

ABSTRACTS for the American Women of Science Symposium

October 20, 2020: Histories of Women in Science

Panel: Tracing Historical Pathways of Women into STEM

This panel features talks by three historians who have helped define the history of women in STEM as a field of research. Professor Sally Kohlstedt will open the session by sketching how historians uncovered the lives and work of individual women and patterns of their collective experience. Dr. Pamela Henson will speak about the history of women in science at the Smithsonian since the late nineteenth century, describing how they fought for full inclusion and contributed new insights. Dr. Peggy Kidwell will explore the creative ways in which women used instruments now in the mathematics education collection at the National Museum of American History to build successive generations of numerical expertise.

Panel: The Double Bind: The Price of Being a Minority Woman in Science

In this panel, Dr. Shirley Malcom, Senior Advisor and Director of SEA Change at the American Association for the Advancement of Science, talks with three Smithsonian educators about her seminal 1976 report, [The Double Bind: The Price of Being a Minority Woman in Science](#), 44 years after its publication. In the report, Dr. Malcom and co-authors argued that the struggles to be scientists were greater for women of color than for white women or men of color. Panelists will discuss the historic, present-day, and future roles of women of color in science.

October 21, 2020: Women Leaders in Biology

Panel: Pathbreaking Female Conservation Biologists at the National Zoo (NZIP) and Smithsonian Conservation Biology Institute (SCBI)

This panel explores the professional stories of four women scientists—Drs. Katherine Ralls, Janine Brown, Devra Kleiman, and JoGayle Howard—who helped develop the emerging field of conservation biology at NZIP/SCBI between the 1970s to present, furthering the conservation and recovery of endangered wildlife species. In this conversation with colleagues Drs. Rob Fleischer and Kate Christen, Ralls and Brown discuss shared themes of

challenges and successes in their own careers and in those of their fellow pathbreakers, Kleiman and Howard, now deceased.

Panel: Overcoming Gender-based Obstacles to Conservation Biology and Social Science

For decades, women and individuals with other marginalized gender identities have fought to overcome challenges related to inequity and, despite these adverse circumstances, have made major contributions in conservation. Top researchers at various career stages will discuss challenges and successes related to gender and ethnicity in conservation, natural, and social sciences. Panelists also reflect on how they are creating change and promoting equality in their professional worlds.

Lightning Talks: Women Scientists of the Future: Smithsonian Interns and Their Paths Through a Changing Scientific World

Interns' participation in scientific research and the Smithsonian community is one of the most effective ways that the Smithsonian engages women from diverse backgrounds, promoting equity and inclusivity. The next generation of scientific leaders has unique ideas of what the future will hold. During individual lightning talks, current and former interns will describe the research they conducted and the role the Smithsonian internship played in their scientific career development.

Panel: Mujeres de STRI: From Exclusion to Influence, Women's Role in the Making of a Scientific Community at the Smithsonian Tropical Research Institute

Female mentorship has been a key strategy to advancing women in science. Yet a group of mainly Panamanian women, who contributed significantly to the creation of a premier U.S. tropical biology research institute, remains unrecognized. Participants including retired administrators, emeritus staff scientists, and key community organizers will share their voices and stories. Women's contributions kept the research community agile and afloat through difficult times. Speakers will consider what elements of the community traditionally provided by women should be preserved or modified as STRI builds a more egalitarian future.

October 22, 2020: Recovering the History of Women in Science

Presentation: Collections, Data, and Representation in Digital Historical Work

In this talk, digital historian Dr. Sharon Leon lays the groundwork for the day's presentations. Dr. Leon will historicize the development of the field of digital history and discuss the challenges that libraries, archives, and museums face to make records about women in their collections more discoverable. To conclude, she will describe the tools and strategies that digital historians and researchers are using to tackle these challenges.

Presentation: Uncovering the Scientific Impact of Women at the Smithsonian Using Machine Learning

One challenge in surfacing comprehensive stories of women in science at the Smithsonian is the distributed and incomplete nature of digitized data and collections. In this talk, learn about how two Smithsonian data scientists, Drs. Mirian Tsuchiya and Rebecca Dikow, are using computational tools such as machine learning to make connections across disparate data sources at scale. They discuss their ongoing work to build the computational workflows necessary to allow Smithsonian researchers and scholars to compile more complete histories of Smithsonian women in science.

Lightning Talk: The Women Behind the Pseudonyms: Uncovering the Lives of Anonymous Nineteenth-Century Science Writers

In the 1840s, botanist Elizabeth Carrington Morris and her sister, entomologist Margaretta Hare Morris, used pseudonyms to write articles for the *American Agriculturist*, a national journal with more than 10,000 subscribers. Margaretta eventually used her own name, becoming a renowned scientist. Elizabeth maintained her anonymity, which played a large role in her erasure from the history of 19th century American science. In this presentation, Dr. Catherine McNeur examines the freedom that pseudonyms allowed, as well as the challenges they pose for remembering the legacy of scientists like the Morris sisters.

Presentation Hidden Voices: A Data Analysis of Subject Headings for Books on Women in Science

Despite rising academic and public interest in the history of women in STEM, libraries continue to face a lack of books available for purchase as well as online catalogs that are inadequate in capturing the breadth of such works. When

people attempt to locate books about women in STEM, they may run into barriers. Dr. Heidi Blackburn and Dr. Jason Heppler will discuss their study of the relationship between Library of Congress Subject Headings and author-assigned keywords used to describe non-fiction books about women in science professions in the last 20 years. Their analysis illuminates how these works construct knowledge about women in STEM, but also highlights the limits of our catalogs in capturing and surfacing important content.

Uncovering the Work of Women in Science in Library, Archive and Museum Collections

The events of 2020 have called attention to the need for scholars and memory workers to be more transparent and mindful about unveiling the stories of marginalized groups. In this session, librarians, archivists, data scientists, and historians come together to talk about their experiences of researching and writing the history of women in science. Participants will discuss their projects and the difficulties of creating and sharing content about women in the digital realm.

October 27, 2020: Women's Scientific Achievements

Panel: Reach Across the Stars: Interactive AR App Showcases Women in Science with Innovative Technology

Featuring four current STEM researchers, this panel will shed new light on historical women whose scientific discoveries expanded our understanding of the universe. These researchers are included in the newly released app Reach Across the Stars, which features Q&A sessions with women scientists on topics from personal challenges to career highlights and favorite hobbies and allows participants a close-up look at their scientific instruments. Enjoy an illuminating discussion on the history and future of women in the space sciences, with an eye towards equity and inclusion.

Lightning Talk: Bodies in the Field: Ursula Marvin and the Antarctic Search for Meteorites

In this talk, historian Alexis Rider will explore the life and work of Ursula Marvin (1921-2018), a geologist and planetary scientist who worked at the Smithsonian Astrophysical Observatory from 1961 until her retirement, studying moon rocks, meteorites, and cosmic dust. Marvin's career exemplifies the barriers that female scientists faced, and the strategies women leveraged to overcome such

barriers. Using the diaries that Marvin kept while in Antarctica in 1979 and 1981, Rider will consider how the complex relationship between gender and fieldwork is brought to the forefront in the Southern continent, where all science is necessarily removed from the lab.

Panel: Breaking the Ice Ceiling: Trailblazing Women in Arctic and Antarctic Science

This panel aims to illuminate polar research and achievements by those who identify as women, and those who were designated female but self-identify differently, across all races and ethnicities to uncover lesser-known stories of women in polar science. The panel will 1) foster discussion on the systemic changes in polar sciences to advance diversity, equity, and inclusion, 2) weave connections and collaborations between many roles in a social change ecosystem to develop tools and methods to reach new audiences and inspire the next generation of women polar knowledge holders, researchers, and scientists, and 3) create a space that values and incorporates Indigenous women's oral histories and traditional knowledge as a fundamental component of scientific research. This discussion will continue in 2021 with a series of free monthly webinars showcasing past, present, and future trailblazing women in the Arctic and Antarctic online from The Arctic Institute.

Lightning Talk: African American Heritage on the Chesapeake Bay and the Sustainability, Integration, and Promotion of Minority Women in the Aquaculture Industry

From the lens of social and economic justice, Imani Black discusses how the discarded histories of African American watermen on the Chesapeake Bay currently impact minorities, specifically women, and the need for increased female involvement in aquaculture. She addresses the necessity for a growth mindset in leading the effort to encourage African American women entry into the restoration and conservation seafood efforts. Through her nonprofit Minorities in Aquaculture, she advocates for K-12 curriculums (with an emphasis on minority females) that allow for participation in hands-on exploratory learning in environmental science and conservation as well as sustainable marine fisheries careers, like the aquaculture industry.

Panel: Ecological Meaning-Making

Climate change adaptation and 'āina (land) based practices are at the forefront of discussions in the Pacific. Understanding the impacts of ecological change to plan and prepare for the future are a top priority for regional governments, academia, cultural and non-profit organizations. This presentation explores the question: How can we build and nurture networks of knowledge that span world views and cross disciplines in order to support, expand, and enrich the contributions of women in environmental science? This discussion considers how different approaches can work in concert and can be braided together to develop a fuller picture of the human-land interstitial relationship. The presentation weaves together diverse systems of meaning-making and brings them to bear upon scientific inquiry through the work of Malia Akutagawa, an Environmental Lawyer, Sonnet Coggins, the Executive Director of Merwin Conservancy; and Healoha Johnston, Curator of Asian Pacific American Women's Cultural History at APAC.

October 28, 2020: Full Partners in Science: Gender Equity and Inclusion

Panel: Agencies in Action: Lessons Learned from Diversity Initiatives at U.S. Scientific Institutions

This panel conversation will highlight models for diversity and equity programs from some of the country's premier scientific organizations. Jessie DeAro, Ph.D., National Science Foundation; Alex Helman, Ph.D., National Academies of Sciences, Engineering, and Medicine; and Iris Wagstaff, Ph.D., American Association for the Advancement of Science, will discuss the critical barriers these programs work to address, as well as promising takeaways and lessons learned for organizations seeking to advance gender equity in the sciences.

Fireside chat: Sheila Minor Huff: A Trailblazing Scientist and Hidden Figure No More

In this fireside chat, Dr. Michele Simms-Burton interviews Sheila Minor Huff, who in 1970 joined the US Fish and Wildlife Services Mammal Division while pursuing a Bachelor of Science in biology with a minor in chemistry at American University. Huff ascended from a GS-3 clerk typist to a GS-14 Environmental Protection Specialist at the Office of Environmental Policy and Compliance with the Department of Interior. Throughout her career, Huff became a trailblazer, often

the only African American woman scientist in her workgroup.

Panel: Building Galaxies: Collaboration as a Model for Centering Women's Stories at the National Air and Space Museum

A historian, a scientist, and an educator from the National Air and Space Museum discuss the barriers and opportunities for bringing their different yet complementary training and experiences to explore and interpret the stories of women in science for themselves and the public. The goal is to create inclusive environments for learning and uplifting women's stories, foster cross-departmental and cross-institutional dialogue, challenge each other, and challenge perceptions of who can engage in science.

Panel: Drawn Conclusions: Women and Scientific Illustration

This fireside chat interrogates the norms that produced the hierarchy of scientific authority while recuperating the legacies of scientific figures whose work has been neglected. With key examples of women's breakthroughs in science and scientific illustration, including scientific illustrator Orra White Hitchcock, space engineer Galina Balashova, and a conversation with the astronomer Wanda Díaz-Merced, who pioneered the sonification of astronomical data to make it available for the visually impaired, Ben Gillespie and Katherine Boyce-Jacino show how each woman has shaped her respective scientific field and transformed public perception.

Critical Conversations about Equity in the Sciences: The Bearded Lady Project

The Bearded Lady Project: Challenging the Face of Science (BLP) is an exhibition featuring photos of contemporary female paleontologists doing field and lab research wearing faux facial hair. This element of surprise attracts attention to their scientific achievements while also stimulating discussion about gender inequities in science. Join us to learn more about BLP and reactions to the exhibit that went beyond gender to broader issues of diversity and equity. The session will begin with four talks by a BLP founder and Cleveland and Smithsonian natural history museum staff. The conversation will continue in break-out groups facilitated by the panel speakers. [Please register for the workshop here.](#)

October 29, 2020: Defining the Future

Panel: First Ladies of Cultural Heritage

This panel examines a spectrum of the “First Ladies of Heritage Conservation,” including 1) the “Founding Mother” of scientific analysis in museums, Joyce Plesters; 2) the first female conservation scientist at the Smithsonian, Elisabeth West FitzHugh; 3) leading Smithsonian researcher Jacqueline Olin; and 4) Carolyn Rose, who created both the field and the degree in archaeological conservation and served as chair of the Department of Anthropology at the Smithsonian's National Museum of Natural History. The panelists will also address their current challenges.

Panel: Affinity Groups as Grassroots Agents of Change

Affinity groups, defined as colleagues that share a common interest or identity or that convene with a specific purpose, can build support and mentor networks that fill gaps in workplace policy and career development. This panel highlights some prominent Smithsonian affinity groups, explores how these groups have affected change in policy or culture for women and underrepresented groups, and provides advice for creating future affinity groups as outlets for staff support and community building.

Panel: Celebrating Cross-Generational Progress & Perspectives of Women in Science at the Smithsonian

Since the first female Smithsonian curator in 1894, the number of Smithsonian women in science has increased – meeting challenges and cultural changes along the way. Across Smithsonian scientific units, women are represented in almost every professional position and career stage. This panel features women from multiple Smithsonian units across professional positions and career stages who will celebrate their scientific contributions, highlight how perceptions of and reactions to women in science have changed over the years, and discuss a future that promotes inclusivity, equity, and diversity across scientific disciplines. This session will provide insight into the changes that women in science at the Smithsonian have promoted, while continuing to challenge the status quo to create a more innovative and welcoming work environment.

Fireside Chat: The Future of Women in Science at the Smithsonian with Secretary Lonnie Bunch

Using the Smithsonian Institution as a case study, Smithsonian Environmental Research Center ecologist Dr. Katrina Lohan and Smithsonian Secretary Lonnie

BECAUSE OF HER STORY



Bunch III discuss historical and present-day issues faced by women in science and how the Smithsonian can be a catalyst for change moving forward.