



MATTHEW FONTAINE MAURY

Pathfinder of the Seas

By Keith Gibson

Thomas Jefferson was in his second term as President when Matthew Maury was born on January 14, 1806. Four years later, his father relocated the family to Tennessee. At the age of 12, the small boy fell 45 feet from the top of a tree. Nearly biting off his tongue and severely injuring his back, the doctor instructed the family that a full recovery would require complete rest for perhaps several years. Mr. Maury preferred that his son learn the backbreaking work of a farmer, but now arranged to send young Matt to school. This unexpected opportunity opened up the worlds of mathematics, astronomy and geography to the convalescing boy. His back would heal, but for the rest of his life, Maury would blame his diminutive 5 foot 6 inch stature on the fall.

Perhaps inspired to a life at sea from the stories told by his older brother John who had become a midshipman at age 13, the head strong Maury secretly arranged an appointment as a midshipman himself. When the devastating news arrived that his older brother had died of disease while on duty, Matthew determined to take his place in the Navy. Richard Maury would never agree to the decision of his 19 year-old son. Riding a borrowed horse, Matt left home to find his path in life. On his way he visited cousins back in Spotsylvania, notably 13 year-old Ann Hernon. Nine years later they married.

In New York, August 1825, the new midshipman boarded his training ship USS *Brandywine*. Both the ship and Maury were new to naval service. The *Brandywine* was

on its maiden voyage. She carried the Marquis de Lafayette back to France after his celebrated last visit to America. In fact, the *Brandywine* was named for the first Revolutionary War battle in which Lafayette had participated.

One year later, Maury found himself on another historic cruise when the USS *Vincennes* became the first US Navy vessel to circumnavigate the globe. He was aware that he had entered the world traveled by Magellan, Drake, Vasco de Gama and Diaz. Unlike these earlier explorers, the young sailor would leave his mark not by discovering a new sea or a landmass, but by discovering the relationship between the two. His keen observations and unquenchable curiosity are revealed in his descriptive writings about the voyage aboard the *Vincennes*: “*If you stand in the public square of the city of Quito (Peru) you can see eleven snowcapped volcanoes all at once. One of these, Chimborazo, is so lofty that it can be seen by moonlight at a distance of ninety miles. Cotopaxi, a near neighbor, is the grandest of all volcanoes. Its terrific eruptions sound like the discharge of the largest cannons, and have been heard at a distance of 100 miles.*”

It was at this time that Maury first realized the disadvantage that American naval officers suffered by not having a school from which to learn the rudiments of their craft. The Army had established West Point almost 20 years earlier in 1809. Maury began to lobby the tradition bound Navy to change its training methods. The opinionated young officer did not always find a welcome ear. Indeed, throughout his career, Maury's outspoken positions coupled with the international praise for this relatively junior officer created jealousy and contempt from some high placed Washington associates. Among them were Congressman Stephen Mallory, Secretary of War Jefferson Davis and Smithsonian Institution's Superintendent Joseph Henry.

Lieutenant Maury returned to Spotsylvania County in 1835 to wed his cousin Ann. The next year, he published his first book: *A New Theoretical and Practical Treatise on Navigation*. When the US Naval Academy was finally established ten years later, Maury's volume would be one of the first textbooks.

As Maury's scientific mind began to attract attention and recognition, for the second time a near fatal accident would change the course of his life. He was riding atop a crowded stagecoach in the middle of the night, when the coach overturned. Maury's right leg was gushed. The Secretary of the Navy found him unfit for further sea duty. The young officer was appointed Superintendent of the Depot of Charts and Records in Washington. In time the Depot would be renamed the US Naval Observatory. It was a disappointing turn of events; as far as he was concerned his career had ended. Maury was 36 years old.

Lieutenant Maury discovered a wealth of neglected information in the ship's logs stored at the Observatory. In 1843, he gave his first paper on the Gulf Stream as it was revealed in the logs. “*There are rivers in the sea.*” Maury proclaimed, “*They are of such magnitude that the mightiest streams of the land are rivulets compared to them. They are of either warm or cold water while their banks and beds are water of the opposite temperature. For thousands of miles they move through their liquid channels unmixed with the confining waters. They are the horizontal movements called current.*” With the logs as his starting point, Maury directed that every navy vessel be equipped with special charts and logs with which to record information in a standardized way. As information began to flow into Maury's Washington office, it became clear that the *paths in the sea* could be located, charted and mastered.

By 1855, Maury's charts were in general use. His work was quickly adopted by the captains of new clipper ships designed for speed. Voyages from New York to San Francisco that had previously taken 180 days could now be made in as few as 100 days!

The impact on international commerce was immediate and astronomical. Maury was praised by every seafaring nation on the globe. He had become the *Pathfinder of the Seas*.

While his team of assistants worked on charting the oceans, Maury started in a new direction: the heavens. He now set out to record a standardized base knowledge of every visible star, with particular emphasis on those used for navigation. Of course, navigators had used stars for centuries. Maury's contribution was to create a uniform record. This project, by its nature, would never be completed (it still is not today) but over the next ten years, Maury would catalog over 100,000 stars!

Now well known for his work with currents, winds, and star catalogs, Maury's curiosity turned to the ocean floor. He became convinced that a practical route could be found on which to lay a telegraph cable connecting the Old World with the New. In 1849, Congress approved a project to explore such a route. Maury solicited the aid of a young naval officer named John Mercer Brooke who had invented a deep-sea sounding device. Years later, the two men would share lecture rooms at VMI. Maury and Brooke charted the ocean floor from Newfoundland to Ireland on what Maury called the *Telegraphic Plateau* - a relatively shallow and flat section of ocean floor. It was here that Cyrus Field would ultimately lay the transoceanic cable twenty years later. In a second way, Matthew Maury's genius had made the globe virtually smaller.

The *Pathfinder of the Seas* never forgot his family origins as farmers. As early as 1851, he became their advocate, calling for standardized global weather observations. Like the ocean currents, weather patterns did not recognize national borders. In 1855, Maury helped organize a conference in Brussels to discuss this international effort. "*The ocean of air,*" he said, "*like the ocean of water, is never at rest.*" It took the United States Government forty more years before the National Weather Bureau was created.

Near the end of May, 1861, Maury dressed in his finest uniform, complete with his almost never used sword, and called upon President Lincoln at the White House. The Virginian felt compelled to stress his opinion that a request for troops would push Virginia into the Confederacy. After the cordial but brief meeting, Maury returned to the Observatory, removed his sword and placed it in the corner of the room. Seated at his well-worn desk, Maury wrote his letter of resignation from the US Navy on April 20, 1861. His native State had left the Union three days earlier. Maury left the office in which he had revolutionized the way we view the natural world. He left his sword resting in the corner.

The Grand Duke of Russia sent an invitation to Maury to come to his country as the head of scientific research. Maury responded with an explanation not unlike that shared by many Virginians of the time: "*The path of duty and of honor is plain ...*" he wrote, "*The State of Virginia gave me birth; within her borders ... my children are planting their vine and fig trees. In her bosom are the graves of my fathers.*" Maury, like Lee and Jackson, cast his lot with his native State.

To be continued ...