

TRACES

Caleb Charland

OF

Sharon Harper

Christina Seely



Rachel Sussman

Photographic Explorations of the Natural World

LEFT Sharon Harper Halsnøy, Norway, 11 Jun 10:17 PM (detail)

COVER
Caleb Charland
Four Generations of
Bacterial Growth on a
Picture of Black (detail)



LEFT
Sharon Harper
Sun/Moon (Trying to See through
a Telescope) 2010 May 27 10:48:35
AM – 2010 May 27 11:08:34 AM
2010 Jun 19 8:16:30 PM – 2010 Jun

EMILY JOHNSEN

FROM ITS EARLIEST STAGES,

photography has developed a symbiotic relationship with science, each advancing the other with the latest discoveries in their fields. Photography's unique ability to capture and record images that the naked eye cannot discern, preserving transitory moments and documenting initial findings for human observation, enabled scientists to prove and explain their theories.¹ Recognizing the importance of this dynamic exchange, photographic art historian Kelley Wilder asserts that, "Photography has in turn enlarged existing fields of scientific study, created new avenues of research, and connected science with the public in unprecedented ways." ²

Photography and science collaborations of the past were extraordinary, due, in part, to the wow factor of what historian Jennifer Tucker calls a "first glimpse" image of natural or artificial phenomena such as solar activity, biological specimens, or geological formations.³ Scientists and photographers had the ability to captivate and mesmerize the public with a single image of something never before seen. However, as she notes, "[early photographs] also have a story to tell about the making, display, and sensationalizing of 'first glimpses' for mass audiences."⁴ It was as much about the process of acquiring the image as it was the end result. And for the most part, the same can be said of contemporary photography.

As both science and photography have evolved, so too has their relationship. Tucker argues that, "In our age of image inundation, there is perhaps no longer such a thing as a 'first glimpse'— or if it exists, the public's interest in it is quickly diverted." So how then, without so many "first glimpse" spectacles, are contemporary photographers incorporating science and still sparking our interest? It is because, rather than showing us the otherworldly, they are choosing to reveal new truths about what we thought we knew, and are making visual rediscoveries of theories that have already been explained. By shedding light on cycles and events in the natural world that we take for granted on any given day, they are providing us with "second looks" at what we have likely put aside in our minds as expected or commonplace. In this sense, their work is more spectacular and more thought-provoking than many of the never before seen images.

"First glimpse" images have, of course, been ground-breaking, but what sets the most successful images apart, to be revered and revisited as iconic moments in time, is their ability to engage the viewer, and to express complicated scientific thoughts into a meaningful artistic translation. When it comes to the elusive concepts of science, it is not enough for a photograph to show a rarity in order to attract and maintain an audience's attention. Viewers must be able to relate and to internalize what they see for there to be a lasting impression and genuine understanding.

In *Photography Changes Everything*, photography curator Marvin Heiferman claims that, "Photographs don't only show us things, they *do* things. They engage us optically, neurologically, intellectually, emotionally, viscerally, physically." But to truly engage us, the photograph must ask us to do something. It must elicit a response from the viewer to fully carry out its intended meaning.

To support this notion, writer Stewart Brand provides an anecdote about the public's reaction to the "first glimpse" image of Earth as a whole, taken in 1968 by the astronauts on the Apollo 8 mission,

"For the first time, humanity saw itself from outside...Humanity's habitat looked tiny, fragile, and rare. Suddenly humans had a planet to tend to... It is no accident of history that the first Earth Day, in April 1970, came so soon after color photographs of the whole Earth from space were made." 7

This scientific photograph, arguably the first portrait of all mankind, transported the viewer to a position of self-reflection. Anyone and everyone could connect with this image in some way. There, floating in the mysterious, dark void of outer space was our sense of belonging. For viewers, it hit home. Home sweet home, to be exact. And the public's response was to dedicate a day of spring cleaning to honor and care for this place that continually provides for us

In a similar fashion, the artists in this exhibition recognize the need to put science into perspective. They, at some point, approached their subject matter with the same curiosity and bewilderment you or I might have, and in doing so their work becomes more personal, and therefore, more enticing for public consumption. To comprehend the vast expanse of life in this universe, we must position ourselves at the center, to view the world in relation to oneself. Being part of an intelligent species means we strive to know our place in this world. And we measure time to understand our relationship to the past, present, and future.

¹ Kelley Wilder, "Photography and the art of science," Visual Studies 24, 2 (September 2009): 163.

² Kelley Wilder, "Science and photography." Grove Art Online. Oxford Art Online. Oxford University Press, accessed December 17, 2015, http://www.oxfordartonline.com:80/subscriber/article/grove/art/T2229436.

³Jennifer Tucker. "Marvels and Spectacles: Photographic Exploration and the 'First Glimpse,'" Aperture 211 (June 1, 2013): 40.

⁴ Ibid, p. 40.

⁵ Ibid, p. 45.

⁶ Marvin Heiferman, Photography Changes Everything (New York: Aperture; Washington, D.C.: Smithsonian Institution, 2012), 16.

⁷ Ibid, p. 67-68



LEFT
Christina Seely
MUTO, Defluo Glacies .
Matanuska Glacier (detail)

These photographers help us grasp what we might otherwise miss. They use photography to make scientific concepts more accessible, understandable, relatable, and attainable, and as a result, their photography serves as a lens for the greater need of environmental awareness.

Embodying the scientific spirit, Caleb Charland's photography is prompted by his insatiable curiosity. Always eager to question what we think to be true, Charland insists, "that even in the well tested laws of science there are, and must always be, pathways to reinterpretation and discovery."8 He reexamines existing theories, stages new experiments, and interprets their findings, producing imagery best captured through the photographic process. While growing bacteria on the surface of film, he discovered that the growth patterns were transferring particles leaving behind microbial evidence of life, or what he calls his "BioGraphs." Each of his images depicts a bacterial "life-scape," scanned when its resources were depleted and the lifecycle complete. More meaningful and complex than a traditional microbiological slide, Charland's photographs contain a comprehensive, yet minute lifespan, depicted during its brief stint on Earth.

Although we may often view technology as an interruption of our personal experience with nature, Sharon Harper embraces its ability to create images that would otherwise go unseen, thereby enhancing our appreciation of the natural world. Using the camera as a mediating device in her "Moon Studies and Star Scratches" series, she charts the relationship between the camera and the movement of Earth, illustrating our ever-present connection with our surrounding environment. By offering timestamps, geographic locations, and exposure times for each of her works, the artist not only maps celestial activity, but she provides a visual account of life at one particular place and time in the extensive history of the universe. For the artist, "These images are an attempt to record a realm we can hardly fathom, but within a framework of time we can readily understand, bringing the human scale into relationship with the cosmic."

Christina Seely sets out on expeditions to the arctic and tropics to explore what it means to bear witness to environmental change on a global scale. The photographs and videos on view from her "Markers of Time" series focus on the effects of climate change and suggests, not only the gravity of the problem, but the urgency required to protect the planet's natural systems. As the artist presents us with imagery of individual species in their rapidly changing environments, the viewer cannot help but compare the animals' lives to their own. This personal association allows us to see ourselves and ultimately humanity as more than the problem, but as part of the potential solution as well. Seely explains that by, "Tying the viewer as individual to the global, this work generates an essential dialogue in a climate of growing uncertainty about our future relationship to the planet." 10

 $^{^8\,}Professional\,website\,of\,Caleb\,Charland,\,accessed\,September\,3,\,2015,\,http://calebcharland.com/about/.$

⁹ Professional website of Sharon Harper, accessed September 4, 2015, http://www.sharonharper.org/statements/moon.html.

Ohristina Seely, document sent to the author, November 6, 201

RIGHT
Rachel Sussman
Jōmon Sugi,
Japanese Cedar #0704-002
(2,180 – 7,000 years old;
Yakushima, Japan)
(detail)

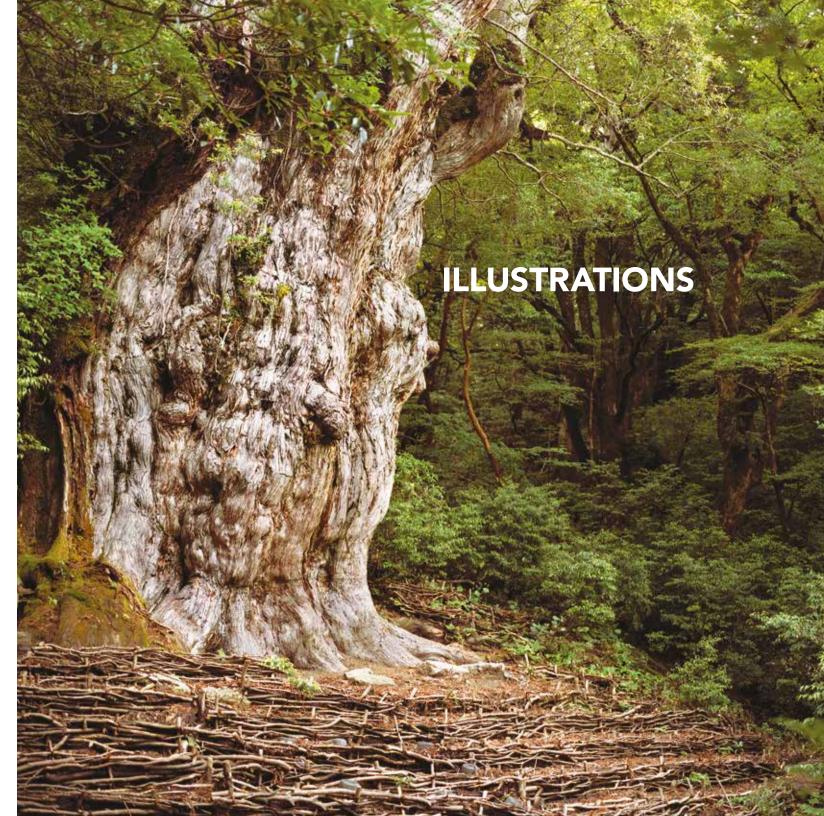


For her series "The Oldest Living Things in the World," Rachel Sussman consulted biologists, scoured scientific journals, and set out on fieldwork expeditions to photograph continuously living organisms at least 2,000 years of age on all seven continents. Inspired by the concept of deep time, which the artist describes as "a framework in which to consider timescales too long for our shallow, physical experience, and too big for our brains to process meaningfully," Sussman sought to create a visual archive that puts into perspective the human lifespan.11 By personifying her subject matter as individuals rather than elements of a landscape, she is able to emotionally connect her viewers with these portraits of life, and prompt us to want to extend these lives. With environmental conservation in mind, the artist asserts, "The more we access deep time, the more easily accessible it becomes, and the more likely we are to engage in long-term thinking. The more we embrace long-term thinking, the more ethical our decision making becomes."12

These four artists reframe the significance of life in this unique, expansive, yet delicate world. Their work answers the call set forth by photographer, educator, and activist Subhankar Banerjee, who proposes a new role for photography:

"We need a new aesthetic vision that is attuned to the ideas of ecology and sustainability. ...I think photography must also play a critical role in establishing our relationship to the environment and all other species with whom we share this planet." 13

Moving forward, Jennifer Tucker suggests that we ask a new question of photography, "Are we capable still of experiencing the exhilarating shock of amazement that once accompanied images of discovery?" ¹⁴ I would venture to say so, for these artists are inspiring new ways of thinking and encouraging us to act. Their photography ignites within us a desire to experiment, to explore, to educate, and to preserve. But most importantly, their work continues to make us wonder. •



¹¹ Rachel Sussman, "What a 9,000-Year-Old Tree Taught Me," Nautilus, March 19, 2015,

http://nautil.us/issue/22/slow/what-a-9000_year_old-spruce-tree-taught-me-.

¹² II:

¹³ Heiferman, Photography Changes Everything, 66.

¹⁴ Tucker, "Marvels and Spectacles: Photographic Exploration and the 'First Glimpse,'" 45.

CALEB CHARLAND



A Picture of Grey Eaten by Bacteria 2, 2009
Pigmented ink print
52 x 44 inches (unframed)
Courtesy of the artist and Sasha Wolf Gallery, New York



Violet Surface Eaten by Bacteria, 2009
Pigmented ink print
44 x 52 inches (unframed)
Courtesy of the artist and Sasha Wolf Gallery, New York

SHARON HARPER



Halsnøy, Norway, 10 Jun 10:50 PM and 10 Jun 10:46 PM, 2012
Archival pigment print on Harman fiber-based paper, printed 2014
40 x 30 inches each (image size) • © 2016, Sharon Harper
Courtesy of Rick Wester Fine Art, Inc., New York; and Bridgette Mayer Gallery, Philadelphia



Moon Studies and Star Scratches, No. 8, November 16, 2004 – May 21, 2005
Luminage print on Fuji Crystal Archive paper, mounted to Gator Board, printed 2009
40 x 50 inches (image size) •Edition 3/5 • © 2016, Sharon Harper
Courtesy of Rick Wester Fine Art, Inc., New York; and Bridgette Mayer Gallery, Philadelphia

CHRISTINA SEELY





MUTO, Defluo Animalis . Vulpes Lagopus, 2011 Archival inkjet prints • 16 x 20 inches each (print size) Courtesy of the artist

MUTO, Defluo Animalis – Odobenus Rosmarus / Humanae, 2012 Two-channel corner video installation 5:32 minute loop Courtesy of the artist

RACHEL SUSSMAN



Llareta #0308-2B31 (2,000+ years old; Atacama Desert, Chile), 2008 Archival pigment print from medium format negative film $22 \times 27^{1/2}$ inches (framed) Courtesy of the artist



Welwitschia Mirabilis #0707-22411 (2,000 years old; Namib-Naukluft Desert, Namibia), 2007 Archival pigment print from medium format negative film 17 ³/₄ x 21 inches (framed) Courtesy of the artist

WORKS IN THE EXHIBITION

CALEB CHARLAND

A Picture of Grey Eaten by Bacteria 2, 2009
Pigmented ink print
52 x 44 inches (unframed)
Courtesy of the artist and Sasha Wolf Gallery, New York

A Picture of Grey Eaten by Bacteria 3, 2009
Pigmented ink print
52 x 44 inches (unframed)
Courtesy of the artist and Sasha Wolf Gallery, New York

Four Generations of Bacterial Growth
on a Picture of Black, 2009
Pigmented ink print
44 x 52 inches (unframed)
Courtesy of the artist and Sasha Wolf Gallery, New York

Violet Surface Eaten by Bacteria, 2009
Pigmented ink print
44 x 52 inches (unframed)
Courtesy of the artist and Sasha Wolf Gallery, New York

SHARON HARPER

Halsnøy, Norway, 11 Jun 10:17 PM and
11 Jun 10:14 PM, 2012
Archival pigment print on Harman fiber-based paper,
printed 2014
40 x 30 inches each (image size)
© 2016, Sharon Harper
Courtesy of Rick Wester Fine Art, Inc., New York; and Bridgette
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Halsnøy, Norway, 10 Jun 10:50 PM and 10 Jun 10:46 PM, 2012 Archival pigment print on Harman fiber-based paper, printed 2014 40 x 30 inches each (image size) Edition 3/5

© 2016, Sharon Harper Courtesy of Rick Wester Fine Art, Inc., New York; and Bridgette Mayer Gallery, Philadelphia

Moon Studies and Star Scratches, No. 8,

November 16, 2004 – May 21, 2005

Luminage print on Fuji Crystal Archive paper, mounted to Gator Board, printed 2009

40 x 50 inches (image size)

Edition 3/5

© 2016, Sharon Harper

Courtesy of Rick Wester Fine Art, Inc., New York; and Bridgette

Mayer Gallery, Philadelphia

Sun/Moon (Trying to See through a Telescope) 2010 May 27 10:48:35 AM - 2010 May 27 11:08:34 AM 2010 Jun 19 8:16:30 PM - 2010 Jun 19 8:23:40 PM, 2010. No. 1, 2010 Ultrachrome print on Epson Enhanced Matte paper 57 x 17 inches (image size) Edition 1/5 © 2016, Sharon Harper

Courtesy of Rick Wester Fine Art, Inc., New York; and Bridgette Mayer Gallery, Philadelphia

Sun/Moon (Trying to See through a Telescope) 2010 May 27
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© 2016, Sharon Harper
Courtesy of Rick Wester Fine Art, Inc., New York; and Bridgette
Mayer Gallery, Philadelphia

CHRISTINA SEELY

MUTO, De Tempore, 2012 Single-channel rear-projection video installation 10:24 minute loop Courtesy of the artist

MUTO, Defluo Animalis - Odobenus Rosmarus / Humanae, 2012 Two-channel corner video installation 5:32 minute loop Courtesy of the artist

MUTO, Defluo Animalis . Vulpes Lagopus, 2011 Archival inkjet prints 16 x 20 inches each (print size) Courtesy of the artist

MUTO, Defluo Glacies . Matanuska Glacier,
July 2011 Alaska, 2012
Archival inkjet prints
24 x 30 inches (print size)
48 x 60 inches (print size)
Courtesy of the artist

RACHEL SUSSMAN

Jõmon Sugi, Japanese Cedar #0704-002
(2,180 – 7,000 years old; Yakushima, Japan), 2004
Archival pigment print from medium format negative film
17 ³/4 x 21 inches (framed)
Courtesy of the artist

Llareta #0308-2B31 (2,000+ years old; Atacama Desert, Chile), 2008 Archival pigment print from medium format negative film $22 \times 27^{1/2}$ inches (framed) Courtesy of the artist

Map lichen R. Geographicum #0808-04A05 (3,000 years old; Southern Greenland), 2008 Archival pigment print from medium format negative film $17\ ^{3}$ /4 x 21 inches (framed) Courtesy of the artist

Pando clear-cut #0906-4717 (80,000 years old; Fish Lake, Utah), 2006 Archival pigment print from medium format negative film 17 ³/₄ x 21 inches (framed) Courtesy of the artist

Sagole Baobab #0707-000505 (2,000 years old; Limpopo Province, South Africa), 2007 Archival pigment print from medium format negative film 17 ³/₄ x 21 inches (framed) Courtesy of the artist

Underground Forest #0707-10333 (13,000 years old DECEASED; Pretoria, South Africa), 2007 Archival pigment print from medium format negative film 17 3 /4 x 21 inches (framed) Courtesy of the artist

Welwitschia Mirabilis #0707–22411 (2,000 years old; Namib–Naukluft Desert, Namibia), 2007 Archival pigment print from medium format negative film 17 $^{3/4}$ x 21 inches (framed) Courtesy of the artist

ARTIST BIOGRAPHIES

CALEB CHARLAND was born in Bangor, Maine and raised in rural Maine. He holds a B.F.A. in photography from the Massachusetts College of Art and Design (2004), and an M.F.A. from the School of the Art Institute of Chicago (2010). His work has been exhibited nationally and internationally, notably in exhibitions at the John Michael Kohler Arts Center, Sheboygan, Wisconsin (2015); Sasha Wolf Gallery, New York (2014); the Portland Museum of Art, Maine (2013); ClampArt, New York (2012), deCordova Sculpture Park and Museum, Lincoln, Massachusetts (2012), and Silver Eye Center for Photography, Pittsburgh, Pennsylvania (2007). Residencies include the Imagine Science Film Festival, New York (2011), and the Skowhegan School of Painting and Sculpture, Maine (2009). Additionally, he was awarded a Pollock-Krasner Foundation Grant for 2016. His work is included in the collections of the Smithsonian American Art Museum, Washington, D.C.; the Portland Art Museum, Oregon; and the Philadelphia Museum of Art, Pennsylvania. He currently lives and works in Brewer, Maine.

SHARON HARPER was born and raised in Stamford. Connecticut. She received a B.A. in Literary Studies from Middlebury College, Vermont (1988) and an M.F.A. in photography and related media from the School of Visual Arts, New York (1997). Her work has been exhibited nationally and internationally and is in the permanent collections at the Museum of Modern Art, New York; the Whitney Museum of American Art, New York; The Museum of Fine Art, Houston, Texas; The Albright-Knox Art Gallery, Buffalo, New York; the Harvard Art Museums, Cambridge, Massachusetts; and the Nelson-Atkins Museum, Kansas City, Missouri, among others. She has held residency fellowships at Yaddo, Saratoga Springs, New York; The MacDowell Colony, Peterborough, New Hampshire; Headlands Center for the Arts, Sausalito, California and the Leighton Artists' Colony at the Banff Centre, Canada. She was also a 2013 recipient of the John Simon Guggenheim Memorial Foundation Fellowship in Photography. She currently lives in Cambridge, Massachusetts and works as Professor of Visual and Environmental Studies at Harvard University.

RIGHT
Rachel Sussman
Map lichen R. Geographicum #0808-04A0
(3,000 years old; Southern Greenland)
(detail)

CHRISTINA SEELY was born and raised in Berkeley, California. She holds a B.A. from Carleton College, Northfield, Minnesota (1998), and an M.F.A. in Photography from the Rhode Island School of Design, Providence (2003). Her photographic practice stretches into the fields of science, design and architecture. Her work has been exhibited nationally and internationally, and is featured in many public and private collections including The Museum of Contemporary Photography, Chicago, Illinois; The Walker Art Center, Minneapolis, Minnesota; and the Yale University Collection, New Haven, Connecticut. She has been an Artist-in-Residence at the Headlands Center for the Arts (2011), a Fellow at The MacDowell Colony (2009), a participant in the Arctic Circle Program, International Territory of Svalbard (2010); and a recipient of a year long Public Arts Commission from the city of San Francisco (2009). She received a 2014 Smithsonian Artist Research Fellowship, and she was selected as a 2016 Artist-in-Residence for Light Work in Syracuse, New York. Her monograph Lux was co-published in 2015 by The Museum of Contemporary Photography (Chicago) and Radius Books (Santa Fe). She is currently an Assistant Professor in the Studio Art Department at Dartmouth College in Hanover, New Hampshire.

RACHEL SUSSMAN was born and raised in Baltimore. Maryland. She earned a B.F.A. in photography from the School of the Visual Arts, New York (1998), and worked on an M.F.A. at Bard College and a PhD at Central Saint Martins (on indefinite hold.) She has exhibited her work nationally and internationally including a traveling solo show premiering at Pioneer Works, Red Hook, New York (2014); the National Museum of Women in the Arts, Washington, D.C. (2015); the Museum of Contemporary Photography, Chicago, IL (2011); and two upcoming exhibitions at MASS MoCA in Spring 2016. She is the recipient of numerous awards including a Guggenheim Fellowship in Photography (2014); a LACMA Lab Art + Tech grant (2014); a New York Foundation for the Arts Fellowship in Photography (2013); multiple residencies at The MacDowell Colony, and she was selected as an Artist-in-Residence at the SETI Institute for 2016. She spoke at the TED Global Conference in 2010, and her book, The Oldest Living Things in the World, is a New York Times Bestseller. She currently lives and works in Brooklyn, New York.



THE UNIVERSITY GALLERIES is excited to present *Traces of Time: Photographic Explorations of the Natural World.* Exploring the rich intersection of art and science, the artists in this exhibition engage in scientific experimentation, expedition, and research to produce visually compelling artwork that speaks to our relationship with the natural world. This topic is increasingly relevant as the study of the Earth's environment and climate change has become hotly debated. These artists record cycles of life while using the lapse of the camera's shutter to foster a mindfulness of the past, present, and future.

We are most fortunate to work with talented artists: Caleb Charland, Sharon Harper, Christina Seely and Rachel Sussman, whose tremendous creativity and receptiveness made this exhibition possible.

I would especially like to thank Gallery Manager Emily Johnsen for her whole-hearted dedication to realizing this endeavor. Drawing upon her extensive knowledge of contemporary photography, she spent over a year researching the topic and refining the curatorial premise. I'm grateful for her distinctive vision and unwavering commitment to every aspect of this exhibition and publication.

Many thanks to graphic designer Professor Thomas Uhlein, a true collaborator who brings elegance and distinction to our publications.

I extend special gratitude to William Paterson University for their support of all that we do, including Dr. Kathleen Waldron, President; Dr. Warren Sandmann, Provost and Senior Vice President of Academic Affairs; Dr. Stephen Hahn, Associate Provost for Academic Affairs; Daryl Joseph Moore, Dean of the College of the Arts and Communication; and Loretta McLaughlin-Vignier, Interim Associate Dean of the College of the Arts and Communication. I also appreciate Visual Resources Curator Heidi Rempel for her ongoing support and excellent editing skills. In addition, graduate assistant David D'Ostilio; work-study students: Jacob Eppinger, Meghan Fletcher, Morgan Francis, and Deivi Peralta; and interns: Kristina Sternesky and Mitchel Sybesma were integrally involved in this exhibition.

Kristen Evangelista

Director, University Galleries

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 $\label{lem:photographic explorations of the Natural World, organized by the University Galleries, \\ William Paterson University, and on view January 25 - March 25, 2016.$

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University Galleries

WILLIAM PATERSON UNIVERSITY

Ben Shahn Center for the Visual Arts 300 Pompton Road, Wayne, NJ 07470 http://www.wpunj.edu/coac/gallery/

Kristen Evangelista • Director Emily Johnsen • Gallery Manager



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RIGHT Sharon Harper Halsnøy, Norway, 11 Jun 10:14 PM (detail)

BACK COVER Rachel Sussman Posidonia Sea Grass #0910-0753 (100,000 years old: Baleric Islands, Spain), (detail)



