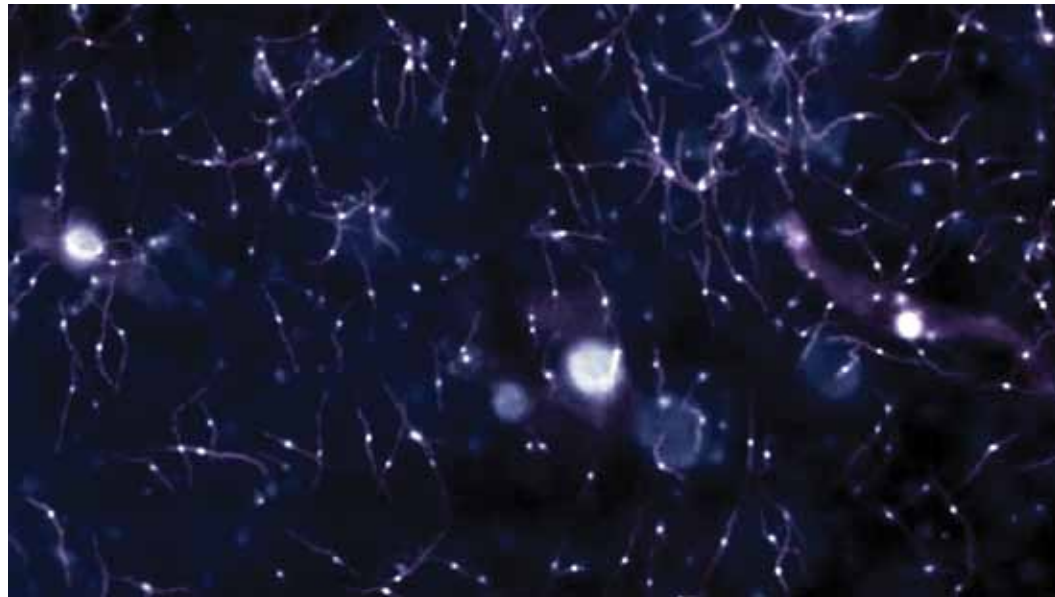
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Cynthia Beth Rubin, Susanne Menden-Deuer,  
Elizabeth Harvey, Jerry Fishenden

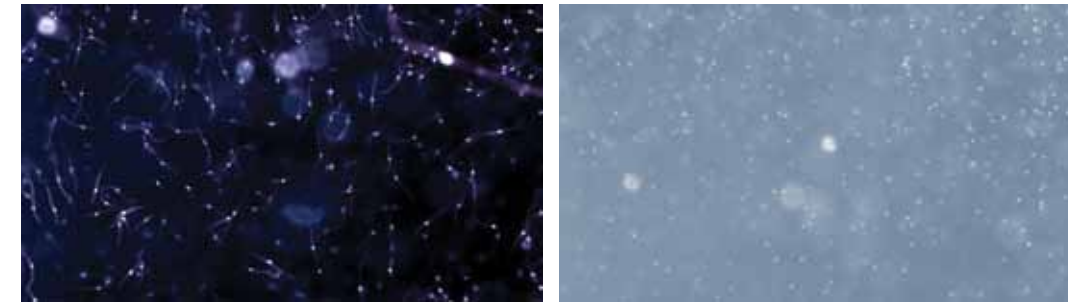


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Elizabeth Harvey, Susanne Menden-  
Deuer.

*Traces* is a collaboration between the artist Cynthia Beth Rubin and the Menden-Deuer Lab at the Graduate School of Oceanography, University of Rhode Island, which studies plankton, the microscopic marine creatures that comprise the most basic piece of our food chain. The original micro-captures are of specimens in small batches of water, devoid of any association with their native environment, and filmed in flat grays. In Rubin's transformation of the raw video, she imagines the plankton moving in water that is infinitely deep, making these mystical creatures leap beyond the confines of the microscopic world into an enticing world of color and movement that begs us to relate to them as part of nature. She does not just reveal the generally unseen life in our ocean waters; she makes it accessible.

The series grew from a practical concern. The Researcher Elizabeth Harvey captured the image of a magical moment: an encounter between a predator, Favella, and its prey, Heterosigma akashiwo. The color balance of that image needed an artist's touch to come alive. From this scientifically accurate work, Rubin moved to bringing the same sense of imagination and wonder to the world of microscopic plankton that she has long explored in the world of imagined human memories. What does it take to make the depiction of a space feel real, inhabitable, and even familiar? How can we step out of our own world into the activity of the ocean?

Technology makes this possible. From the digital capture of microscopic plankton to the ability to put these images into analytical and modifying video software, technology makes the intertwining of visual sources an avenue for exploration. At the outset, the artist spent weeks understanding the forms of the plankton, learning to relate to them, and generating variations of the video. The final colored version was selected in discussion with the scientists, balancing scientific and artistic focus. The sound score by Jerry Fishenden was composed specially to add classic drama to the video.



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Cynthia Beth Rubin began experimenting with digital images in 1984, and since then her work has been shown at numerous editions of ISEA, ArCade, SIGGRAPH, and venues including the Jewish Museum in Prague, the London ICP (Pandemonium Festival) the Decordoba Museum, the Rochester Memorial Art Gallery, the Florida Film Festival, and other film festivals and exhibitions around the world. A native of Rochester, she holds degrees from Antioch College (BA) and the Maryland Institute (MFA), and is affiliated with the Rhode Island School of Design.

Susanne Menden-Deuer is Associate Professor of Oceanography at the Graduate School of Oceanography, University of Rhode Island. With her students and post-doctoral fellows, she studies plankton behavior and ecology. Dr. Menden-Deuer's research has taken her to all continents, including most recently western Greenland, and the Antarctic, where she studies climate change effects on plankton biology.

Elizabeth Harvey is graduating with a PhD in Oceanography from the University of Rhode Island, studying plankton behaviors and feeding ecology. During her time as a graduate student, she traveled extensively, including to Crete, France, Brazil and a two month visit to Seoul National University in Korea. Her doctoral research was featured on NPR, CBC, the Himalayan Times as well as the home page of the National Science Foundation.

Jerry Fishenden graduated with a BS and MPhil from the City University, London, completing doctoral research at the Institute of Creative Technologies in interactive digital technologies and user experience.