# Celebrating the 200th Birthday of Maria Mitchell

The Nantucket Maria Mitchell Association

# 2018 Annual Report

Nantucket's Science Center





"The step, however small, which is in advance of the world, shows the greatness of the person, whether that step be taken with brain, with heart, or with hands."

- Maria Mitchell

# **Mission Statement**



The mission of the Nantucket Maria Mitchell Association is to promote the legacy of Maria Mitchell and exploration, education, and enjoyment of Nantucket's land, waters, and skies beyond. In fulfilling our mission, we recognize the historic persona of Maria Mitchell, the foremost American woman scientist and educator of the nineteenth century, and her potential impact on contemporary thought by passing on her legacy of intellectual curiosity, respect for and love of nature, learning by doing, and the ideal of individualism.

### **Table of Contents**

Mission Statement	1
Executive Director's Report	2
Astronomy	3-4
Natural Science	
Education	7-8
Mitchell House, Archives & Special Collections	9-10
Facilities	11-12
Development & Communications	13
Maria Mitchell Women in Science Symposium	14-15
Galaxy of Support	16-23
Donations & Gifts	24
Financial Report	25-26
Board, Staff, Interns, Volunteers	27-29
Research	30
Collaborators	31
Publications & Presentations	32

## **Executive Director's Report**

# 2018 Was A Monumental Year At The Maria Mitchell Association

In addition to the over 500 events and programs undertaken by the hard-working staff, interns, and volunteers and through the generous support of our members and donors, we celebrated a truly momentous event, the 200th anniversary of the birth of America's first woman astronomer, Maria Mitchell. We had numerous celebrations through-



out the year to ensure that Maria's life's work was fittingly recognized. From the MMA-created exhibit at the Nantucket Historical Association's Whaling Museum about the life and legacy of Maria Mitchell, to the window honoring our namesake that the MMA was invited to create at Hingham Bank on Main Street, to the new Maria Mitchell Women of Science Symposium, to the one-woman play about Maria Mitchell written by Vassar graduate Barbara Duffy and co-produced with the Dreamland Theater, it was a robust and full year! In addition to the work of the Maria Mitchell Association's staff and board, it is important to recognize the Town of Nantucket and its support of numerous special programs throughout the celebratory year.

In addition to the celebrations surrounding the 200th, the MMA was proud to open the newly renovated Research Center. The Research Center, housed in the MMA's former Science Library at 2 Vestal Street, includes a state-of-the-art science classroom, laboratory space, and climate-controlled storage areas for its over one hundred year old biological collections that have been continuously collected on Nantucket and represent a unique and important collection of the island's biodiversity. Opened on May 25, 2018 with a wonderful opening reception, remarks were made by Nathaniel Philbrick and the MMA's former Director of Natural Science, Eileen McGrath, both former and now honorary board members of the MMA. Since its opening, the Research Center has been actively used by researchers, students, interns, and as a meeting space for the science community – from both on the island and off.

2018 was a year to remember. On behalf of the MMA supporters, the thousands of individuals and hundreds of students who benefited from the good work of the Maria Mitchell Association, we are all indebted to the individual that made this all possible, Maria Mitchell.

David Gagnon
Executive Director



As we marked the 200th year since Maria's birth, the Astronomy Department hosted several special events to celebrate and honor the legacy of Maria Mitchell.

The flagship National Science Foundation Research Experience for Undergraduates (NSF-REU) program received 210 applications for the six available positions. After an extensive review process, including phone interviews of the short-listed candidates, six excellent students were selected. (Please see "Board, Staff, Interns & Volunteers" on page 28.)

Each student was paired with an individual research project – with topics ranging from exo-planets and stars to galaxy formation and cosmology – and was mentored by Dr. Jorgenson, Gary Walker, and in some cases, an additional affiliated astronomer. This summer, we were joined by five affiliated astronomers. (Please see page 28.)

This summer, with the help of affiliated astronomer Dr. Rodolfo Montez, we implemented a new Python bootcamp - a

two-day long intensive workshop aimed at getting the students up to speed on the latest computer programing language widely used in astrophysics. At the end of the summer, all of the students presented ten-minute talks on their research projects to the public as part of the MMA's Science Speaker Series.

In January 2019, the interns successfully presented research posters at the American Astronomical Society (AAS) meeting in Seattle, Washington. We are happy to report that intern Caeley Pittman was awarded the prestigious Chambliss Astronomy Achievement Award for her research poster, entitled "Searching for Intermediate-Mass Black Holes in the Optical Time Domain," and completed under the quidance of Drs. Gezari and Jorgenson. The AAS also saw the occurrence of the fourth annual Maria Mitchell Observatory alumni breakfast. Generously sponsored by Princeton Instruments, Planewave. Ball Aerospace, and the Giant Magellan Telescope, the breakfast brought together over forty MMO alumni and friends.

## **Astronomy**

It was a particularly bad summer for fog, forcing us to cancel nearly half of our public Open Nights at Loines Observatory. Overall, we welcomed nearly 1,600 visitors and made \$14,000 in income from summer Open Nights at Loines. Daytime tours of the Vestal Street Observatory saw an increase in visitation from previous summers to 210 visitors. We continued to offer and provide private Open Nights for various groups, from the Nantucket New School, to both off- and on-island Boy and Girl Scout troops, and numerous private parties.

We are happy to report that summer 2016 NSF-REU student Tanveer Karim's paper on his MMO summer research project was accepted for publication by the top astrophysics journal, *The Astrophysical Journal*. The title of his paper is "Probing the Southern Fermi Bubble in Ultraviolet Absorption using Distant AGNs." The team included MMO Affiliated Astronomer Dr. Andrew Fox (Space Telescope Science Institute) and Dr. Jorgenson. Karim is currently in his third year as an astrophysics PhD student at Harvard College.

In the winter of 2018, the MMO hosted Bennington College Field Work Term student Ariel Mora. Under the tutelage of Gary Walker and Dr. Jorgenson, Mora used both the Loines 24-inch telescope and the Sierra Remote Observatory to study the unusual, optical flickering behavior of star VO694 Mon. Mora was then accepted into the TAURUS summer research program at the University of Texas, Austin and seems well on his way to a productive career in astrophysics.

In April, Dr. Jorgenson was invited to give the astrophysics colloquium at the University of Massachusetts, Amherst, where she was hosted by Dr. Martha Hanner, a longtime MMA supporter and former MMO summer intern. Dr. Jorgenson gave a four-part lecture series on the planets (and beyond!) at the Nantucket Atheneum. In November, Dr. Jorgenson was invited to the Center for Astrophysics | Harvard & Smithsonian to sit on a career panel.

Dr. Jorgenson began a biweekly radio interview series called "Looking Skyward" that airs on the Cape and Islands National Public Radio (NPR) station. During the show, Dr. Jorgenson discusses the latest astronomy news with Brian Morris, the host of the local portion of "All Things Considered" radio program. Dr. Jorgenson continued to serve on professional scientific committees such as the Hubble Space Telescope Time Allocation Committee and the National Science

Foundation Scientific Review Panel, as well as acted as a manuscript referee for the journals Science, Astrophysical Journal, and Monthly Notices of the Royal Astronomical Society. Gary Walker continued to serve in his role as secretary ofthe American Association of Variable Star Observers.

In 2018, the Natural Science Department continued its goals of preserving and displaying the biodiversity of Nantucket County and conducting research on invertebrates, snakes, birds, and marine biodiversity. The Aquarium and Natural Science Museum were open from June 4 through August 31. As Dr. Emily Goldstein Murphy was on maternity leave during the summer. Shellev Dresser took on full responsibility for the operations and management of both the Aquarium and Natural Science Museum, as well as coordinating staff around the various research projects. Visitation at the Aquarium was down by 250 compared to 2017 with a total visitation of 5.727. In contrast, the Museum's visits were up by 196 for a total of 2.520 visitors. The Aquarium remains the main entry point of guests into the MMA properties. This year's Aquarium interns did a particularly great job of guiding people to visit other properties with their



passes and were especially successful at selling memberships.

Research programs consisted of continuing projects and new projects. The MMA continued to collaborate with the Nantucket Conservation Foundations on the long running Whip-poor-will survey and regional horseshoe crab survey. The American Burying Beetle project was reinvigorated this year with reintroductions of captive bred beetles from the Roger Williams Park Zoo. This began the first of five years of planned reintroductions to bolster the population on Nantucket. We continued green crab research with the Nantucket Land Council and while the data has not yet been analyzed, a quick glance notes there were very few recaptures. It is not clear whether we will get good estimations of population or density from the data from 2018. The Museum interns also participated in field work focusing on Snake Fungal Disease and on monitoring bats.

We again traded fish with Marjorie Williams at the Cape Cod Museum of Natural History. We collected fish from her in the late spring and she collected fish from us in the late summer in return. Several tropical fish came into the Aquarium over the summer and they are now on display in the Museum.

## **Natural Science**



Natural Science Collections Manager Julia Blyth returned to prepare specimens and work on the collections maintenance. All biological collections are in the Specify database. With the Research Center opened, all of the Biological Collections were moved from the basement of Hinchman to the new climate-controlled storage located in the basement of the Research Center. Many members of the Nantucket Biodiversity Initiative and interns helped move the collections while we hired professional movers to carry the cabinets.

The gift shops were administrated by Shelley Dresser, Assistant Director of Development, and Trinity Foreman, Executive Administrator. The Board determined that the gift shops should move away from plastic items and towards higher-end items and educational toys.

The Nantucket Science Festival was held March 16, 2018 from 10 am - 2 pm at the Nantucket High School. Over 400 island children and adults explored science through hands-on activities in robotics, renewable energy and electricity, magnetism, potential energy in engineering, space exploration, sensory crafts, and more. Many organizations across the island also supported this year's event including the Nantucket High School Tech Club, the Linda Loring Nature Foundation, the Nantucket Conservation Foundation, ACK Smart, SmartPower, and the Exploration Station.





The Education Department continued to provide programs throughout the school year for island children in grades K-5. In 2018, the MMA offered three afterschool series including "Land, Seas and Skies of Nantucket" and "ARTstronomy" for grades K-2, and "Chemistry is Out of this World" for grades 3-5. Classroom programs included "Trees and the Community" for all 5th grade classes in both public and private schools, "All About Reptiles" for the Children's House, and a seven-week series on reptiles as an enrichment program for third graders at the Nantucket Intermediate School. The department also hosted a "Beach Exploration" field trip at Harbor Flats for all public school kindergarteners, assisted the Nantucket Land Council in vernal pool programs at Squam Swamp, and led salt marsh ecology lessons for 7th and 8th graders from the New Canaan Country Day School.

The MMA continued to offer a vacation camp in April, but did not offer a winter camp in 2018. "Home ECOnomics" was held April 17-21. Thanks to the generosity of the Adam Bloom Scholarship Fund, the MMA provided one full scholarship and two partial scholarships for this week of camp.

The 4th Annual Nantucket Science Festival was held on March 17, 2018. Due to the popularity of the growing Science Festival, the event was held in the high school gymnasium which provided much more floor space and higher ceilings for such activities as stomp rocket and catapult design challenges. It was a smashing success with over 425 people in attendance.

On March 14, 2018, Kim Botelho, MMA's Director of Education; Emily Goldstein-Murphy, MMA's Director of Natural Science; and Pauline Cronin, Nantucket Community School's (NCS) Early Childhood Education Coordinator received the Secretary's Award for Excellence in Energy and Environmental Education for their roles as lead organizers for the Annual Nantucket Science Festival which has been held on the third Saturday of March since 2015. Both, Kim and Pauline have been instrumental since the event's inception and Emily joined the team in 2017. The MMA held a Science Festival for many years but it was re-invigorated in 2015.

The MMA and NCS also received special recognition from the Massachusetts House of Representatives for their collaboration on this event. The awards were presented at the Massachusetts State House by Secretary Matthew Beaton and Kris Scopinich, chair of the Secretary's Advisory Group for Energy and Environmental Education.

Despite being short staffed during August, our busiest month, the MMA reached more families and generated more income than ever before and was voted best children's activity on Nantucket by *Cape Cod Life* magazine. For the first time in the programs history, over 600 camp spaces were filled with a total of 617 participants.

## **Education**

Thanks to the generosity of EGCF, a nonprofit foundation, the MMA awarded eleven partial scholarships and eleven full scholarships totaling \$9,285. This year, thirteen of twenty-two or 59% of the scholarships went to girls. This is up 4% from last year and only the second year since the scholarship began that they have been awarded to more girls than boys.

Since 2015, the MMA has been growing food for the food pantry in its Giving Garden. Campers enrolled in "Green Guardians" for 10-12 year olds and teens enrolled in the Naturalist Leadership Program, "Community Service and Ecology" for 13-16 year olds helped maintain the garden. Until 2018, the MMA shared a small garden in the Nantucket Community Garden and was only able to grow a small amount of produce. In 2018, the MMA was thrilled to finally have its own plot and thanks to the generosity of the Cape Cod Five Foundation, the Education Department was able to install a 20'x20' deer fence and purchase materials for raised garden beds and trellises to get started. In April, Jordan McHugh, a former education intern with extensive gardening experience, joined the Education Department as an extended-season Education Coordinator. In May, the MMA hosted Charlemont Academy and their students helped to build the raised beds and filled them with soil and compost. Thanks to their effort and the youth enrolled in the MMA service programs, it was an amazing season. 130 bunches of greens, 226 root vegetables, 24 squash, 9 gallons of beans, 46 pints of tomatoes, 24 peppers, 170 tomatillos, and more were delivered to the Nantucket Food Pantry!

On Saturday, September 22, 2018, the MMA joined forces with the Nantucket Conservation Foundation (NCF) for the first "All About Bats" public program. The program began with an indoor presentation by Kim Botelho and viewing of bats from the MMA's biological collections. Following the indoor presentation, the group met up with NCF's Danielle O'Dell who leads the research efforts for bat populations on Nantucket. This research is focused primarily on Northern Long eared bats - a population that is stable on the island and not impacted by white nose syndrome which has devastated populations across the country. During the field portion, participants learned about the research, how NCF collects data through mist netting, and had the opportunity to see four long-eared bats up-close.



In 2018, the MMA's Director of Education, Kim Botelho, continued to serve as a Board Member and Environmental Literacy Representative for the Massachusetts Environmental Education Society (MEES). She was selected to represent MEES for the North American Association of Environmental Education's Affiliate Workshop in Pacific Grove, CA and at the national conference in Spokane, WA. During 2018, she also began discussions with the New England Environmental Alliance to create a stronger regional network and improve resources for state boards across New England.

- 8 -

# Mitchell House, Archives & Special Collections

As was expected, the year 2018 was action-packed, exciting, and exhausting as we celebrated Maria Mitchell's 200th Birthday. It was the MMA's opportunity to celebrate America's first woman astronomer, her accomplishments, and all that the MMA does to perpetuate and preserve her legacy.

For 2018, we continued with our popular Mitchell House programs for children, as well as adult preservation workshops on stone monument conservation, the "Daring Daughters of Nantucket" walk, and the collaborative "Four Centuries Domestic Architecture" walk with Nantucket Preservation Trust and the Nantucket Historical Association. New classes are planned for the summer of 2018 – including a Mitchell House History camp that will be a week-long, all day adventure for children.

Conservation as always is a year-round task - from a focused and conservation-minded dusting and vacuuming to keep dust, insects, and mildew at bay, to focusing down on specific artifacts for their maintenance and conservation. One of the largest conservation project in 2018 was the processing of a large dinnerware set once owned by Mary and Peleg Mitchell Junior and used in the house at 1 Vestal from 1836-1902. This Ridgeway Pottery Asiatic Palaces pattern, donated by two of Peleg's and Mary's descendants - Line Farr and Martha Kent was a perfect project for the summer intern, Kelly Bernatzky. It allowed all levels of the accession and conservation process to be completed by the intern - becoming a useful and wonderful teaching tool. And, it was a wonderful and unexpected gift. Further conservation projects included removing all artifacts from the "long closet" and cleaning its shelves and properly cleaning all of the porcelain and other objects inside. This also allowed for the better creation of space for the new acquisition noted above. We were also able to finally complete the restoration of the fence at Prospect Hill where Maria Mitchell is buried thanks in part to a grant from the Community Preservation Act.

As noted, Maria Mitchell's 200th Birthday, was a busy year. We kicked off the 200th with a "Women in Science on Nantucket" panel organized by the Mitchell House Curator and MMA Deputy Director, Jascin Leonardo Finger, and co-hosted it with the Nantucket Atheneum in March – Women's History Month. Moderated by the MMA's Director of Natural Science, Emily Goldstein-Murphy, the panelists included: Tara Riley, Town Shellfish Biologist; Regina Jorgenson, MMA Astronomer; Sarah Bois, Director of Research and Education at the Linda Loring Nature Foundation; Emily Molden, Resource Ecologist at the Nantucket Land Council; and Karen Beattie, Director of Science and Stewardship at the Nantucket Conservation Foundation. It was a well-attended event – with a great group of young female students – with great questions – from the high school.

The MMA Deputy Director and Mitchell House Curator, Jascin Leonardo Finger, was invited to write, design, and install an exhibit at the Nantucket Historical Association's Whaling Museum. Titled "Celebrating Maria Mitchell and Her

## Mitchell House, Archives & Special Collections

Legacy," the exhibit allowed little-known or seen artifacts and archives to come out of the Mitchell House and MMA Archives and Special Collections. Installed in the museum's "Island Home Gallery", it included items from the MMA's other departments as well, weaving the story of Mitchell's life and her legacy that continues today in the MMA. The exhibit opening occurred in April and will run through early winter 2019. The curator also created, designed, and installed a window at Hingham Bank on Main Street. It included images, quotes, and brief information on Maria Mitchell and the MMA – celebrating her life and legacy. Finally, the curator also created and designed two bulletin boards which were installed at the Nantucket Elementary School and Nantucket Intermediate School for Women's History Month – the focus of course being on Maria.

The curator was also invited to speak at a Linda Loring Nature Foundation Science Pub about Nantucket women, highlighting women in science on Nantucket. And she and the MMA's Executive Director presented at a NHA Brown Bag Lunch on Mitchell, her legacy, and the events of the 200th. Additionally, they sat for a television spot on Maria Mitchell and the 200th's activities on NCTV and the curator was also interviewed by Brian Morris of WCAI, the local Cape and Islands NPR station, concerning Maria's 200th.

The summer included a special Birthday Speaker series organized by the curator. David Baron, author of *American Eclipse*; Dava Sobel, author of *The Glass Universe, Longitude, Galileo's Daughter,* and numerous other science-related books, and J. Drew Lanham, author of *The Home Place* and also an ornithologist and professor of wildlife biology at Clemson University were the invited speakers. Baron and Lanham were co-hosted at the Atheneum in June and August, while Sobel was co-hosted with the Nantucket Historical Association in July – just before Mitchell's 200th birthday.

Of course, August 1, 2018 saw a HUGE crowd on Vestal Street with music of the period by Susan Berman and friends, falconer Tom Mullholland and Houdini<sup>†</sup>, and children's book author Hayley Barrett talking about her soon to be released picture book *What Miss Mitchell Saw* and completing fun activities about telescopes with children. And a smaller but continuing event – the Seven Sisters Tea – also occurred during the summer. During this event, women who attended the Seven Sisters colleges meet for a get-together to celebrate Maria Mitchell and the first women's colleges – once of which – Vassar – Maria Mitchell taught at.

And throughout the year, the Mitchell House had numerous research inquiries and requests for use of historic images in multiple publications. This number only grew with the celebration of her 200th birthday year. Mitchell and the MMA were also the focus of multi-page articles including in *Cape Cod Life*.

## **Facilities**

The year 2018 was particularly busy as we moved the Natural Science collections to their new home in the Research Center as the site was completed and the Education Department was able to find a new home of its own as well. Additionally, the MMA continued to focus on the preservation and repair of all of our buildings, particularly on Vestal Street.



Research Center: After a spring of final touches including interior painting, HVAC completion, moving the natural science collections from Hinchman House to the new Center, and cleaning and shelving all the former circulating collection of books, the Research Center was opened to the public. On May 25, 2018, the MMA held a reception and ribbon cutting for donors to the Research Center, MMA Members, and the people who worked so hard to conserve and restore the building. Author and islander, as well as former board member, Nathaniel Philbrick and the MMA's former Director of Natural Science and also former board member, Eileen McGrath, officiated. Both Philbrick and McGrath are also MMA honorary board members. After the opening, smaller modifications and changes were made to the outside of the building, including improved landscaping.

Hinchman House: A focus was placed on the dormitory space in the winter of 2018 with new appliances to replace old, failing or broken appliances. A new furnace was installed given that the old one had finally come to its end. But with this, we were able to make some modifications and now have one new efficient hot water heater instead of two. New kitchen supplies were purchased for the interns and overnight visitors who use the dormitory space. Finally, the move of the Natural Science collections to the new Research Center allowed for the main cellar of Hinchman House to be converted into the Education Department's offices and classroom spaces. With the assistance of a matching grant from the Massachusetts Cultural Facilities Fund and a grant from the M. S. Worthington Foundation, we were able to work with Riptide Finishes to repair and coat the floor – it looks like the ocean! – and to create a walled office space for the Director of Education with Matt Anderson Carpentry and Nicholson Electrical. Improved lighting was installed and we received a donation of slightly used lab-style tables from the Eaglebrook School in western Massachusetts.

# **Facilities**

**Drake Cottage:** The Administrative and dorm spaces saw some updates in 2018. These included new flooring in various places in the guest room, a new refrigerator for the dorm, and some plumbing updates in the office kitchenette.

Maria Mitchell (MMO) and Loines Observatories: An effort was started to raise funds for a new, expanded deck at Loines Observatory which will provide a better viewing experience, more benches, and a larger space for our visitors. Designs were completed by island architect Milton Rowland and much of his time was donated to the MMA. Drawings were further enhanced with full engineering plans and the MMA hopes to begin this project in 2020. Historic District Commission approval has been granted, as well as a building permit. In the fall, with a generous gift, the MMA was able to work with landscaper Greg Maskell to replant the wildflower and native species garden in front of the MMO.

Aquarium and Washington Street Properties: These sites saw various repairs, as well as a new chest freezer for the Aquarium to store food for the marine life and stand-by ice packs to be used as chillers if a chiller tank breaks down. A new hot water heater was installed, plumbing repairs were made, and various repairs were made to the decks at the Aquarium.

General: The MMA received all new signage on its buildings, allowing us to update the old signs with the newer logo of the MMA. In addition, a new way-finding sign at Milk and Vestal Streets was created to replace the old sign – allowing the MMA to add the Research Center to the map and other updates. Teak benches were also purchased. One is named in honor of Eileen McGrath, the MMA's former Natural Science Director, and in memory of Edith Andrews, the MMA's former ornithologist and Mitchell House Curator. The second bench was purchased by the family of birder Marvin Greenberg and named in his memory.

In 2018, after many years of work, the Mitchell House was finally able to restore the fence at the Mitchell family lot where Maria Mitchell is buried with several of her siblings, her aunt, and her parents. This restoration was funded with a grant from the Community Preservation Act and the fence is based on historic images. Fittingly, it was completed a few months before the anniversary of Maria's birth.



## **Development & Communications**

The Department spent a great deal of time preparing and executing the 200th birthday of Maria Mitchell. More than twenty-two events were held ranging from small and intimate to loud and celebratory. Thanks to the Nantucket Land Bank, the MMA took over the field adjacent to the Aquarium. With a tent, lights, food, drink, and a band, the MMA celebrated the accomplishments of Maria Mitchell. The event was held Friday, August 10. Additionally, to celebrate the



200th birthday of Maria Mitchell, The Town's

Department of Culture and Tourism collaborated with the MMA to produce a walking tour of touch points in Maria's life. The Department also collaborated on and paid for enamel lapel pins featuring the 200th's logo. The pins were distributed island wide and received with great enthusiasm.

To celebrate the discovery of the comet on October 1, 1847 from atop the roof of the Pacific Bank in Nantucket, the MMA and Bank of America hosted a free cocktail event for approximately 150 people in the very place where Maria lived from 1836 - 1861.

The MMA produced its first professional video of the Maria Mitchell Association with the help of Yellow Productions, a Nantucket-based video production company. The video is approximately four minutes long and features all that the MMA has to offer. The video helps the MMA to build its image while also informing viewers about the programs and collections offered by the MMA. The video was played at the Dreamland Theater prior to the start of each movie.

As in past years, the Department created and produced the "Business Sponsor Book", which outlines how a company can become involved in supporting the



MMA. Additionally, the "Summer Program Book" was produced, listing all of the programs offered by the MMA, including Summer Discovery programs.

The Nantucket Red Tie Soirée, the largest fundraiser for the MMA, was held again at the Sankaty Head Golf Club on Sunday, July 8. The silent auction had a record number of items donated and the event was sold out. Special guest for the evening was Ambassador Rufus Gifford of Denmark.

## Maria Mitchell Women In Science Symposium

The 200th Birthday year closed with the highly anticipated first Maria Mitchell Women in Science Symposium. The first MMWISS was a HUGE success and sold out! After over a year of planning, it all came to fruition on October 4-5, 2019 in Wellesley, Massachusetts at the Babson Executive Conference Center. Women and men from all walks of STEM (Science, Technology, Engineering, Mathematics) were in attendance - from college students to those who were in the late stages of their careers or already in retirement. They came to celebrate Maria Mitchell and what she did for women in science and to celebrate one another. They came to hear from others, to develop real-world solutions for women and girls in STEM, and to create new paths of opportunity and a support system for women in STEM. It was a unique hands-on experience in which attendees developed solutions that could be taken back to a person's school/place of work/institution. Attendees met as a group for much of the Symposium and then met in smaller, assigned salons that provided safe spaces for people to talk about issues and how to solve them. The keynotes speakers were: author Dava Sobel, Israel Munson Professor of Physics and Astronomy and Director of the Yale University Center for Astrophysics Meg Urry, Ph. D., Kate Kirby, Ph.D. the Director of the American Physical Society, and Jill Tarter, Ph.D. the Director Emeritus of SETI. The four keynotes were also the recipients of the newly revived Maria Mitchell Women in Science Award. The MMA founded this award and presented it for many years until it no longer occurred. The MMWISS was the moment to bring it back and the awardees were very excited and honored to receive the honor.

The MMWISS panels were moderated by Heather Goldstone, Ph.D. science editor at WCAI the Cape and Islands NPR Station, and panelists and topics were as follows:

#### Recruitment: How To Bring Women and Girls into STEM

Shirley Malcom, Ph. D., *Director of Education and Human Resources Programs, American Association for the Advancement of Science* 

Christine Kelley, Ph. D., Professor of Mathematics, University of Nebraska

Regina Jorgenson, Ph. D., Director of Astronomy, MMA

Megan Spencer, Novartis Community Exploration and Learning Lab, Novartis Biomedical Institutes

# Maria Mitchell Women In Science Symposium

# Retention: Strategies for Stemming the Leaky Pipeline and Ending Unconscious Bias

Colette Salyk, Ph. D. Assistant Professor of Astronomy, Vassar College

Jackie MacDonald, Ph.D. Associate Professor, Department of Environmental Sciences and Engineering, University of North Carolina

Cecilia Arragon, Ph.D., Professor in Department of Human Centered Design and Engineering and Senior Data Science Fellow, University of Washington

# The Future: Where Are We Going and How Do We Get There? The Future of Women and Girls in STEM

Dr. Anne LaCasce, Associate Professor of Medicine, Lymphoma Specialist, Director of Dana-Farber/Partners CancerCare Fellowship in Hematology/ Oncology, Dana-Farber Cancer Center

Susana Widicus Weaver, Ph.D. Associate Professor and Director of Graduate Studies Department of Chemistry, Emory University

Russette Lyons, Ph.D., *Director of Novartis Community Exploration and Learning Lab, Novartis Institutes for Biomedical Research* 

Kate Kirby, Ph.D., Executive Officer, American Physical Society

Sponsors of the First MMWISS were: Dana-Farber Cancer Institute, Mount Holyoke College, Vassar College, Brainpickings.org, Schwartz Hannum PC, MassBio, Nantucket Conservation Foundation, Linda Loring Nature Foundation, American Philosophical Society, Novartis Institutes for Biomedical Research, Kenan Institute for Engineering, Technology and Science, MA Space (NASA) Grant Consortium, National Science Foundation, Tupancy-Harris Foundation, Boston Red Sox Foundation, Sheila David, Jascin Leonardo Finger, D.E. Shaw & Co., American Astronomical Society.



97.7 WACK

ACK 4170 w/ Peddler

Ambrosia

Annie and the Tees, Inc.

Atlantic

Aunt Leah's Fudge Beverly Barlow The Black Dog

Boston Red Sox Foundation

Breezin' Up

Cape Air & Nantucket Airlines

Centre Pointe Centre Street Bistro

Charleston Shoe Company

Christopher Bonelli

The Club Car Coastal

Craftmasters

Cross Rip Outfitters
Current Vintage

DATTCO

D. Dream Atelier Darya Salon & Spa David Sharpe

East End Gallery Endeavor Sailling Excursions

Eric Savetsky

Four Winds Craft Guild Freedman's of Nantucket

Fresh

Francine Ouellette

Force5

Fusaro's Homemade Italian

G.S. Hill Gallery

Geronimo's Pet Supplies

Ginger Andrews

Grey Salt Haberdashery Handlebar Café

Haul-Over Nantucket

Henley & Sloane

Hepburn

Ice

Isabel Harvey

Island Bike Company Island Cashmere Island Company

The Islander It's a Shore Thing

J. McLaughlin

Jack Wills

Jewel in the Sea

Jeweler's Gallery of Nantucket

Juice Bar

Kidding Around Lady Bird Lingerie Laura Qureshi

Leggiadro

Lilly Pulitzer

Lynx Educational Foundation

Martin McKerrow

Melissa David Salon & Spa

Milly & Grace

Monelle

Nantucket Beach Chair Nantucket Bike Shop Nantucket Book Partners Nantucket Clothing Company Nantucket Coffee Roasters

Nantucket Culinary Nantucket Diva Salon Nantucket Light Shop Nantucket Peddler

Nantucket Pool & Spa Center

The Nantucket Project Nantucket Surf Club Nantucket Walkabout Nantucket Whaler Native Shoes

Nobby Clothes Shop Pageo Jewelers

Parchment Patina

Peter England Nantucket

Perch

Ralph Lauren

RJ Miller Salon & Spa

Robert Frazier Robert Miklos Sayle's Seafood

Schulan's Fairlawn, Inc.

The Sea Grille Shari's Place Skar Jewelry Skinny Dip Slip 14 Space

Straight Wharf Restaurant Susan Lister Locke Jeweler

Merrilou & Ned Symes The Tavern Thai House Toy Boat Trinity Collection The Westmoor Club

Red-Tie Soirée



## Business Sponsors

#### \$2,500

Hingham Institution for Savings US Trust

#### \$1,500

Atlantic East Real Estate Fisher Real Estate Nantucket House Antiques & Interior Design Nantucket Pharmacy

#### **Individual Sponsors**

#### \$20,000

Bebe Archibald Poor, DVM, MS

#### \$5.000

John G. Archibald Beverly A. & David H. Barlow Toni & Martin McKerrow Gayle & Joseph Santucci, Jr.

#### \$2,500

Barry Barksdale Anne & Chad Gifford Michael & Joan Nelson Maureen Phillips & Dr. Douglas Horst

#### \$1,250

Mariann Berg Hundahl Appley
Howard & Maureen N. Blitman
Laura Debonis & Scott Nathan
John & Margaret Falk
Joe Grause
Lisa Larson
Judy Lee & Robert Schwarzenbach
Judy & John MacLeod
Nathaniel & Melissa Philbrick
Eileen Rudden & Josh Posner
William & Laurie Schutt
Ned & Merrielou Symes
Helene & Francis (Tim) Weld

University of Nantucket Valero & Sons, Inc. The Vanderbilt Gallery Victoria Greenhood Jewelry Design Zero Main on Centre

#### Soirée Donations

William & Kathie Beattie
Ann Buttrick
Dennis & Anne Cross
Fay Gambee
Dr. Henry Gewirtz
Haul-Over Nantucket
Bruce & Ann Hall Kaplan
Ann and Hardy Oliver
Diana R. Regan

#### 200th on the Harbor

Cisco Brewers
Ana & Michael Ericksen
Margaret & John Falk
Missy & Chris Griffiths
Tina & Michael Jemison
Toni & Martin McKerrow

### **Supporting Members**

#### **Business Members**

#### \$1,000

Bartlett's Ocean View Farm Island Lumber Co., Inc.

#### \$500

Fisher Real Estate Hyline Cruises Sylvia Antiques

#### \$250

Glidden's Island Seafood Nantucket Walkabout

#### **Individual Supporting Members**

#### \$2.500

Susan & Michael Baer

#### \$1,000

Andrew Forsyth & Kelly Williams Isabelle Georgeaux & Patrick Healy Tom & Donna Jarecki Anne & John J. Kennedy Megan Landeck & Charles Hoopes Kevin & Beth McMeen Richardson & Pamela Merriman Roger & Kathryn Penske Philip & Janet Villiotte Catherine & Thomas Walkey

#### \$500

Bill & Sara Congdon Lisa Gustavson Amy & Brett Harsch Andre & Suellen Perold James Meehan & Patricia White Gregory & Tracey Morzano Meg Succop & Rob Adams

#### \$250

Dennie Doran & Allan D. Bell William & Margaret S. Brenizer William & Carol Browne Dennis & Anne Cross Chip Carver & Anne DeLaney Joseph & Cheryl DiMartino Barbara & James Duffv David & Vinta Ferrera Peter Ginn Gloria & Jeffery Holtman Ulrich Lachler & Nancy Gillespie Richard & Carol Lowry Drs. Joel Bowman & Pat Michaelson Sam & Ellen Phelan Maureen Phillips & Dr. Douglas Horst Dr. Abrar & Laura Qureshi Matthew & Jessica Rainwater Linda Saligman Seth & Jennifer Stier Jonathan Swain

#### **Annual Fund**

#### \$10,000+

Ames Family Charitable Remainder Unitrust John & Margaret Falk Fisher Real Estate Barbara & Amos Hostetter John S. Weatherley Charitable Foundation Ned & Merrielou Symes

#### \$5,000 - \$9,999

Archibald Family Foundation
Susan Blount & Rick Bard
Toni & Martin McKerrow
Ronay & Richard Menschel
North Pond Foundation
Rita Allen Foundation
Meg Reynolds & William McKee
Christine Ryan & Curt Burwell

#### \$1.000 - \$4.999

Beverly A. & David H. Barlow Constance & Harrington Bischof Andrea Brue Sally & Richard Charpie Cox Foundation, Inc. Maureen & James Crowlev Lisa & Porter Dawson Heather & Dirk De Roos Barbara & James Duffy Figawi Charities Fva Gaw Nancy & Charles Geschke Gilbert Verney Foundation Peggy Gilfoy Joan & Phillip Gullev Lindsev & Zac Gund Marianne & Jack Hegenbart Carolyn & Kevin Holt Donna & Tom Jarecki Barbara Jones Judy Family Foundation Judy Lee & Robert Schwarzenbach Edith & Salvatore Lentini Mr. & Mrs. David M. Lilly, Jr. Grace & Ken Logan Christa & Mark Lopez Deedie & Edward McCarthy Laetitia & Stephen Mead Ginger & Marlin Miller Polly & Nick Miller Moose Moss Donor Advised Fund Joan & Michael Nelson Susan & Donald Pegg Peravid Foundation Melissa & Nathaniel Philbrick Vicki & Gerald Platt

Post Family

Ellen & David Ross

Eileen Rudden & Josh Posner

Elaine & Carv Schwartz

Randee Seiger

Lorraine C. Snell

Stillwaters Charitable Trust

T Theory Foundation

Thornburg Foundation

Robert & Constance Walkingshaw

Hannah Wallace Susan Weatherlev

Helene & Francis (Tim) Weld

#### \$1 - \$999

Stephanie Abisi

Garland & James Alban

Sue Ellen Alderman

Patricia J. & Thomas Anathan

Donald Anderson

Summerlin Anderson

Ann-Britt & Christian Angle

Ara D. Cohen Charitable Lead Foundation

Barry Barksdale

Judy & John Belash

Shannon & Dominic Bell

Natasha Bergreen

Gabija Birzinyte

Cindy & Kenneth Blackshaw

Lisa & Bruce Bond

Georgette & Solomon Boucai

**Edith Bouriez** 

Allison & Chris Bovard

Lauren & Larry Breakiron

Lucia & Richard Brimer

Susan & Gene Briskman

Angela & Fred Bromenschenkel

Marilyn & Haworth Bromley

Carol & William Browne

Carol & William Browne

Lisa-Margaret & Stewart Bryan

Sally Bub

Gretchen & Derek Buchmann

Laura & Bill Buck

Bonnie J. Buratti. Ph.D.

Alice Burnham

Eileen & Robert Butler

Robin & Ray Callahan

Diana & Hill Carter, Jr.

William Timothy Cashman

Karen Castle & John Mahoney

Centerplate-Boston Culinary Group

Nancy Chanover

Mary & Michael Kearney Chlopecki

Rachel Coben

Hilary & Ara Cohen

Nancy & Paul Connolly

Mary Cowell

Deborah Crocker & Ronald Buta

Amanda B. Cross

Carol March Emerson Cross

Culligan Family

Sheila David & David Policansky

Peggy Davis & William G. Porter

Beth Day

Elizabeth de la Pena

Mr. & Mrs. Edwin Deane Leonard

Megan Delgado

Susan Deutsch

Peter Dictenberg

Rosalind Dodd

Keltie Donelan

Sheila & William Donovan

Shelley Dresser & David Gagnon

Jennifer Eckert & Richard D'Amore

Marvna Dzvonik

Marsha & Bob Egan

Christine & Taylor Ellis

Janice Ellsworth

Ana & Michael Ericksen

Ernst Land Design

Carrie Disette

Maia Farish

- - -

Mary Farland

Sheila & Matt Fee

Rebecca Feen

Marianne & Robert Felch

Mary Ellen Ferrel

Jascin & Eric Finger

Karen & Josef Fischer

Elizabeth Fish

Frerichs Family Fund

Kathleen Gaffney

Mr. & Mrs. Robert Gambee

Mary & Craig Gambee

Julia & Cam Gammill

Nicole Garcia

Melinda & Bill Gardner

Michelle & Steven Garfinkel

Julie & Ralph Geer

Dr. Henry Gewirtz

Margot & Joe Gibson

- 19-

Sarah & Edward Gillum, Jr.

Mary Gilmour

Nancy Giragosian & Burton Went

Melissa & Scott Gluck

Marilyn L. Gobbo & Alan Kramer

Nell & Mitchell Goetze

Margaret & John Goldman

Joe Grause

Toby Ann Greenberg

Missy & Chris Griffiths

Lindsey & Zack Gund

Barbara & Edmund Haiim

Cory Hajim & Jim Sperber

Kathy Halbower

Valerie & Robert Hall

Natasha & Jason Harman Harsch Family Foundation

Lucile Hays

Lucy & Patrick Hehir

Hehir Group Custom Builders Inc.

Katherine Hemingway & Dane DeCarlo

Jeffrey Hempstead

Hallie Henderson & Erich M. Fischer

Frances Hickey Kimberly Higgins

Joan & Richard Hofmann

Hollie & Jamie Holt

Kimberlev Homer

Mary Howell & Jeff Shapiro

Margaret & Peter Hovt

Caroline & Peter Hubbell

Grace Hull

Varban Ivanov

Lisa & Mark Jennings

Cecil & Paul Jensen

JNC Fund

Allison Johnson

Ann & Charles Johnson

Harvey Jones

Judith T. Karpen

Eliud Kauffman

Suzanne Keating

Andrew Kern

Constance & Mark Klocke

Kim Klopstock

Sarah & Rick Knauft

Knowledgeworks Foundation

Tarini Konchady

Tara & Ted Kramer

Flizabeth Laffont

Lisa Larson

Amy Lee Julie Lee

Margaret & Terry Lenzner

Cathleen & Timothy Lepore

Susan & Larry Levine

John Liu

Marlaine Lockheed & Steve E. Frakt

Pamela Lohmann

Mary Longacre

Thomas B. Loring

Kerry & John Loughborough

Sherry Lowe

Nancy & Richard Lubin

Warren Lyman

Madaket Marine

Lacey Malloy

Miriam Mandell

Joan Manley

Raphael Martinez

Heather Masciotti

Sarah & Christopher Mason

Katherine & Michael Mastellone

Joseph McGraw

Kerry McKenna

Beth & Kevin McMeen

Katie & Bill McNabb

Barbara & Alan Medaugh

Kristine & James Melvin

Tamsen Merrill & Gregory Thorp

Jacqueline Merse

Tina & Robert Miklos

Melanie Milgram

William C. Miller, IV

Jane & John Miller

Miriam & Herbert Mittenthal

Yuko Morita

Nita & Robert Morse

Murray Camp of Nantucket

Erin Myers

Jessica Myers

Nantucket Dermatology

Nantucket Home Health Care, Inc.

Nantucket Island Resorts

Mary Naughton

Jennifer R. Nelson

Lucy Newcomb

Deborah & Jeff Nicholson

Tiffany & Jack Noonan

Mary & Al Novissimo Harriet & Robert Noyes

- 20 -

Lorraine & Robert Olson

Louise Oram-Cho

Jeffrey Paduch

Maria Partida

Helene Patterson

Kathryn & Roger Penske

Suellen & Andre Perold

Adele & Chester Pielock

Pledgeling Foundation

Eileen & Elliott Pollack

**Pollacks** 

Darcy & Matthew Poor

Vicky & Andy Powell

Gretchen Putnam

Peg & Jay Rachfal

Catherine Raphael

John Reed

Allen B. Reinhard

Geoffrey Riggs

Jamie & Matthew Roberts

Susan Robinson

Rachel Rock & Josh Levy

Kara & Stephen Rogers

Sueanne & Nicholas Rorick

Laura Rosene & R. Scott Toop

Priscilla & Kermit Roosevelt

Robin & Mickey Rowland

Errol Rudman

Cordelia & James Russell

Katherine Rhode & John Salzer

Samuel P. Mandell Foundation

Carl Michael Sangree, Jr.

Stephanie Santella

Charles Sawyer

James R. Schufreider & Christopher Mario

Laurie & William Schutt

Christina & Harry Schwefel

Ricarda Scully

Rebecca Segall

Kevin Sheridan

Mrs. John J.B. Shea

Kimberly & Andrew Shiff

Nancy E. Snell

Something Natural

Molly & Bryan Sorrows

Cynthia Staniels

Pamela & Stephen St. Pierre

Ann & Bob Stock

Kathy & Gregory Sullivan

Mark Tercek

Carolyn & Geoffrey Thayer

Ann & George Thom

Derek E. Till

Colleen & Graves Tompkins

Lydia Toth

Michael L. Trimpi

Samuel Turner

Sarah Turner

Romelys Vasquez

Deborah & Donald W. Van Dyke, II

Pamela Van Hoven Clark

Priscilla Van Ogtrop

Heather Vance

Susan Vester

Irene & Laszlo Von Lazar

Kathy & Gary Walker

Laura Wasserman

Mary Wawro & Peter Morrison

Alexander Webb III

Yvette Weber

Martha G. Weille

Welch & Associates, Inc. Realty Group

Clark Whitcomb

Carolyn Wells & Frank White

Elizabeth & Hugh Wilkinson

Natasha Willauer

Will Brown Fund

Joanne Wilson

William Wilson

Judy & Michael Wodynski

Alexandra Yurkosky

Barbara Zachary

Carlyn & Jon Zehner

#### In Honor / Memory Gifts

In Memory of Barbara Vigneau Cindy & Kenneth Blackshaw

Joan H. Manley

In Memory of E. Dorrit Hoffleit, Ph.D.

Carol Day

Judith Karpen

In Memory of Dr. Emilia Belserene, Ph.D

Joan H. Manley

In Memory of Edith Andrews

Ginger Andrews

Trish Pastuszak

*In Memory of John H. Cabot*Jeanne & Blakeslee Barnes

*In Memory of Joyce A. Mark* Valerie Bouvier Toriann & Tommy Pienciak

*In Memory of Terrence H. Laundry* T Theory Foundation

In Memory of Marvin Greenberg
Fifi Greenberg
Toby Ann Greenberg
Kim & Tom Griswold
Kathleen Hay Designs

In Memory of Duncan Wall Suzanne Lee Wall

*In Honor of Jascin Leonardo Finger* Constance & Robert Walkingshaw

*In Honor of Sadie Goetze* Nell & Mitchell Goetze

*In Honor of Daniel W. Drake* Betty P. Kenan

*In Honor of Gary Walker* Margaret & Peter Hoyt

#### **Grant Support**

Cape Cod 5 Foundation CARE for the Cape & Islands Community Foundation for Nantucket Edith Andrews Fund Ella George Children's Foundation Highland Street Foundation Massachusetts Cultural Council M. S. Worthington Foundation Nantucket Garden Club Nantucket Golf Club Foundation Nantucket Shellfish Association National Science Foundation NCH Community Health Fund ReMain Nantucket Fund Town of Nantucket - Community Preservation Committee **Tupancy-Harris Foundation** 

#### **Restricted Gifts**

#### **Adam Bloom Scholarship Fund**

Drs. Margaret & John Goldman Susan & Larry Levin

#### **Astronomy**

Association of Universities for Research in Astronomy Big Kid Science Digitalis Education Solutions, Inc. Martha Hanner Planewave Instruments Princeton Instruments

#### **Barn Owl / Osprey Program**

Nancy & Doug Abbey Leanne Marie Bell Maureen & Howard Blitman Ruth & Robi Blumenstein Susan & Coleman Burke Margaret & John Falk Sarah & William Goodman Cindv & Evan Jones Sonya Keene & John Moy Maria & Peter Kellner Sarah & Rick Knauft Susan & William Learnard Sherry Lowe Helen & James Manchester Meg Reynolds & William McKee Nina Pollock Gretchen & Jay Riley Samantha & Mark Sandler Gladys & James Stedman Ann & George Thom Meredith & Richard Tolsdorf Ellen & Garv Tratt Bill Untereker Allison & Phillip Waterman

#### Birdathon

Gillian & James Duda Elissa Gilgen Beverly Hall Debra Hopkins Virginia & Richard Irwin Sonya Keene & John Moy

Anne & Robert Kennedy Barbara & Bill Maple Andrew McKenna-Foster Kat Robinson Grieder

#### **Education Program**

Scholarships Ardmore Toyota - Internships Ella George Children's Foundation North American Assoc. for Environmental Education Toyota Dealer Match Program - Internships

Al & Mary Novissimo Giving Fund -

Stephen Welch

#### **Loines Deck Campaign**

Archibald Family Foundation
John G. Archibald
Nancy Beebe
Jeanne Berk
Susan Blount & Rick Bard
Constance & Harrington Bischof
Burwell Family
Marcia & Allan Chertok
Carol & Erik Christensen
Culligan Family
Lisa & Porter Dawson

Anne & Robert Drapeau Jere Freedman

Jane & Joseph Gifun

Margaret & John Goldman Amy & Brett Harsch

Benjamin P. Holder

Kimberley Homer

Elizabeth Jacobsen

Sonya Keene & John Moy

Mary Longacre

Millhiser & Dickson Families Milton Rowland & Associates

Mary & Al Novissimo

Maureen Phillips & Douglas Horst

Maria Popova

Ellen & Homer Ray

Mary & David Sharpe

Shuch Family

Yvette St. Jean

Esta-Lee & Harris Stone

Leigh Topham

#### **Mitchell House**

Caroline W. Farr Happy & Samuel Shipley, III Vassar College MMA Fellowship - Internship

#### **Tree Project**

ACKsent Design Island Treasures LLC Nantucket Garden Club Nantucket Rotary Club

#### **Natural Science**

Burwell Family Fund - Bird Observation Exhibit Laura & Abrar Qureshi - Bay Scallop Research

#### **Science Speaker Series**

Don Allen Auto Services Cisco Brewers

#### **Program Book Sponsors**

ACK Dental Art
Allied Group
BPC Architecture
Christopher's Home Furnishings
Hanley Construction & Development
Hatch's Package Store
Jordan Real Estate
Killen Real Estate
Nantucket Architecture Group
Nantucket Dermatology
Nantucket Energy

Nantucket Energy
Nantucket House Antiques & Interior Design

Pinwheels, Inc.
Pioneer Cleaning

Quidley & Company

Rachel Dixon LLC

The Tile Room

The Water Closet

Tixodes LLC

Wicked Island Bakery

Yellow Productions

Young's Bicycle Shop & Car Rental



## **Donations and Gifts**

Mitchell House and the Archives and Special Collections received several gifts this year. They included:

**Happy Shipley \$2,000** for use in Mitchell House Conservation

**Robert**<sup>†</sup> **and Nina Hellman** – various natural science related books

Joan Manley - painting of the rear of MMA Science Library by Dan Durand, carved marble owl head on black marble by Jane Stroup (former MMA librarian) **Virginia Andrews** - hand-held brass and tin lantern, ca. 1870

Line Farr and Martha Kent – dinnerware belonging to Mary and Peleg Mitchell Jr and used at 1 Vestal Street, thirty-eight pieces including platters, soup tureen, and vegetable platters in Ridgeway's Asiatic Palaces pattern, blue and white.

**Line Farr** \$250.00 for Mitchell House Conservation









#### THE NANTUCKET MARIA MITCHELL ASSOCIATION, INC.

#### STATEMENT OF FINANCIAL POSITION

#### DECEMBER 31, 2018 (With Summarized Financial Information for 2017)

	2018	2017
Assets	-11	
Cash	\$ 357,355	\$ 743,360
Receivables		
Contributions	114,626	126,376
Grants	29,691	-
Other	31,959	45,051
Prepaid expenses and other assets	9,844	9,210
Investments	2,575,712	3,056,066
Note receivable	235,000	235,000
Remainder interest in property	1,270,669	1,205,568
Property and equipment, net	6,616,073	5,281,822
	\$ 11,240,929	\$ 10,702,453
Liabilities and Net Assets		
Current liabilities		
Accounts payable and accrued liabilities	\$ 152,791	\$ 173,268
Current maturities of long-term debt	12,408	
Refundable grants	200,000	<u> </u>
Total current liabilities	365,199	173,268
Long-term debt, less current maturities	1,065,605	
Total liabilities	1,430,804	173,268
Net assets		
Without donor restrictions	6,330,984	6,691,687
With donor restrictions	3,479,141	3,837,498
Total net assets	9,810,125	10,529,185
	\$ 11,240,929	\$ 10,702,453

# **Financial Report**

#### THE NANTUCKET MARIA MITCHELL ASSOCIATION, INC.

#### STATEMENT OF ACTIVITIES

#### YEAR ENDED DECEMBER 31, 2018

(With Summarized Financial Information for 2017)

	Without Donor	With Donor	To	Totals	
	Restrictions	Restrictions	2018	2017	
Operating activities:	377	Marie Control	S		
Revenue and support					
Contributions	\$ 323,874	\$ 35,392	\$ 359,266	\$ 341,347	
Grants	146,434	31,235	177,669	222,860	
Programs	410,266	-	410,266	302,421	
Admissions	54,019	§2	54,019	55,988	
Memberships	84,750	10 m	84,750	93,895	
Museum Shop	17,314	- 12	17,314	16,665	
Special fundraising events	14,000		A STATE OF THE PARTY OF THE PAR	1100000	
Gross proceeds	182,006	82	182,006	160,027	
Less: Direct benefit to donors	78,899	6.4	78,899	44,699	
		W 3	- The state of the		
Net revenue from special fundraising events	103,107		103,107	115,328	
Investment return designated for operations	129,050	-	129,050	142,550	
Rental income	49,570	9.5	49,570	70,145	
Interest income	2,943	32	2,943	2,782	
Net assets released from restriction					
Satisfaction of program restrictions	123,049	(123,049)			
Total revenue and support	1,444,376	(56,422)	1,387,954	1,363,981	
Expenses					
Program services	1,140,087	17.0	1,140,087	1,026,070	
Management and general	470,448	§2	470,448	391,737	
Development	277,926	/4 <u>18</u>	277,926	264,721	
Total expenses	1,888,461		1,888,461	1,682,528	
Change in net assets from operating activities	(444,085)	(56,422)	(500,507)	(318,547)	
Non-operating activities:					
Investment return, less amounts designated					
for operations	(34,008)	(247,896)	(281,904)	346,821	
Contributions and grants restricted for capital activities	201 <u>2</u> 01 34	10,000	10,000	36,772	
Loss on uncollectible contributions receivable	-	(11,750)	(11,750)	(22,500)	
Donation of remainder interest in property	-	65,101	65,101	20, 20, 20	
Net assets released from restriction					
Satisfaction of capital related restrictions	117,390	(117,390)	9 <u>6 – 8</u> 9		
Change in net assets from non-operating activities	83,382	(301,935)	(218,553)	361,093	
Change in net assets	(360,703)	(358,357)	(719,060)	42,546	
Net assets, beginning of year	6,691,687	3,837,498	10,529,185	10,486,639	
Net assets, end of year	\$ 6,330,984	\$ 3,479,141	\$ 9.810.125	\$ 10,529,185	

## **Board, Staff, Interns & Volunteers**

# Board of Directors as of October 17, 2018

Helene Weld, President (June 2018 - ) Deborah Manus (June 2016 - June 2018) Judy MacLeod, Vice President Curt Burwell, Treasurer Joseph Santucci, Jr., Clerk Richard Bard **Beverly Barlow** Margaret Falk Chris Griffiths John Hartner Toni McKerrow Michael Nelson Mary Archibald (Bebe) Poor, D.V.M. Katherine Rhode, Ph.D. Brian Sullivan Edward Symes III Jane Tausig

#### **Honorary Board of Directors:**

Howard Blitman, John Daniels, Daniel Drake, Joan Gulley, Judith Lee, Malcolm MacNab, M.D.,Ph.D., Eileen McGrath, Nathaniel Philbrick, Anne Parks Strain, Derek Till

# Administration Executive Director

David Gagnon

# **Development Director**George Donnelly

# Associate Director of Development and Special Projects

Shelley Dresser

# **Executive Administrator and Marketing/Event Coordinator**

Trinity Foreman (until August 2018) Lydia Gullicksen (Starting in September 2018)

## Finance & Information Administator

Katharine Robinson Grieder

### **Data Specialist**

Vince Murphy

#### Marketing Intern

Lydia Gullicksen

#### **Natural Science**

**Director of Natural Science** Emily Goldstein-Murphy, Ph.D.

#### **Natural Science Affiliated Staff**

Robert S. Kennedy, Ph.D. Senior Research Fellow, MMA and Department of Ornithology, Harvard University Museum of Comparative Zoology

Valerie A. Hall, Ph.D. Research Associate, Scallops

Andrew McKenna-Foster Research Associate, Spiders

Andrew McCandless Research Associate, Eel Grass

# MMA Natural Science Museum in Hinchman House

Virginia Andrews
Field Ornithologist
Julia Blyth
Collections Manager

#### Interns

Elisabeth Sorrows B.A., Earlham College

Julia Barrone B.S., Framingham State University

Emily Gagne Junior, University of Maine

## **Board, Staff, Interns & Volunteers**

#### **MMA Aquarium**

Kara Falck, Manager Junior, Providence College

Jack Dubinsky, Manager B.A., The Evergreen State College

#### Interns

Isabella Gaw B.A., Skidmore College

Kylie Schubert Senior, Northern Arizona University

Setse Bush Junior, Vassar College

# Astronomy Director of Astronomy

Regina Jorgenson, Ph.D

### Telescope Engineer

Gary Walker

### **Astronomy Interns**

Anne Blackwell

College of William and Mary

Katie Chapman Colgate University

Jay Chittidi Vassar College

PJ Gibson Willamette University

Alexandra Mannings University of Alabama

Caeley Pittman
William Jewel College

#### **Affiliated Astronomers**

Dr. Terri Brandt NASA, Goddard Space Flight Center

Dr. Suvi Gezari University of Maryland

Dr. Lindsay King University of Texas, Dallas

Dr. Rodolfo Montez, Jr. Chandra X-Ray Center, Smithsonian Astrophysical Observatory, Center for Astrophysics | Harvard & Smithsonian

Dr. Philip Muirhead Boston University

# Education Director of Education

Kim Botelho

# **Education Coordinator**Jordan McHugh

# Assistant Camp Director/Aquatics Director

Chris Coomey

### **Discovery Program Instructors**

Thompson Brock Nicholas Brown Chi Bui Ann Carter Eileen Daley Samantha Flagg Emily Herz Kaitlin Hunt David Paasche Victoria Read Lydia Silber

Alexandra Webb

### Pop-Up Science Intern

Saoirse Ryan

## **Board, Staff, Interns & Volunteers**

Mitchell House, Archives & **Special Collections** MMA Deputy Director and Mitchell House Curator Jascin N. Leonardo Finger

## Mitchell House Intern

Kelly Bernatzky Vassar College 2019

#### **Volunteer Tour Guide**

Avery Hylton Patricia Michaelson, Ph.D.

#### Student Volunteer

Keira Reidy-Dack

### **Natural Science Volunteers** Adult Volunteers:

Kenneth T. Blackshaw Trish Pastuzak Scott Leonard Annie Mendelsohn Vincent Murphy Tucker Taylor Saoirse Ryan Zach Dusseau Kim Horvn Danielle O'Dell Seth Englebourg Jed Williams Cormac Collier

Sarah Bois

Cailin Duke

Tobias Glidden

Cheryl Beaton

Patrick Gregorich

### Museum and Aquarium Student Volunteers:

Ava Waig Gus Von Lazar Cat Buccino Kvle Steele Elizabeth Pellegrini Isabella Lopez Clvde Kellev Stefano Chiampo Brogan O'Hearn Connor Brennan Faizaan Qureshi Olivia Barlow Andrew Breckenridge Rachel Blatt Sophia Roosevelt Chris Petrella Chase Dallin Juliana Brenner Greta Leissa Mason Kucik Sydney Bramen

Angus Gauffin Mairead Burwell Mava Albright Daniel Blatt Shea Lyden Alex Yuen Derek Sokol Alex Ratowski Matthew Kihiczak Katherine Kihiczak Mia Shevner Tori Dixon Gigi Griffith Daisy Hancock Lucy Ward Havley Bidwell Jenna Genthner

### Maria Mitchell Women in Science Symposium Committee Members:

Sarah T. Bois. Ph.D. Joel Bowman, Ph.D. Sheila David George Donnelly Shelley Dresser Jascin Leonardo Finger David Gagnon Emily Goldstein Murphy, Ph.D. Regina Jorgenson, Ph.D. Malcolm MacNab, M.D., Ph.D. Patricia Michaelson, Ph.D. Katherine Rhode, Ph.D.

- 29 -

### Research

The MMA conducts several ongoing research programs both on its own and with various collaborators.

#### **American Burying Beetle**

Lou Perrotti, Director of Conservation Programs, Roger Williams Park Zoo Cynthia Corsair, U.S. Fish and Wildlife Service

**Anita Barstow,** U.S. Fish and Wildlife Service

**Brandon Quinby,** *Purdue University, Ph.D. student* 

#### Scallops, Shellfish

Dr. Steve Estabrooks, *Scallop Researcher* Tara M. Riley, *Town of Nantucket Shellfish Biologist* 

Dr. Valerie Hall, MMA Scallop Researcher

### Horseshoe Crabs, Insects, Bats

Dr. Derek Perry, Massachusetts Division of Marine Fisheries

Dr. Jennifer Karberg, *Research* Supervisor, Nantucket Conservation Foundation

Danielle O'Dell, Research Technician/ Field Supervisor, Nantucket Conservation Foundation

### Snakes, Birds

Danielle O'Dell, Research Technician/ Field Supervisor, Nantucket Conservation Foundation

Scott Smyers, *Environmental Consultant, Oxbow Associates Inc.* 

Joe Martinez, Curatorial Assistant, Museum of Comparative Zoology

#### **Green Crabs**

Emily Molden, *Nantucket Land Council* Cormac Collier, *Nantucket Land Council* 

Jeff Carlson, Natural Resources Department, Town of Nantucket J.C. Johnsen, Natural Resources Department, Town of Nantucket

#### Other

Jessica Cundiff, Curatorial
Associate/Collections Manager,
Museum of Comparative
Zoology, Sankaty fossils
Karon Boattio, Managor of the

Karen Beattie, Manager of the Department of Science and Stewardship, Nantucket Conservation Foundation

Dr. Kevin Esvelt and Joanna Buchthal, MIT, Mice Against Ticks Project

#### Herbarium

Roberta Lombardi, Herbarium Assistant, UMass Amherst Pam Polloni, Research Assistant, Woods Hole Oceanographic Institute Kelly Omand, Research Technician/ Field Supervisor, Nantucket Conservation Foundation



## Collaborators

The Maria Mitchell Association is proud to establish collaborations with other non-profit organizations and universities in order to offer the best in programs and to conduct research vital to undertanding and preserving Nantucket's natural areas, history, and to pursue cutting edge research in astronomy using the MMA's telescopes and leading telescopes around the world and in space.

**ACKlimate** American Society of Mammalogists American Arachnology Society American Association of Variable Star Observers Artists Association of Nantucket **Boston University** Cape Cod Museum of **Natural History** City University of New York Connecticut College Egan Maritime Institute European Southern Observatory International Astronomical Union Josh Eldridge, "Critter Cruises" Mark Genthner, Just Do It. Too Harvard-Smithsonian Center for Astrophysics Harvard University Museum of Comparative Zoology The Irish Wildlife Trust **Keck Observatory** Linda Loring Nature Foundation Long Island University The Mammal Society (UK)

Marine Biological Laboratory

Massachusetts Audubon

Massachusetts Division of

Massachusetts Space Grant

Marine Fisheries

Consortium

Society

Massachusetts Institute of Technology U.S. Fish and Wildlife Service Massachusetts Division of Marine Fisheries Museum of Comparative Zoology Jason Bridges, Nantucket Bike Tours Town of Nantucket Natural Resources Department Monomoy Charters Montessori Children's House of Nantucket Nantucket Atheneum Nantucket Biodiversity Initiative Nantucket Boys and Girls Club Nantucket Community Sailing Nantucket Community Television Nantucket Conservation Foundation Nantucket Girl Scouts Nantucket Historical Association Nantucket Islands Land Bank Nantucket Land Council Nantucket Lighthouse School Nantucket Marine & Coastal Resources Department Nantucket Preservation Trust Nantucket Public Schools Nantucket Shellfish Association Nantucket Shipwreck & Lifesaving Museum National Collaborative of Women's History Sites National Museum of **Natural History** 

National Research Council of Canada Oxbow Associates, Inc. Pontificia Universidad Católica de Chile Preservation Institute Nantucket Prospect Hill Cemetery Association Purdue University Roger Williams Park Zoo Rotary Club of Nantucket Sconset Trust Shearwater Excursions Town of Nantucket The Trustees of Reservations Tuckernuck Land Trust University of Arizona Universidad Nacional Autónoma de México University of California, Davis University of Hawaii **UMass Amherst** UMass Boston Nantucket Field Station UMass Dartmouth School of Marine Science & Technology University of North Carolina at Charlotte University of Paris, France University of Rhode Island University of Western Australia U.S. Fish and Wildlife Service The Wildlife Society Woods Hole Oceanographic Institute Vassar College Yale University

### **Publications & Presentations**

### **Astronomy Publications:**

Karim, Md T., Fox, A., Jenkins, E., Bordoloi, R., Wakker, B., Savage, B., Lockman, F., Crawford, S., Jorgenson, R. A., Bland-Hawtorn, J., "Probing the Southern Fermi Bubble in Ultraviolet Absorption Using Distant AGNs," 2018, ApJ, 860, 98.

Beltz, H., Jorgenson, R. A., Rafelski, M. "A High Redshift Survey of Lyman Limit Systems." 2018, American Astronomical Society Meeting Abstracts #231, #357.02.

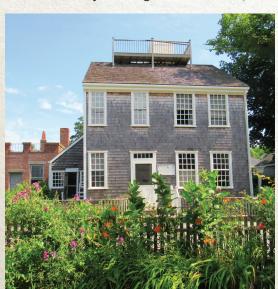
Ayers, M., Gezari, S., & Liu, T. "Searching for Signatures of Supermassive Black Hole Binaries." 2018, American Astronomical Society Meeting Abstracts #231, #347.18.

Benjamin, T., & Brandt, T. J. "Investigating y-ray Emission from the Westerlund 1 Massive Star Cluster." 2018, American Astronomical Society Meeting Abstracts #231, #344.14.

Bowyer, R. "Mapping Dark Matter in Simulated Galaxy Clusters." 2018, American Astronomical Society Meeting Abstracts #231, #252.10

Brzycki, B., & Silvia, D. "Observational Tracers of Hot and Cold Gas in Isolated Galaxy Simulations." 2018, American Astronomical Society Meeting Abstracts #231, #149.53.

Thomashow, E., Jorgenson, R. A., Strelnitski, V., Walker, G., Maria Mitchell Observatory (MMO) Research Experiences for Undergraduate (REU) Interns, "Two-Decade Monitoring of MWC349 in Optical and Radio: New Results." 2018, American Astronomical Society Meeting Abstracts #231, #136.10.



### Mitchell House Presentations:

Nantucket Historical Association Brown Bag Lunch - Jascin N. Leonardo Finger Curator and Deputy Director and David Gagnon, MMA Executive Director - Maria Mitchell's 200th.



MARIA MITCHELL
AMERICA'S FIRST WOMAN ASTRONOMER



4 Vestal Street Nantucket, MA 02554 508-228-9198 mariamitchell.org