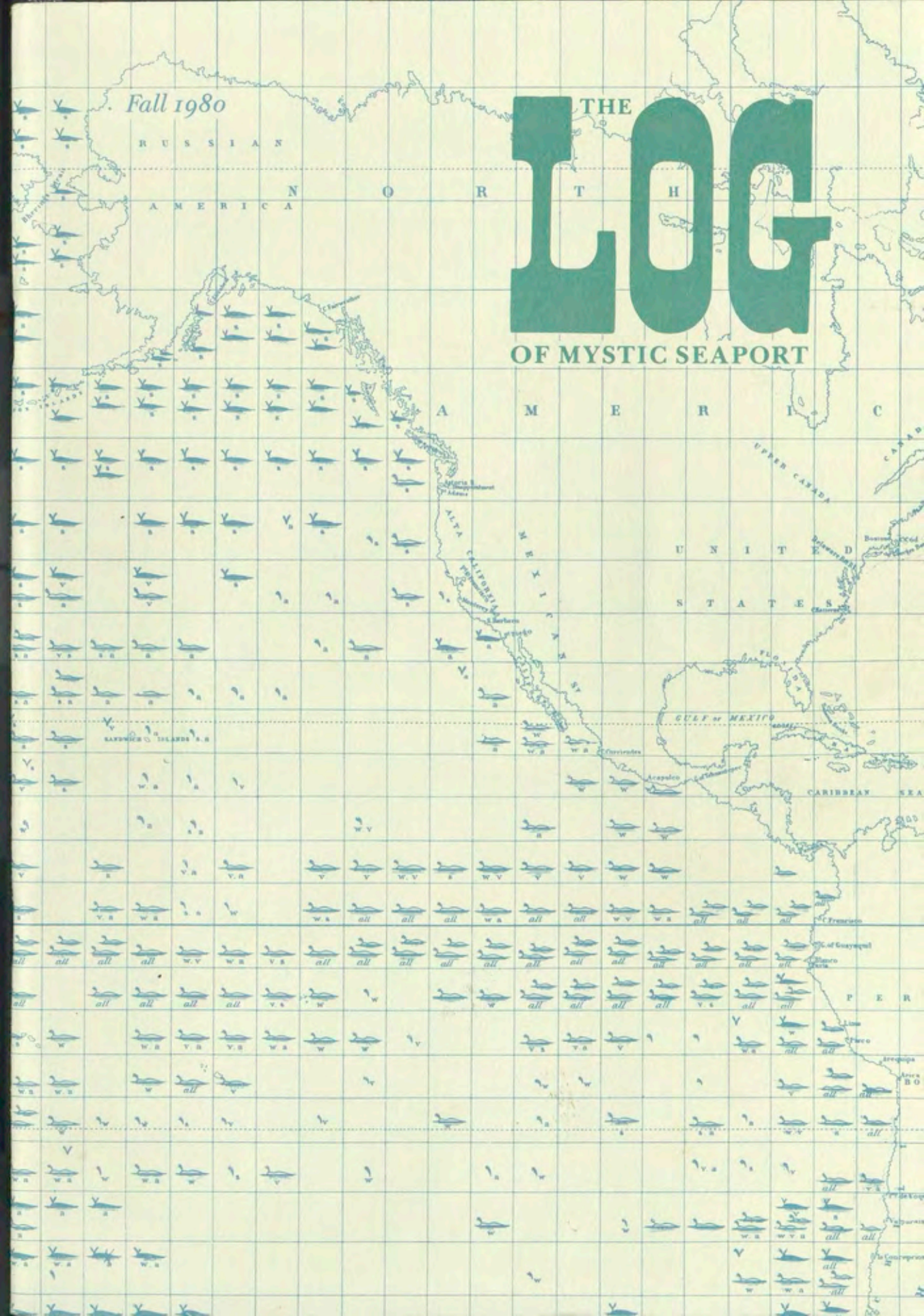

Fall 1980
THE
LOG
OF MYSTIC SEAPORT
RUSSIAN
AMERICA
NORTH
AMERICA
UNITED
STATES
MEXICAN
GULF OF MEXICO
CARIBBEAN SEA
PERU

Officers and Trustees of Mystic Seaport Museum, Inc.

William C. Ridgway, Jr. *Chairman of the Board*
Clifford D. Mallory, Jr. *President*
William H. Moore *Vice President*
Harris B. Parsons *Vice President*
William C. Ridgway III *Vice President*
Rudolph J. Schaefer III *Vice President*
Richard W. Woolworth *Treasurer*

TRUSTEES EMERITI
John P. Blair
E. Jared Bliss, Jr.
Briggs S. Cunningham
John W. Draper
William P. Gwinn
Irving M. Johnson
Donald B. Kipp
Robert P. Koenig
Leonard P. Moore
Joseph S. Santin
Rudolph J. Schaefer
Jerome W. Sinsheimer
John R. Wheeler

BOARD OF TRUSTEES
Thomas R. Adams
Oakes Ames
Rensselaer W. Bartram III
Powell Cabot
Percy Chubb II
John R. Deupree
F. George duPont
Paul Hallingby, Jr.
Herbert A. Hild
Waldo Howland
Charles J. Irwin
David W. P. Jewitt
Waldo C. M. Johnston
Timothea Schneider Larr
Stanley Livingston, Jr.
A. Lee Loomis, Jr.
James M. Lyon
Clifford D. Mallory, Jr.
G. Barron Mallory
Margaret P. Mallory
Richard C. McCurdy
Danforth Miller, Jr.
William H. Moore
Robert L. Newell
Alfred Ogden
Alfred T. Ogden II
Harris B. Parsons
Hugh M. Pierce
William C. Ridgway, Jr.
William C. Ridgway III
Francis Day Rogers
Peter D. Sanger
Rudolph J. Schaefer III
Henry A. Scheel
Rothwell M. Sheriff, Jr.
E. Newbold Smith
Gaddis Smith
Frank V. Snyder
Olin J. Stephens II
Robert G. Stone, Jr.
Oscar S. Straus II
Michael B. Stubbs
Rudolf L. Talbot
Edwin Thorne
Alexander O. Vietor
William Blunt White
Thomas R. Wilcox
Jacques D. Wimpfheimer
Richard W. Woolworth

Staff Officers

J. Revell Carr *Director*
Franklin Kneedler *Deputy Director*
Oliver Denison III
Secretary and Assistant Treasurer

The Log of Mystic Seaport

Editorial Board: J. Revell Carr, Dorothy E. R. Brewington, Benjamin A. G. Fuller, Benjamin W. Labaree
Editor: Gerald E. Morris *Associate Editor:* Andrew W. German
Picture Editor: Stuart L. Parnes
Design and Production: Klaus Gemming
Publications Staff: Andrew W. German, Nancy E. Zercher
Photography Staff: Kenneth E. Mahler, Mary Anne Stets, Claire White-Peterson

The Log of Mystic Seaport (ISSN 0024-5828) is published quarterly by Mystic Seaport Museum, Mystic, Connecticut 06355. Subscriptions are by membership only. Contributions of previously unpublished articles and pictures are welcome. Editorial guidelines for prospective authors are available from the Publications Department.

© 1980 Mystic Seaport Museum, Inc.

The Log of Mystic Seaport is available in microform. For information write to University Microfilms International, Department F. A., 300 North Zeeb Road, Ann Arbor, Michigan 48106.

COVER: *Detail of Lieutenant M. F. Maury's Whale Chart, 1851, showing best regions to hunt right whales (dark) and sperm whales (light) in winter (w), spring (v), summer (s), and autumn (a). (59.1402)*

Volume 32, Number 3 / Fall 1980

THE LOG OF MYSTIC SEAPORT

CONTENTS

Sightings 82

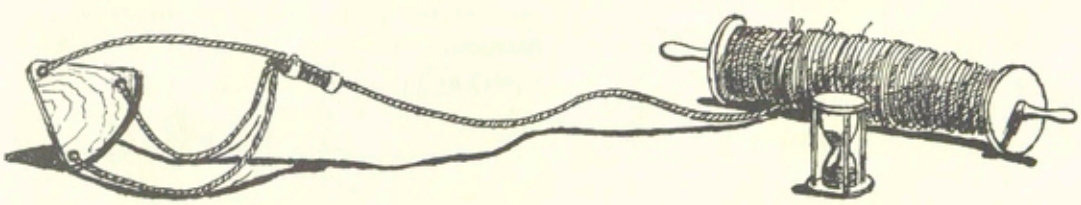
False Teeth:
New Problems with Plastic Scrimshaw
RICHARD C. MALLEY 83

"The Light is My Child"
SUE ELLEN THOMPSON 90

Paths Through the Sea
DOUGLAS STEIN 99

Book Reviews 108

Acquisitions 110



SIGHTINGS



A dramatic change has taken place in collecting maritime objects over the past decade. With rapidly escalating prices, commercial companies have entered the field, using the most advanced technological methods to manufacture remarkable reproductions. They have been followed by forgers who profit from these new techniques by adding their own skills and creating objects which are sometimes very difficult to distinguish from originals. This poses new and ubiquitous challenges to museums and private collectors seeking original objects. In this issue, Richard Malley's article will alert you to new problems arising with scrimshaw.

During the preliminary work which resulted in this article, the curatorial staff was often frustrated by the necessity of making judgements based on descriptions and pictures received through the mail, without benefit of examining the actual objects in question. This situation clearly pointed up the obvious advantage of direct contact between an individual learning about an object, and the object itself; a relationship which is a prime function of museums. Whether a person is comparing subtleties of an original with a reproduction or a fake, or the variation in quality among originals, there is nothing which can replace this contact. Direct exposure is important for both the casual visitor to the museum, and for the collector refining his skills as a connoisseur.

Artifacts used in this manner are but one way in which the museum instructs. As a teacher, the museum assumes both passive and active roles. In our passive character, we preserve objects and permit scholars and visitors opportunity to use the collection for study. And in this regard, it is desirable to have study collections which represent not only the finest achievements, but also display a full range for comparison.

Today, museums recognize that they have many responsibilities in addition to simply providing access to their collections. Using our collections for teaching, we take on a much more active role; this is reflected in our exhibits, demonstrations, and research assistance.

Teaching actively involves many people on the staff. Those who design and develop the themes for exhibits are conscious of these responsibilities. Our interpreters in exhibits and those performing demonstrations know that many visitors are first exposed to maritime material at Mystic Seaport so their presentations are vital to each visitor's appreciation and understanding. The museum teachers, working in more formal teaching situations, bring life to the information they convey, and our craftsmen around the grounds, whether building a boat, restoring a ship, or shingling a roof, are part of the educational experience for our visitor. The three authors represented in this issue of *The Log*, as well as those who have prepared other Seaport publications through the years, are similarly aware of the need to make their work accurate and interesting.

As modern technology develops new methods of communication and information transmission, we should be alert to ways that these techniques can be used to reach out from the Seaport and spread information. We must remain conscious, however, of the importance of the opportunity for direct contact between people and artifacts. This exposure, when augmented by an enthusiastic staff, creates an unsurpassed learning experience, the province of museums alone.

J. Revell Carr

False Teeth: New Problems with Plastic Scrimshaw

RICHARD C. MALLEY

Scrimshaw's popularity as an American folk art form has increased dramatically over the past several decades. This fact, combined with recent federal legislation protecting whales and other marine mammals, has led to an even greater demand for scrimshaw by dealers, collectors, and museums alike.

An outgrowth of this phenomenon is the use of new materials and technology to produce a wide range of fine reproductions which capture much of the feel and aesthetic quality of genuine scrimshaw. Highly realistic copies, molded in polymer plastics, are available to the public at a fraction of the cost of a real piece.

A leader in the production and marketing of these reproductions is Artek, Inc. of Antrim, New Hampshire. The heart of its line consists of some two dozen "polymer ivory" copies of authentic whale teeth, walrus tusks, and whalebone ditty boxes, many from the collections of the Peabody Museum of Salem, the Nantucket Whaling Museum, and Mystic Seaport Museum. Close cooperation between the firm and the museums has resulted in some very faithful reproductions. Each Artek piece is identified by one or more recessed mold marks incorporating the Artek name, the words "reproduction" or "replica," and the initials of the museum owning the original piece, e.g. "PMS," "NWM," "MS." Marks are normally located either on the underside of the piece, or near or within the cavity of the tooth.

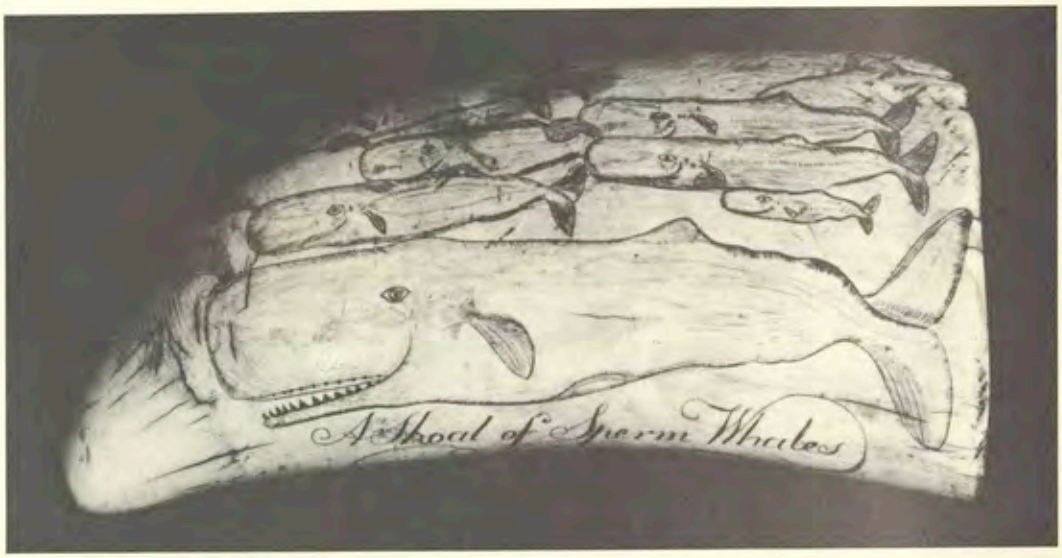
After graduating from Providence College in 1974 Richard C. Malley received his M.A. in American history from Fordham University. A member of the Curatorial Department at Mystic Seaport since 1976, he is currently Assistant Registrar.



Close-up of the identifying mold mark on an Artek reproduction of a Mystic Seaport piece.

Recently, some examples of these reproductions have turned up in the East and Midwest with their mold marks intentionally obliterated. These pieces have apparently been resold, by parties unknown, as genuine scrimshaw. Several times in the past year and a half Mystic Seaport Museum has been approached by individuals seeking information on a fine whale tooth, marked "*A Shoal of Sperm Whales*," which they had acquired at a sale or auction. Ironically, the original for this Artek tooth is in Mystic's collection. Both Artek and the respective museums are understandably disturbed by this development.

The fact that these doctored reproductions are of genuine scrimshaw originals means that the historical data on each piece, such as vessel name and rig, dates, master's name, etc., will check out correctly in standard reference sources such as Alexander Starbuck's *History of the American Whale Fishery* (1876).



Original *"Shoal of Sperm Whales"* tooth at Mystic Seaport Museum. (46.1480)

Before considering some ways to avoid purchasing these reworked scrimshaw reproductions, we must examine another element in the plastic scrimshaw puzzle.

Scrimshaw Fakes

In February 1979 the Curatorial Department at Mystic Seaport received an inquiry from an English couple who had just purchased a handsome walrus tusk. It was marked with the name of the ship *Charles W. Morgan,* initialed "D.M.S.," and dated 1842. A fine sketch of the tusk accompanied their request for information on the vessel and the identity of "D.M.S."

The initial excitement at the discovery of such an early *Morgan*-related piece was soon displaced by a growing sense of uneasiness. The crew list failed to note anyone with the initials D.M.S. on the whaleship's first voyage (1841-45), which took her to the Pacific as far north as present-day Hawaii.

The reverse of the *Charles W. Morgan* tusk intrigued Seaport Director J. Revell Carr. Its design, incorporating a busy whaling scene, featured a number of highly stylized gulls or frigate birds hovering overhead. It looked familiar. Page 107 of E. N. Flayderman's *Scrimshaw and Scrimshanders* (1972), where a whale tooth from a private American collection is illustrated, provided the answer. Here was the scene–and those birds–which appeared on the *Morgan* tusk.

Before a reply could be sent to England there arrived at the Museum a letter and photographs from a gentleman in Wiltshire, England, requesting similar information on three walrus tusks, one of which was an exact duplicate of the first *Charles W. Morgan* tusk! Our uneasy feelings about the first tusk were now well grounded, it appeared. In addition, the man's two remaining tusks, marked *"THE SHIP TEMPEST"* and *"THE SHIP REGULUS, Captain James Hoad"* respectively, failed to pass the test of historical scrutiny when much of the information engraved on them was compared with published whaling records. An identical *Regulus* tusk had turned up in New York very shortly before this development, and another *Tempest* tusk soon thereafter.

As the pieces were identical down to the last detail, it became apparent that the tusks



Top: Obverse of the mystery *Charles W. Morgan* tusk. Note the initials "D.M.S." at the tip. *Bottom:* Reverse of the *Morgan* tusk with the distinctive birds.

were being manufactured out of molded plastic. Our English contacts were unable to trace the tusks very far, however.

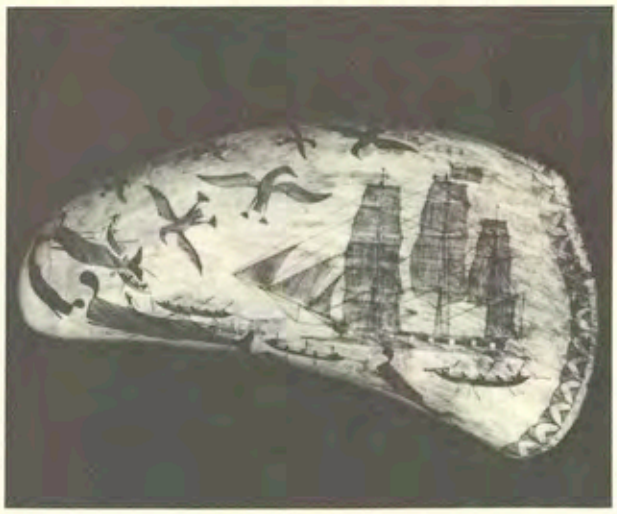
Before long, the Museum was offered another of the *Charles W. Morgan* tusks by an unsuspecting Toronto dealer. The asking price, $5,500, was indicative of the high technical quality of the tusk.

Other pieces, mostly tusks, began appearing in the United States with disturbing regularity; first in the East, then the Midwest, and most recently on the West Coast. Some of the tusks bore silver metal caps on their bases. Among the more familiar pieces by this time were tusks for the vessels *Cavalier, Veronica, Nolan, Regulus, Tempest, Ionia,* and, of course, *Charles W. Morgan.*

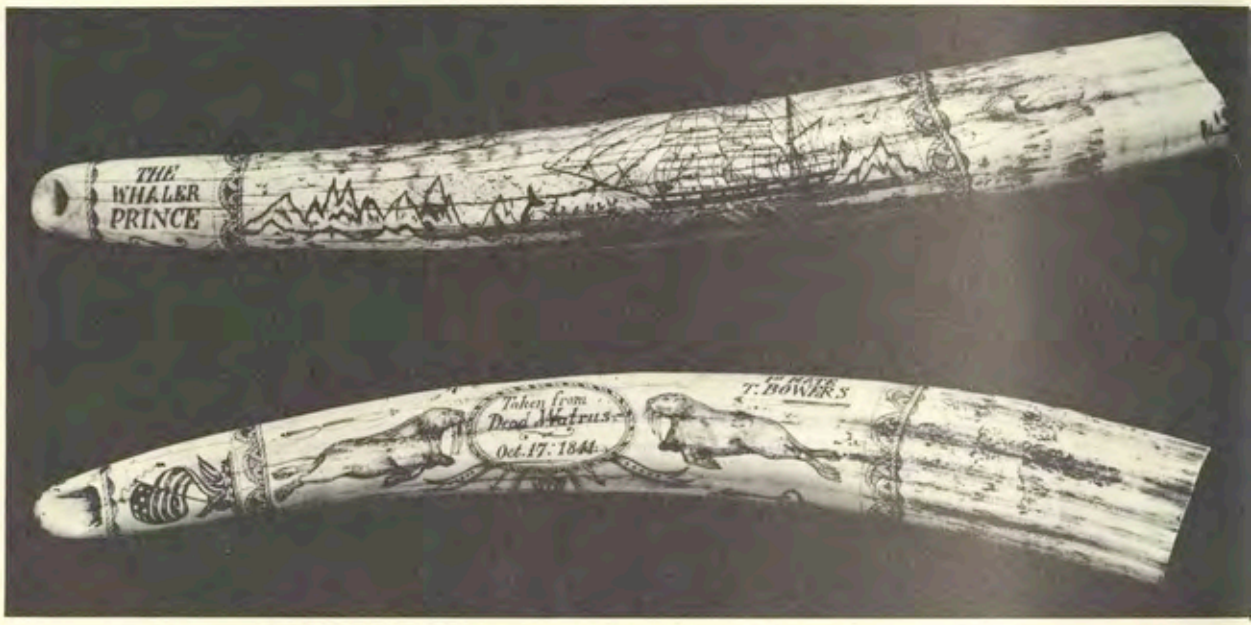
Identical whale teeth, marked "*THE COMET 1831*," turned up in the possession of physicians in Illinois and Belfast, Northern Ireland. A zoologist had reportedly examined the Illinois tooth and pronounced it genuine!

In January of this year an Englishman brought to the Museum several scrimshaw items which he had recently acquired in the East Sussex area of England. While this

Below: Genuine scrimshaw tooth with the scene used on the *Morgan* tusk. (Courtesy of the Barbara Johnson Whaling Collection). *Bottom:* Examples of the plastic *Comet* tooth appeared in Northern Ireland and Illinois. Records indicate that this vessel never existed.







Top: Obverse of the plastic tusk for the mystery whaler *Prince*. *Bottom:* Reverse of the *Prince* tusk. Compare the shape of this tusk with the *Morgan* specimen.

man had an interesting ostrich egg and large tortoise shell, what caught the attention of the staff was a walrus tusk, marked "*THE WHALER PRINCE*" and dated 1841. Comparison with photographs of the *Charles W. Morgan* tusk left little doubt that both tusks utilized the same basic mold, though with different engraving. Once again, the records failed to reveal either a whaler *Prince,* or a first mate named T. Bowers as inscribed on the reverse side.

The elaborately engraved ostrich egg, like the tusk and tortoise shell, was molded of plastic. It bore an interesting scene on one side, depicting black slaves celebrating and dancing. Some detective work by the curatorial staff located the original model for this familiar scene, a *ca.* 1800 watercolor painting entitled *The Old Plantation* in the Abby Aldrich Rockefeller Folk Art Collection at Williamsburg, Virginia.

The nagging mystery of these well-executed fakes continued until a visitor stopped at the Seaport in March 1980. He identified himself as the factory representative of a London-based firm, Juratone Limited, which was producing and marketing an extensive line of polymer plastic scrimshaw items. He brought along an appropriate sample piece – the *Charles W. Morgan* tusk! An illustrated price list of forty-three items contained most of the familiar problem tusks, the *Comet* tooth, the tortoise shell, and an ostrich egg. The following list presents known Juratone Ltd. products.

Titles and Dimensions of Juratone Moldings

TORTOISE SHELL

We Owe Allegiance To No Crown	24" x 18"

LARGE WALRUS TUSKS

The Ship Charles W. Morgan	23"
First Mate T. Bowers	23"
Ship James Allen	23"
The Bonhomme Richard & Serapis	23"
The Ships Niger & Fox	23"
The Romulus	28"

MEDIUM WALRUS TUSKS

The Bark Cavalier	19″
The Whaler Ionia	19″
The Ship Tempest	19″
Captain James Morgan	19″
Ship Sachem	16″
The Bark Veronica	19″
Captain J. O. Norton	19″
The Ship Regulus	15″
The Ship Nolan	16″

WHALES TEETH

Ship Tamar	7″
Ship Roman	7″
The Chesapeake	7″
The Ship Starbuck	8″
H.M.S. Victory	9″
The Brunswick	7″
Ship Romulus	8″
Ship Susan	7″
Ship Mercator	9″
The Brandenberg	7″
A. T. Mogar	7″
The Cultivator	8″
The Southern Star	7″
The Ship Lawrence	8″
The Royal George	7″
The Comet	8″
The Ship Albatross	7″
U.S.S. Constitution	8″
Riverboat	8″
Whalers Coat of Arms	7″
Napoleon	9″
The Planter	9″
Merrils Wharf	8″
The Great Flood	8″

PAN BONES

The Great Hunt	17″ x 4″
The Whaler Salem	17″ x 4″

OSTRICH EGG

Tall Ships	8″

The major problem with these pieces, besides the historical inaccuracies noted, was that they were uniformly unmarked as to origin. This, combined with the fine quality of the molding work, has led many people to purchase the items at auctions, flea markets, and shops, believing them to be genuine.

Individual Artek teeth range in price from about $25 to $50 each, while prices reported for Juratone items vary widely. The catalog list ranged from about $300 for a tooth to around $600 for a large walrus

Below: This plastic scrimshaw ostrich egg incorporated a familiar scene. *Bottom:* Watercolor painting, *The Old Plantation, ca.* 1800. (Courtesy of the Abby Aldrich Rockefeller Folk Art Center, Williamsburg, Virginia)







Above: A genuine whale tooth (left) and a plastic Juratone piece under normal light. *Below:* Under ultra-violet light the real tooth fluoresces while the plastic example does not react.



tusk or whale panbone. The impressive tortoise shell topped the line at $1,400.

Detection of Unmarked Plastic Scrimshaw

If modern plastic scrimshaw items are so well done as to be virtually indistinguishable from real ivory, how does the collector protect himself from mistakenly purchasing an unmarked specimen in the belief it is genuine? Perhaps the single most important thing an individual can do is to learn as much about scrimshaw as possible. There are various books published on the topic and many maritime museums have sizable displays. Study genuine scrimshaw carefully and learn what you can about the actual processes of nineteenth-century whaling and scrimshanding.

A brief examination of the technique of scrimshanding is in order here, using a sperm whale tooth as an example. Normally, raw teeth are unsuitable for scrimshaw work. The rough surface which characterizes the natural tooth must be carefully prepared before actual engraving begins. The ridged surface must be smoothed, using a knife perhaps, and then polished with some fine abrasive such as sandpaper, sharkskin, or pumice. Once the scrimshander is satisfied with the finish, he engraves the scene on the tooth using any number of implements: knives, files, awls, sail needles, etc. The engraved tooth is then inked using whatever is available, be it india ink, lampblack, berry juice, or some other material. The tooth is quickly wiped clean, leaving only the pigment in the engraved areas. Occasionally, the scrimshander might artificially age a piece by applying tobacco juice or some other stain to the finished tooth.

While the most common examples of scrimshaw employ sperm whale teeth, seamen also used walrus (and elephant) tusks as well as bone from the whale's skeleton to fashion decorative or utilitarian items. In

terms of quantity and diversity, scrimshaw reached its peak in the hands of the nineteenth-century American mariner, though the art was, and is, practiced by other nationalities and cultures.

Arm yourself with as much specific information as possible. Published reference sources, especially Alexander Starbuck's two-volume *History of the American Whale Fishery* and its sequel, offer specific voyage data which can be used to verify information found on or accompanying a piece of scrimshaw. This work lists American whaling voyages chronologically, noting each vessel's name, rig, tonnage, hailing port, master, and owner, along with the dates, destination, and results of each voyage. Many individual port and custom house records and annual federal shipping lists are also available to cross-check data. A fair number of research libraries and maritime museums have these resources at their disposal. Take the time, if possible, to check out the historical data engraved on a piece of scrimshaw before buying.

Is there any foolproof method of checking ivory or bone for authenticity? While laboratory analysis is the most effective method of testing a piece of scrimshaw, it is far from practical. Simply feeling or tapping the item is often inconclusive, given the state of the art in plastics, and may, of course, cause damage to a real piece.

Seaport staff compared various plastic scrimshaw items with real teeth and tusks (both raw and finished examples) under ultra-violet light. Real ivory appeared bright white, while plastic specimens did not react to light on this wavelength. Though it may seem ridiculous to buy a portable UV lamp to carry around, it is, nonetheless, something the serious collector should perhaps consider. The cost of a good UV unit is modest when compared with the amounts being spent on scrimshaw these days. An additional aid is a proven sample of whale ivory – even a raw or broken tooth would do – to compare with a prospective purchase item under the UV light.

Another characteristic of polymer scrimshaw is that under moderate magnification (about 30x) tiny, perfectly round air bubbles appear on the surface near each end, along the bottom edge, and within the tooth cavity itself. These are apparently the result of the liquid molding process. Such uniformly circular marks do not appear in real ivory; instead, the marks are rather irregular in shape. Small pocket magnifiers of sufficient power are available and might prove useful in spot-checking pieces.

The problems of plastic scrimshaw are real indeed, and will not disappear overnight. Undoubtedly, the cases mentioned represent only the tip of the iceberg. Purchasers of scrimshaw must exercise extreme caution. Learn as much as you can about the subject and then apply this knowledge intelligently. It is our only protection.

"The Light Is My Child"

SUE ELLEN THOMPSON

The editor of *Harper's Monthly* described her in 1869 as "slender and blue-eyed, with light brown hair, frank and hearty, and likely to be more famous next summer than any Newport belle." The young woman he was referring to was no out-of-town debutante about to burst in upon the Newport social scene, but rather a native-born lighthouse keeper's daughter, famed not for her beauty and grace but for her skill in handling a pair of oars.

It was in the menacing winter waters of Rhode Island's Narragansett Bay that Idawalley Zorada Lewis – quickly shortened to Ida – gained most of her experience in handling a boat, rowing her brothers and younger sister back and forth to school from the Lime Rock Lighthouse, where their father Hosea was keeper, to the town of Newport. The Lewis family had moved to the newly-built keeper's cottage in June 1858, when Ida was only sixteen. Despite a rather frail physique, she had already distinguished herself as a strong swimmer and a skilled oarswoman, and when her father suffered a paralytic stroke only four months later, her strength and skill became vital to the family's survival. With Hosea an invalid, the task of tending the light and transporting not only the children but food and supplies from town fell to Ida and her mother.

In the fall of that same year, Ida was standing in the lighthouse door watching four young men enjoy an evening sail in a small catboat. One of them climbed the mast and started to rock the boat back and forth to give his companions a thrill. But their amusement turned quickly to fear when the boat suddenly capsized about a half-mile from the nearest point of land. The bay in September had already taken on its autumn chill, and in the growing dusk the boys knew they would never be able to swim to shore. The capsized craft was too light to support their combined weight, so they took turns holding on.

Within seconds of witnessing the accident, Ida had reached her own boat and lowered it into the darkening waters. As she neared the struggling victims, she skillfully avoided their frantic clutches until she could approach them from a safe position. Then she pulled them one by one over the stern. When the last boy was safely aboard, her father, who had been watching the entire exploit through his telescope, collapsed in relief. The rescue was not publicized until several years later, when Ida's reputation sent reporters scurrying over her past. The four young men involved – two from Newport, two from Philadelphia, and all sons of prominent families – were inclined to keep their mouths shut, and Ida's natural reticence prevented her from giving it a second thought.

Ida's brother liked to brag that she could "hold a boat to wind'ard in a gale better than any man I ever saw wet an oar. Yes, and do it, too, when the sea is breaking over her." It was more than a brotherly boast, as the winters of 1866-69 were soon to prove. In February 1866 Ida's courage was tested a second time. Three drunken soldiers, stationed at Fort Adams, were experiencing some difficulty in negotiating the three-mile hike from Newport back to their garrison.

A Phi Beta Kappa graduate in English from Middlebury College, Sue Ellen Thompson received her M.A. from the Bread Loaf School of English in 1974 and studied poetry at Oxford in 1978. Formerly an editor for Prentice-Hall, the author is a published poet and freelance writer living in Mystic.



Ida Lewis, *ca.* 1870. (Courtesy of the Newport Historical Society)

As they neared Jones Bridge, a wharf projecting into the bay just a few hundred yards from Lime Rock, they noticed a skiff belonging to Ida's brother pulled up on the beach. Deciding that rowing was preferable to walking, all three jumped into the boat and took off for the fort. While two of the soldiers struggled to coordinate the oars, their reckless companion in the stern started to bang his foot down on a plank in the bottom of the skiff. Before any of them realized what was happening, he had kicked out the plank and the boat began to sink. The two oarsmen swam for shore and had disappeared by the time Ida, who had seen them from her window, reached the submerged craft and its half-drowned survivor. "It only seems wonderful," commented a contemporary observer, "that a slightly formed woman should have found the strength to lift this huge lump of masculine inebriety from the element he so little patronized." In fact, the physical effort of trying to bring the soldier aboard strained Ida so severely that she didn't recover for almost a year. She finally brought the soldier back to the lighthouse by tying a line around his chest. The now sober veteran left for the fort in clothes he had borrowed from Ida's brother (whose skiff he had lost) which he never even bothered to return. The two who had attempted the chilly swim to shore were never seen or heard from again. The prevailing theory was that they took advantage of the incident to desert. If they drowned, their bodies were never recovered.

This rescue, like the last, received limited notice because neither Ida nor the surviving soldier wished to publicize what might be grounds for discharge. But when she saved five more lives the following year, her reputation for unusual bravery began to spread. In January 1867 three Irish laborers from the estate of banker August Belmont were driving a valuable sheep through the streets of Newport. The sheep suddenly ran out on a wharf and plunged into the water. The tide and a strong southeast gale swept it out of the harbor while the three herders ran along the fort road trying to keep it in sight. Here they found Ida's brother's new skiff and, oblivious to the gale-force winds, set off to pursue their lost charge.

Ida was sewing by the kitchen window when the sight of her brother's boat with three strangers aboard caught her eye. She watched them draw near the sheep, but then a huge wave came along and over-



Lime Rock Island, off Newport, Rhode Island. This sketch by C. G. Bush appeared in *Harper's Weekly*, 31 July 1869. The artist seems to have depicted Ida rushing to her rescue boat, which hangs on davits at left.

turned the boat. Within minutes she had launched her own boat and rescued the three men, who, despite their own narrow escape, were still worrying about how they would explain the loss of the sheep to their employer. After depositing them safely on shore, Ida braved the gale a second time and hauled the exhausted animal back to its grateful protectors.

Only a few weeks later Ida's mother, an habitual early riser, peered out the window at the gray February morning just then dawning. She saw a man's head and the rigging of his sunken boat near Little Lime Rock, a submerged rock about halfway between the lighthouse and town. The unidentified boatman had apparently struck it shortly after midnight, and survived the night by clinging first to the rock and then, as the tide came in, to the rigging. While Mrs. Lewis shouted reassurances, Ida dressed and rowed out to save him. "there he was," Ida said afterward, "shaking and God-blessing me, and begging to be set on shore, and the last I saw of him he was crawling up the wharf on his hands and knees!" His eagerness to be on his way was later explained by the discovery that the sailboat had been stolen. The owner told her he would gladly have given her $50 to let the thief drown.

Aside from the indomitable Ida, the Lewis family was not a particularly healthy one. Ida's younger sister Harriet soon became ill, and the burden of caring for her taxed their mother's strength as well. More and more of the household chores, in addition to the many responsibilities involved in tending the light, fell to Ida, who by this time was in her late twenties. The lamp had to be lit exactly at sundown, and at midnight another had to be substituted. She could only catnap while the light was burning, for it had to be watched constantly. The wick might flare or burn low; the chimney might be obscured by smoke or crack without warning. Then at sunrise the light had to be extinguished, and the demands of keeping house for her ailing family took over. In later life Ida told a local newspaper reporter, "The light is my child, and I know when it needs me, even if I sleep."

Ida herself was suffering from a bad cold on 29 March 1869–the day that was to

change if not the course of her life then certainly the quality of her island existence. It was late in the afternoon of a stormy winter day. The rain – at times mixed with snow – was sweeping across the bay in sheets. Mrs. Lewis was enjoying a quiet hour before helping Ida prepare the family's dinner. Although it was still early, something prompted her to go upstairs and fill the lamp in preparation for what promised to be an unusually long night. The light was kept in a low tower on the second floor level, projecting slightly from the southwest corner of the house and with glass on three sides. It was reached from the inside by a passageway leading from one of the bedrooms. As Mrs. Lewis looked out across the turbulent waters of the bay she saw two men clinging to an overturned boat. She cried out to Ida downstairs, who had only to catch the words "men drowning" before she was on her way out the door. Forgetting shoes and a hat, and with only a towel knotted around her neck, she launched her boat with the help of her brother Hosea.

The sailing skiff which had set out from Newport only a short time before was piloted by a fourteen-year-old boy who had managed to convince Sergeant James Adams and Private John McLaughlin that he could ferry them safely to Fort Adams. Anxious to avoid the dreary trip back by foot in the storm, the two soldiers agreed. The skiff was too small and unseaworthy, and the boy, it turned out, had greatly exaggerated his skill as a helmsman. About halfway to the fort a sudden blast struck the sail, the startled boy jammed the tiller in the wrong direction, and the waves rolled the boat over twice. The three tried clinging to the keel, but the cold salt water and blinding rain made it almost impossible. After a half-hour of this desperate struggle the boy's strength was exhausted. He grabbed McLaughlin's shoulder, gave a strangled cry, and slipped beneath the next wave. The two soldiers were about to do the same when they glimpsed Ida and her brother rowing toward them.

Hosea's first impulse was to reach over the side and grab the nearest victim, but Ida was quick to stop him, realizing that they would almost certainly end up in the water themselves if he did. With a well-timed

Interior of Lime Rock Lighthouse, Ida Lewis at home. This sketch by C. G. Bush appeared in *Harper's Weekly*, 31 July 1869.



stroke she turned the boat so the men could be hauled in over the stern. They were so overcome with exhaustion and exposure that they had to be carried into the lighthouse, where they were cared for until they recovered. Ida later received a letter of appreciation from Colonel Henry J. Hunt containing $218 which had been contributed by the officers and men at Fort Adams.

The story of this rescue was picked up by a reporter from the *New York Tribune*. Seemingly overnight Ida Lewis became a heroine, and her earlier exploits as well as the most recent example of her daring were written up in newspapers across the country. Engraved pictures of her appeared in *Harper's* and *Leslie's*, the popular magazines of the day. But while everyone was quick to applaud her heroic deeds, her behavior also prompted some reflection on "the sphere of woman" that can only be appreciated in historical context. The editor of *Harper's* expressed the widely pondered question of whether it was "'womanly' to tug and strain through a tempest, and then pull half-drowned men into a skiff." But, he concluded sensibly, "no man will be such an – let us say donkey, as to insist that it was unfeminine in Ida Lewis to pull off in her boat to save men from drowning. It was no more unfeminine than to sing a baby to sleep." he was also concerned (and rightly so, as it turned out) about how Ida might be affected by "the storm of notoriety and flattery" that had already begun to deluge the Lewis household. But like any other Victorian gentleman, he could only hope "that she may be safely married, and with a changed name have left the Lime Rock Lighthouse before Mrs. Grundy reaches Newport."

Ida was, in fact, engaged at this point to William H. Wilson of Black Rock, Connecticut, the captain of a yacht that moored in Newport harbor during the yachting season. They were married on 23 October 1870, and lived together briefly on the mainland. Whether Ida missed her old life at the lighthouse or simply realized that she had made a mistake is not known, but she and Wilson separated a short time afterward and he was never heard from again. Although they were never formally divorced, Ida continued to be known as "Miss Lewis."

The residents of Newport decided to honor their local heroine the summer following her widely publicized March rescue, and 4 July 1869 was designated "Ida Lewis Day." There was a celebration in town, capped by the presentation of a new rescue boat built by Thomas Stoddard, a well-known Newport craftsman. Embarrassed by this show of public recognition for what she merely considered her duty, Ida had someone else deliver an appropriate acceptance speech. Then she climbed into her new boat, decorated with flags and velvet cushions, and "struck out [for the light] with bold and yet easy strokes of her oars, making her way through the numerous boats that covered the waters, in a manner that showed her to be master of the situation."

Nor was this her last encounter with public acclaim. In addition to the silver rudder yoke and boat hook presented by the Narragansett Boat Club, Ida received a silver medal from the Life Saving Benevolent Society of New York, an honorary membership and gold pin from the Sorosis Society (a leading women's organization), complimentary resolutions from the Rhode Island General Assembly, a silver medal from the American Life Saving Society in Washington – the first woman to receive such a tribute. A few years later, in 1881, she was presented with a gold medal from the U.S. government, a life saving medal of the first class for "extreme heroic daring involving imminent personal danger."

But the tribute that meant more to Ida than all of these was the one she received in 1879; official appointment as keeper of the Lime Rock Light by a special Act of Con-

gress. Her mother had been appointed temporarily when her father became an invalid, but in fact Ida had assumed the major burden of responsibility over the years, and it seemed even more justified in view of her record for heroism. At the same time, her salary was raised from $500 to $750, making her the highest paid keeper in that part of the country.

There is some confusion surrounding Ida's status in the history of the Lighthouse Service. In a glowing account of her achievements the *New York Times* billed her as "the first woman appointed to such a post in the Federal Lighthouse Service." And an article in the *Providence Journal* just a few years before her death referred to her as "the only woman in charge of a lighthouse in the service of the United States." This would undoubtedly have triggered an angry response from Mrs. Kate Walker, who at that point had been tending the Robbins Reef Light off Staten Island for almost twenty years. The fact is that keepers' wives often ended up as keepers themselves when their husbands became ill or died. According to a Treasury Department report, thirty widows of keepers had been appointed by 1851, but their number declined after that with the advent of heavy lenses, steam-driven foghorns, and other equipment demanding special training or heavy physical labor. One key to the controversy can be found in the annual report of the Lighthouse Board for 1912, the year after Ida's death, which refers to her as "the most widely known keeper in the United States." It seems likely that Ida's fame, as is often the case, inspired a little local hyperbole. She was almost certainly not the first woman lighthouse keeper, although she may well have been one of the few in her day. But she deserves credit in any case for putting women keepers on the map.

Comparisons with Grace Darling, the English heroine, became so commonplace that when she died, Ida's tombstone bore the motto, "The Grace Darling of America."

But it was surely an accident of time and circumstance that made Ida Lewis the heir rather than the bestower of this particular crown. Grace was twenty-two years old and living with her parents in the new Longstone Lighthouse which had recently been built to replace an earlier structure on the Farne Islands off the Northumbrian coast. On the evening of 6 September 1838, the paddle-steamer *Forfarshire*, on a routine voyage from Hull to Dundee, had boiler trouble and lost engine power in the midst of a strong northeast gale. Running under sail, she apparently tried to seek shelter under the lee of the Farne Islands but was instead wrecked on the rocks there. Grace sighted the wreck early the next morning from her bedroom window high in the lighthouse tower. Although there were sixty-three passengers on board, her father could discern only a small cluster of survivors clinging to the rock face. The rest had gone down with the wreck or died of exposure during the long night.

At Grace's urging, William Darling decided to attempt a rescue. Father and daughter rowed out to the rock, where they found nine people still alive. The keeper jumped out to help them board while Grace had the nerve-wracking task of holding the boat off the rocks. When the first boatload was safely landed on the island, Grace and her mother cared for the rescued passengers – several of whom were injured – while her father and two of the men returned to collect the others. By the time a rescue boat arrived from the mainland, all nine survivors were sipping hot tea in the lighthouse parlor.

News of the wreck and the ensuing rescue spread quickly, and Grace Darling, much like her later American counterpart, was an overnight sensation. A fund of $8,500 was subscribed for her benefit, and with a few embellishments, her life story served as the basis for many plays, articles, and poetry of epic pretensions. Locks of hair said to have come from her head were sold in shops

everywhere. Her niche in the annals of history was secured when she died four years later of tuberculosis at the age of twenty-six – by coincidence, the same year Ida Lewis was born.

The fact that Grace and her father made their historic rescue in the open waters of the North Sea does add a certain dramatic dimension that Ida's Narragansett Bay ventures lack, but there is little basis for comparison between a single incident and the repeated acts of bravery – usually without assistance – that took place off Lime Rock. Ida kept a neatly framed picture of Grace Darling's grave in her room at the lighthouse, however, and there can be little doubt that she was inspired by the earlier heroine's example.

There must have been many times in the years following her 1869 rescue that Ida wished for a position in a location as remote as Grace Darling's Longstone Light. One of the problems with Lime Rock was that it was so convenient to Newport, and tourists from all over flocked to see "the heroine of Lime Rock," "America's Grace Darling" – epithets that boosted the sales of Ida Lewis hats and scarves and the ubiquitous locks of hair. Ida's invalid father amused himself by counting her visitors: 100 a day, 9,000 in one summer! Ida disliked public attention and undoubtedly resented the constant requests for souvenirs, transportation back and forth to the light, and first-hand accounts of what to her were simple acts of duty. She had been pressed to repeat the story of her life so many times during the summer of 1869 that she agreed to let George Brewerton, a local author, write up a brief biography of her first twenty-eight years which, at a price of thirty cents, would get her off the hook.

Ida Lewis and her dog, 1905. (Courtesy of the Newport Historical Society)



Of the many gifts and visits from well-known people she received, two stood out in Ida's memory for years to come. One was sent by the people of Maine. It was a box of oatmeal and two gallons of fresh maple syrup to make a hasty pudding for her sick father. Ida spoke feelingly when she said, "I value it more than all the rest, for I think it is straight from the giver's heart." The other memorable event was a visit from President Ulysses S. Grant, who was in Newport preparing to board a train for Boston. He asked that his carriage pull up on Long Wharf so that Ida could row over and be personally greeted by himself and his wife. When asked later what the President and his entourage had said to her, Ida answered, as she had on similar occasions, that she could never remember flattering speeches because "they all seem alike, as if out of the same pattern and learned by heart."

Another concomitant of fame which, had Ida been able to foresee it, might well have been enough to keep her indoors that blustery March day, was the sudden proliferation of suitors. Her natural reticence in dealing with the opposite sex was assaulted

daily by an avalanche of love letters and proposals from total strangers. One West Point cadet, bolder than the rest, went so far as to send his father out to Lime Rock to press Ida for an answer, bringing along a photograph of the willing son and a personal reference from the mayor of his city. She remarked afterward that judging from his picture, he was "a young thing," and much too adolescent to be lovable.

On the whole, Ida took these invasions of her well-loved privacy in good humor. But her patience must have been tried when tourists took to cutting the painter off her boat as a souvenir, or when, in the middle of the night, passing practical jokers would yell "Help!" It is a tribute to her sense of duty and personal modesty that she continued in her life and responsibilities as unchanged as she did. In fact, she performed rescues well into her sixties. Some reports say that she saved eighteen more lives, bringing the total close to thirty. A particularly dangerous rescue took place in February 1887, when two soldiers fell through a crevice in the ice while trying to cross the frozen harbor to Fort Adams. Ida, crawling out on the treacherous ice herself, threw them a rope and hauled them in. For this she received a silver medal from the Massachusetts Humane Society (presented for the first time to an outsider) and a silver teapot from the troops at Fort Adams. The teapot, along with several of Ida's medals and the boat *Rescue* presented by the citizens of Newport, can be seen today in the Newport Historical Society's marine museum. Her last known rescue was performed in 1906 at the age of sixty-four. A close woman friend, who was rowing out to the light to visit, stood up, lost her balance, and fell overboard. Ida swiftly rowed out to save the woman and retrieve her boat.

Throughout her career as keeper, Lime Rock was known as "the most faithfully tended light on the coast." But somehow a rumor began to circulate in 1911 that the lighthouse was to be closed down and Ida relieved of her duty. A short piece in the *Newport Daily News* supported the idea, stating that a new group of officials at work on lighthouse management wanted to build a new light at the end of Goat Island (to the north). Even though the Lime Rock tourist trade had slacked off considerably during Ida's later years and she was no longer the "blue-eyed heroine" of her twenties and thirties, it seems unlikely that someone with her record would be displaced without a good reason. It was true that some of her reports to the Lighthouse Board had been returned lately with a notation from a minor department clerk that she "was not following strictly the new order of things," and Ida took the implied censure very personally, as might be expected. Her friends tried to convince her that the error was a slight one and the criticism impersonal, but she remained convinced that the official stamp of the Lighthouse Board meant that she had neglected her duties. She brooded over the incident, and the *Daily News* article confirmed her worst fears. Many believed the rumors, which turned out to be false, contributed to her death just a few days later.

Like both her parents, Ida died at the lighthouse. Her brother found her unconscious on the floor near the light early on a Saturday morning. She was a victim of apoplexy, just as her father had been. For three days she lay unconscious, and the number of letters and telegrams that poured in were a melancholy reminder of her bygone celebrity. On 24 October 1911, the Commandant of the Narragansett Bay Defense District received a message from the War Department to suspend target practice because Ida was ill and was not to be disturbed. He was notified of her death a few hours later. That night, as the Fall River liner *Priscilla* passed Lime Rock on her way to New York, the bells on the craft were tolling in honor of the lighthouse heroine. Her brother Rudolph expressed what she had said many times herself: "This is the



Ida Lewis in her rescue boat, *ca.* 1910. (Courtesy of the Newport Historical Society)

way poor Ida wanted to leave the light when she left for good – in her casket." Her wish was granted, and her last voyage across the harbor was made under clear skies on the calmest of waters. She was buried in the Common Ground cemetery facing Farewell Street.

The Lime Rock Light ceased to be used as a lighthouse shortly after Ida's death. In the early 1920s it was sold to the Narragansett Bay Regatta Association, and in 1928 it was officially designated the Ida Lewis Yacht Club. It still holds a commanding view of the harbor, and on a clear day the elegant lines of the Newport Bridge can be seen to the north. But the lighthouse itself, now gaily decorated with flags and awnings and anchored to the mainland by a long wooden pier, looks altogether too cozy and close-to-shore to have housed a woman of such daring.

BIBLIOGRAPHY

Adamson, Hans Christian. *Keepers of the Lights.* New York: Greenberg, 1955.

Brewerton, George D. *Ida Lewis, The Heroine of Lime Rock.* Newport, R.I.: A. J. Ward, 1869.

"Editor's Easy Chair." *Harper's New Monthly Magazine* 39 (June 1869).

Holland, Francis Ross, Jr. *America's Lighthouses.* Brattleboro, Vt.: Stephen Greene Press, 1972.

Lippincott, Bertram. *Indians, Privateers, and High Society.* New York: J. B. Lippincott Co., 1961.

Newport Historical Society Bulletin, January 1930, pp. 20-26.

"The Passing of Ida Lewis, The Heroine of Newport." *The New York Times,* 29 October 1911, Magazine section, p. 9.

Snow, Edward Rowe. *Famous Lighthouses of New England.* Boston: The Yankee Publishing Company, 1945.

U.S. Lighthouse Service Annual Report, 1912, p. 25.

Walford, Herbert Ladd. "Ida Lewis." *The American Magazine* 69 (1910): 334-37.

Paths Through the Sea

Matthew Fontaine Maury and his Wind and Current Charts

DOUGLAS STEIN

In June 1831 a twenty-five-year-old midshipman named Matthew Fontaine Maury was appointed acting sailing master to the U.S. sloop-of-war *Falmouth,* then at New York preparing for duty with the Pacific Squadron. It was Maury's responsibility as navigation officer to devise the best course for the vessel's passage to the Pacific Ocean.

Since his boyhood days at the Harpeth Academy in Tennessee, Maury had displayed a marked interest and ability in mathematics, and during his early years in the Navy, such books as Bowditch's *The New American Practical Navigator,* Norie's *Epitome of Navigation,* and Riddle's *Investigation of Rules and Principles of Lunar and Other Observations,* did not escape his investigation. In fact, during his all-important midshipman's examination a few months earlier, Maury chose to answer a lunar navigation problem by spherical trigonometry instead of quoting Bowditch's rules for using lunar observation, which was the custom. The examination board, unable to follow his computations, passed him twenty-seventh out of forty candidates, a position that set back his anticipated promotion sequence by approximately two years. He would later write of this ordeal. "He who repeats 'by heart' the rules of Bowditch, though he does not understand the mathematical principles involved in one of them, obtains a higher number from the Board than he who, skilled in mathematics, goes to the blackboard and, drawing his diagram, can demonstrate every problem in navigation."[1]

Doug Stein, a native of Illinois, earned degrees in American history from Bradley University and Illinois State University before joining the Seaport staff as Curator of Manuscripts in 1973.

At present however, he was excited by his new assignment, a billet that would give him an opportunity to exercise his ability. Maury wanted the passage to be a fast one, so with his usual thoroughness he set out to find charts that would help him select the most favorable route. He searched New York for printed information on the subject, but found nothing.

Undaunted, he asked masters of merchant vessels to advise him of the best route, but was disappointed to find that navigation on the high seas depended primarily on luck and jealously guarded personal experience. Finally, he began to search through any logbook and journal he could find from vessels that had made passages similar to the one *Falmouth* was undertaking. He copied extracts from volumes that recorded wind and current data, analyzed his findings, and prepared a course for the sloop's route round Cape Horn.

Maury noted a pattern emerging from his data. He discovered that most of the vessels followed one of two basic routes round the Horn: the inshore passage between the islands and the coast, or the southern route staying south of the islands. The inshore passage was the quickest if westerly gales were not encountered, but Maury's evidence indicated that a relatively fast and safe passage could be completed by heading south in the face of such storms.

It wasn't long before Maury's theories

were put to the test. In October, *Falmouth* and the British ship *Volage* began the Cape Horn run together, and they soon encountered fierce west winds off the Cape. *Falmouth* then headed south while *Volage* persisted in her attempt to gain the inshore passage. *Falmouth* completed the run undamaged in twenty-four days, while *Volage* took thirty-eight days and then needed repairs at Talcahuano.

Elated by events of the passage, Maury recorded his observations in a paper he called "On the Navigation of Cape Horn," which he sent back to the United States, and which was soon published by the *American Journal of Science and Arts*. In his paper Maury stated formally what many experienced shipmasters already knew, that "... winds with *westing* are more prevalent than those with *easting*," a fact "established from the circumstance that the return is less dreaded and shorter than the outward bound passage." He then advised that "the 'inshore passage' is to be pursued always, when the winds are favorable, keeping close into the land...." He pointed out, however, that "Common practice teaches that good passages are more frequently made by those vessels, which finding contrary gales off the Cape, stand boldly to the South...."[2]

The *Falmouth* episode and the subsequent article were early manifestations of what was to become Maury's most important work; the consolidation and promotion of the mariner's knowledge of the sea. First however, there was to be an interlude of eight years during which he married Ann H. Herndon of Fredericksburg, Virginia; wrote his first book, *A New Theoretical and Practical Treatise on Navigation;* was promoted to lieutenant; and suffered an injury that would influence the direction of his naval career.

In 1839, the family lived in Fredericksburg, with Maury drawing half pay as an officer on leave and awaiting orders. He was appointed acting astronomer for the controversial Jones-Wilkes exploring expedition, but was later discharged from the assignment at his own request. He, like many in the Navy at that time, was disenchanted with the infighting and professional jealousies which characterized the Jones-Wilkes dispute and began writing a series of articles for the *Richmond Whig and Public Advertiser* under the pen names *Harry Bluff* and *Will Watch,* criticizing the Navy's handling of the whole affair and calling on the Navy's new Secretary, James K. Paulding, to restore the service's prestige.

A few months later, in October 1839, Maury's right leg was severely injured in a stagecoach accident while on his way to New York and duty aboard the hydrographic brig *Consort*. His convalescence and rehabilitation lasted nearly two years, but Maury used much of that time writing a series of inflammatory articles on the inequities and inefficiences of the Navy, under the pen name of *Harry Bluff*. The series was called, "Scraps from the Lucky Bag" (the lucky bag being a shipboard receptacle for lost and found items), and dealt with such topics as the adoption of steam power, establishment of a school for midshipmen, and new ranks for naval officers. He discussed using rifle guns and hollow shot in what he felt to be the new era in naval warfare. He also advocated "great circle sailing" by saying that a straight line as plotted across a flat chart was not the shortest route between two points on a spherical globe.

Harry Bluff's true identity was finally discovered, but despite these articles (or perhaps because of them), and since his crippled leg precluded any assignment to a ship at sea, Maury was at last reassigned to active duty as Superintendent of the Depot of Charts and Instruments in Washington. With this appointment, Matthew Fontaine Maury's time had arrived, the prologue was over, and the work for which he would be remembered was about to begin.

The Depot of Charts and Instruments was founded in 1830, and prior to Maury

had been supervised by three officers, among them Lieutenant Charles Wilkes, who relinquished the position to command the Pacific and Antarctic exploration expedition that bore his name. During his term as superintendent Wilkes purchased a house on Capitol Hill and moved the Depot to his dwelling. On taking command in July 1842, Maury moved it to a house on Pennsylvania Avenue, which also provided living accommodations for his family on the second floor.

The Depot's primary function was the accurate determination of time, which was secured by celestial observation. All naval chronometers were checked against the Depot's official chronometer for the least variation from absolute accuracy. These shipboard chronometers were very sensitive, and once set and started were never reset; rather each instrument was rated every time it was returned to the Depot at the conclusion of a voyage. A record of the rate of variation for each chronometer accompanied the timepiece whenever it was issued to a vessel going to sea.

Sextants, quadrants, barometers, and thermometers were also serviced and issued by the Depot. Navigation charts and all required nautical books were housed at the Depot. Like the instruments, they were issued to a departing vessel and returned upon completion of the voyage. Finally, meteorological studies were a part of the routine work of the office, with particular emphasis on the study of the force and direction of winds.

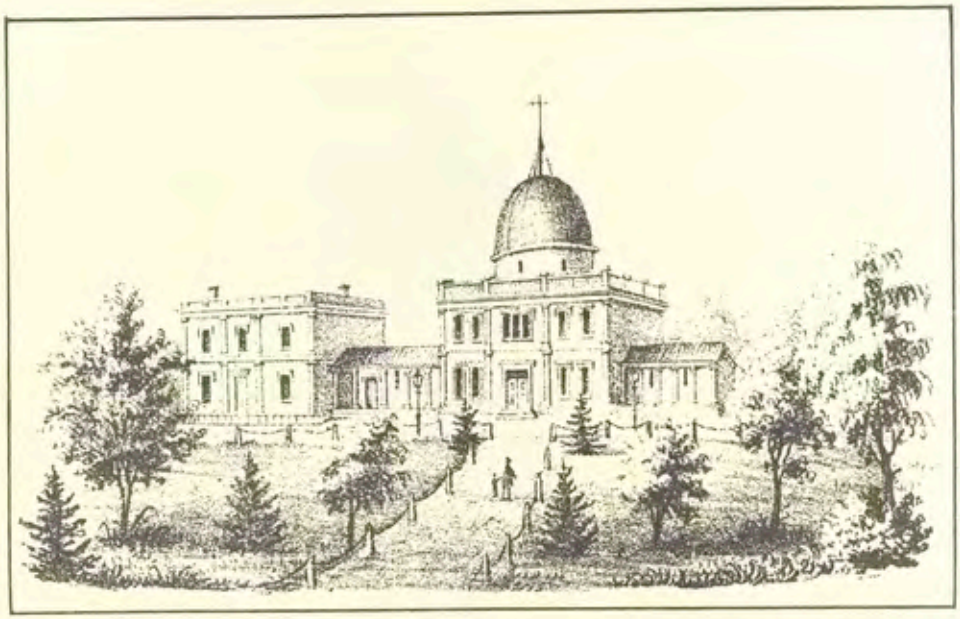
While not forsaking the Depot's other responsibilities, Maury soon became convinced that his chief duty should be the creation of ocean charts. He realized that American vessels depended upon other nations for charts not only of the open seas but for North American waters as well.[3] Many of these charts were over 100 years old, and few if any had anything to say about winds and currents, both principal concerns of the navigator.



Matthew Fontaine Maury in civilian dress, *ca.* 1859. Photograph with overpainting by an unknown photographer. For his contributions to navigation, Maury was elected the first honorary member of the venerable East India Marine Society of Salem, Massachusetts, in 1859, and this photograph was hung in the Society's East India Marine Hall. When Maury joined the Confederacy, he was expelled from the Society forever and his likeness was removed from the wall in disgrace. (Courtesy of the Peabody Museum of Salem)

Maury decided to revise these charts completely, making them more complete, accurate, and helpful than anything that had ever been available before. Aboard the *Falmouth* he had decried the paucity of navigational data, and with that voyage in mind he turned once again to the prime record of all navigational experience, the logbook.

Maury called his staff together (four lieutenants, eight midshipmen, one clerk, and a draftsman) and outlined their duties. They were to go through every one of the old naval logbooks now housed at the Depot and extract every scrap of information which might assist the navigator.



U.S. Naval Observatory and Hydrographical Office, Washington, D.C., from Bohn's *Hand-Book of Washington* (1854). The domed observatory was constructed a mile west of the White House in 1844, and the superintendent's quarters (left) were added in 1847. Maury served as superintendent from the opening of the Observatory in 1844 until he resigned from the U.S. Navy to follow his native state of Virginia into the Confederacy in April 1861. (Courtesy of the Virginia State Library, Richmond)

There seemed to be more records of the New York to Rio de Janeiro run than any other so they began with those. Before long it was obvious that the logs revealed well-defined routes across the seas which took advantage of helpful winds and currents while avoiding contrary ones. However, these were not the routes most captains sailed. Instead, navigators seemed to be fighting nature rather than using it to their advantage. If only such information were made available to all mariners they could find and follow these natural "paths" through the sea. It was this emphasis on natural paths through the oceans that became the keystone of Maury's navigational charts, and forever earned him the title, "pathfinder of the seas."

After careful consideration, Maury decided to develop a new type of chart, and sailing directions which represented a radical departure from types then in use. The project received Navy approval late in 1842, and a circular was sent out ordering captains of naval vessels to send in navigational, hydrographic, and meteorological data to Maury at the Depot of Charts and Instruments.

Progress was slow. The Depot staff continued to sift through the accumulated logs and journals while the requested data from naval cruises trickled in. In October of 1844 Maury was appointed Superintendent of the U.S. Naval Observatory and Hydrographical Office, successor to the now defunct Depot of Charts and Instruments. Despite increased astronomical responsibilities inherent in his new position he was able, in the autumn of 1847, to report that the first of his Wind and Current Charts, as they were to be called, was ready.

Thus, five years after he had first discovered the collection of old logbooks at the Depot, his study of them had produced the totally new kind of navigational chart he had envisioned. Between 1847 and 1860, over sixty charts would be issued within six different series.[4]

The first group, Series A, totaled thirty-four charts (35.3″ x 24.1″) and covered the Atlantic Ocean, North; Atlantic Ocean, South; Indian Ocean; Pacific Ocean, North; and Pacific Ocean, South. They were known as Track Charts. The direction, divergence and strength of winds were indicated by what Maury called "small brushes." Currents were indicated by arrows, the length of the arrow being proportionate to the strength of the current, which was also expressed in knots by numbers at the side of each arrow. Roman numerals denoted degrees of magnetic variation as observed by the vessel near whose track they were placed. The tracks of merchant and naval vessels were plotted with the names of each vessel and year of passage printed on their track. Water temperature was also given. All these symbols were eventually color keyed to the four seasons of the year, using black, green, red, and blue.

Series B, entitled Trade Wind Charts, included two charts, one for the Atlantic Ocean (35.3″ x 24.1″), and the other for the Indian Ocean (17.3″ x 35.4″).

Series C began what were to become the famous Pilot Charts of the U.S. Navy. Identified then also as Pilot Charts (35.3″ x 24.1″), the series covered the Atlantic Ocean, Brazil, Cape Horn, Indian Ocean, and the Pacific Ocean. Over twenty sheets in the series were issued.

Series D consisted of five Thermal Charts (35.3″ x 24.1″), which recorded the surface temperature of the ocean at the specific place and time where the observation had been made. Thermal Charts were issued for the North and South Atlantic Oceans.

Storm and Rain Charts formed Series E (35.5″ x 24.1″). Covering the Atlantic and part of the Pacific Oceans, these three charts supplied for every five degree square the number of observations that had been made for each month, the number of rain days, calm days, incidents of fog, lightning and thunder, storms, and the quarter from which the storms had blown.



Detail of Maury's North Atlantic Track Chart, 1852. (52.1321)

The four sheets of the Whale Chart of the World, Series F, (24.1″ x 35.8″) provided information on breeding habits, migration, and the places where the most whales could be located in different seasons of the year. This series was of value to the whaling fleet, then an important segment of America's merchant marine.

In 1850 Maury published *Notice to Mariners,* which served as a guidebook in the use of his charts. Subsequent editions published through 1859 were entitled *Explanation and Sailing Directions to Accompany the Wind and Current Charts,* commonly referred to simply as "Sailing Directions." Typically, the edition of 1851 contains 315 pages and 12 plates, and carries a description for each chart series. Topics discussed include General Circulation of the Atmosphere, Deep Sea Soundings, Routes to and from Europe, and The Cape Horn Passage.[5] Each year, as more and more information became available, Maury continually enlarged his "Sailing Directions" until the eighth edition of 1859, comprising 2 volumes and totaling 1,300 pages.

In "Sailing Directions" Maury stated that his charts were intended to generalize the experience of navigators so that each could command the experience of all.[6] It was one thing to create this pool of sailing experience, yet another to persuade many of the crusty old salts to abandon traditional habits. They gave these charts, developed by a crippled land-bound Navy lieutenant, little consideration; for them the old ways were still the best. That opinion was shattered when the bark *W.H.D.C. Wright* returned from Rio de Janiero in the spring of 1848.

Captain Jackson had sailed the *Wright* out of Baltimore and, following Maury's sailing chart, set his course for Rio where he arrived thirty-eight days later, beating the average time by seventeen days. Jackson repeated the course on his return trip and arrived at Baltimore in thirty-seven days, thirty-five days before he was expected![7]

Word of the *Wright*'s achievement spread like wildfire. The impact implicit in this voyage was tremendous. Every day saved at sea lessened the dangers for seafarers, reduced the risk of shipwreck and damage to cargo, and, in effect, cut shipping costs.

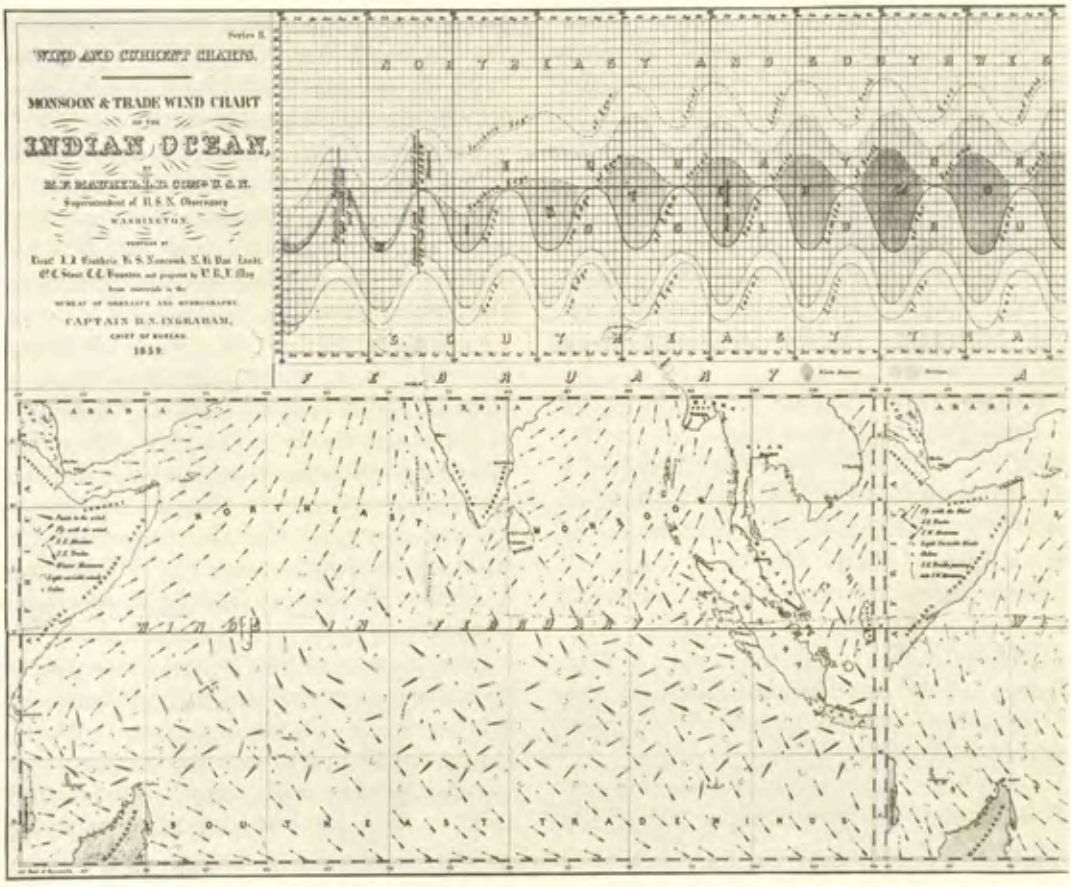
Maury's Wind and Current Charts were in immediate demand; but they were not for sale. Rather, he had devised a plan whereby a shipmaster could acquire the charts and a copy of "Sailing Directions" if he would sign an agreement directing him to maintain an abstract log (provided by Maury) of the voyage which was to be returned to the Naval Observatory when the voyage was completed. Instructions were given on how to make the required observations and exactly what information was needed. These abstract logs could be returned through the mails postage free provided they were marked "ship."[8]

Much of the information used to create Maury's charts had been gleaned from the old logs at the Depot and their creator realized that he must develop a source for more current data to increase the accuracy and value of future charts and editions of "Sailing Directions." Although there were some who did not abide by the agreement to return the abstract logs, the scheme, in general, worked well.

As the track charts and abstract logs began to come back, Maury could see that some sea captains still clung to their old courses. For the merchant vessel of 1848, saving a few sailing days between ports could mean lower insurance rates, and perhaps the master might secure a cargo under more advantageous terms, but, except in a few trades, speed was not then a crucial factor in maritime commerce.

However, the discovery of gold in California later in 1848 ignited a stampede, and speed in reaching California became the primary consideration. A fortune awaited the miner or merchant who got there first. Passages between New York and San Francisco often became races between two or more of the new American clipper ships, graceful "greyhounds of the sea" built to meet the demand for speed.

By 1851, clippers using Maury's charts averaged 144½ days from New York to San Francisco, compared to an average of 187½ days for those that did not.[9] From this time on, Maury had little trouble getting captains



Detail of Maury's Trade Wind Chart of the Indian Ocean, 1859. (43.1330)

to use his charts and "Sailing Directions," or getting them to fill in the abstract logs furnished by the Observatory. By the end of 1851, approximately 1,000 American vessels were recording this information and faithfully reporting to him at the end of each voyage.

With his charts now firmly established in the United States, Maury sought to create international cooperation for his work. Largely through his efforts, an International Maritime Meteorological Conference was held at Brussels in August 1853. Maury declined the opportunity to serve as president, but did consent to give the opening address. He proposed that his system of distributing abstract logs be extended to the ships of many nations and that the results be used for the benefit of all. The ten nation conference unanimously adopted this plan and afterwards other countries joined the program.[10]

Two years later his book, *The Physical Geography of the Sea*, was published and went through five printings during the first year. The book was to become Maury's most famous publication.

Maury's career was at its zenith, but the coming of the Civil War changed all that. Unwilling to take up arms against his native Virginia, he resigned his commission on 20 April 1861 and went to serve the Confederacy. The defection of this popular naval officer shocked and hurt many who, in the past, had supported his endeavors. In 1863 Maury's publications were discontinued be-

cause his charts were said to "embrace much which is unsound in philosophy and little that is practically useful."[11] A Boston newspaper offered a $5,000 reward for the "Head of Jeff Davis," and $3,000 for the "Head of the Traitor, Lieut. Maury."[12]

During the war, Maury struggled to make the electric torpedo into an effective weapon, and later was engaged in secret service work for the Confederacy in England. He was in Cuba, en route home, when the war ended.

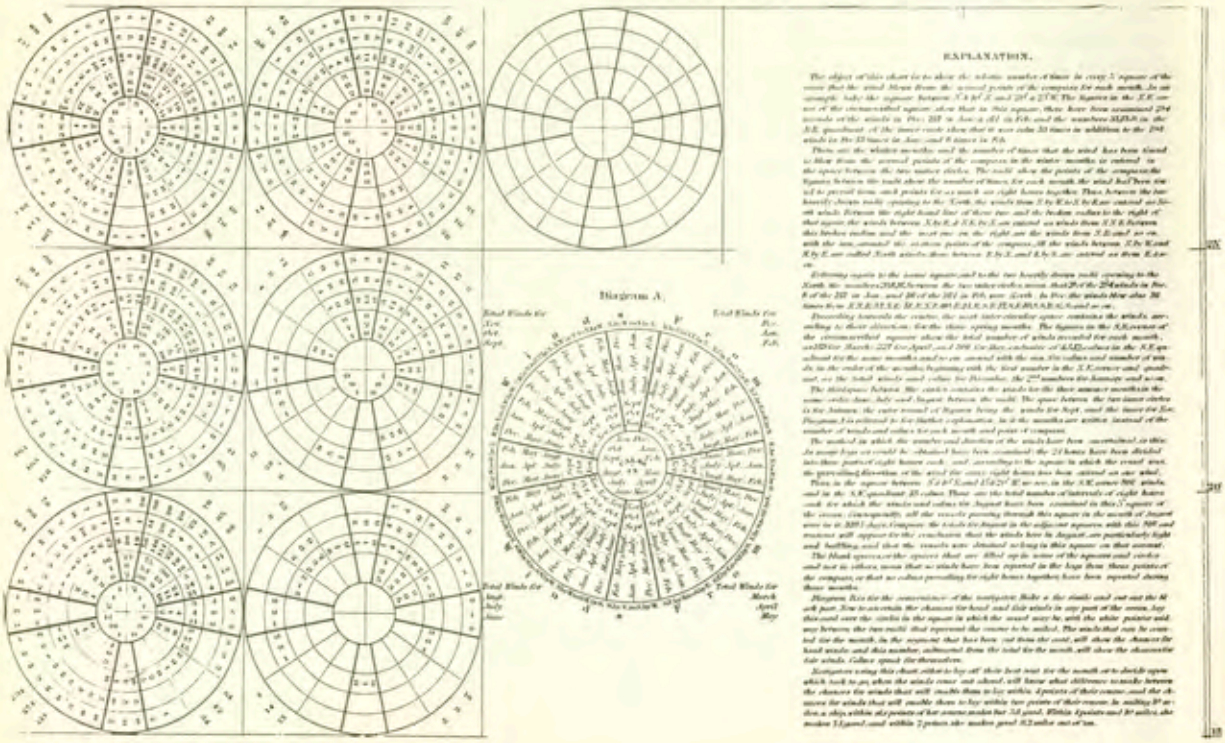
Rather than risk the uncertainties of returning to the United States, Maury decided to go to Mexico where he presented a plan to Emperor Maximilian for a colony of southern planters and other landowners to be established there. The "New Virginia" scheme never materialized and he soon returned to England to be reunited with his family. He lectured in London and in Europe on the development of the electric torpedo, and spoke at Cambridge on "Science and the Bible."

The Maurys returned to America in July 1868. They settled in Lexington, Virginia, where Maury lectured at the Virginia Military Institute. But the quiet life in his beloved Virgina was brief, and he died peacefully at home in February 1873.

Matthew Fontaine Maury traveled a difficult, twisted path to success. Although his accomplishments brought him international fame, his ambition and his talent for creating controversy earned him more than his share of enemies.

In addition to his revolutionary Wind and Current Charts, Maury pioneered the first accurate and systematic deep sea soundings of the ocean floor, studies which led to his assisting in the successful laying of the Atlantic cable. His articles played a significant role in the creation of the bureau system for naval administration and the U.S. Naval Academy. He also produced a textbook on navigation that became required study for midshipmen, and his *Physical Geography of the Sea* is now considered to have been the first textbook of modern oceanography. Maury fought for a national weather service that would predict as well as report the weather. He was honored by universities

Detail of Maury's North Atlantic Pilot Chart, 1853. According to the explanation, "The object of this chart is to show the relative number of times in every 5° square of the ocean that the wind blows from the several points of the compass for each month." (60.143)



and learned societies; he was also decorated by heads of state and by Pope Pius IX.[13]

Maury's ambition and enthusiasm however, frequently caused him to overextend his authority and, perhaps unintentionally, encroach upon the jurisdiction of others. This was certainly true in the case of Alexander Bache, Director of the Coastal Survey from 1843 to 1867, and Joseph Henry, Director of the Smithsonian Institution. Both remained powerful enemies of Maury throughout his career.

His articles caused him to be unpopular with some groups of naval officers, and on many occasions he was at odds with members of the scientific community. Some believed his approach to science amateurish, and his reckless generalizations invoked suspicion of his theories.

It is true that neither his research nor his writing ever conformed in the strict sense to the scientific method, but Maury believed himself to be a "natural philosopher" rather than a scientist, and he sensed the purpose of his labors as spreading new information as quickly and as widely as possible.[14] His flowery pen captivated the layman and helped create popular interest in the sea and its forces:

> There is a river in the ocean: in the severest droughts it never fails, and in the mightiest floods it never overflows; its banks and its bottom are of cold water, while its current is of warm; the Gulf of Mexico is its fountain, and its mouth is in the Arctic Seas. It is the Gulf Stream....[15]

Scientists however, were bothered by the oversimplified and often contradictory explanations which Maury insisted upon advancing for all data that he acquired. His energy and ambition were not enough to initiate him into the intricacies of geophysics and fluid dynamics. Yet it was these areas that perhaps interested him most and he "formulated theories concerning the most complex systems of the sea and supported his contentions with a few observations, a vast number of assumptions, and quotations from the Bible."[16]

Of course Maury's reputation was forever tarnished by his activities during the Civil War when, like a more famous Virginian, Robert E. Lee, he chose his native state over the Union. For years he was considered a traitor, and for a while he was a man without a country. But the impact of his accomplishments endure. In 1883 Maury's charts were reissued as Pilot Charts by the U.S. Naval Oceanographic Office and the series has continued ever since. Today, on every modern pilot chart you will find the statement:

> Founded upon the researches made in the early part of the nineteenth century by Matthew Fontaine Maury while serving as a lieutenant in the U.S. Navy.

NOTES

[1] Matthew Fontaine Maury, "Scraps from the Lucky Bag," *Southern Literary Messenger* 7 (December 1840): 120. Quoted in Francis Leigh Williams, *Matthew Fontaine Maury, Scientist of the Sea* (New Brunswick, N.J.: Rutgers University Press, 1963), p. 88.

[2] Matthew Fontaine Maury, "On The Navigation Of Cape Horn," *American Journal of Science* 26, *Art.* V (July 1834): 56, 59, 61. Quoted in Williams, p. 93.

[3] Williams, p. 154.

[4] For a complete list of Maury's charts see Williams, pp. 693-96.

[5] Matthew Fontaine Maury, *Explanation and Sailing Directions to Accompany the Wind and Current Charts*, 3rd. ed. (Washington: C. Alexander, 1851).

[6] *Ibid.*, p. 23.

[7] Janice J. Beaty, *Seeker of Seaways, A Life of Matthew Fontaine Maury, Pioneer Oceanographer* (New York: Pantheon Books, 1966), p. 101.

[8] Abstract Log, Ship *Benares*, 1857-59, pp. I-XI. Manuscript Collection, G. W. Blunt White Library, Mystic Seaport Museum, Mystic, Conn.

[9] Matthew Fontaine Maury, report to Secretary of the Navy William A. Graham, in *Annual Report of the Secretary of the Navy For 1851*, pp. 13, 61. As quoted in Williams, p. 190.

[10] Diana Fontaine Maury Corbin, *A Life of Matthew Fontaine Maury* (London: Sampson Low, Marston, Searle, & Rivington, 1888), p. 72.

[11] Susan Schlee, *The Edge Of An Unfamiliar World, A History Of Oceanography* (New York: E. P. Dutton & Co., 1973), pp. 62-63.

[12] Beaty, p. 126.

[13] Williams, p. viii.

[14] Beaty, p. 111.

[15] Matthew Fontaine Maury, *The Physical Geography of the Sea*, 6th ed. (New York: Harper & Brothers, 1856), p. 25.

[16] Schlee, pp. 58-59.

BOOK REVIEWS

The Mariner's Mirror. The Society for Nautical Research. c/o National Maritime Museum, London SE 10 9NE. Annual subscriptions $15.00.

"The Society's quarterly journal The Mariner's Mirror is internationally recognized as a leading authority in nautical history and archaeology and information about seafaring throughout the ages." So reads the official description by the Society for Nautical Research, and indeed the description is accurate.

The Mariner's Mirror has been in continuous publication since 1911. The breadth of coverage–much of it esoteric, but always readable–is truly dizzying. The accuracy and quality of material has never faltered.

The admitted heaviness (owing to solidity) of the articles is balanced in each issue by something which only the British seem able to achieve–a very lively "Notes and Queries" section. Year after year queries are answered, disputed, refuted, and brought up again by the world's experts.

Indispensable to the serious maritime historian, there is also plenty of wonderful enlightened entertainment for the lay reader. *The Mariner's Mirror* is a superb, reliable quarterly with which anyone interested in maritime studies will want to become acquainted.

Scale Model Sailing Ships. Edited by John Bowen. (Greenwich, England: Conway Maritime Press Ltd., 1977. 192 pp. Photographs and drawings, bibliography, glossary of terms. $12.95.)

This is an unusual book in that each of the eight chapters is written by a different modelmaker. All are well known in Great Britain and all are frequent contributors to the *Model Shipwright.* John Bowen, who edited the book, is also the editor of *Model Shipwright,* a naval architect by training, and a lifelong model builder.

In the first chapter, John Bowen describes in general terms "Galleons," "Clipper Ships," and fore-and-aft "Coasters" before going on to talk about plans and their sources. Such matters as locating and delving into old records, drawings, etc. are written with British archives in mind but the same methods can be used elsewhere. There is also a treatise on how to read and interpret ships plans which should be invaluable for the new hobbyist unfamiliar with shipbuilding practice.

Ewart C. Freeston prepared the section on Hulls and Decks and in it discusses the three most common methods of model construction: block, bread and butter, and plank on frame. Roger Glen covers deck fittings such as capstans, life rails, boats, anchors, pumps, houses, hatches, etc.

Masting and Rigging is done by Bill Shoulder, Working Models by Max Davey, Miniature Scenic Models by Derek Hunnisett, Painting and Finishing by P. Heriz Smith and Flags by Alec Purves.

Some of the authors treat their subject in considerable detail and others in more general terms. A comprehensive bibliography both lists and describes many books for additional reading on model building, shipbuilding, maritime history, periodicals, and plans. The glossary will also be greatly appreciated by the neophyte.

This book is profusely illustrated with over 100 detail drawings and diagrams and 150 photographs. It should be helpful to the first timer as well as the more experienced hobbyist.

William Quincy
Model Specialist, M.S.M.

Some Welcome Reprints

In 1979, a fine set of six reprints appeared, which will make several maritime classics available for our bookshelves. Under the editorship of Robert Wolk, head of library services for the Seamen's Church Institute of New York and New Jersey, Earl M. Coleman Enterprises of Stanfordville, New York, has issued a series entitled "Seafaring Men: Their Ships and Times," composed of facsimile reproductions of classic works long out of print.

Chronologically, the earliest is Frank T. Bullen's *The Men of the Merchant Service,* 1900 (347 pages, $29.50), which details the duties of each level of seafarer, from master to fireman and trimmer. Bullen's comments on the conditions and needs for reform, based on his own varied experiences at sea, are well taken. His catalog of responsibilities for each rank of seaman, and his differentiation between British and American merchant service, provide a valuable reference

for the end of sail. A comparison of Bullen's descriptions with those of Richard Henry Dana in his *Seaman's Friend* of 1841 (the revised edition of 1851 having recently been reprinted by Scholars' Facsimiles & Reprints, Inc., Delmar, New York, 1979, with an introduction by former Seaport chanteyman R. D. Madison) offers clear evidence of the changes which took place at sea in the later nineteenth century.

Frederick Perry's *Fair Winds and Foul,* 1925 (204 pages, 9 illustrations, $17.50), is the next oldest in the reprint series. Perry recounts many vivid memories of his service as mate in the Down Easter *Continental* and several other vessels, primarily in the California grain trade in the late 1870s. Written almost as a sailor's yarn, the tale is intriguing.

We have heard much of "bucko Mates" and Perry does little to dispel the image. He characterizes the typical mate of his time as a "general manager, auditor, superintendent, humorist, blasphemer, sailing master, official log-keeper, work creator and sleep destroyer." Early in his career he learned that to give sympathy to a sailor only ensured that the sailor would later take advantage of him. While not a brutish character on the order of Bull-dog Penfield, Dinky Bunker, Big Parker, or Charley Watts, whom he introduces, Perry got his licks in at sea and here recounts them in fine detail.

Peter Tutein's *The Sealers* (247 pages, $22.50), translated by Eugene Gay-Tifft, was originally published in 1938. This frank account of a young Danish seaman's experiences aboard a Norwegian sealing vessel in the Arctic about 1920 gives a very thorough picture of life in one of the lesser maritime trades. Throughout, Tutein's appreciation of the vast and spectacular Arctic world of ice plays counterpoint to the frenzied slaughter of countless seals.

Mutiny at Sea, 1938 (253 pages, 9 illustrations, $22.50), by Robert L. Hadfield, is perhaps best characterized as historical fiction. Hadfield fills out thirteen factual mutinies with dialogue to add color to an ever popular subject. Except for a mutiny on an American whaler and the famous incident aboard the Russian warship *Potemkin* in 1905, the mutinies Hadfield elaborates took place on British vessels. They are truly exciting tales of the sea.

Robert Ferguson's *Arctic Harpooner,* 1935 (224 pages, 9 illustrations, $19.50), is an especially valuable offering. Ferguson's irrepressible interest and tremendous powers of observation make *Arctic Harpooner* an indispensible volume on American whaling in Hudson Bay. Ferguson's journals of his voyage in the *Abbie Bradford,* 1878-79, were edited to form a continuous narrative, interspersed with yarns repeated by Ferguson. Leslie Dalrymple Stair did a creditable job of documenting and editing the manuscript, and the reprint captures the spirit of the original University of Pennsylvania edition. Perhaps Coleman Enterprises will see fit to reprint Ferguson's *Harpooner,* an equally fascinating memoir of whaling in the South Atlantic in the bark *Kathleen.*

The latest volume in the series, William L. Standard's *Merchant Seamen: A Short History of Their Struggles,* 1947 (224 pages, $15.00), traces in some detail the long campaign to unionize American seamen. After briefly presenting the background up to 1920, Standard concentrates on the period between the wars, especially the strikes, bargaining, and power plays of the mid 1930s, when the National Maritime Union was forged. *Merchant Seamen* was written to rally seamen in the late 1940s, and the last chapter, "Unite–or be Smashed," conveys the tone of this work.

All together, these are well-produced, useful volumes, for which the publisher should be congratulated.

–The Wherry Oarsman

ACQUISITIONS

Since it has been a full year since we have featured any of our recent acquisitions, let us catch up a little now with this multiple offering:

This elegant Victorian yachting trophy, donated by Mr. Hollis Hunnewell, has a history as interesting as its design. The 14½-inch-tall sterling silver cup was made by J., E., W., & J. Barnard of London, and presented by Americans living in London to Englishman J. Asbury. Mr. Asbury's yacht *Livonia* was defeated by *Columbia* in the America's cup series of 1871, but did win one race in the process. The design motifs are less than subtle, with the figure of Liberty standing in gracious victory over a seated and defeated figure of Brittania.

Mr. Asbury, sorely insulted, sent the cup back to the New York Yacht Club along with serious accusations of bad sportsmanship. The incident led to a decided cooling of yachting enthusiasm between the two nations and marked the worst confrontation in the 120 year history of the competition.

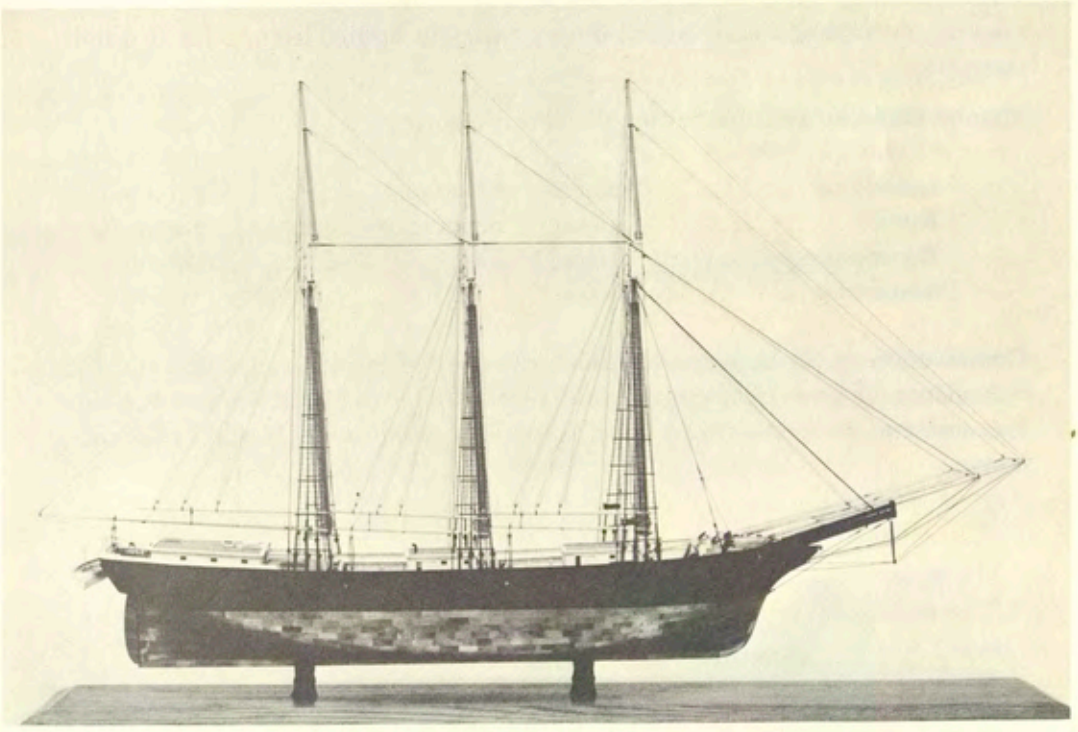
It is interesting to note that though Mr. Asbury's yacht was registered as *Livonia,* the trophy has the name spelled *Lavonia,* adding insult to injury. [79.37]



The Seaport recently purchased this gelatin print photograph, possibly by Emerson W. Hazard, of the sidewheel steamer *C. H. Northam* (built 1873, Brooklyn, N.Y.). The ship is shown underway, possibly in New Haven harbor, around 1885, The steam tug *Francis H. Jackson* (built 1882, Wilmington, Del.) is at the left and six canal boats are rafted in the foreground. Period photographs such as this one showing nineteenth-century harbor activity provide valuable documentation of our past, and are actively collected by the museum. Dim: 15⅝" x 19⅞". [79.73]

Not all items in the Seaport's collection are acquired by gift or purchase. Some are made "in house" by staff members. Such is the case with the recently completed model of the tern schooner *James Miller,* built in the Seaport's model shop by staff model builder William S. Quincy. Quincy worked for twelve months on the model, building it on a scale of 1:48. Though there were no existing plans or photographs of the *Miller,* originally built in 1854 in Essex, Connecticut, by Nehemiah Hayden, the builder's handwritten journal and the schooner's original half model were available. Quincy used this limited documentation to reconstruct the plans for himself and then built this handsome and very accurate model. Dim: l.o.a. 51¼", beam 7½", height 30", height overall 33¼". [79.76]


C.H.NORTHAM
2070
2035



AN INVITATION
TO JOIN MYSTIC SEAPORT MUSEUM

We should like to extend a cordial invitation to like-minded individuals to join with us in programs dedicated to the preservation of our national maritime heritage. Annual dues materially strengthen Mystic Seaport Museum. At the same time, a member receives tangible benefits and privileges, including:

Unlimited Free Admission to Mystic Seaport Museum during regular hours. (In all classifications above Individual, this applies to parents, children and grandchildren under the age of eighteen).

Receipt of THE LOG OF MYSTIC SEAPORT, a quarterly magazine devoted to articles on maritime subjects.

Receipt of the WIND ROSE, the Seaport's newsletter, reporting on current museum activities and personnel.

A Ten Percent Discount on boat dockage for Individual, Family, and Participating Members. Sustaining Members and above are accorded free dockage for two nights each visit.

A Ten Percent Discount on purchases at the Mystic Seaport Museum Stores, Inc.

Purchase of Guest Ticket Books at substantial savings.

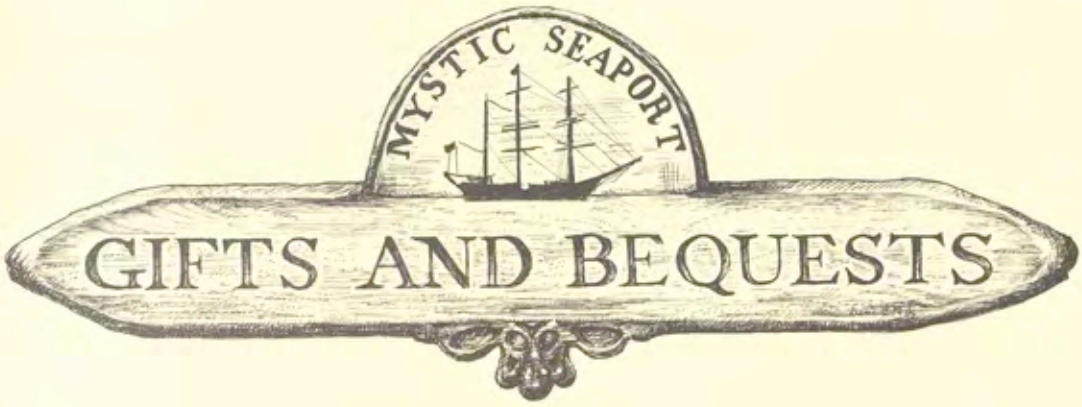
Eligibility for Subscriptions to the Adventure Series, illustrated lectures for armchair travelers.

Memberships are available in the following categories:

Individual	$ 20.00	Associate	$ 250.00
Family	30.00	Benefactor	500.00
Participating	50.00	Life	1000.00
Sustaining	100.00		

Contributions to Mystic Seaport Museum are deductible within legal limits for U.S. income tax purposes. Please make your check payable to Mystic Seaport Museum, Inc. and send to: Membership Office, Mystic Seaport Museum, Mystic, Connecticut 06355





GIFTS AND BEQUESTS

The development of the museum–the buildings, ships and wharves, the exhibits, books and manuscripts–give eloquent testimony to the generosity of members and other friends of Mystic Seaport Museum. There are continuing opportunities for gifts and bequests which will help assure its future strength and development.

Members of the Seaport who have not already done so are urged to perpetuate their interest in the work of the museum through a bequest. Some members will want to make a specific bequest while others may want to designate Mystic Seaport Museum as a residuary or contingent beneficiary of all or a portion of their estate.

Mystic Seaport Museum is a nonprofit institution publicly supported by gifts and grants. Contributions are deductible within legal limits for Federal income tax purposes. Inquiries regarding gifts and bequests are encouraged and may be directed to the Director of Resource Development.

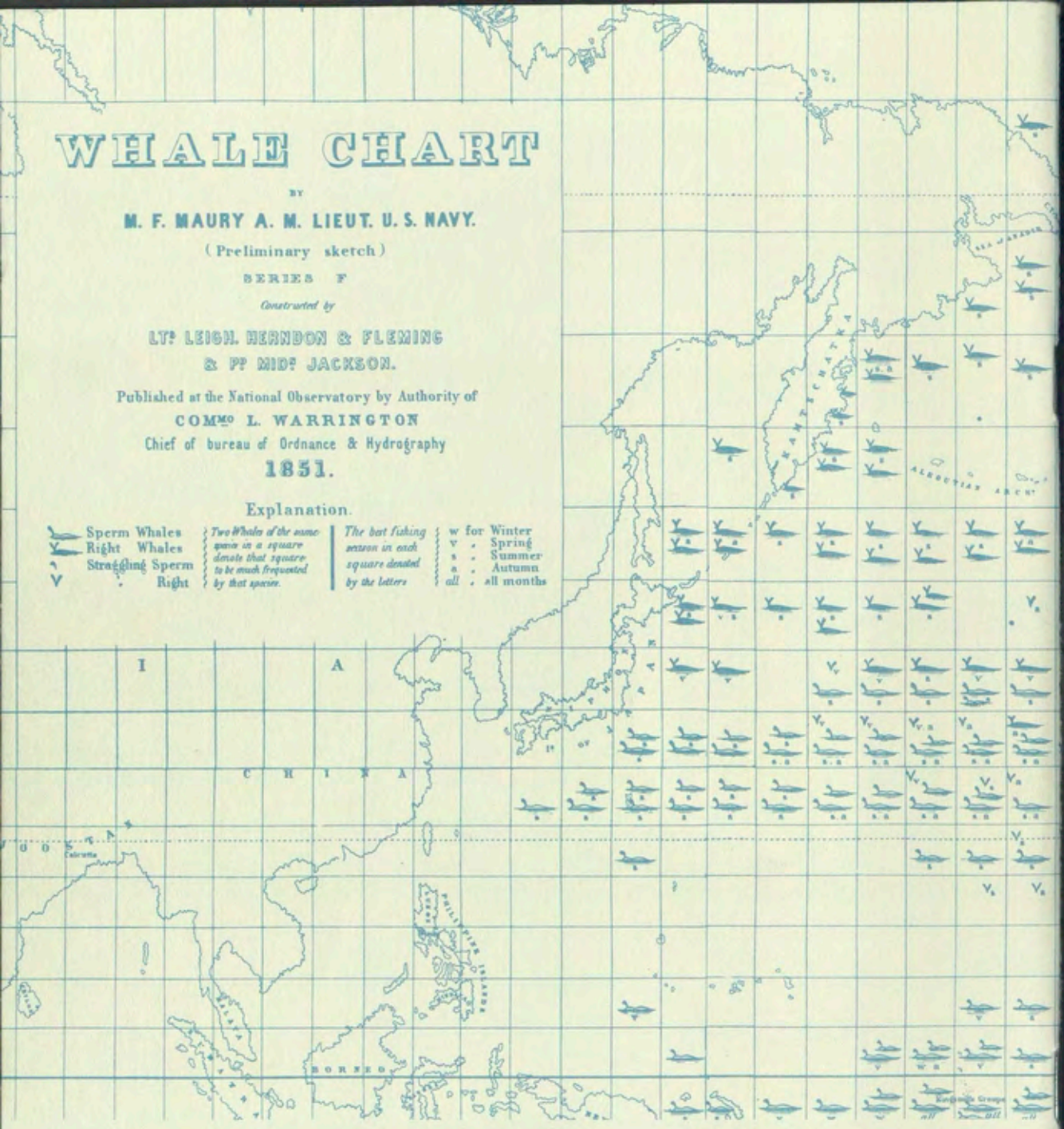
SUGGESTED FORMS FOR BEQUESTS

General

I give and bequeath to Mystic Seaport Museum, Inc., a corporation existing under and by virtue of a charter granted by the State of Connecticut, and located in Mystic (Town of Stonington) in said State, $ . . . . . , to be used (or the net income to be used) at the discretion of the Trustees of said Corporation.

Residuary

All the rest, residue, and remainder of my real and personal estate I devise and bequeath to Mystic Seaport Museum, Inc., a corporation existing under and by virtue of a charter granted by the State of Connecticut, and located in Mystic (Town of Stonington) in said State, said estate to be used (or the net income to be used) at the discretion of the Trustees of said Corporation.



THE LOG OF MYSTIC SEAPORT

Mystic, Connecticut 06355

Non-Profit Organization
U.S. Postage Paid
Mystic, Connecticut
Permit No. 1