



**Matthew Fontaine Maury**  
Pathfinder of the Seas



#### Cover photo

Lt. Matthew Fontaine Maury (1806-1873)

This reproduction is from an original portrait by Beverly Stautz commissioned in April 2001 by the US Naval Observatory. The photograph hangs in the entrance of NGA's Maury Hall. Courtesy of the U.S. Naval Observatory

#### Inside and Back Cover

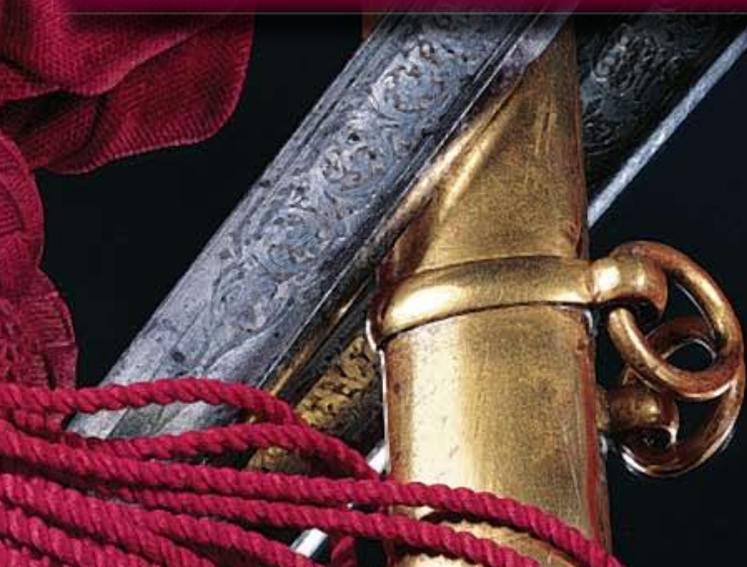
Matthew Maury's Presentation Sword

This sword was sold to Maury by the famous Wilkinson firm in London, England, while Maury was serving as Confederate naval agent. The blade was etched with his name on June 8, 1864 and the sword was assembled on June 18, a day before the famous battle between the C.S.S. Alabama and the U.S.S. Kearsarge. Maury purchased the Confederate warship just 2 years earlier.

The 32-inch blade is etched on both sides with intricate floral designs in a panel with "Maury-C.S.A." the reverse has the same intricate patterns and is etched, "Henry Wilkinson, Pall Mall, London," on the ricasso and with a script "C.S.A." In a panel midway through the 20-inch long etching. The sword has a brass mounted Gothic hilt conforming to the English pattern 1822 sword which was popular among British Marine officers. The guard has the Royal Cipher, "VR" surmounted by the crown, the grip is shagreen wrapped with 3 strands of twisted wire.

This sword was originally discovered in Georgia in 1980 and was acquired by a private collector. It was later on display at the Virginia Military Institute Museum and in 2005 was auctioned to a private collector.

Courtesy Hendershott Museum Consultants





## Dedication

This booklet is dedicated to the memory of Captain James Maury Werth, U.S. Navy (Retired), a great-grandson of Matthew F. Maury and the former Superintendent of the U.S. Naval Observatory from 1968 to 1972.

September 15, 1917 - January 8, 2008

## TRIBUTES TO M.F. MAURY



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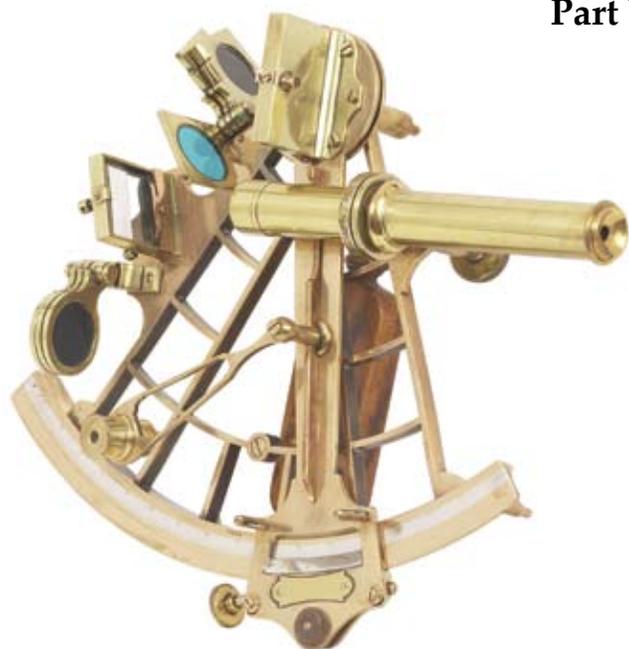
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# SHARING NGA HERITAGE AND TRADECRAFT

NGA's Source Operations & Management Directorate and Analysis & Production Directorate join in recognizing the life and achievements of Matthew Fontaine Maury—Pathfinder of the Seas and Father of Oceanography.

Maury revolutionized commerce shipping routes by gathering thousands of source Navy log books and providing timely, relevant analysis of the data, creating his famed, “Wind and Current” charts. His legacy continues in the missions of both Directorates.

He pioneered methodology and analysis in a broad spectrum of areas nearly 100 years before we coined “tradcrafft.” Today, NGA and its partners throughout the National System for Geospatial Intelligence (NSG) are the stewards of the tradecraft borne out of his legacy and provide the nation with a critical capability—geospatial intelligence (GEOINT). Analysts continue to build on his methods and practices by discovering and exploiting new sources of information, leveraging deep intellectual capital and integrating innovative practices and technology. The result is quality GEOINT that precisely describes, assesses, and visually depicts spatial information, physical features, and geographically-referenced activities on the Earth. Analytical tradecraft is the cornerstone of GEOINT's substantial contributions to the nation.

NGA and NSG analysts currently support America's decision makers in national security policy, international obligations, intelligence activities, and military operations. In the tradition of Maury and his fellow pathfinders, the dedicated analytical workforce continues to strive for high standards and constant innovation, pushing the limits of the tools and technology available to discover, exploit, and analyze source information.

In all of our mapping and charting work, we take inspiration from the excellence of Matthew Fontaine Maury as we strive to

*“KNOW THE EARTH—SHOW THE WAY.”*



John A. Oswald  
Director, Analysis & Production Directorate



Peter M. Makowsky  
Director, Source Operations & Management  
Directorate

# TRIBUTES TO M.F. MAURY

(JANUARY 14, 1806-FEBRUARY 1, 1873)

## THE QUINTESSENTIAL MARINE ANALYST

Matthew Maury was an American original who wore many hats throughout his career as a naval officer, pioneer, superintendent, scientist, author, lecturer, and educator.

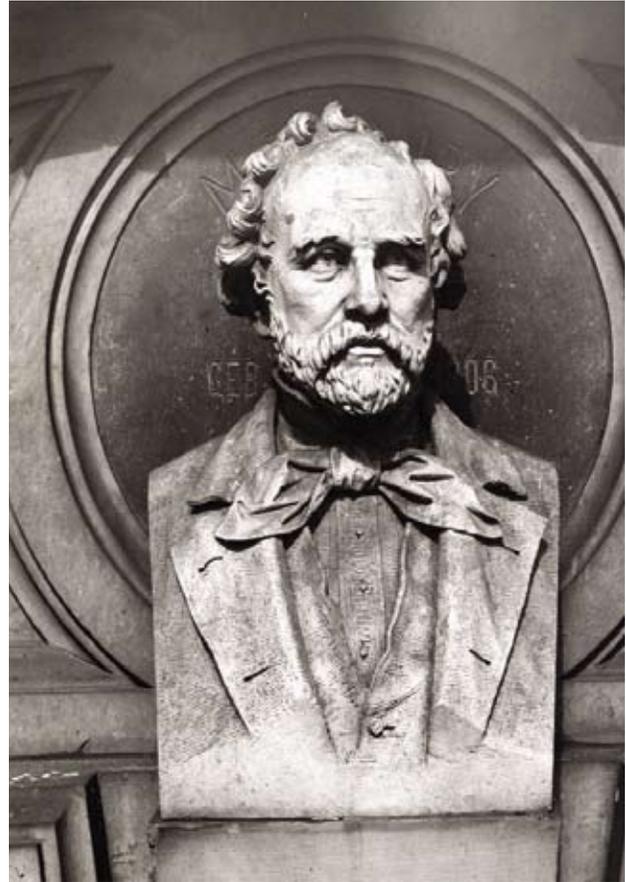
From its inception, the United States has relied upon brave individuals willing to risk life and fortune to explore uncharted territory. Explorers such as Lewis and Clark led expeditions through the Louisiana Purchase, and aided what became the great western migration across the North American continent. Their reports, maps, and artwork graphically and accurately depicted the little known territory through which they traveled. Indeed, the Lewis and Clark Expedition is considered by many to be the first nationally-sponsored geospatial intelligence mission,<sup>1</sup> chartered to provide information regarding unknown territory through the use of maps, charts, and drawings.

American explorer John Charles Fremont, (1813-1890) played a vital role also, and was nicknamed “the pathfinder” in acknowledgment of his expeditions to map the American West between 1838 and 1854.

But as the American westward expansion grew, an equally vital exploration took place on the oceans of the world, led by pathfinder Matthew Maury.

The National Geospatial-Intelligence Agency (NGA) proudly traces its lineage to these early explorers and is honored to have Maury Hall and the Fremont Building named after “pathfinders.”

Maury applied his expertise to chart the maritime territory both along the coastlines and upon the open sea. His efforts were directly responsible for the United States emerging as a powerful seafaring nation unequalled in its knowledge of the earth’s oceans, winds, and currents.



Maury is known by several titles, all earned as a result of his work in several fields. To the mariner, Matthew Maury is forever known as “Pathfinder of the Seas,” a title he earned for his role in developing Wind and Current Charts in 1847, the predecessor of today’s NGA Pilot Chart Atlas. Maury perhaps was the quintessential marine analyst as he “analyzed and evaluated” thousands of ships’ logbooks that had been, by regulation, stored in Navy warehouses. By comparing different logs on any given route, he could deduce areas of wide differences and recommend certain areas of the oceans that should be avoided at different times of the year. Today, NGA marine analysts embody Maury’s analytical skills by collecting, analyzing, maintaining, and disseminating navigation safety

<sup>1</sup> The term “geospatial intelligence” means the exploitation and analysis of imagery and geospatial information to describe, assess, and visually depict physical features and geographically referenced activities on the earth. Geospatial intelligence consists of imagery, imagery intelligence, and geospatial information.

information to its customers—the United States Navy and other NGA mission partners.

Maury also collected astronomical data and began cataloging the stars due to his belief that the United States should not be dependent upon foreign calculations and celestial observations. By 1849 his astronomical observations were sufficiently complete for him to establish the American Nautical Almanac Office.

Maury is considered the founder of Naval Meteorology, conceiving the idea of a universal system of meteorological observations on both land and sea. In 1853, he organized and represented the United States in the first International Maritime Meteorology Conference in Brussels. This led to a uniform weather reporting systems for 13 nations.

His 1855 publication, the “Physical Oceanography of the Sea,” is considered the first modern textbook of oceanography and won Maury international fame along with the title, “Father of Oceanography.” Maury, along with his assistant John Mercer Brooke, played a significant role in developing a method for deep-sea sounding and bottom profiling of the ocean.

In 1858, this bathymetric data was instrumental in determining the location between Newfoundland and Ireland for the first transatlantic cable. Cyrus Field, a U.S. financier and one of the founders of the New York, Newfoundland and London Telegraph Company formed to carry out the project, was a driving force to establish a transatlantic connection. He said in a banquet celebration after the laying of the first transatlantic cable, “I did the work, England gave the money, but Maury furnished the brains.”

NGA continues Maury’s bathymetric endeavors. NGA bathymetrists evaluate and extract hydrographic and bathymetric data to support safety to maritime navigation, and create geospatial graphic displays and textual reports of intelligence data and information to meet customer requirements. NGA Bathymetric Contour Charts play a vital role in underwater navigation, and allows United States Navy submarines to carry out our nation’s interests around the world.

Maury was a man who lived ahead of his time, yet he was a man who lived within his time. As a native Virginian, he sided with the South at the

outbreak of hostilities, and on April 20, 1861, he wrote President Lincoln and resigned his commission in the United States Navy. Upon his resignation, his length of service from 1842 to 1861, covering a 19-year span, is the longest held superintendency in the U.S. Naval Observatory’s history.

During the American Civil War, Maury served as the head of the Coastal and Harbor Defenses for the Confederacy. He was responsible for developing the first electrically controlled submarine mine used in warfare. In 1862, after completing this project, he went to England to procure ships for the Confederate Navy.

At the end of the war he did not return to the United States until he was pardoned in 1868 by President Andrew Johnson. He then entered academic life and served as professor of physics at the Virginia Military Institute until his death in 1873. Maury is buried in Hollywood Cemetery, Richmond, Virginia.

Maury’s daughter, Diana, described her father in his prime as only a daughter could: “a stout man, and about 5 feet 6 inches; he had a fresh ruddy complexion, with curling brown hair, and clear, tender, blue eyes. His massive head and strong neck surmounted broad and square shoulders, and a chest deep and full. His arms were long and strong, with hands small, soft, and beautifully formed—he was apt to use them in graceful gestures while conversing.”

Because of his innumerable contributions in so many diverse and important fields of study, Matthew Maury is today memorialized in many ways. From naval ships to buildings, the name Matthew Fontaine Maury remains forever embedded in the American memory, a tribute to his contribution to all sea-faring nations.

Howard J. Cohen  
January 14, 2006  
Workforce Development and Tradecraft Office



# PART I - TRIBUTES

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# MAURY BUILDINGS



*NGA's Maury Hall The National Geospatial-Intelligence Agency's Maury Hall sits beside the Potomac River in Bethesda, MD.*



## Matthew Fontaine Maury Oceanographic Library.

With over 160,000 volumes of information, the Matthew Fontaine Maury Oceanographic Library, located at the Naval Oceanographic Office (NAVO) at Stennis Space Center, MS, contains the world's foremost military collection of physical oceanography materials. From modern CD-ROMs to handwritten 18th century ships' logs, the library is noted for the technical diversity of its holdings. The Maury Library was named and occupied in March 1986, and is a valuable resource for scientists in government, academic, and private industry.

*Matthew Fontaine Maury Oceanographic Library. Photo courtesy NAVO Public Affairs Office.*



*Top: Maury Hall, present day., Bottom: Maury Hall in 1944. Photos courtesy U.S. Naval Academy*

## Maury Hall, United States Naval Academy.

Built in 1907, Maury Hall was part of the “new” Naval Academy design, and is the right-hand part of a three-building complex. Its adjoining buildings are Mahan and Sampson Hall. In 1975, upon completion of a major renovation, Maury Hall was connected at ground level with Rickover Hall and became part of the Division of Engineering and Weapons, and houses the Department of Electrical Engineering and Department of Weapons and Systems Engineering.

Maury Hall is one of two buildings on the grounds of the U.S. Naval Academy named for officers who served in both the U.S. Navy and the Confederate States Navy. The other is the Buchanan House, the official residence of the Superintendent, named in 1976 for the first Superintendent, Commander Franklin Buchanan, later admiral in the Confederate Navy.

Maury was a strong proponent for establishing a training school for Naval officers, and his writings helped to influence the establishment of the Naval Academy. Maury's book, *A New Theoretical and Practical Treatise of Navigation* published in 1836, was the first navigation textbook used for the new land-based school for midshipman at Annapolis in 1845, which was officially named the United States Naval Academy in 1850.





## Maury Elementary School, Alexandria, VA.

The site for Maury Elementary School was originally seven acres of farm land, purchased in 1927 as a site for a school to serve “small children west of the railroad tracks.” Maury Elementary School has undergone many changes since the original building was constructed in 1929 at a cost of \$35,000. It consisted of six classrooms and an auditorium, with a design enabling future additions as needed. The facility has recently completed another renovation and expansion project. It was rededicated in June 2005, to coincide with the building’s 75th anniversary.

Currently, Maury is Alexandria City Public School’s smallest elementary school. With a population of 150 students grades K to 5, students experience small class size and a real feeling of community. Maury is small in size and big in heart.

*Top: Maury Elementary School, Photo by Kathy Lafferty.*

*Bottom Left: Maury High School, Norfolk, VA.*

*Bottom Right: Maury-Brooke Hall courtesy of Virginia Military Institute, Lexington, VA.*



## Maury High School.

Originally the Norfolk High School, in February of 1911, it was re-named the Matthew Fontaine Maury High School. This is a postcard dated 1917. In 1936, Maury’s great-grandson, Capt. James Maury Werth graduated Maury High and went on to serve his country by joining the Navy. His last assignment before retiring from active duty was to serve as Superintendent of the U.S. Naval Observatory in Washington, thus following in the footsteps of his famous great-grandfather.

Maury-Brooke Hall, built in 1909, is named for two former VMI professors whose names are notable in American naval history. John Mercer Brooke was a protégé of Maury. As a midshipman, and while serving at the U.S. Naval Observatory under Maury, Brooke invented a deep-sea sounding apparatus that could bring up ocean bed samples from 12,000 feet. In latter years both

were professors of physics at VMI after the Civil War, Maury from 1868 until his death in 1873 and Brooke for more than thirty years, from 1865 to 1899. Today, Maury-Brooke Hall is home to the VMI Regimental Band, The Bomb (cadet yearbook), The VMI Cadet (cadet newspaper), and the Honor Court. In 1962, the Matthew Fontaine Maury Memorial Fund Scholarship, was established by his granddaughter, Ann H. Maury and is used to assist worthy students.

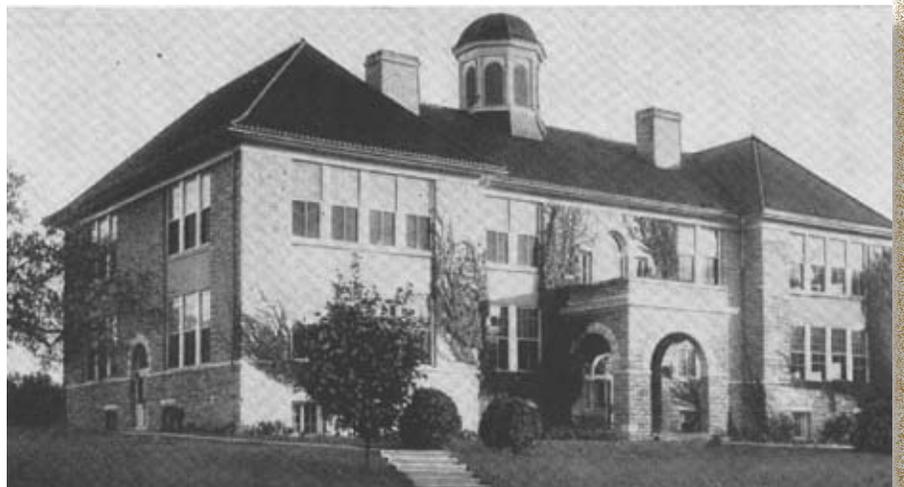




*Top: Maury Hall, James Madison University (Today). Below: Maury Hall, James Madison University (1909). Photos courtesy James Madison University.*

### Maury Hall, James Madison University, Harrisonburg, VA.

Maury Hall, originally called the Science Hall, was the university's first academic and administrative building. It was completed in 1909 and named in honor of Matthew Fontaine Maury, Virginia scientist and oceanographer. Today, Maury Hall, is home to the Political Science department.





*Maury Hall, The Virginia Institute of Marine Science (VIMS). Bottom Right: Plaque on Virginia Institute of Marine Science. Photo by Matthew F. M. Werth Jr.*

## Maury Hall.

The Virginia Institute of Marine Science (VIMS) dedicated the Maury Hall building in 1962. The VIMS School of Marine Science is the professional graduate school in marine science for the College of William & Mary. In 1989, VIMS established the M.F.M. Fellowship Endowment.



MAURY HALL  
DEDICATED TO  
THE HONOR AND MEMORY OF  
VIRGINIA'S FOREMOST MARINE SCIENTIST  
MATTHEW FONTAINE MAURY  
"PATHFINDER OF THE SEAS", AUTHOR OF  
"THE PHYSICAL GEOGRAPHY OF THE SEA",  
OFFICER IN THE NAVIES OF THE UNITED STATES  
AND THE CONFEDERATE STATES

THIS PLAQUE PRESENTED BY THE  
CONFEDERATE MEMORIAL LITERARY SOCIETY  
RICHMOND, VIRGINIA  
1962

## Maupin-Maury House.

A postcard from the early 1900s of the Maupin-Maury house. Built in 1846 by Dr. Socrates Maupin, a founding faculty member of Medical College of Virginia (MCV). Dr. Maupin subsequently sold the house to Robert H. Maury. Matthew Maury lived in this house with his cousin Robert on 1105 East Clay Street, Richmond from April 1861 until September 1862 when he left the country to serve in England. Within this house, he conducted experiments in a bathtub to develop the first electrically controlled underwater mine—then called the “submarine torpedo.” In the book, *A brief sketch of the work of Matthew Fontaine Maury during the war, 1861-1865*, by his son, Richard L. Maury, he writes, “His initial experiments to explode minute charges of powder under water, were made with an ordinary tub in his chamber at the house of his cousin, Robert H. Maury...The batteries were loaned by the Richmond Medical College, which also freely tendered the use of its laboratory...” Miss Belle Maury, the daughter of R. H. Maury, who was ten at the time, remembers servants hauling tubs of water to the third floor front room for the experiments. Both Matthew Maury and his wife, Ann Herndon, were deeply religious; however, his wife was opposed to her husband’s underwater experiments because it was an “Unchristian like way to kill people.”

On October 26, 1910, in a ceremony presided over by Governor William Hodges Mann, a tablet containing the following inscription was unveiled by Maury’s granddaughter, Miss Amy McRae Werth:

The MCV Alumni Association purchased the Maupin-Maury House in 1943 and in 1993 renovated and relocated the house to 1016 East Clay Street. The Alumni Association is located on the ground floor and the School of Medicine Development office is located on the 3rd floor. The originally site is also part of the MCV campus and has a bronze plaque of the same inscription. Maury never returned to Richmond.



*Top Inset: Postcard of Maupin-Maury House (early 1900s) courtesy of author’s collection. Below: Plaque on house photo by Maury Hutcheson. Top Right: Maupin-Maury House today photo by Maury Hutcheson.*



In This House  
 MATTHEW FONTAINE MAURY,  
 LL.D., U.S.N., C.S.N.,  
 Invented the  
 Submarine Electrical Torpedo,  
 1861-1862

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 This stone is placed by the Confederate  
 Memorial Literary Society,  
 A.D. 1910





## “National Observatory”

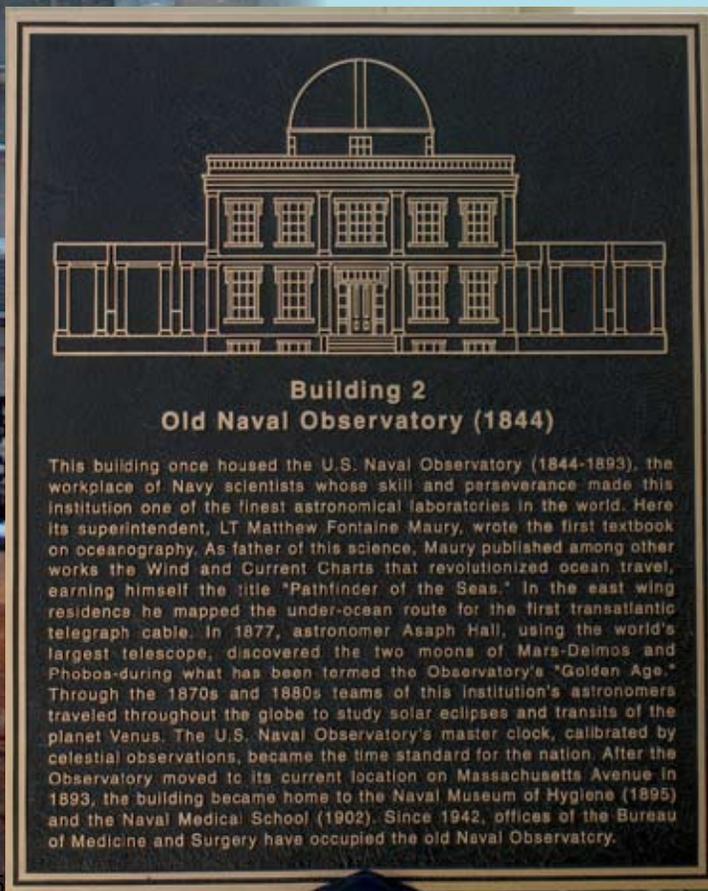
Built in 1844 at a cost of \$25,000, in the Foggy Bottom region in Washington D.C., the building was home to the U.S. Depot of Charts and Instruments. In 1854 the name changed to the U.S. Naval Observatory and Hydrographical Office to reflect the growing science of hydrography and astronomy. It was often referred to as the “National Observatory.” The left wing was added in 1847 and served as Maury’s residence.

Presently the building serves as the home to the Navy’s Bureau of Medicine and Surgery on 2300 E Street NW, Washington D.C. In 1965 it was designated a national historic landmark

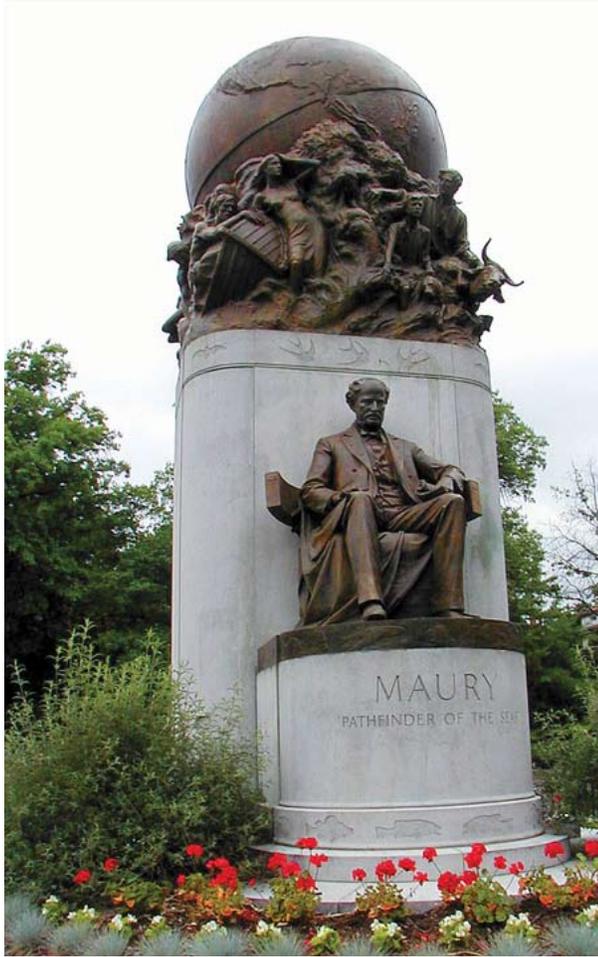
## Building 2

### Old Naval Observatory (1844)

This building once housed the U.S. Observatory (1844-1893), the workplace of the Navy scientists whose skill and perseverance made this institution one of the finest astronomical laboratories in the world. Here its superintendent, LT Matthew Fontaine Maury, wrote the first textbook on oceanography. As father of this science, Maury published among other works the Wind and Current Charts that revolutionized ocean travel, earning himself the title “Pathfinder of the Seas.” In the east wing residence he mapped the under-ocean route for the first transatlantic telegraph cable. In 1877, astronomer Asaph Hall, using the world’s largest telescope, discovered the two moons of Mars/Deimos and Phobos-during what has been termed the Observatory’s “Golden Age.” Through the 1870s and 1880s teams of this institution’s astronomers traveled throughout the globe to study solar eclipses and transits of the planet Venus. The U.S. Naval Observatory’s master clock, calibrated by celestial observations, became the time standard for the nation. After the Observatory moved to its current location on Massachusetts Avenue in 1893, the building became home to the Naval Museum of Hygiene (1895) and the Naval Medical School (1902). Since 1942, offices of the Bureau of Medicine and Surgery have occupied the old Naval Observatory.



# NATURAL & MANMADE MONUMENTS



## Matthew Fontaine Maury Monument.

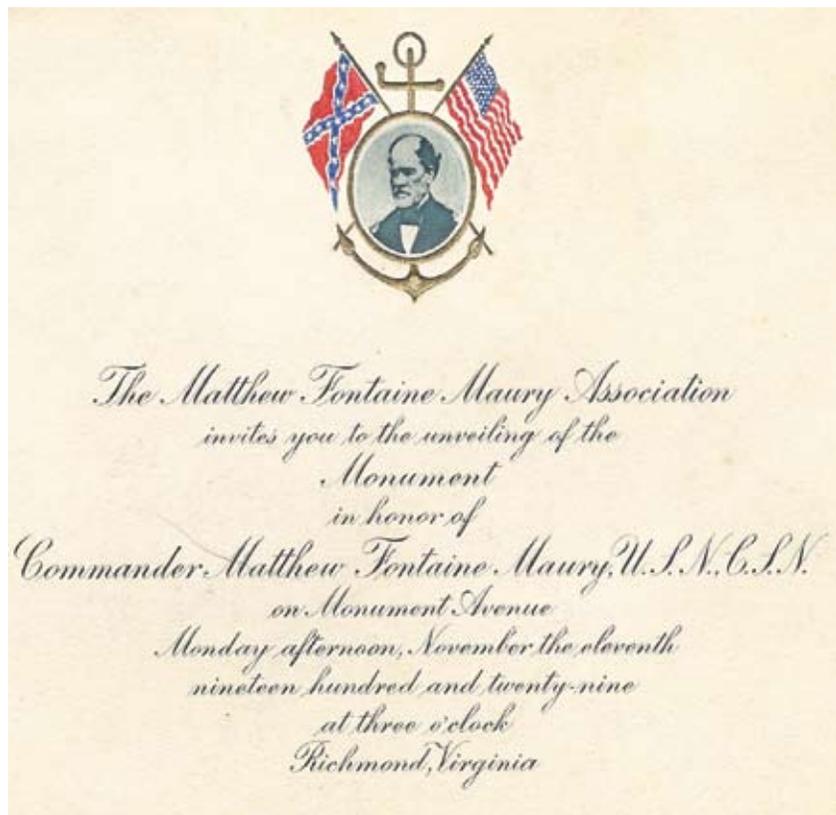
This Matthew Fontaine Maury Monument stands at the end of the historic section of statues on Monument Avenue in Richmond. The Women's Club of Virginia was the driving force behind the construction of this monument, raising \$60,000 needed from donations by the State of Virginia, the City of Richmond, and private benefactors. William F. Sievers, a native of Richmond, was the designer. Stylistically, the sculpture is the most complex of all the monuments. Sievers captured an entire range of experiences in this monument and equated Maury with playing a part in all of them. The statue is composed with images of water, land, and sky, relating to Maury's achievements in oceanography, navigation, and meteorology. Since Maury's talents reached beyond the Civil War, his statue has been referred to as the "man of peace" amidst the other Confederate war heroes. This was the last of the Confederate monuments to be erected on Monument Avenue and joins statues of Robert E. Lee, "J.E.B." Stuart, Jefferson Davis, and "Stonewall" Jackson.

*Maury Monument, photo courtesy John Iler.*

## *Right: Invitation:*

The monument was unveiled by two of Maury's great grandchildren in an impressive military and civilian setting on November 11, 1929. Miss Mary Maury Fitzwater and Master Matthew Fontaine Maury Osborne pulled the cords which released the canvas spread over the monument. Note the "U.S.N., C.S.N." after Maury's name recognizing his role in both the U.S. Navy and the Confederate States Navy.

*photo courtesy Jan K. Herman.*



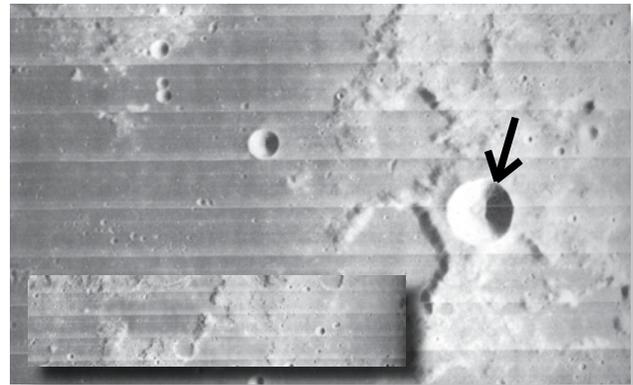


Lake Maury, is a 167-acre artificial lake that was created in 1932. It's part of the park that is owned and maintained by The Mariners' Museum, Newport News, VA.  
 Photo courtesy The Mariners' Museum, Newport News, VA



Maury Stadium, located in Fredericksburg VA, hosts James Madison High School football games and city festivals.  
 Photo courtesy of Fredericksburg Office of Economic Development and Tourism

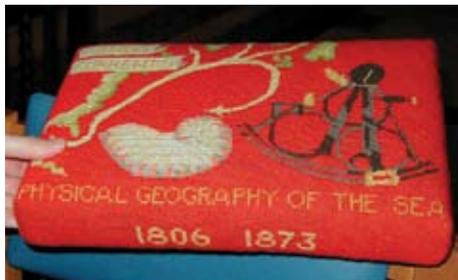
LAKE MAURY  
 NAMED FOR  
 MATTHEW FONTAINE MAURY  
 1806 - 1873  
 BELOVED VIRGINIAN  
 WHOSE CONTRIBUTION TO THE  
 SCIENCE OF OCEANOGRAPHY  
 LANDED HIM THE TITLE  
 "PATHFINDER OF THE SEAS"



Maury Crater. On the moon 37.1N, 039.6E, 17.6km wide.

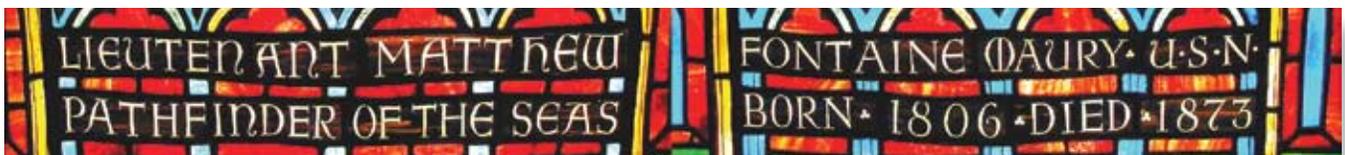
Top left: Lake Maury. Top right: Maury Stadium score board. Middle right: Moon photos from Luner Orbiter Photographic Atlas of the the Moon 1971, Courtesy of NASA.  
 Bottom left: Kneeling cushion in the National Cathedral, Washington D.C. Bottom: Stained Glass in the National Cathedral, Washington, D.C.

Photo courtesy Larry Franklin



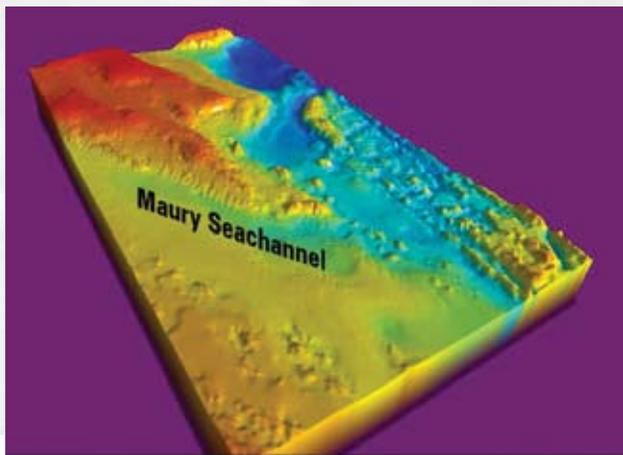
### Stained Glass.

This is located within the Washington National Cathedral, Washington, D.C. Mrs. Alice Parmelee, a granddaughter of Matthew Maury, donated \$50,000 to memorialize in stained glass her grandfather, husband James Parmelee, and Myron T. Herrick, a U.S. Ambassador to France. On May 21, 1935, at the dedication ceremony, Captain J.F. Hellweg, Superintendent of the Naval Observatory in tribute to Maury stated, "...that one man has made such a deep and lasting impression upon the world, places him in a preeminent position as one of the world's great pioneers. Very aptly Lieutenant Maury has been called "The Pathfinder of the Seas," a title which he so richly deserved.

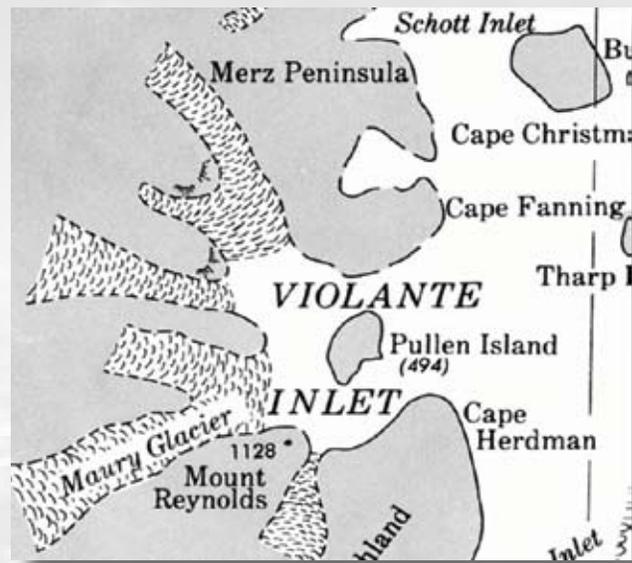


## Maury Seachannel 56°33'N, 024°0'W.

The Advisory Committee on Undersea Features approved this name on February 18, 1969. The depth is approximately 3,200 meters. Maury prepared charts of the bottom of the Atlantic Ocean between the United States and Europe, and assisted Cyrus W. Field with laying the first transatlantic cable. The first official message was sent on August 16, 1858. Maury's knowledge made this achievement possible and established him as the locator of the first transatlantic cable. There is also the "Maury Deep" south of the Aleutians Islands located in 51°00'N, 170°00'W.

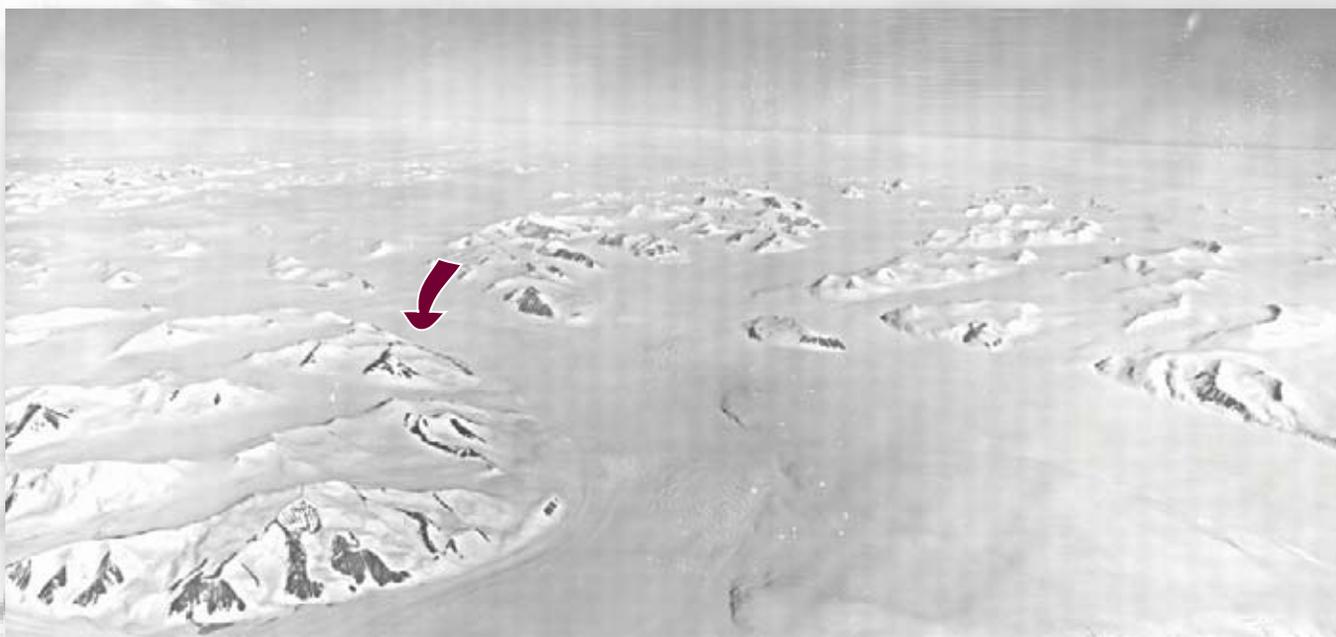


Top left: photo courtesy of NGA.  
Top right: photo courtesy of NGA.  
Bottom: photo courtesy US Geological Survey.



## Maury Glacier 72°42'S, 061°40'W.

Maury Glacier is 4 miles wide, flowing in an ENE direction to the Southwest corner of Violante Inlet, on the East coast of Palmer Land. It was discovered and photographed from the air in December 1940 by members of the United States Antarctic Service. Maury was an advocate of Antarctic exploration and the name was applied by the United Kingdom via their Antarctic Place-Names Committee (UKAPC) in 1955, and accepted by the US ACAN (Advisory Committee on Antarctic Names) the same year. Maury Glacier appears on NGA Chart 29002.

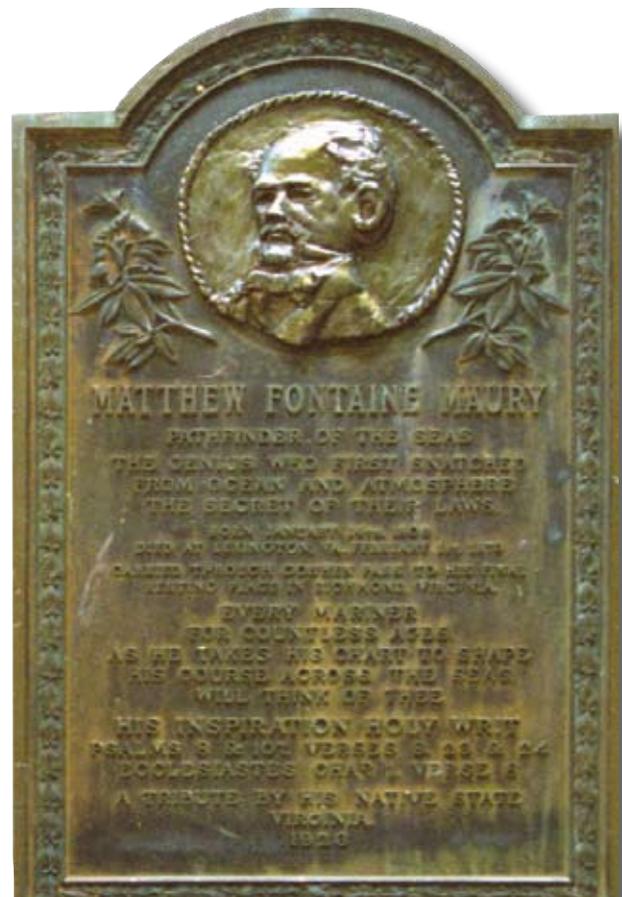




### Goshen Pass, VA Postcard.

A postcard showing the dedication ceremony in Goshen Pass, VA, on June 9, 1923. C. Alphonso Smith, Head of the Department of English at the U.S. Naval Academy, said in his remarks, "We dedicate this tablet to one who, though dead, yet lives and leads. We dedicate it to the founder of a new science, to the pilot of every ship that sails, to the herald of the new era of international cooperation. Matthew Fontaine Maury summed up the past and projected the future. Over land and sea his spirit broods as an abiding benediction."

MATTHEW FONTAINE MAURY  
 PATHFINDER OF THE SEAS  
 THE GENIUS WHO FIRST SNATCHED  
 FROM THE OCEAN AND ATMOSPHERE  
 THE SECRET OF THEIR LAWS.  
 BORN JANUARY 14TH, 1806  
 DIED AT LEXINGTON, VA. FEBRUARY 1ST, 1873  
 CARRIED THROUGH GOSHEN PASS TO HIS FINAL  
 RESTING PLACE IN RICHMOND, VIRGINIA.  
 EVERY MARINER  
 FOR COUNTLESS AGES,  
 AS HE TAKES HIS CHARTS TO SHAPE  
 HIS COURSE ACROSS THE SEAS,  
 WILL THINK OF THEE  
 HIS INSPIRATION HOLY WRIT  
 PSALMS 8 & 107, VERSES 3, 23 & 24  
 ECCLESIASTES CHAP. 1, VERSE 8  
 A TRIBUTE BY HIS NATIVE STATE  
 VIRGINIA  
 1923



*Top: photo courtesy Manuscript Division, Library of Congress.*

*Bottom right photo courtesy Virginia Department of Transportation.*

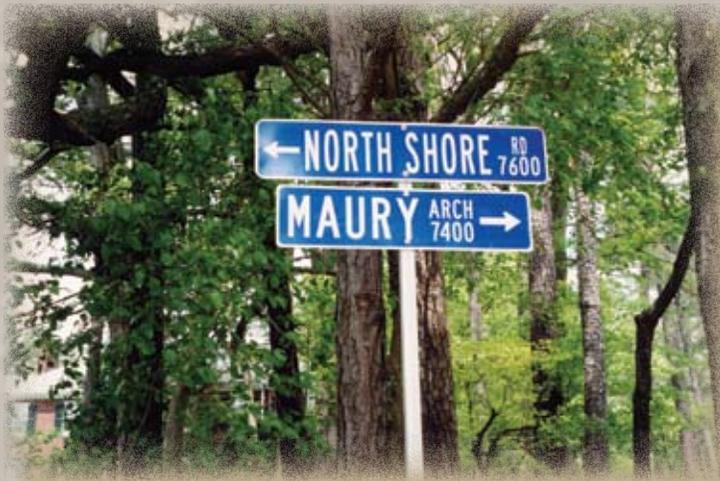
Mount Maury 45° 20'S., 167° 30'E.

Mount Maury is in the Fiordland National Park, New Zealand, and is situated by the South Fiord of Lake Te Anau. Fiordland is in the far southwestern corner of the South Island and much of the region is inaccessible by road. Named by Scottish born surveyor and explorer James McKerrow (1834–1919), who arrived in New Zealand in 1859, he surveyed large areas of the southern half of the park in 1862-63. Mount Maury stands 1,570 meters high.

*Map courtesy of Heinemann New Zealand Atlas, 1990 Heinemann Publishers Ltd., Auckland*

*Photo inset Mt. Maury courtesy Phyllis Farris*





Maury Arch  
Norfolk, VA



Maury Circle Wash. D.C.  
is located within the  
grounds of the Navy's  
Bureau of Medicine and  
Surgery at 2300 E Street  
NW. Washington, D.C.



Fontaine Avenue  
Charlottesville, VA

*Photos courtesy Matthew F.M. Werth Jr., Jan K. Herman  
and Charlottesville, Virginia Traffic shop.*



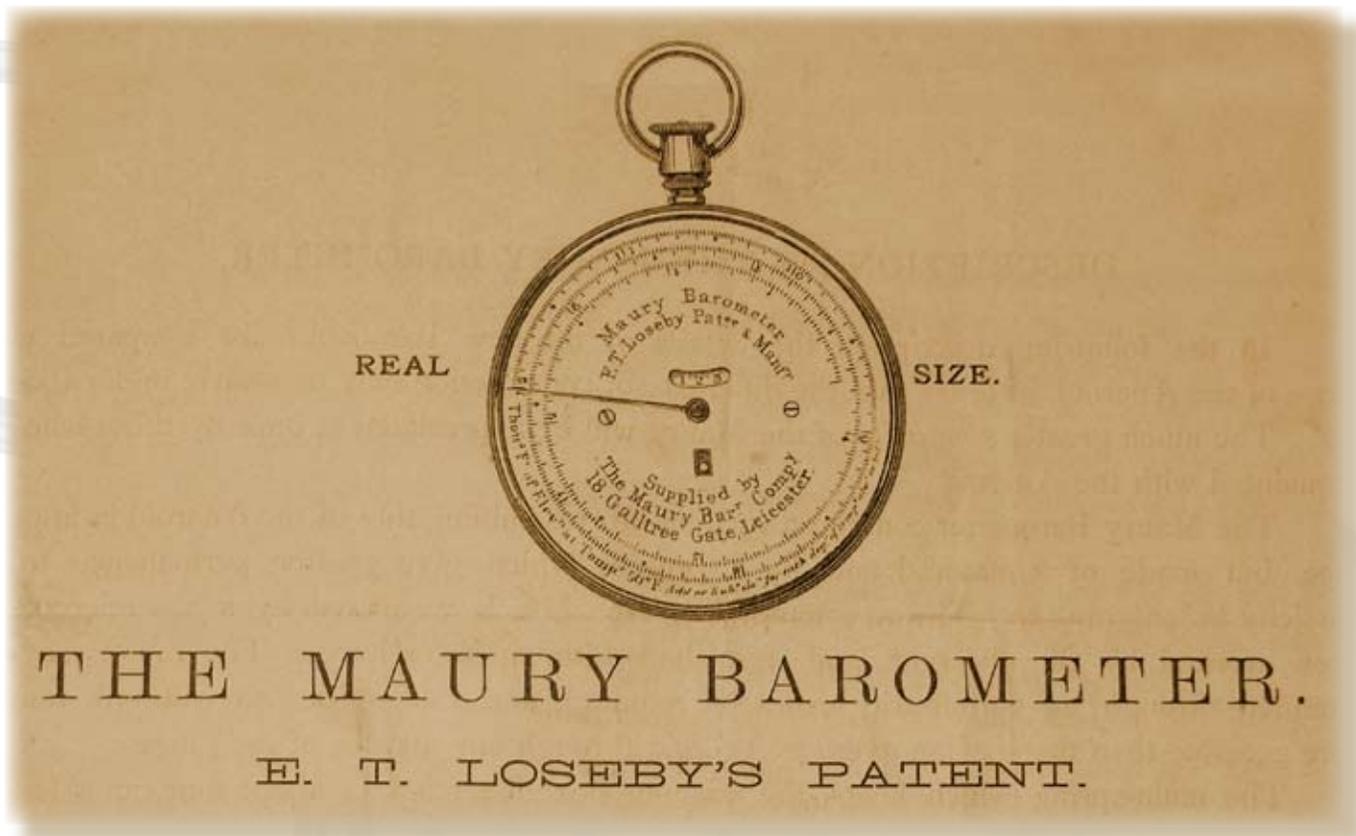
Maury Circle Virginia  
Beach, VA



Maury Street  
Richmond, VA



Residence Building  
Naval Station  
Norfolk, VA



Courtesy of Manuscript Division, Library Congress

## The Maury Barometer.

This instrument was invented and patented by Mr. E.T. Loseby of Leicester, England between 1860-61. Maury remarked that the finest chronometers brought to the Observatory in Washington for trial were those produced by Mr. Loseby. Maury pointed out to Loseby that an accurate and durable pocket barometer was wanted for many purposes, especially for measuring high mountain ranges, and urged him to use his skills to produce such an instrument. Mr. Loseby undertook the challenge and met Maury's requirements.

**"MAURY BAROMETER."**

**THE MAURY BAROMETER COMPANY, 18, GALLTREE GATE, LEICESTER, ARE**  
now prepared to take orders for this Instrument, at the following prices, viz. :-

	In brass case.	In silver case.
	£ s. d.	£ s. d.
No. 1.—Dial divided to 6,000 feet, or 6 Barometric inches	5 0 0	6 0 0
No. 2.—Dial divided to 12,000 feet, or 12 Barometric inches	6 10 0	7 10 0
No. 3.—Dial divided to 18,000 feet, or 18 Barometric inches	10 0 0	11 0 0
No. 4.—Higher ranges by special agreement.		

*Terms—Net Cash on delivery. No discount.*

A scale for converting feet of elevation, into barometric inches, can be engrossed on the back of the case of these instruments which are graduated to show feet of elevation, at an additional charge of 10s. for the range of 3 inches, which is the extent usually required for meteorological purposes.

The Barometers will not be ready for delivery for several months, but orders will be executed strictly in rotation, according to the date on which they are received by the Company.

If the Company should fail to deliver any order within 18 months from the date of its receipt, the purchaser will be at liberty to cancel it.

OFFICE OF THE COMPANY IN LIVERPOOL, 37, CHURCH STREET.

*Entered at Stationers' Hall.*

W. & A. G. PATENT, 18, GALLTREE GATE, LEICESTER.

**ORDER FORM.**

**TO THE MAURY BAROMETER COMPANY,**  
18, GALLTREE GATE, LEICESTER.

*Please supply me with a Maury Barometer, No. \_\_\_\_\_, price*  
*£ \_\_\_\_\_, on condition that it shall be ready for delivery*  
*to me within 18 Months from this date.*

Name \_\_\_\_\_

Address \_\_\_\_\_

Day \_\_\_\_\_

**TERMS—CASH ON DELIVERY.**

\*Note.—The Dial will be engraved for feet of elevation, and the Barometer will not be engraved on the back, when contrary instructions are inserted on this form.

## Maury Barometer Order Form.

Depending on the detail and whether you wanted a brass or silver casing, the Maury Barometer could cost between £5-11, or between \$441.71 to \$971.77 in 2004 using the Consumer Price Index.



## The Hall of Fame for Great Americans.

Maury was recognized for his contributions in the field of science and was elected to the Hall of Fame for Great Americans 1930. He became the 65th person to be honored. The bronze bust of Maury was unveiled on May 14, 1931 by Matthew F. Maury III, a great-grandson of Maury. It was sculpted by F. William Sievers and was a gift from the United Daughters of the Confederacy.

The Hall of Fame for Great Americans at Bronx Community College is a New York landmark institution founded in 1900 to honor prominent Americans who have had a significant impact on this nation's history. The categories of occupation or endeavor represented in the Hall of Fame are authors, educators, architects, inventors, military leaders, judges, theologians, philanthropists, humanitarians, scientists, statesmen, artists, musicians, actors, and explorers.

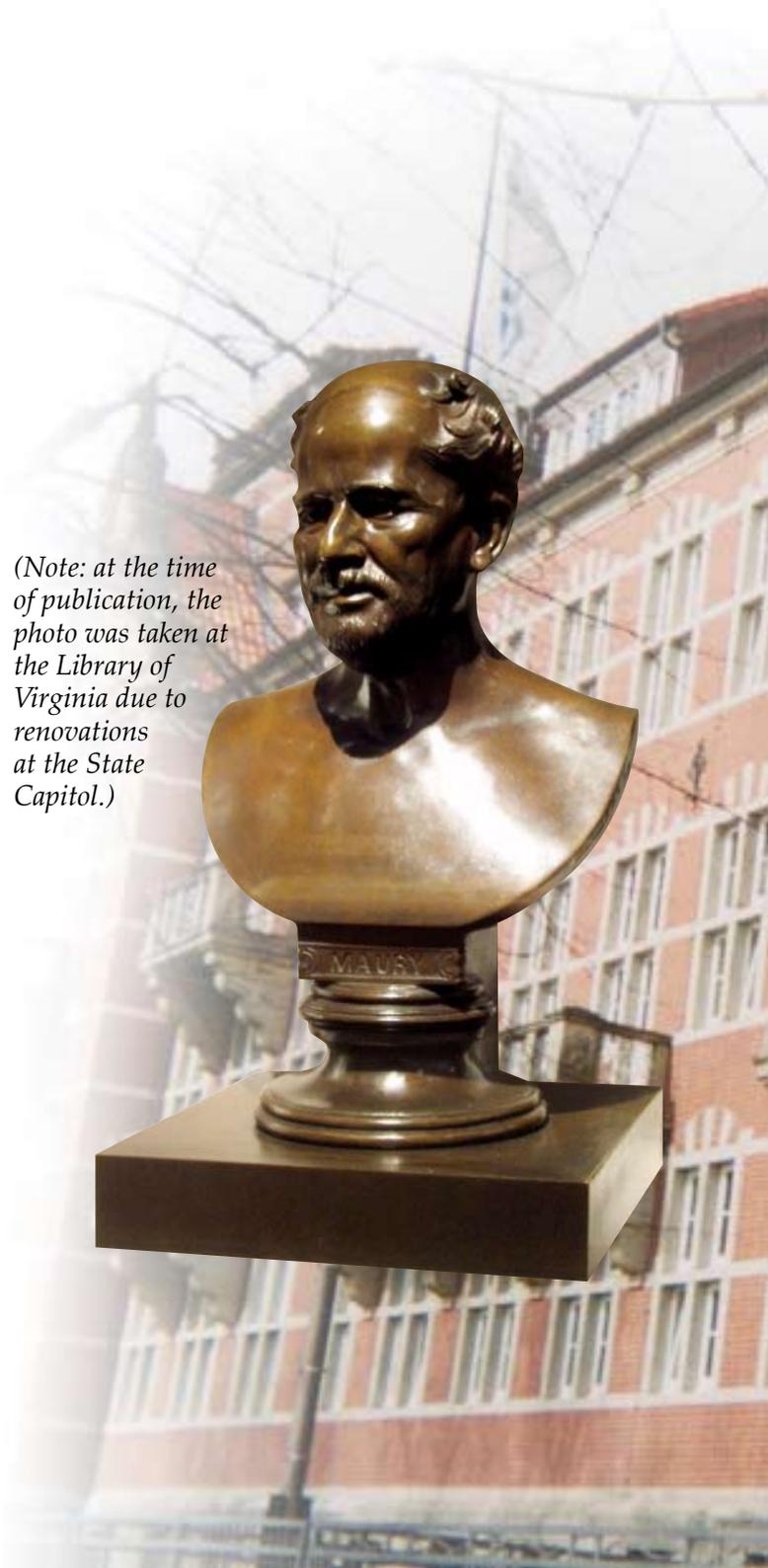
The principal feature of the Hall of Fame is its 630-foot open-air Colonnade, which houses the bronze portrait busts of the honorees. The Colonnade was designed with niches to accommodate 102 sculptured works and currently houses the busts and commemorative plaques of 98 of the 102 honorees elected since 1900. The Hall of Fame's 98 portrait busts have been called "the largest and finest collection of bronze busts anywhere in our country."

*above photo courtesy Art Zuckerman, Courtesy Bronx Community College.*

## Bronze Bust.

In 1867 sculptor Edward Virginius Valentine created this bronze bust of Matthew F. Maury that sits in the old hall of the House of Delegates within the Virginia State Capitol in Richmond. The old hall also houses other famous Virginians, such as John Marshall, Henry Clay, George Mason, Robert E. Lee and Cyrus McCormick.

*below photo courtesy Maury Hutcheson.*

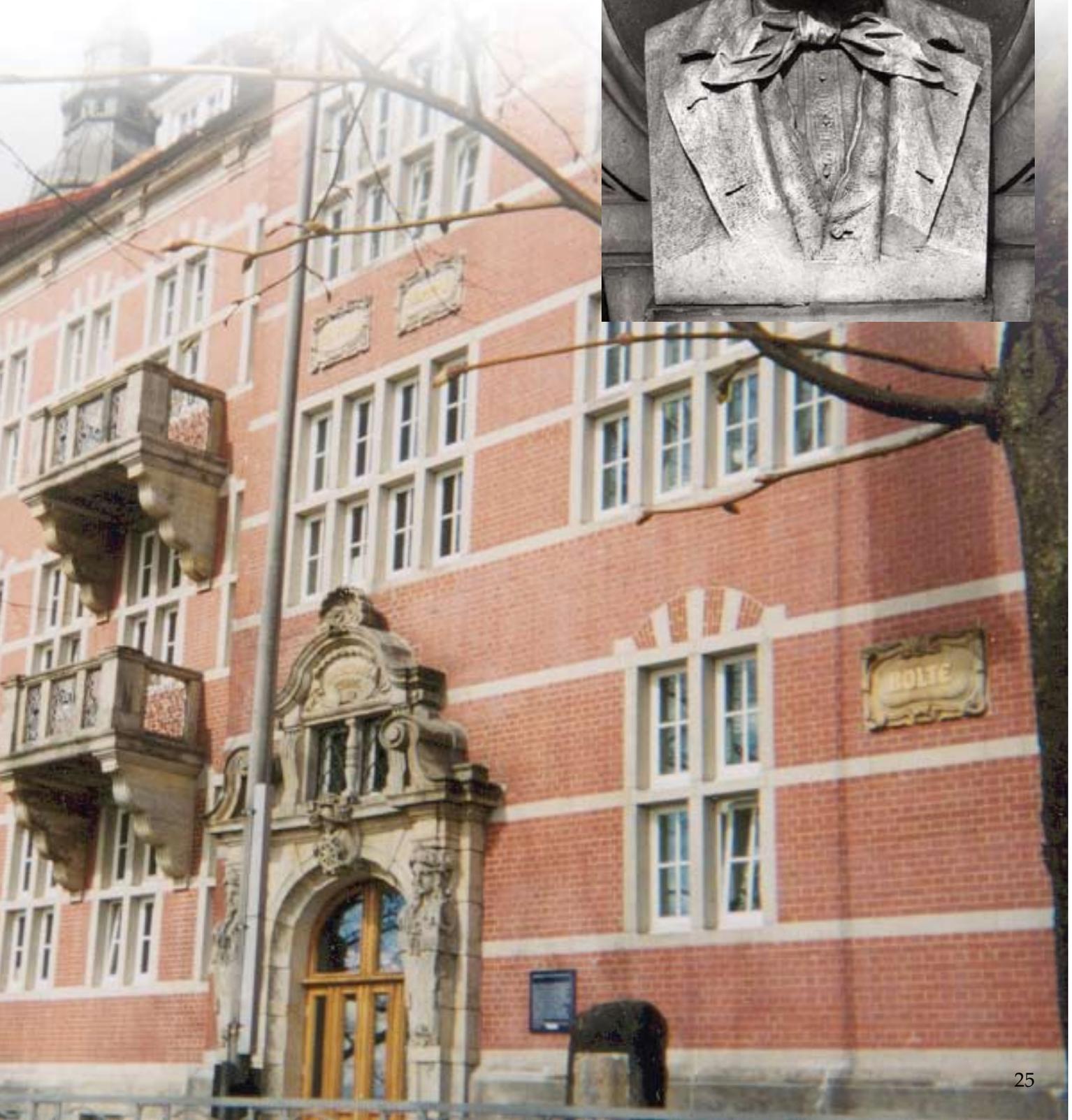
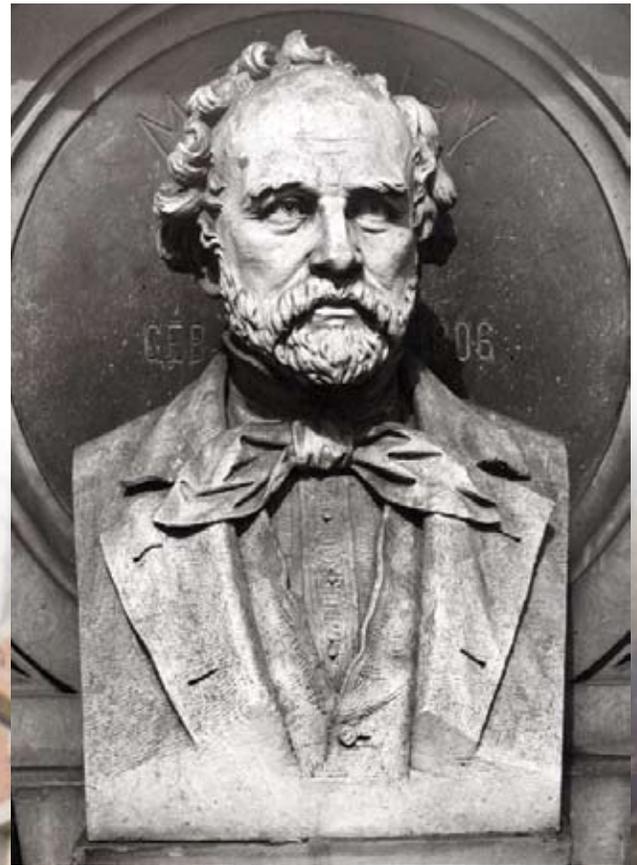


*(Note: at the time of publication, the photo was taken at the Library of Virginia due to renovations at the State Capitol.)*

## Hamburg Bust.

This bust of Maury was over the main entrance of the Deutsch Seewarte (Meteorological Station of the German Admiralty) in Hamburg, Germany. The building was destroyed in an air raid in the winter of 1945. Today, the new building has plaques of the names whose the busts were destroyed.

*Right: Photos courtesy Matthew F. M. Werth Jr.*



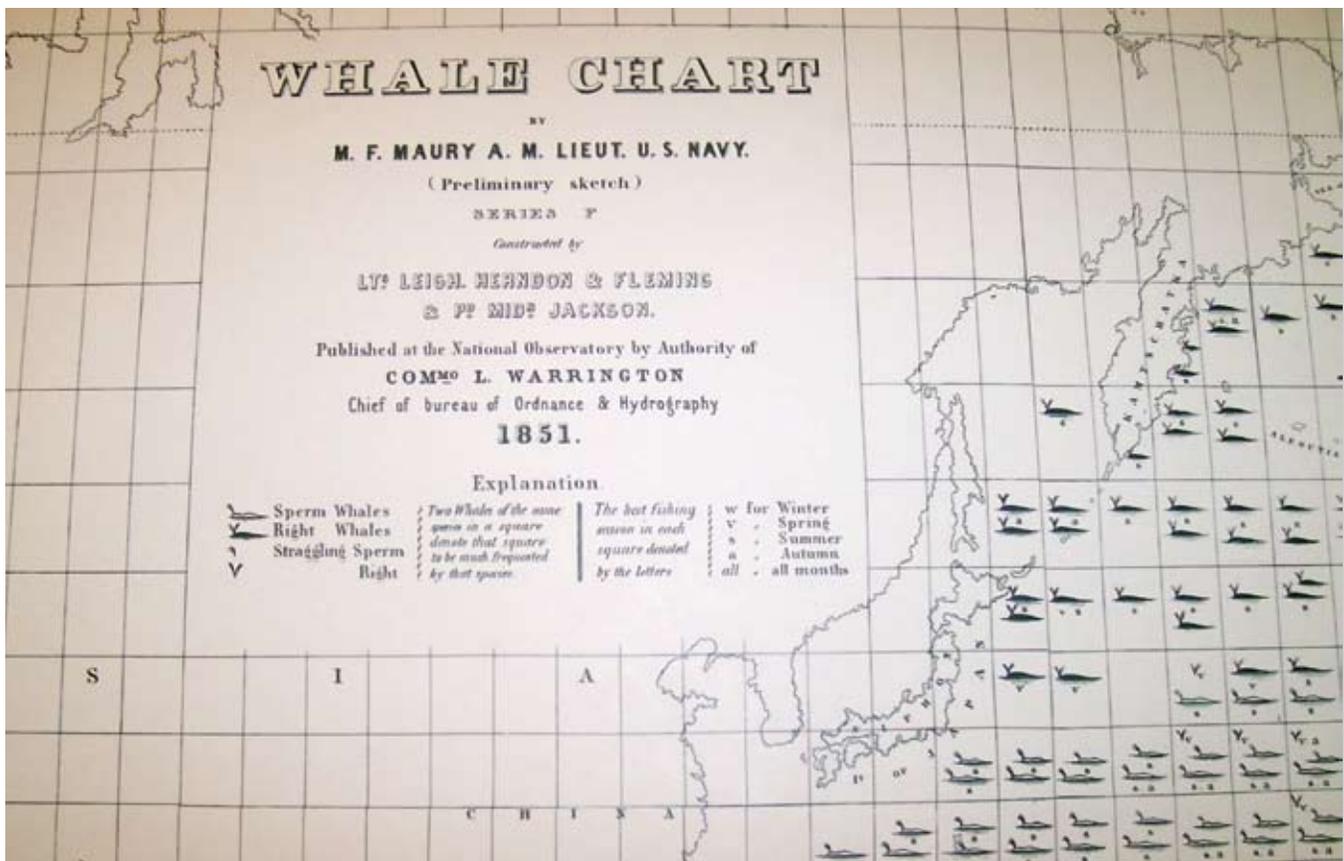
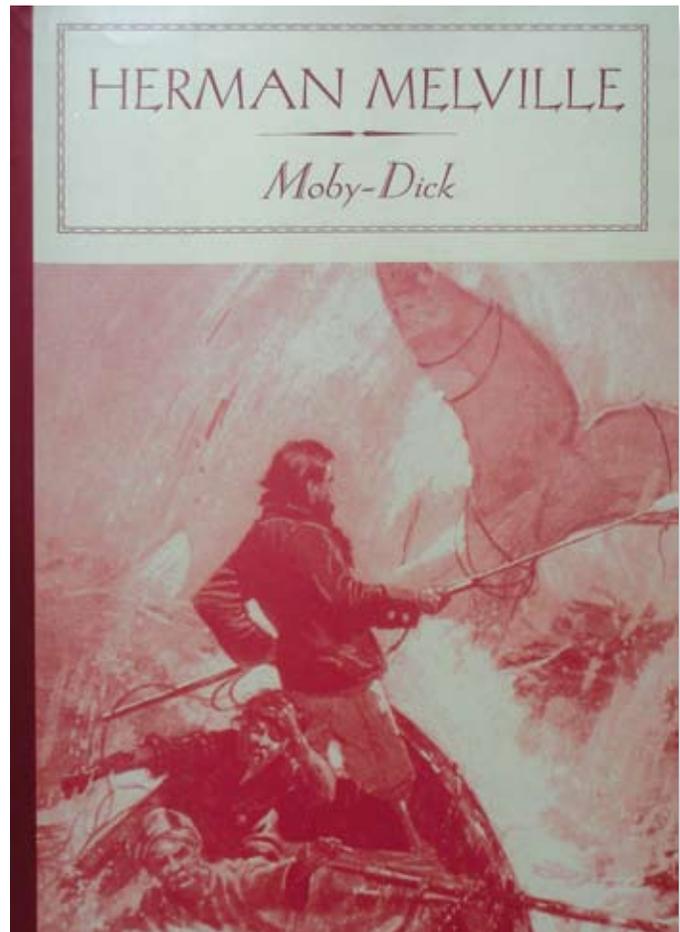
## Moby Dick and Maury's Whale Chart.

Maury's Whale Chart is mentioned in Herman Melville's classic *Moby Dick* published in 1851, in a footnote in Chapter XLIV.

Ahab consults the charts below decks: "On this hint, attempts have been made to construct elaborate migratory charts of the sperm whale."

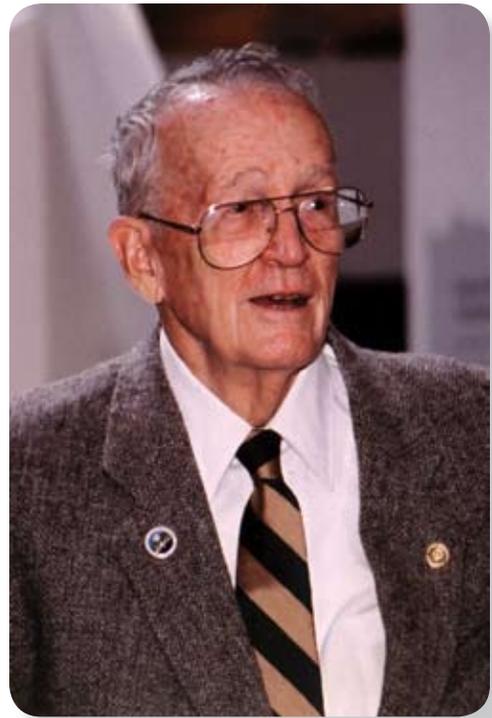
*"Since the above was written, the statement is happily borne out by an official circular issued by Lieutenant Maury, of the National Observatory, Washington, April 16th, 1851. By that circular, it appears that precisely such a chart is in course of completion; and portions of it are presented in the circular. "This chart divides the ocean into districts of five degrees of latitude by five degrees of longitude; perpendicularly through each of which districts are twelve columns for the twelve months; and horizontally through each of which districts are three lines; one to show the number of days that have been spent in each month in every district, and the two others to show the number of days in which whales, sperm or right, have been seen."*

Photos by Gracie Cohen



## Navy Museum.

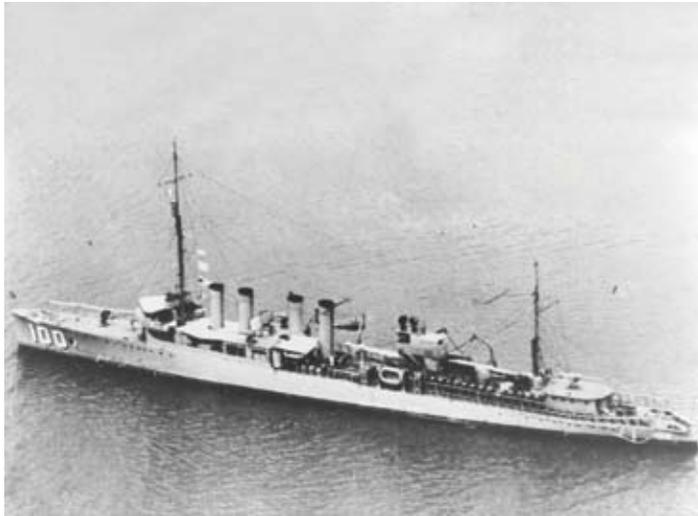
The Navy Museum at the Washington Navy Yard in Washington D.C., is home to the "Pathfinding on the Seas" exhibit. A ribbon-cutting ceremony for a revised Matthew Maury exhibit was held on September 9, 2003. Maury's great-grandson Capt. James Maury Werth (ret.) (right) helped dedicate the exhibit. Among the new features include stars on the wall for school children to receive hands-on experience in celestial navigation. A timeline depicting NGA's Maritime heritage hangs on the wall.



*Photos by Rob Cox*



# MAURY SHIPS



Maury I. *Maury* (DD-100), the first ship named after Maury was laid down May 4, 1918, by Fore River Shipbuilding Co., Quincy, MA, and was launched July 4, 1918. She reporting for duty with the Adriatic Detachment on February 18, 1919, and participated in "umpiring" duties for the natural harbors of the Adriatic. On July 17, 1920 she was redesignated DM-5, light minelayer. She was decommissioned March 19, 1930, and scrapped May 1, 1934.

*Photo courtesy National Archives*



Maury II. The second *Maury* (DD-401) was launched February 14, 1938 and was sponsored by Miss Virginia Lee Maury Werth, great-granddaughter of Matthew F. Maury. Assigned to the Pacific Fleet after commissioning, *Maury* was operating out of Pearl Harbor when the United States entered World War II. *Maury* received 16 battle stars for her service in the Pacific Theater. She was decommissioned October 10, 1945 in Philadelphia and soon after sold for scrap.

*Photo courtesy National Archives*



Maury III. The third *Maury*, built under a Maritime Commission contract, was launched as *Renate* (AKA-36) an attack cargo ship and commissioned February 28, 1945. She transported Pacific veterans back to the United States. In June 1946 *Renate* entered Portsmouth Naval Shipyard for conversion to a survey ship and on July 12, 1946 was renamed the *USS Maury* (AGS-16). On January 6, 1947, *USS Maury* got underway for the Pacific for her first hydrographic mission which was the charting of the waters around Truk and Kwajalein. In 1965 *Maury* surveyed, off the coast of South Vietnam and the Mekong Delta. Into 1969, her efforts had added significantly to knowledge of the characteristics of the coastal area in which naval forces conduct riverine warfare and amphibious operations.

*Photo courtesy US Naval Institute*



SS *Maury*. The Liberty Ship SS *Maury* was built in 1942 at Todd Houston Shipbuilding and owned by the War Shipping Administration. She was the third ship to be built, preceded by the SS *Sam Houston* and the SS *Davy Crockett*. This picture was taken on May 8, 1943 by the United States Coast Guard. On July 10, 1943, the SS *Maury* was part of the six-ship convey BT-22 en route to Algiers, Algeria when the U-371 fired a torpedo and hit the freighter in the stern. The explosion blew the propeller off, bent the shaft, flooded the number 5 hatch, and caused the vessel to lose way. The crew of eight officers, 35 men and 28 armed guards, in addition to seven passengers, did not abandon ship. All hands survived the attack. Two British corvetts assisted and towed the vessel for emergency repairs to Bougie, Algeria. The vessel steamed to Newport News, VA, to receive additional repairs. The SS *Maury* survived the war and later was transferred to the reserve fleet. She was scrapped in 1961.

*Photo courtesy Mariners' Museum*



Maury IV. (T-AGS-39) was delivered to the Navy on March 31, 1989, the USNS *Maury* (T-AGS-39) was placed in service with the Military Sealift Command for surveying operations. Placed Out-of-Service in September 1994, she was transferred to U.S. Maritime Administration (MARAD) for lay up in the National Defense Reserve Fleet, Suisun Bay, Benicia, CA. On May 4, 1996, the vessel was transferred by MARAD to the California Maritime Academy as a training ship, and renamed TS *Golden Bear III*.

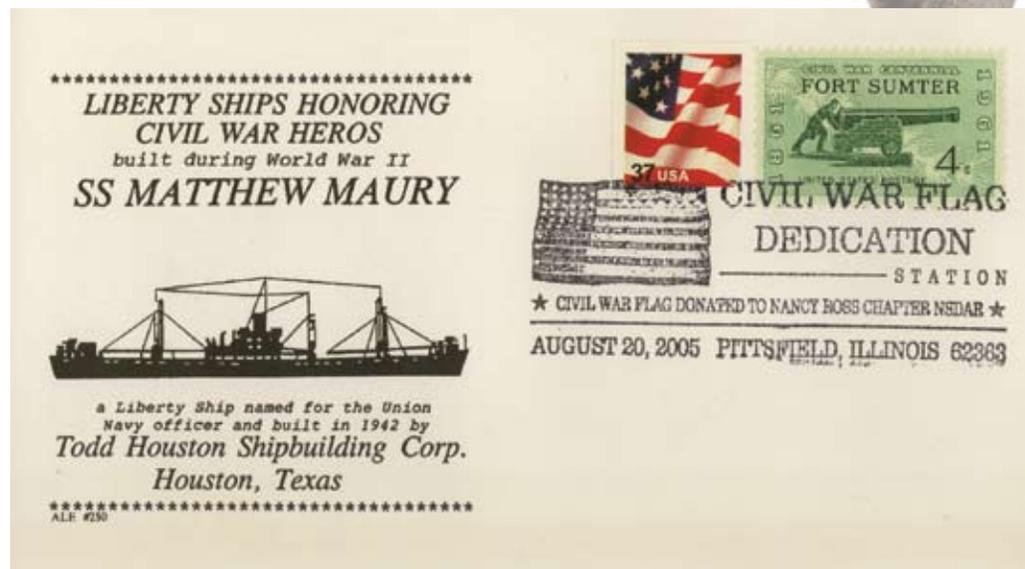
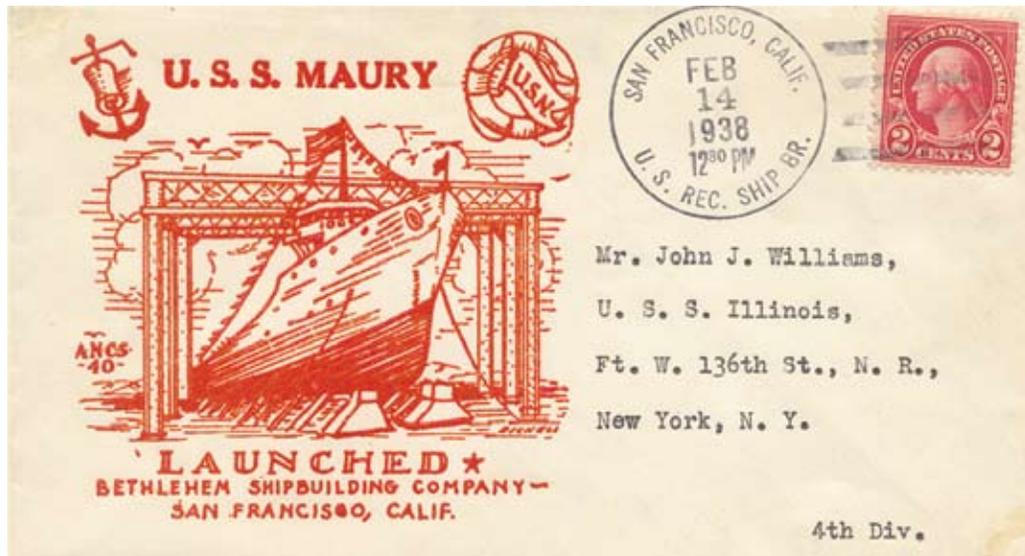
*Photo courtesy US Naval Institute*

Research Vessel *Matthew F. Maury* (formerly PCF-2). The R/V *Matthew F. Maury* has been part of the Tidewater Community College since 1996 and serves as a floating classroom for its geophysical science department. The vessel also hosts other schools and science groups to conduct hydrographic experiments in the Chesapeake Bay. The 51-foot vessel can accommodate 20 students and is equipped with water samplers, nets, microscopes, and other research devices. It has a range of 500 miles with speeds over 20 knots. Originally a United States Navy vessel named Patrol Craft Fast-2 (PCF-2), this type of craft was built for riverine warfare in Vietnam in the 1960s. PFC-2 (and its sister craft PFC-1) were prototypes and used for training purposes in Coronado, CA. One hundred and two PFC's served in Vietnam, and the boats built an impressive record of naval combat. In the mid 1970s, PCF-1 and PCF-2 were transferred to the Navy Small Craft Instruction and Technical Training School in Panama. In 1996, with the signing of the National Defense Authorization Act, PCF-2 was awarded to Tidewater Community College and renamed the R/V *Matthew F. Maury*.



*Photo by Sandra Snider. Courtesy Tidewater Community College.*

# MAURY FIRST DAY COVERS



IN THE SENATE OF THE UNITED STATES.

MATTHEW FONTAINE MAURY.

JANUARY 27, 1890.—Presented by Mr. CHANDLER; referred to the Committee on the Library, and ordered to be printed.

[To accompany bill S. 2315.]

PETITION OF JULIUS A. PALMER, A CITIZEN OF MASSACHUSETTS, FOR THE ERECTION OF A STATUE IN MEMORY OF THE LATE MATTHEW FONTAINE MAURY, OF THE STATE OF VIRGINIA.

*To the Senate and House of Representatives of the United States of America in Congress assembled:*

Respectfully represents Julius A. Palmer, a citizen of Boston, Commonwealth of Massachusetts, United States of America, and by profession a ship-master; that in his opinion a suitable monument should now be erected to the memory of the late Matthew Fontaine Maury, of the State of Virginia, in support of which he begs leave to offer the annexed memorial prepared by a daughter of said Maury:

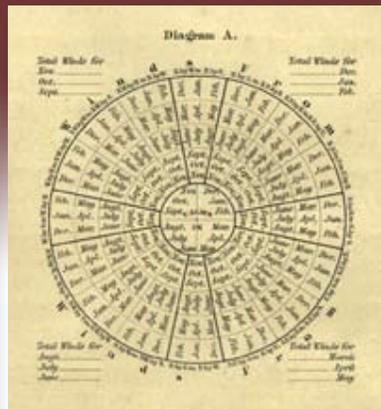
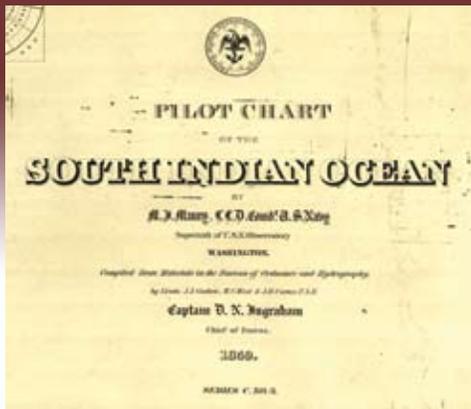
Maury was a Virginian by birth, but he emigrated to Tennessee with his parents when in his fifth year, and entered the Navy, when a lad of nineteen, from that State in 1825. After continued sea service for six years he was appointed sailing-master of the sloop-of-war Falmouth in 1831, and ordered on a three years' cruise to the Pacific. Before leaving New York on this voyage he had searched in every direction for reliable information as to the winds and currents to be encountered and the best path for his vessel to follow. He soon found that little or nothing was known on the subject, and he forthwith began to collect material and make observations. In this connection he noticed the curious phenomenon of the low barometer off Cape Horn. He wrote his first scientific paper on this subject, and it was published soon after his return by the American Journal of Science. Shortly after he wrote another much-talked-of paper, entitled "The relation of Terrestrial Magnetism to the Circulation of the Atmosphere." These small beginnings he soon expanded into his celebrated wind and current charts and sailing directions. "These charts completely revolutionized commerce," said the Secretaries of the Navy in their annual reports for the years 1850, 1851, 1852, 1853, 1854, 1855, and 1856, "and have not only saved millions of dollars to those 'who go down to the sea in ships,' but have added glory and honor to his country.

"A calculation of the amount saved to the commerce of the United States by shortening the voyage fifteen days by the use of these charts, will show the following startling results: The average freight from the United States to Rio is 17.7 cents per ton per day, to Australia 20 cents, to California 20 cents. The mean of this is a little over 19 cents per ton per day, but to be within the mark we will take it at 15 cents and include all the ports of South America, China, and the East Indies. We estimate the tonnage of the United States engaged in trade with these places at 1,000,000 tons per annum. With these data we see that

1242

**Senate Bill to Erect a Statue Bill S.2315** for the erection of a monument to the memory of Matthew Maury was introduced to the Fifty-first Congress, first session by Sea Captain Julius A. Palmer on January 27, 1890. Captain Palmer's closing remarks were: "The money saved to the commerce of the United States by the use of Maury's charts would erect a monument of precious stones, sparkling with diamonds." There was no further action and the Bill did not pass the Senate.

Courtesy Manuscript Division, Library of Congress



The object of this chart is to show the probable direction of the wind... (Detailed text describing the chart's purpose and usage, including instructions for sailors and information about the Bureau of Hydrography.)

*M. F. Maury Comdr. U.S.N.*

1859 Pilot Chart for the South Indian Ocean. Note the "L.L.D." title after Maury's name as the University of Cambridge honored Maury with a L.L.D. degree. Although today's wind rose looks a bit different, the portrayal of information in 5° blocks of latitude and longitude has not changed. Maury's charts were not numbered, as we know of them today.

Initially referred to as "Wind and Current Charts," they were a series of six distinctive charts. Series A, North Atlantic (Track Chart), became the first to be published in 1847, based on the path a ship sailed on its voyage. Series B, Trade Wind Charts, were constructed specifically for the Atlantic and Indian Oceans and gave data for specific types of winds. Series C, Pilot Charts, gave the directions and frequencies of wind that could be expected during a voyage. Series D, Thermal Charts, revealed sea-surface temperatures for the Atlantic. Series E, Storm and Rain Charts, portrayed storm tracks for the Atlantic and Pacific Oceans. Maury also produced, Series F, Whale Charts, based on observations received exclusively from whaling vessels. The Whale Chart showed in 5° blocks of the world, what type of whale you could expect to find.

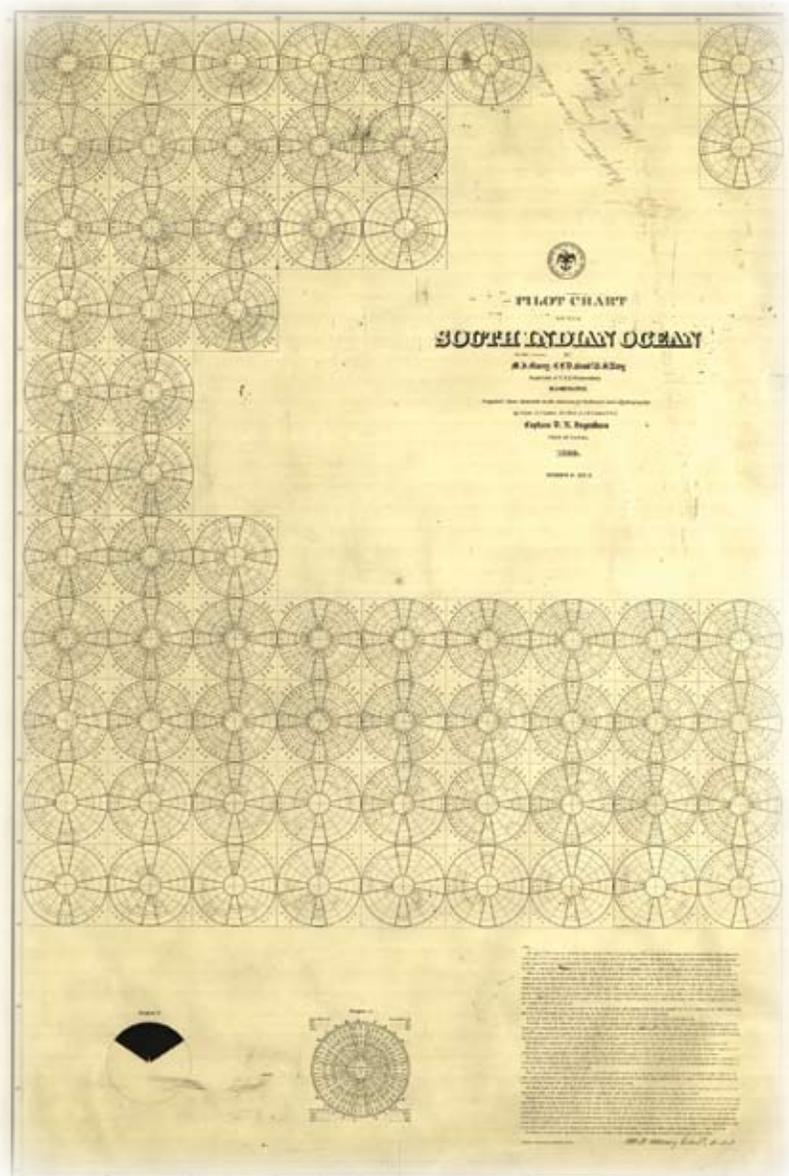
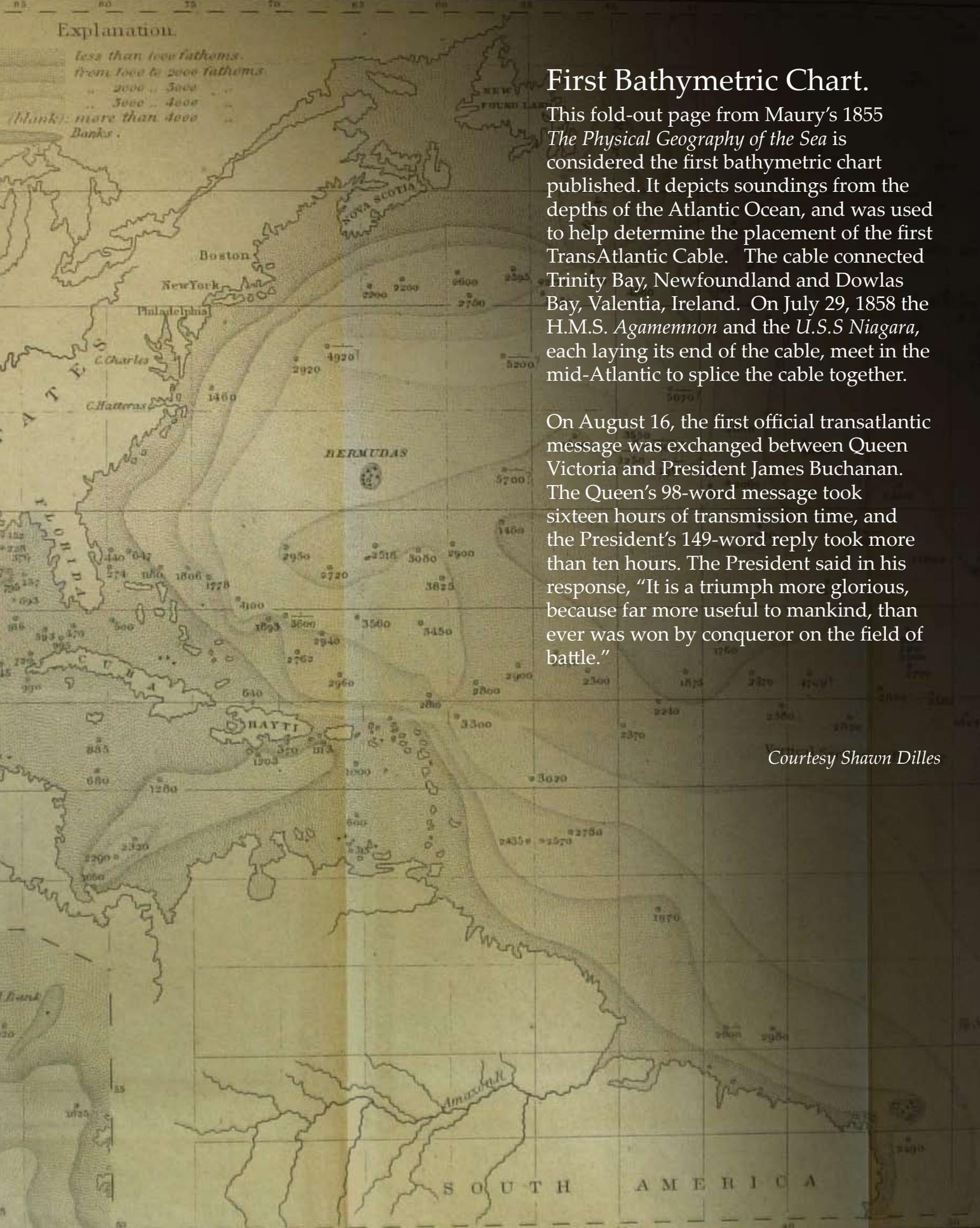


Image courtesy NGA

Explanation.

- less than 100 fathoms
- from 1000 to 2000 fathoms
- 2000 .. 3000
- 3000 .. 4000
- (blank): more than 4000
- Banks.



### First Bathymetric Chart.

This fold-out page from Maury's 1855 *The Physical Geography of the Sea* is considered the first bathymetric chart published. It depicts soundings from the depths of the Atlantic Ocean, and was used to help determine the placement of the first TransAtlantic Cable. The cable connected Trinity Bay, Newfoundland and Dowlas Bay, Valentia, Ireland. On July 29, 1858 the H.M.S. *Agamemnon* and the U.S.S *Niagara*, each laying its end of the cable, meet in the mid-Atlantic to splice the cable together.

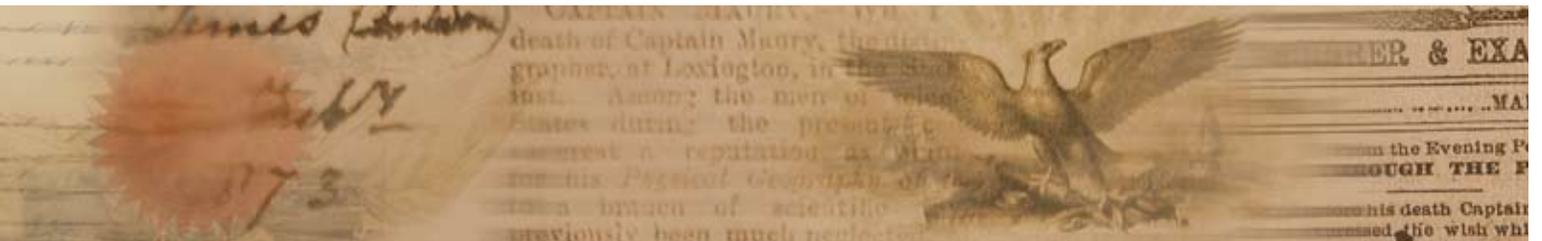
On August 16, the first official transatlantic message was exchanged between Queen Victoria and President James Buchanan. The Queen's 98-word message took sixteen hours of transmission time, and the President's 149-word reply took more than ten hours. The President said in his response, "It is a triumph more glorious, because far more useful to mankind, than ever was won by conqueror on the field of battle."

Courtesy Shawn Dilles



## PART II - SIGNIFICANT EVENTS

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# STAGECOACH ACCIDENT

Stagecoach Letter Maury writes to his cousin Ann Maury about the stagecoach accident that occurred on October 17, 1839 in Somerset, Ohio:

Somerset, Perry Co., Ohio  
25 Oct. 1839

My dear Cousin:

I shall not be with you according to instructions expressed in my last. I write "toes up" to inform you of the accident which detains me. With 12 others I was upset in a stage here last Friday, about 1 a.m. I was the 13th and had my right knee joint transversely dislocated, and this they learned longitudinally fractured, making together a very serious injury from which a recovery must be slow.

Fortunately I am in the hands of a good physician; & my mind is at ease.

According to one of the first physicians of the States, whom I had examine the leg – treatments – etc., I may consider myself fortunate if I'm off my back in 3 mo's time. With this prospect upon me I have written Nannie [Maury's wife, Ann "Nannie" Hull Herndon] & the children; I hope I shall have no need of Mr. Kent's "articles."

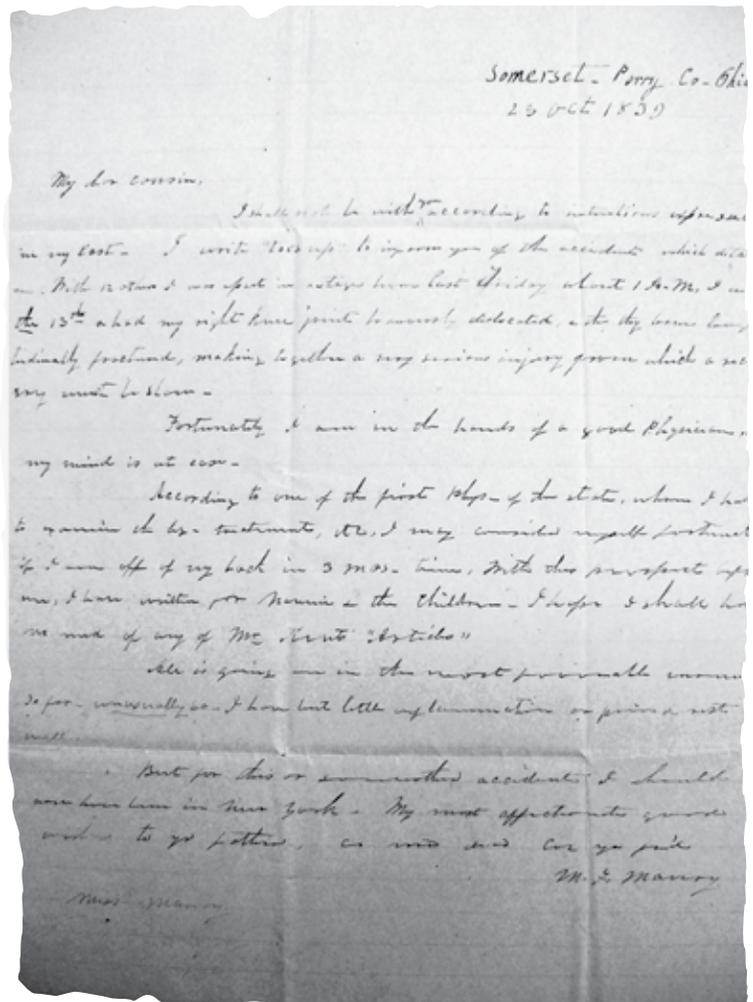
All is going on in the most favorable manner – so far unusually so. I have had little inflammation or pain & rest well.

But for this or some other accident, I should have been in New York. Most affectionate good wishes to your Father, as ever, dear Cousin,

Yr Fr'd,  
M.F. Maury

Maury was leaving Tennessee after visiting his parents whom he had not seen in nine years, en route to New York to report to the brigantine *Consort* (during 1840 and 1841 she conducted surveys along the southern coast of the United States). The

stagecoach that could only hold nine, took on three additional passengers, one of whom was a woman. Maury gave up his seat for the woman, and the three men rode on top by the driver. With no lights on the stagecoach and traveling on a dirt road, the driver veered off on a slope, causing the stagecoach to overturn. Maury was thrown and hit the ground hard causing his right leg injury and thus changing his life. It was while recovering that Maury began writing about Naval reform in the Southern Literary Messenger under the pen name of "Harry Bluff." His critical comments caught the eye of the Navy and his identity was exposed. Not being fit for sea duty, the Navy sent him to take charge of a storage facility – called The Depot of Charts and Instruments.



Courtesy Manuscript Division, Library of Congress.



James Buchanan,

President of the United States of America.

TO ALL WHO SHALL SEE THESE PRESENTS,

Greeting:

Know Ye, that reposing special Trust and Confidence in the Patriotism, Valour, Fidelity and Abilities of Matthew F. Maury, a Lieutenant on the Reserved List, I have nominated, and by and with the Advice and Consent of the Senate, do appoint him a Commander in the Navy, from the 14<sup>th</sup> of September 1855, on the Act of the service of the **UNITED STATES**. He is therefore carefully and diligently to discharge the duties of a **Commander**, by doing and performing all Manner of Things thereto belonging, and I do strictly charge and require, all Officers, Seamen and Marines, under his Command, to be obedient to his Orders as a **Commander**. And he is to discharge and follow such Orders and Instructions from time to time as he shall receive from me; or the future **PRESIDENT** of the United States, or his Superior Officer set over him: according to the Rules and Discipline of **THE NAVY**. This **COMMISSION** to continue in force during the pleasure of the President of the United States, my being.

(By the President)

Given under my Hand at Washington, this Twenty Seventh day of January in the year of our Lord One Thousand Hundred and Fifty Eight and in the Eighty Second of the Independence of the United States.

James Buchanan

next day's Commander  
Jan. 27. Friday Schenck  
J. B. Austin



# PROMOTION

## Presidential Notification.

Maury received this Presidential Notification in a letter from the Secretary of the Navy on January 29, 1858 that read:

“Sir: The President of the United States, by and with the advice and consent of the Senate, has appointed you a Commission in the Navy from the 14th of September, 1855 on the Active List. I have the pleasure to enclose herewith your commission, dated the 27th instant. I am respectfully, I. Toucey.”

James Buchanan

President of the United States of America,  
TO ALL WHO SHALL SEE THESE PRESENTS.

Greetings:

Know Ye, that referring special trust and Confidence in the Patriotism, Valour, Fidelity and Abilities, of Matthew F. Maury, a Lieutenant, on the Reserved List, I have nominated, and by and with the advice and consent of the Senate, do appoint him a Commander in the Navy, from the 14th of September 1855, on the Active list in the service of the United States. He is Therefore carefully and diligently, to discharge the duties of a Commander, by doing and performing all manner of things Thereto belonging. And I do strictly charge and require, all Officers, Seaman, and Marines, under his Command to be obedient to his Orders as a Commander. And he is to be diligent and follow such orders. Directions from time to time as he shall receive from me; or the future PRESIDENT of the United States of America, or his, Superior Officer set over him: according to the Rules and Discipline of THE NAVY.

This Commission to continue in force during the pleasure of the President of the United States for time being. Given under my Hand at WASHINGTON, This Twenty Seventh day of January in the year of our Lord One Thousand, Eight Hundred and Fifty eight and the Eighty Second year of the Independence of the United States.

James Buchanan

*Left: Manuscript Division, Library of Congress.*

Also signing the document is Secretary of the Navy, Isaac Toucey.

This was the culmination of a battle which began in the spring of 1855, when a retirement board of United States Navy officers (known as “the plucking board”) was created to get rid of those considered unfit for the Navy. Though Maury had established his fame, the lame right leg from the stagecoach accident in 1839 prevented him from further sea duty and thus he was considered “unfit.” The Board showed little sympathy and placed Maury on the retired “reserved on leave of absence pay” that kept him on duty at the National Observatory and left him with a reduced salary from \$3,500 to \$1,200 annually.

Maury was among 118 naval officers who petitioned the action and asked for a hearing with Congress. Maury won his grievance and was reinstated as well as promoted to the rank of Commander with back pay. Only 46 cases were upheld.

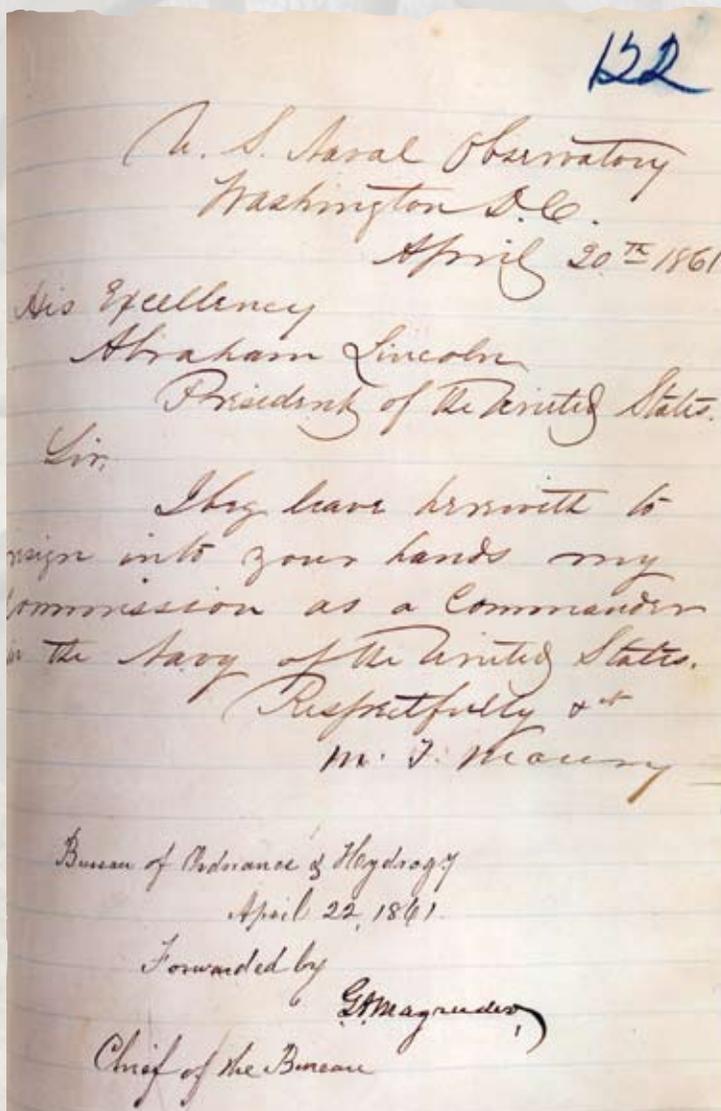
Ironically, among the opponents that Maury encountered in Congress were Senators Jefferson Davis (Mississippi), Judah P. Benjamin (Louisiana), and Stephen R. Mallory (Florida); the last two senators would someday serve in Confederate President Davis’ Cabinet as the Attorney General and Secretary of the Navy. Captain Franklin Buchanan (Maryland), who served on the Retirement Board and would later serve as a Confederate admiral, also opposed Maury. Maury believed that these four people carried a grudge against him, and were responsible for sending him out of the country in 1862 and “out of the way” to England for the duration of the war.

# RESIGNATION FROM U.S. NAVY

**Letter of Resignation.** About the Letter: Maury's letter of resignation does not stand by itself, but rather, is one of many to appear in two bound volumes titled, "Letters of Resignation Received from Commission officers at the Outbreak of the Civil War 1860-61."

Maury's letter is within Volume I, and is number as "122" of 144. The various resignation letters are not arranged by date, as the second letter is from April 23 by a United States Naval Academy midshipman. The last entry in Volume I is May 31, 1861. Maury's letter can be found at the National Archives, Washington D.C. as part of Record Group 45.

Maury, aged 55, and having served 36 years in a Federal uniform, wrote this letter of resignation to President Lincoln seven days after the fall of Fort Sumter. Initially, Maury started to dictate the letter to Thomas Harrison, his secretary of 20 years; however, Harrison was emotionally overwhelmed and could not complete it. Thus, Maury wrote it himself. He left in civilian clothes and arrived in Richmond, Virginia the next day, leaving behind his uniform, epaulettes, and sword. This letter forever sealed Maury's fate as a traitor to the Union. On May 4, 1861, a notice appeared in the *Boston Daily Evening Traveller*, "5,000 reward for the Head of Jeff Davis, \$3,000 for the head of Gen. Beauregard, \$3,000 for the Head of the Traitor Lieut. Maury." Maury was appointed on June 10 in the Confederate States Navy as a commander.



U.S. Naval Observatory  
Washington D.C.  
April 20th 1861

His Excellency  
Abraham Lincoln  
President of the United States

Sir,

I beg leave herewith to resign into your hands my Commission as a Commander in the Navy of the United States.

Respectfully,  
M.F. Maury

Richmond Va.  
26 April 1861

Photo courtesy National Archives.

Sir,  
I had the honor last night to receive your communications of 22nd in stating that my resignation without reasons (hinged?) had been received, and the president does not at present accept it.

I am not aware of any laws or rules that requires an officer tendering resignation to give reasons therefore.

In this, however, I have no objections to state them. They are these: our once glorious Union is gone; the state through which and for which I confessed allegiance to the Federal government has no longer any lot or part in it. Neither have I.

I desire to go with my own people and with them to share the fortunes of our own state together.

Such are the reasons for tendering my resignation, and I hope the President will considered them satisfactory.

At the date of your communications, I had already left the observatory housing and made over all its possible property in my charge to my next in authority, Lt. Whiting a very trustworthy & reliable officer.

Respectfully,  
M. F. Maury

Gideon Wells  
Navy  
Washington

123

Beaufort Va  
29. Apr 1861

Sir,

I had the honor last night to receive your communications of 22nd in stating that my "resignation without reasons therefore" had been received, & "the president does not at present accept it"

I am not aware of any laws or rules that requires an officer tendering resignation to give reasons therefore.

In this, however, I have no objections to state them. They are these: our once glorious Union is gone; the state through which and for which I confessed allegiance to the Federal government has no longer any lot or part in it. Neither have I.

I desire to go with my own people & with them to share the fortunes of our own state together.

Such are the reasons for tendering my resignation, and I hope the President will considered them satisfactory.

At the date of your communications I had already left the observatory housing and made over all its possible property in my charge to my next in authority, Lt. Whiting a very trustworthy & reliable officer.

Respectfully  
M. F. Maury

Gideon Wells  
Navy  
Washington

# THE DEATH OF M. F. MAURY



*Lying in State: photo courtesy of Virginia Military Institute*

Lying in state at V.M.I. Library (February 3-5 1873) The frame enclosing the original print appears to have been heavily draped in seaweed/moss/other plants as a decoration.

Upon Maury's death, V.M.I. issued general orders, No. 5, and informed President Ulysses S. Grant:

"It is with feelings of profound solemnity, that the Acting Superintendent announces to the Officers of the Institute and the Corps of Cadets, the death of Commodore M.F. Maury, LL.D., Professor of Physics in the Virginia Military Institute. He died at 12:30 to-day. The illness, which has thus terminated fatally, was of long duration, beginning with the return of Com. Maury from an extended and laborious tour of public service. All that skill and affection could do to arrest the fatal blow was in vain. It was not in vain, however, that the captain, philosopher, and Christian had the opportunity allowed to show, for the instruction of young and old, how bravely, calmly, and truthfully such a man meets his death.

It would be inappropriate, in this preliminary order, to touch upon the varied achievements in the service to his State, his country, and the world, which gained for him illustrious fame, or to delineate the traits of character which endeared him to the hearts of all who enjoyed the privilege of his friendship. The world will hasten to offer present tribute to his memory, and his career will afford a lofty theme for a future biography. Academic duties

in the Institute will be suspended until further orders, and the Corps of Cadets will hold itself in readiness for such participation in solemn ceremonies of the occasion as may be hereafter ordered...The usual badge of mourning will be worn by Professors, Officers, and Cadets, for the period of thirty days."

By command of Col. J.T.L. Preston,  
Act'g Supt.

To the President of the United States,  
Washington City, D.C.

Superintendent M.F. Maury, formerly of National Observatory, and late Professor of Physics, in Virginia Military Institute, died at 12:30 to-day. The distinguished scientific position of the deceased, and his world fame, makes his death an event of more than national concern. With this view, the Institute to which he gave his last service, deems it not unappropriate to ask the President of the United States to communicate the information of his death to Representatives of Foreign countries at Washington."

J.T. L. Preston,  
Acting Supt.

*Obituaries page 43 from left to right: The New York Times, Richmond Enquirer and Examiner, Manuscript Division, Library of Congress.*



# New York Chamber of Commerce Resolution

Chamber of Commerce of the State of New York  
Resolution  
In regard to the Death of Matthew F. Maury

At the meeting of the Chamber of Commerce, held February 6th 1873, Hon. William E. Dodge, President, the following preamble and resolution were adopted:\_\_\_\_\_

Wheras, this Chamber has frequently recognized the benefits conferred upon Commerce by Matthew Fontaine Maury; Therefore\_\_\_

Resolved, That it has heard of his death with much regret; also preamble and resolutions, duly signed and sealed, be sent to his widow.

A true copy.

W.E. Dodge  
President

*Courtesy of Manuscript Division, Library of congress*

Author's note: In 1853, a silver tea service was presented by the Merchants and Underwriters of New York to Matthew Maury in testimony of their appreciation of the beneficent results of his service to Commerce and Navigation.

Chamber of Commerce of the State of New York.  
Resolutions  
in regard to the Death of Matthew F. Maury

At the Meeting of the  
Chamber of Commerce, held February 6<sup>th</sup> 1873,  
Hon. William C. Dodge, Presiding, the fol-  
lowing Preamble and Resolutions were  
adopted: -

Whereas, this Chamber has  
frequently recognized the benefits con-  
ferred upon Commerce by Matthew  
Fontaine Maury; Therefore

Resolved, That it has heard  
of his death with much regret; also

Resolved, That a copy of this  
Preamble and Resolutions, duly signed  
and sealed, be sent to his widow.

A true Copy.

W. C. Dodge  
President.

Attest: -  
George K. Dixon  
Secretary.





## PART III - HONORS & AWARDS

---



# DESCRIPTION OF HONORS AND AWARDS

*The following were all intended as acknowledgements of the services rendered to Commerce Navigation and Science, through the Wind and Current Charts, the Physical Geography of the Sea, and the researches and investigations connected with and arising therefrom.*

*There were many other honors and distinctions conferred; but the letters, diplomas, resolutions and other evidences thereof, were stolen during the War when my father's residence in Fredricksburg was plundered by the Federals at the time of the great battle there.*

*Richard L. Maury  
Richmond, VA. 1897*

---

## Medals and Testimonials Presented to Captain Matthew Fontaine Maury

---

### Gold medal, presented by the King of Sweden



*Photo courtesy Smithsonian Institution*

Obverse: A bust of the King, with these words:  
"Oscar Rex Sveciae Norvegiae Goth et  
Vandal."

Reverse: Illia Quorum Meruere Labores M. F.  
Maury Procenturioni Observator  
Astron. Washingtonensi Praefecto  
(N. B.) This was the first medal  
received.

Obverse: A bust of the King with these  
words -Willem III Konig Der  
Nederl. G. H. F. Luxemb.

Reverse: Aan M. F. Maury Deu  
Onderzoeker der Natuur. Deu  
Gide ever Deu Oceaan. Eu  
Weldoener van der Seeman  
De Koning MDCCCLV

#### Translation

"To M.F. Maury, The Expounder of Nature, the  
Guide over the Ocean and Benefactor of the  
Sailor. The King. 1855

Letter to Lieut. Maury from the Secretary of  
State transmitting the Netherlands medal  
together with the accompanying letter from that  
Governments.

*Department of State Washington  
March 6th, 1856*

*Lieut. M. F. Maury  
of the U. S. Navy, Washington, D.C.*

*Sir,*

*I take great pleasure in transmitting to you herewith  
a gold medal which His Majesty, the King of the  
Netherlands, has been pleased to confer upon you, in  
consideration of your services to science. with a copy of the  
note from the Dutch Minister of Foreign Affairs which  
accompanied it, just received from the Minister Resident  
of the United States at the Hague.*

*I am Sir respectfully*

*Your obedient Servant  
W. L. MARCY*

---

### Gold medal, presented by the King of the Netherlands Willem III



*Photo courtesy Smithsonian Institution*

A Resolution authorizing the acceptance of certain medals from Foreign Governments :

*Resolved - the Senate and House of Representatives of the United States of America in Congress assembled.*

*Sec. 2. And be it further resolved That Lieut. M. F. Maury of the United States Navy be and he is hereby authorized to accept the gold medals recently presented to him by the governments of Prussia and Holland and the Republic of Bremen.*

*Approved August 30, 1856*

*II stat. L. 151*

Letter from the Netherlands Minister of Foreign Affairs to the United States Minister resident at the Hague transmitting the medal for Lieut. Maury.

(Translation)

*The Hague*

*February 5th, 1856*

*Sir:*

*Lieut. M. F. Maury of the Navy, Superintendent of the National Observatory at Washington, has on several occasions presented to the Government of the Netherlands copies of his scientific works which have always been received with the very great interest which they deserve.*

*My august Master the King desiring to manifest to him his high appreciation has caused to be struck for Mr. Maury a gold medal of thirty Holland ducats.*

*I beg you Sir, to be so kind as to communicate the foregoing to your learned fellow citizen, who probably has already by this time received a communication from the Legation of the Low Countries at Washington, and at the same time I avail myself of your courtesy to request that you will transmit to Mr. Maury the aforesaid medal which I have the honor to send inclosed herewith. Accept Sir renewed assurances of my highest consideration.*

*VAN HALL*

*Mr. Belmont, Resident Minister of the United States of America.*

## Gold medal, presented by the Republic of Bremen



*Photo courtesy of Smithsonian Institution*

Obverse: The arms of the Republic

Reverse: DEM FÖRDERER DER WISSENSCHAFT DEM FÜHRER DER SEEFÄHRER LIEUT. M.F. MAURY IN EHRENDER ANERKENNUNG DER SENAT DER REPUBLIK BREMEN 1855

Translation: To the Promoter of Science, the Navigator's Guide, Lieut. M.F. Maury. In honourable acknowledgement of the Republic of Bremen, 1855.

The following letter accompanied this medal:

*Washington, D. C.  
December 28th, 1855*

*Sir:*

*It affords me great pleasure to hand you in the name of my government the accompanying Gold Medal. Its German inscription may be thus rendered in English: "To the Promoter of Science, the Navigator's Guide, Lieut. M. F. Maury. In honorable acknowledgement of the Republic of Bremen. 1855."*

*This inscription, better than any of mine, shows the sense of high appreciation in which your eminent merits in regard to all maritime interests are held in my country - the citizens of which are perhaps re generally engaged in navigation and therefore more benefitted by your valuable discoveries and directions than those of any other country-*

*Your name which has so long been an ornament to the United States Navy is and will ever be gratefully remembered in Bremen.*

*I beg leave to avail myself of this agreeable occasion to offer you at the same time a renewed assurance of the great personal respect and regard with which I have the honour to be*

*R. Schleiden  
Minister of the Republic of Bremen*

(Reply)  
Observatory Washington  
December 29, 1855

-Sir:

*I have the pleasure to acknowledge the receipt of your communication of the 28th inst.. conveying from the Senate of the Republic of Bremen a gold medal struck in honor of my poor services.*

*Make my acknowledgments. I pray you. in suitable terms to your government for this honor.*

*I shall hasten to lay your communication with the medal before my government for such action as the organic law of the country requires.*

*There is an open virtue in this exquisitely wrought medal and a sweet grace in the beautiful inscription upon it which will cause it ever to be regarded as a most precious memorial.*

*The seamen of the Republic of Bremen are renowned for their skill for their enterprise and intelligence, than they none are better judges of what tends to improve navigation or benefit commerce; and it will always be a lively source of gratification to remember that it is the Senate of such people that have deemed my labours worthy of their honorable acknowledgement.*

*Thanking you for the kind terms and friendly manner in which you have been pleased to make known the action of your government.*

*I have the honor to be, with distinguished consideration, &c.*

M. F. MAURY

*M. Rudolph Schleiden  
Min. Resident of the Republic of Bremen  
Washington*

*Leave of Congress to accept -Aug. 30, 1855 II stat. L. 151  
V. No. 111.*

## The Cosmos Medal of Humboldt, presented by the King of Prussia



Photo courtesy Smithsonian Institution

Obverser: A bust of Humboldt with these words : "Alexander Von Humboldt MDCCCXXXVII:

Reverse: ΚΟΣΜΟΣ

A letter to Lieut. Maury from the Prussian Minister presenting to him, by order of His Majesty the King of Prussia the Great Golden Medal for Science and the Cosmos Medal

*Prussian Legation,  
Washington 10th April, 1856*

*It affords me great pleasure to inform you that by order of His Majesty the King my Sovereign, I have been directed to present to you the great golden medal for Science, and the golden Cosmos Medal as an acknowledgement of the services for which Prussia is indebted to you for the publication of your Sea and Current Charts with the Sailing directions and the distribution of them to several of the Royal Authorities and Institutions in Prussia.*

*In presenting to you the said medals together with a letter addressed to you by Baron A. von Humboldt, I beg leave to renew to you the assurance of my high consideration, and to be,*

*Very respectfully  
Your Obedient Servant  
L. Gerolt*

*Lieutenant Maury. U.S.N.  
Superintendent of the National Observatory Washington.*

(Reply)

Observatory Washington  
12th April, 1855  
Sir:

*I have had the pleasure to receive your esteemed communication. of the 10th instant. transmitting a letter from Baron Alexander von Humboldt together with the great gold medal for science, and the golden Cosmos medal which His Majesty the King of Prussia has been pleased to order in acknowledgment of the services to which Prussia is indebted on account of the wind and current charts.*

*I consider it a great honor that my labors are held in such esteem at a court so renowned as is that of His Majesty the King of Prussia, for the science which surrounds it and the achievements which men of science acting under its auspices and patronage have accomplished. Pray therefore. my friend, convey to His Majesty suitable expressions of my acknowledgment for these flattering marks of his high appreciation, and permit me to in- close for your mail the accompanying letter to my great and good friend the Baron Alexander von Humboldt.*

*Thanking you most cordially for the pleasant and agreeable manner in which you have made known to me the generosity of your sovereign. I beg to renew to you the assurance of high consideration.*

Respectfully &c-. M. F. MAURY

Autograph Letter to Lieut. Maury from Baron von Humboldt commending his scientific achievements and informing him that the King of Prussia had sent him the Prussian Great Gold Medal of Science and the COSMOS Medal:

(Translation)

*For many years you have been pleased to enrich with your generous gifts the most important Institutions of my country, the Admiralty, the Academy, the Schools of Navigation, and the Public Libraries.*

*Your great works upon the Currents of the Seas, its depths, and the direction of the winds at different seasons, and in different latitudes have been productive of the greatest benefits to the Commerce of all Nations in shortening the voyages by sea and increasing the safety of the navigation of the Atlantic and the Southern Oceans to a wonderful extent. You have thus pointed out new routes to the sailors who are all greatly impressed with the wisdom of your suggestions, and you have thus added immensely to the conclusiveness of all that has been hitherto urged in favor*

*of the employment of steam and the more frequent use of the Chronometer and the observations of the Lunar distances in navigation.*

*My sovereign the King of Prussia. deeply impressed with a sense of the eminent merit of your careful and painstaking labors, and interested also in the noble efforts of the United States in the advancement of Science so necessary to the greatest development of public prosperity. desires to give to Lieutenant Maury. Superintendent of the National Observatory at Washington, a mark of his gratitude and esteem by presenting to him through our Minister Baron Gerolt (my excellent friend) the medal which is given in reward for great scientific achievements. And being aware of the affection with which you have honored me for so long. the King, wishing to increase your pleasure, has added another Medal, the one which His Majesty caused to be struck when the. COSMOS was published.*

*Accept I beg you my dear and illustrious friend renewed expressions of my high and very affectionate consideration.*

*Your very humble and your very devoted servant.*

*Baron Alex de Humboldt*

*Berlin*

*February 3, 1855*

(Reply)

Observatory of Washington

April 13th, 1855

*My great and good friend:*

*Your letter of 3rd Feby. is very grateful. It assures me by testimonials the most flattering and comfortable that labors of my own which I consider poor were - the best of judges regarded as works of merit.*

*Commendation from such a source conveyed in such terms, and expressed by such tokens and symbols is for the man of science a quiver full. It cheers him, he feels strong for renewed labors and buckling up his armor, he finds his hands strengthened, and realises the fact that words of sympathy and acts of kindness have enlarged for him, by making wider his field, the glorious privilege of doing good.*

*Commendation from such a source conveyed in such terms, and expressed by such tokens and symbols is for the man of science a quiver full. It cheers him, he feels strong for renewed labors and buckling up his armor, he finds his hands strengthened, and realises the fact that words of sympathy and acts of kindness have enlarged for him, by making wider his field, the glorious privilege of doing good. Be pleased therefore my good friend and benefactor to accept my most sincere thanks for the kind and generous expressions contained in your excellent letter, and have the goodness to convey to His Majesty suitable expressions for the honor he has conferred. Say if you please dear Baron that as highly as these medals are valued as marks of honor and friendly consideration by an august Sovereign, they have a virtue which gives them a value that is great for good.*

*With the affection solicitude of friendship for the continuation of your health, and the prolongation of a life that has been so gloriously spent, permit me my dear Sir to subscribe myself, as ever.*

*Your friend and admirer  
M.F. Maury*



Bronze medal presented by Leopold I of Belgium



Gold medal Presented by the Emperor of the French





Bronze medal presented by the Society of Experimental Philosophy



Gold medal Presented by the Emperor of the French



## SET OF 13 SILVER MEDALS OF POPE PIUS IX

A set of 13 silver medals commemorating events of Pope Pius IX was presented to Matthew Maury through Cardinal Giacomo Antonelli. The Pope was a proponent of the 1853 Brussels Conference that adopted Maury's universal system of weather reporting. The Vatican authorized special flags to be flown at the mast of any vessel from the Papal States whose masters utilized Maury's weather reporting system. Special decorations for seamen were awarded also. Those whose log books were approved by Maury would receive military rank from their governments and be entitled to a salute as they passed its forts.



*Photo courtesy: Smithsonian Institution*



**Monetary Award.** On June 5, 1866, Sir John Pakington, First Lord of the Admiralty, presented this award to Maury at a gala dinner in London, England. The award was for the benefits that all maritime nations had gained from Maury's Wind and Current Charts, his Sailing Directions, and the worldwide marine meteorological co-operation brought about by the Brussels Conference of 1853. It reads: "We the undersigned beg your acceptance of the accompanying purse of Three Thousand Guineas in appreciation and acknowledgment of the eminent and disinterested service which through years of untiring zeal in the cause of science you have rendered to the maritime nations of the world. Receive from us this public testimony of our regard with every wish for your future welfare and happiness."

The purse was presented to Maury in this silver-gilt casket award and signed by all the donors. The Grand Duke Constantine of Russia contributed £1,000; £1,100 by admirers in Holland, and the balance by donations of individuals from Britain.

The monetary term guineas was considered a more gentlemanly amount than £1. At the time 3,000 guineas was worth \$15,750. In 2004 dollars, taking into account the Consumer Price Index, the award would be worth \$186,298.

*Manuscript Division, Library of Congress*

“On April 24, [1912] Mrs. Mary Maury Werth, the daughter of the late Capt. Matthew Fontaine Maury and other of his descendants, were received by special appointment by the President of the United States, and handed him the following letter:

To the President:

We, the undersigned, desire, through you, Mr. President, to present to the United States of America the collection of letters, medals and other honors conferred upon the late Matthew Fontaine Maury by foreign Governments in recognition of his services to science and navigation, of which a description is hereto annexed, with the request that, if accepted you will its deposit in the government institution at Washington which would be the most appropriate custodian of such a memorial.

We assume that in case of the medals this would be the National Museum and as regards the rest of the collection it would be the Library of Congress.

Yours most obediently,

(Signed)

Mary Maury Werth  
Rose Robinson Maury  
Nannie Belle Maury  
Sophia Bruce Maury

Lucy Maury Van Doren  
Matthew Fontaine Maury Werth  
Alice Maury Parmelee  
Dabney H. Maury

President Taft accepted the gift for the United States and directed that the medals be deposited with the National Museum, and the books and papers with this Library.”

From: Report of the Librarian of Congress for the Fiscal Year Ending June 30, 1912. Washington, Government Printing Office.

“Mrs. James R. Werth in a Colonial dress & powdered hair piece wearing the orders & decorations presented to her father, Captain M.F. Maury in acknowledgement of his scientific service to the maritime nations of the world. A diamond and pearl pin from the Czar of Russia (on breast). A diamond pin from Maximilian, Grand Duke of Austria (on left shoulder). The cross of the Dannebrog from the King of Denmark. The Tower and Sword (a star suspended) from the King of Portugal and the Order of Our Lady of Guadalupe (over the left shoulder and under the right arm) from the Emperor of Mexico.”

Written by Mary Maury Werth age 54. Picture taken on February 10, 1899 for her son M.F. Maury Werth.

*Photo courtesy of Valentine Richmond History Center*





## PART IV - PORTRAITS OF MAURY

---





*Top left: Oil painting which hung at the entrance to Maury Hall from 1989-2005, NGA Bethesda Site. At the dedication ceremony, Maury's great-grandsons, Captain James Maury Werth USN (Ret.), George Carter Werth, and twin brother Lewis Herndon Werth, were on hand to dedicate Maury Hall. Top right: Oil painting which hangs in Maury Hall after the rededication in 2006.*



*Photograph of an engraving by Lemuel S. Punderson after a daguerreotype of about the year 1855, autographed and inscribed by Lt. Maury.*

*photo courtesy Jan K. Herman*



*Top: Photo of the Maury family. The strain of the Civil War and the years of exile on Matthew F. Maury (seated on left) is clearly evident in this 1868 photograph taken in London shortly before his return to the United States. His wife Ann Herndon, is seated to the right, his granddaughter, Nannie, on his lap, and five of his children stand behind him: From left are Eliza, Lucy, Mary, Matthew Jr., and Diana. Admiral Jansen of the Royal Dutch Navy, a family friend, is standing behind Maury.*

*Photo courtesy Jan K. Herman*



*Left: Maury who considered himself a man of science first and foremost rather than a naval officer is photographed in civilian black broadcloth attire. This carte-de-visite photograph was taken by Mathew Brady in his studio near the White House prior to the outbreak of the Civil War. Brady opened his studio in 1858 at 350-352 Pennsylvania Avenue, N.W.*

*Photo courtesy Jan K. Herman*



*Left: Maury Honary Doctor of Laws. on May 28, 1868, Maury received an honorary doctor of laws (LL.D.) degree from Cambridge University.*

*Photo courtesy Virginia Military Institute*

*Maury's recipe for Eggnog.  
The recipe was presented  
to the United States  
Naval Academy by Mr. H.  
Lownder Maury in 1939.*

## M. F. Maury's Recipe for Eggnog

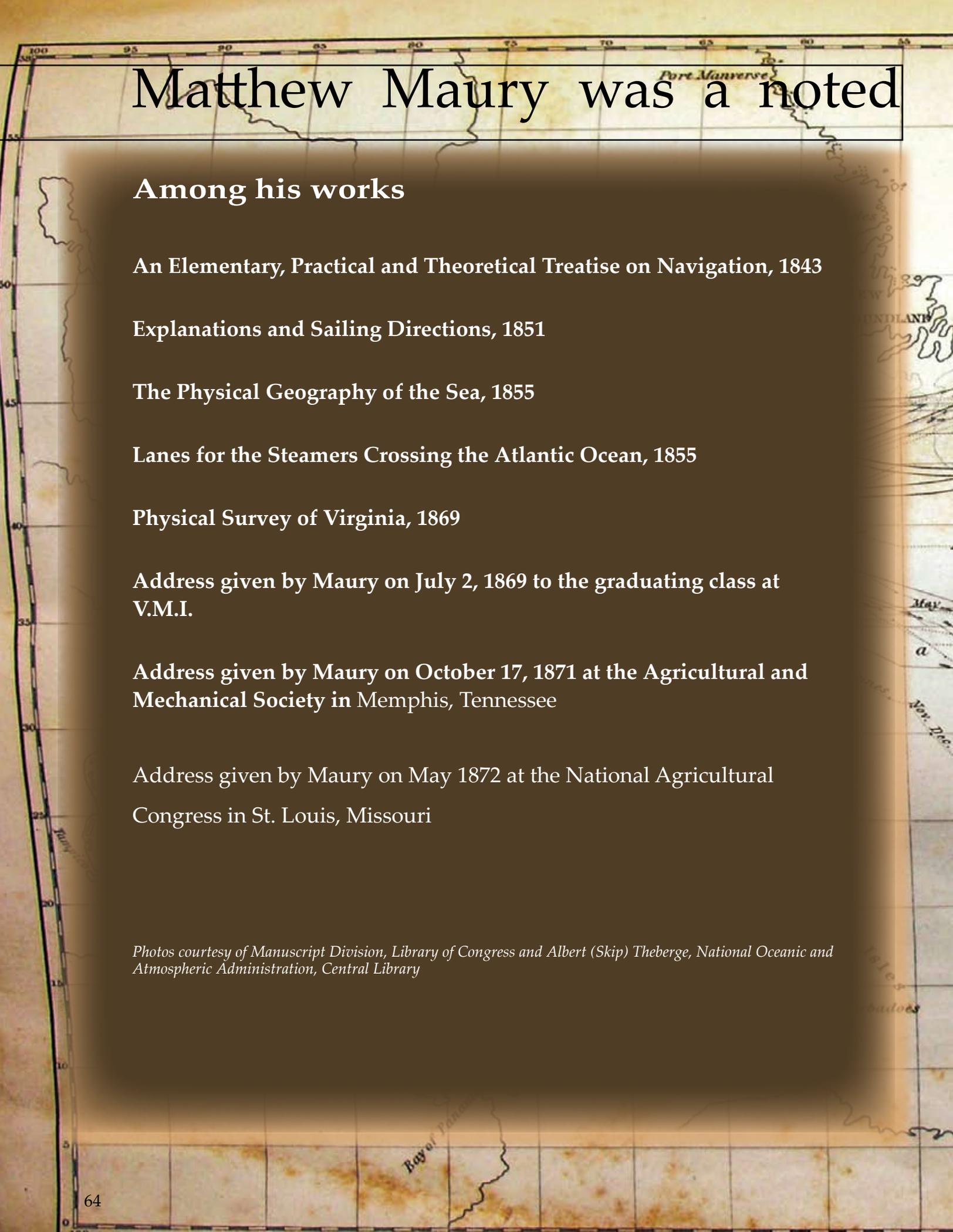
12 Eggs  
12 dessert-spoonfuls sugar  
12 Table-spoonfuls Jamaican Rum  
12 Table-spoonfuls Whiskey  
1 Pint whipped cream

Break yolks and whites of eggs separately  
Stir sugar into beaten yolks  
Then whiskey and rum into mixture  
Into this stir one pint whipped cream  
lastly stir in the stiffly beaten whites of the eggs

## PART VI - PUBLISHED WORKS

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# Matthew Maury was a noted

## Among his works

An Elementary, Practical and Theoretical Treatise on Navigation, 1843

Explanations and Sailing Directions, 1851

The Physical Geography of the Sea, 1855

Lanes for the Steamers Crossing the Atlantic Ocean, 1855

Physical Survey of Virginia, 1869

Address given by Maury on July 2, 1869 to the graduating class at V.M.I.

Address given by Maury on October 17, 1871 at the Agricultural and Mechanical Society in Memphis, Tennessee

Address given by Maury on May 1872 at the National Agricultural Congress in St. Louis, Missouri

*Photos courtesy of Manuscript Division, Library of Congress and Albert (Skip) Theberge, National Oceanic and Atmospheric Administration, Central Library*

author and lecturer of his time.

# SOUTHERN LITERARY MESSENGER

T. W. WHITE, EDITOR AND PROPRIETOR.

VOL. IX.

JANUARY, 1843.

## ORIGINAL PROSE ARTICLES.

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| 1. The Editor to his Patrons.....  | 1    |
| 2. The Navy and the West; Harry Bluff's plan for establishing a National Boat-Yard, on the Mississippi; How it was responded to, by the Legislature of Tennessee; The proceedings of the citizens of Memphis, in relation thereto; How the West is concerned in the Navy, and how it has been cheated of Navy patronage; and how the public service has suffered in consequence thereof; The mouth of the Mississippi not at the Balize, but at the capes of Florida; How the Gulf of Mexico ought to be defended by Steamers, and how they ought to be manned by Western boatmen; How every thing for boat building is produced in the West, and carried to the East for the benefit of Eastern speculators; How guns for the Navy are cast in the West, for 50 per cent less than in the East; How the Steamers Mississippi and Missouri have proved failures; How it cost \$1,500 a day to sail them, and how they cost more than they came to; A plan proposed by which every river-town in the West, may have its 'water-mark,' showing at all times the depth of the shoals above and below; A capital idea, worthy the consideration of the West- |      |

## ORIGINAL PROSE ARTICLES—(con)

- |  |  |
|--|--|
| 7. The Wanderer; The Abbey of Parslet; J. and Abellard; Interesting account of the romantic history..... |  |
| 8. Lord Bolingbroke's Writings, compiled by D. forced and re. His master-piece of a paper.....           |  |
| 9. The Writers' Union.....   |  |
| 10. Love Sketches and Mordant dieing hour;   |  |
| 11. The Winter-Nancy Brown's scrape; Meetings; Citations; E. may grieve h.....                           |  |
| 12. Extracts from.....   |  |
| 13. Woman.....   |  |
| 14. Old King T.....  |  |
| 15. Song, by Ann the Hummin.....   |  |
| 16. Winter is the Mysterie White at the Midnight.....  |  |

## NOTICES

Two notices of circulation, by North, and A. in United States.....

*Yarnall*

AN  
ELEMENTARY, PRACTICAL AND  
THEORETICAL  
TREATISE ON NAVIGATION:

WITH A  
NEW AND EASY PLAN  
FOR FINDING  
DIFF. LAT., DEP., COURSE, AND DISTANCE BY PROJECTION.

BY M. F. MAURY,  
LIEUT. U. S. NAVY.

SECOND EDITION, REVISED AND CORRECTED.

PHILADELPHIA:  
EDWARD C. BIDDLE, NO. 6 SOUTH FIFTH STREET.  
1843.

# THE PHYSICAL GEOGRAPHY

# OF THE SEA.

BY M. F. MAURY, LL.D.,  
LIEUT. U. S. NAVY.

NEW YORK:  
HARPER & BROTHERS, PUBLISHERS,  
229 & 231 PEARL STREET,  
FRANKLIN SQUARE.  
1855.

RAREBOOK  
GC  
11  
M45  
1st ed.  
1855

712  
30139 P

EXPLANATIONS AND SAILING DIRECTIONS

TO ACCOMPANY THE

WIND AND CURRENT CHARTS,

APPROVED BY

COMMODORE LEWIS WARRINGTON,

CHIEF OF THE BUREAU OF ORDNANCE AND HYDROGRAPHY;

AND PUBLISHED BY AUTHORITY OF

HON. WILLIAM A. GRAHAM,

SECRETARY OF THE NAVY.

BY LIEUT. M. F. MAURY, U. S. N.

SUPERINTENDENT OF THE NATIONAL OBSERVATORY.

WASHINGTON:  
C. ALEXANDER, PRINTER.  
F STREET, NEAR NAVY DEPARTMENT.  
1851.

14810

RAREBOOK  
VK  
802  
.114  
3rd ed.  
1851

LANES FOR THE STEAMERS

CROSSING THE ATLANTIC.

CONCERNING

BY

M. F. MAURY, LL.D., LIEUT. U.S.N.,

SUPERINTENDENT OF THE NATIONAL OBSERVATORY, WASHINGTON.

NEW YORK:

PUBLISHED BY THE BOARD OF UNDERWRITERS.

PHYSICAL SURVEY OF VIRGINIA.

HER GEOGRAPHICAL POSITION;

COMMERCIAL ADVANTAGES AND NATIONAL IMPORTANCE.

PRELIMINARY REPORT

OF

M. F. MAURY, LL.D., ETC., ETC.,

PROFESSOR OF TIDEON, VIRGINIA MILITARY INSTITUTE, ALEXANDRIA, VA.  
Gen. FRANCIS H. SMITH, & M. SCHENCKENBERG.

MARCH, 1860.



SECOND EDITION.

NEW YORK:

D. VAN NOSTRAND, PUBLISHER.

1860.

ADDRESS

TO THE

Graduating Class,

VIRGINIA MILITARY INSTITUTE,

JULY 2ND, 1869,

BY

COM. M. F. MAURY, LL. D.,

*Prof. of Physics, Va. Military Institute.*

PUBLISHED BY REQUEST.

RICHMOND:  
DISPATCH STEAM POWER PRESSES.  
1869.



ADDRESS

Com. M. F. MAURY,

BEFORE THE  
Fair of the Agricultural & Mechanical Soc.  
OF MEMPHIS, TENN.

DELIVERED AT THE FAIR GROUNDS,

IN PRESENCE OF A LARGE AUDIENCE,

Oct. 17th, 1871.

MEMPHIS:  
PRINTED BY THE APPRAL JOB OFFICE, No. 14 UNION STREET.

1871.

ADDRESS

M. F. MAURY, LL.D.,

BEFORE THE  
National Agricultural Congress,

AT ITS MEETING IN ST. LOUIS,  
May, 1872.

JNO. P. REYNOLDS, PRESIDENT,  
Chicago, Ill.

L. B. BERTOCK, TREASURER,  
St. Louis, Mo.

C. W. GREEN, SECRETARY,  
LONDON, TENN.

SENEGAMBIA

Monrovia

Shape of Doldroms

in Spring

in Winter

for Steamers to America

Steamers to Europe

May

March

C. Finiste

Lisbon

St. Vincent

Gibraltar

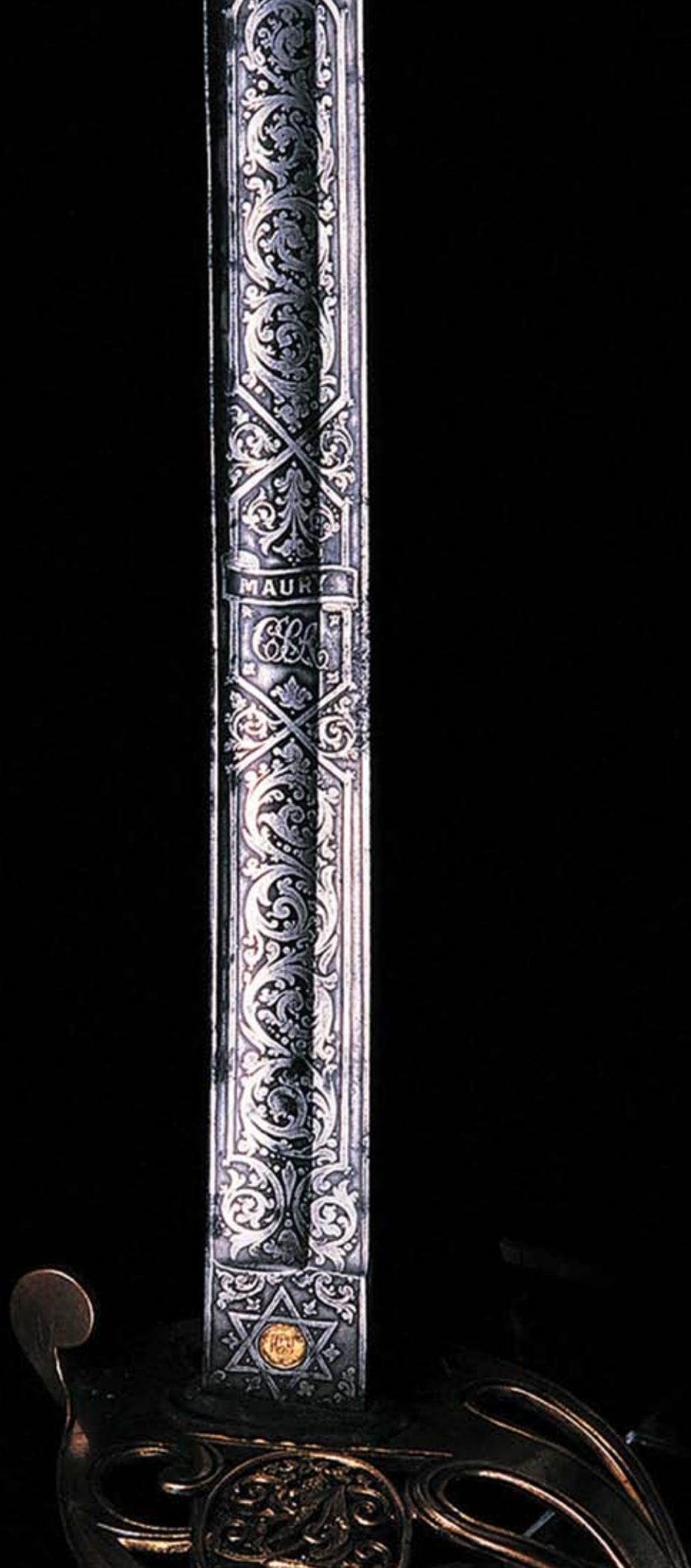
C. Blanc



### *ABOUT THE AUTHOR*

Howard Cohen graduated from the Massachusetts Maritime Academy in 1977 with a Bachelor of Science in Marine Transportation and minor in Oceanography. He served as a Licensed Deck Officer in the U.S. Merchant Marine. Mr. Cohen is currently a Marine Analysis Professional Advisory Board Manager in the Workforce and Development Tradecraft Office. He has written extensively about NGA's Maritime Domain's heritage, products, services, and accomplishments. His articles have been published in Hydro International, Via Inmarsat, IMO News, and NOAA's Mariners Weather Log. Mr. Cohen was a Public Affairs Officer in the Office of Corporate Relations and holds a Masters of Arts in Communications from American University.





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