



NATHANIEL BOWDITCH.

NATHANIEL BOWDITCH, LL.D.

MATHEMATICIAN, NAVIGATOR, ASTRONOMER (1773-1838).

(Extracts from an article by Commodore E.S. CLARK, Jr., *Sea Scouts*, in the *United States Naval Institute Proceedings*, Annapolis, January, 1937, page 84). *

The name "Bowditch" is familiar to all naval, Coast Guard, and Merchant Marine officers, as well as to all other men who are connected with the sea, but we usually think of a book published by our Hydrographic Office rather than of that fine, brilliant, and lovable character who was the author of the original edition of the *American Practical Navigator*.

Nathaniel Bowditch was born on March 26, 1773, in the town of Salem, Massachusetts, the son of Habakkuk Bowditch, a poor cooper who later turned to the sea as his business ashore dwindled.

He was the fourth in a family of two girls and four boys. When Nathaniel was three years old his father moved the family to Danvers, a small town a few miles away, and there the father worked at his trade until the outbreak of the Revolution, when his business failed and he went to sea.

Young Nathaniel was in school but a few years when his father grew even poorer, and at the age of ten years and three months Nathaniel was obliged to leave school to serve an apprenticeship in a firm of ship chandlers by the name of Ropes and Hodges. Even at this age he was much interested in mathematics and availed himself of every opportunity to study and read books on the subject.

At the age of fourteen BOWDITCH was making a special study of navigation and astronomy. During this year he made several crude instruments and actually wrote an almanac which remained in his library as long as he lived, and is still in the Bowditch Library in Boston. Dr. BENTLY and Dr. PRINCE, both clergymen of Salem, did much to assist in his education by lending him numerous books.

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Late in the summer of 1794 he had the desire to go to sea and signed on board a Salem vessel as clerk under a Captain PRINCE as master. The vessel was owned by Mr. DERBY, a rich Salem merchant. On January 11, 1795, BOWDITCH (aged 21) left Salem Harbor on board the ship *Henry* for a trip to the East Indies by way of the Cape of Good Hope.

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During the voyage he availed himself of every opportunity to study navigation under Captain PRINCE and to make as many observations as possible of heavenly bodies and their movements. On January 11, 1796, the *Henry* dropped anchor in Salem Harbor having completed her voyage of just one year.

BOWDITCH was ashore but a short time when he started out on his second voyage under the same Captain PRINCE. This time he left on March 26, 1796, and sailed for ports in Spain, Portugal, Java, the coast of Borneo, and the Philippines. As before, he spent much time in studying and gathering all possible information relative to the subjects in which he was so much interested. On the afternoon of May 22, 1797, he arrived again in Salem after having been halfway around the world in 14 months. On this voyage he had engaged in considerable trading on his own and had accumulated quite a bit of money. This time ashore he decided that he would remain and seriously considered getting married and settling down to a business in Salem. On March 25, 1798, he married a very lovely and intelligent young woman by the name of Elizabeth BOARDMAN. He remained ashore with her until August of the same year when he once more felt the urge to return to the sea to provide a better income for his bride. It was with great grief that they parted but she urged him

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to do what he thought best, and late in the month he sailed as supercargo for the same owner under the same skipper. This was the last time that he saw his young wife, for while her husband was away on this voyage she died at the age of 18.

On this voyage the vessel headed straight for Cadiz. On September 19, after one month at sea, they sighted the Spanish shore.

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They dropped anchor in the harbor the following day at four in the afternoon. On September 29, 1798, word reached BOWDITCH of the destruction of the French fleet in the Mediterranean by Lord Nelson.

While at anchor in the harbor of Cadiz word came to him from another Salem vessel that his young wife had died. During this trip the Salem vessels sailed the Mediterranean under British convoy and were in constant danger, but even in such surroundings BOWDITCH was interested only in his studying, much to the amusement of the captain.

His next voyage was made in the ship *Astrea*, owned by a Boston merchant but with Captain PRINCE of Salem as master. This time they sailed on July 23, 1799, arriving at Batavia, the chief city on the island of Java, on December 17. From there the vessel cruised the China Sea and put in at Manila.

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BOWDITCH had much to do on this voyage. On his other trips and while on shore he had made quite a study of a number of volumes published on navigation, among them one in particular which was much in use at the time, a volume published by a London firm and written by Hamilton Moore. In studying it carefully he discovered many mistakes in its tables (some 8,000 in all) and many misstatements which he believed to have been to blame for many shipwrecks. This book had been republished in America in 1798 by Mr. Edmund BLUNT of Newburyport, Massachusetts, who was about to get out a second edition but hearing that Mr. BOWDITCH had found much wrong with the present edition he asked to confer with him. Mr. BLUNT finally prevailed upon BOWDITCH to take several copies of MOORE'S *Navigator* along with him on this trip to study and upon his return he would get out a new third edition, containing all of BOWDITCH'S corrections. All through this voyage BOWDITCH was busily at work checking tables and statements and found so many of them in error that he decided it was useless to try to correct them all and made up his mind to write a complete new book of his own. Much of his spare time was now spent on this work. Upon arriving home from this voyage he was determined again that he would now remain ashore and settle down.

On September 28, 1800, he married his second wife, his cousin Mary INGERSOL, who lived with him 34 years and was a great inspiration in his work. For two years after his last voyage BOWDITCH was a merchant in Salem, and on July 14, 1802, purchased one-sixth of a small schooner and its cargo, amounting to \$ 911.

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He was now putting in more work on his book and conferred from time to time with Mr. BLUNT, with the result that in 1802 instead of there being a third edition of MOORE'S *Navigator* published, BOWDITCH came out with the first edition of his *American Practical Navigator*, published under his own name with Mr. BLUNT as the proprietor. BOWDITCH was 29 years of age at the time. This volume soon replaced MOORE'S book in the United States and in a short time found its way to England and other foreign countries.

At the time of its publication the East India Marine Society of Salem appointed a committee to thoroughly investigate its contents and the committee submitted a report recommending its use to ship captains and seamen. The original manuscript of this report is now in the Peabody Marine Museum of Salem, along with the original manuscript tables computed by BOWDITCH and used in this first edition.

Before his death in 1838 he had lived to see ten editions of his book come off the press, representing over 30,000 copies. Some thirty odd editions were published before the government took it over and published it through the Hydrographic Office. The Peabody Museum has in its possession copies from eighteen of the early editions.

During September of 1802 BOWDITCH with three other men from Salem purchased the ship *Putnam* recently built in Danvers, and on November 21 she sailed with a valuable cargo under the command of Nathaniel BOWDITCH himself, this time sailing from Beverly and heading directly to the Indian Ocean by way of the Cape of Good Hope. On this

voyage BOWDITCH assigned duties to his various officers in such a way as to leave himself much free time in which to complete several works already started by him. His outstanding piece of work on this voyage was the translating from French into English of the *Mécanique Céleste* by the French mathematician LAPLACE.

On May 2, 1803, he arrived at the Pepper Island and on August 31 sailed from Sumatra for home, the last time from any foreign port. The middle of December of the same year the vessel reached Nantucket Shoals after a most uncomfortable voyage, and through a masterful piece of navigating in the fog, rain, and snow BOWDITCH brought his vessel to anchor behind Baker's Island at the entrance to the harbor of Beverly on Christmas Day. This voyage ended his career as a sailor after serving the sea for eight years.

With the publishing of his *Practical Navigator* and the popularity he was gaining on shore, honors were being bestowed upon him. In 1802 he was honored by Cambridge College, in 1803 he was offered a professorship in mathematics at Harvard, in 1804 he was installed as President of the Essex Fire and Marine Insurance Company, in 1810 President JEFFERSON asked him to accept the office of Professor of Mathematics at the University of Virginia, and in 1820 the Secretary of War asked him to serve as a professor at the Military Academy at West Point. All of these professorships he refused because he disliked talking in public. He delighted in offering instruction to worthy young men in private but often declined to appear in public.

Between the years 1800-20 he wrote 23 papers that were published in the *Memoirs of the Academy of American Arts and Science* relating to observations of the moon, comets of 1807-11, eclipses of the sun 1806-11, measurements of the height of the White Mountains in New Hampshire, observations of the compass, a pendulum supported by two points, and corrections in NEWTON'S *Principia*.

In 1806 he wrote and published a book entitled, *Directions for Sailing into the Harbours of Salem, Marblehead, Beverly, and Manchester*, and with it a chart.

Very few copies of this book are in existence today. There is one in the Boston Public Library and another in the Peabody Marine Museum, in Salem. This museum also has a very excellent engraved copper plate used in printing the charts of Salem Harbor made by BOWDITCH. This plate bears the date of 1834.

In 1818 BOWDITCH was chosen a member of the Royal Society of London and Edinburgh and was enrolled on the list at the Royal Irish Academy. He was made an associate of the Astronomical Society of London, the Academies of Berlin and Palermo and at the time of his death he was being chosen a member of the National Institute of France, which had only eight foreign members at the time. In 1823 he left Salem and moved to Boston to head two large insurance companies, one on life and the other on marine. He disliked leaving Salem but this offer was far too large to turn down.

In 1816 the degree of LL.D. was conferred upon him by Harvard University, after which he was always referred to as Dr. BOWDITCH. In 1829 he was appointed President of the American Academy of Arts and Science of which he had been a member since 1799.

In 1838 he became seriously ill and was confined to his home where most of his last days were spent in his library and with his children. Death took him on March 16, 1838.

