

## *Imagery and Types of Vessels*

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THE YEARS 1840 TO 1860 CAN BE DESCRIBED AS A PERIOD OF CONTRAST in American shipbuilding and shipping activity. Rapid advances in naval architecture took place side-by-side with conservative, often static, shipbuilding and boatbuilding traditions. This contrast was in turn reflected by shipping activity along the New England coast, where clipper ships and steamships plied sea lanes between Boston and distant ports while processions of trading schooners, fishing schooners, and a multitude of small craft hugged the coastline. The swiftest and most refined examples of marine technology glided past traditional watercraft types that looked and worked very much the same throughout the nineteenth century. Progressive and conservative ship designs have always existed together, but the Industrial Revolution accelerated divergences of design and construction methods to an unprecedented degree. In the two decades preceding the American Civil War, this phenomenon was to become manifest in the ports and shipyards of New England.

With photography in its infancy, the camera record of New England shipping from 1840 to 1860 could only be fragmentary, leaving the making of a broader pictorial record to painters and printmakers. Among them were artists in many foreign ports who depicted individual vessels with great accuracy, but rarely with knowledge or inclination to place them in a New England setting. The representation of a New England vessel in its milieu required knowledge of the vessel, particularly its hull form and rigging; knowledge of the setting, such as a seaport or coastal environs; and knowledge of crew activities and how the vessel was worked. A few competent local painters, such as William Bradford, augmented by a handful of immigrant col-

leagues, like J. E. Buttersworth, possessed this knowledge and produced some admirable ship portraits. It was left to a native of Gloucester, Massachusetts, a landsman whose physical handicaps limited severely his seagoing experiences, to depict the vessels he saw with accuracy while placing them in port scenes and seascapes of great artistic achievement. If the aesthetic qualities of Fitz Hugh Lane's work overshadow the technical accuracy of the ships he depicted, then it is time to assess an overlooked aspect of his painting and to gain a better understanding of what is probably the most strenuous and time-consuming part of a marine artist's work.

The great progress in shipbuilding and ship design that established American primacy in western shipbuilding from 1830 to 1857 was due to two basic needs: greater carrying capacity and greater speed. As the rapidly developing nations rimming the North Atlantic Basin intensified their seaborne commerce, they needed larger ships to carry material in greater volume and faster ships to maintain regular communication among major seaports. The construction of this fleet was left initially to a small number of master shipwrights whose competence and imagination allowed them to gauge the form, proportions, and dimensions of materials to build hulls of untried size and form. Experience soon proved, and improved, their rudimentary calculations and guesswork, and in turn became the datum for even more ambitious designs.<sup>1</sup>

The technical knowledge needed by the American shipyards was initially provided by shipwrights and constructors employed by the United States Navy, which, in the experience of the War of 1812, had embarked on an ambitious fleet construc-

tion program, planning and building warships that surprised and alarmed even the largest European navies. It is likely that if naval constructors such as Samuel Humphreys, John Lenthall, and Samuel M. Pook had not engaged in design work for private yards, progress in American merchant shipbuilding would have been very different, certainly slower. A number of their apprentices left naval service to found some of the leading private yards of the antebellum period.<sup>2</sup> Isaac Webb, perhaps the most distinguished of these, in turn trained three apprentices—William H. Webb (his son), John W. Griffiths, and Donald McKay—who were to become the most influential ship designers of their day.

The growth of the United States Navy in this period and its influence on yards owned by former naval shipwrights marked the birth of naval architecture as a legitimate science in America. Intuitive and traditional design methods were supplemented, but not altogether displaced, by increasingly sophisticated methods of calculating hull displacement, stability, loading capacity, and other qualities that permitted a ship's performance to be predicted prior to construction. Drafting techniques were refined, allowing accurate hull plans to be drawn without relying on half-models to judge hull form; however, American shipwrights still lagged behind their European counterparts in the development of this practice.<sup>3</sup>

The introduction of steam propulsion and vessels with specialized mechanical features (particularly for use in harbors) forced on American shipwrights the sister science of marine engineering. In the transatlantic trade, their efforts were superseded by English steamships, but in the coastwise passenger trade and in major ports, a variety of steam-powered craft found useful niches for themselves.<sup>4</sup> Even sailing ships could not escape the marine engineer's services, for as hulls grew in size, their wooden frames and planking became increasingly subject to stresses requiring metal strapping and careful distribution of timber mass. Larger ships required mechanical aids to enable smaller crews to perform heavier tasks, giving rise to many "patent" rigs and sail-handling devices. Anchors, windlasses, pumps, and steering mechanisms were under constant improvement.<sup>5</sup>

The dissemination of naval architecture and marine engineering in antebellum America relied solely on the master-apprentice system until the 1840s. In 1839, Lauchlan McKay, a brother of Donald McKay, published *The Practical Shipbuilder*,

the first American textbook to describe shipbuilding methods from the initial design processes to launching and rigging.<sup>6</sup> In 1849, a much more scientific work was published, *Treatise on Naval Architecture* by John W. Griffiths, whose goal went far beyond answering the needs of the day. Well-read in the works of English designers, Griffiths did not hesitate to criticize their theories and reply with theories of his own. He frequently attacked maritime laws and tonnage regulations, which he felt were stifling the development of better ships, and derided the naval establishment's reluctance to adopt more progressive warship designs and improved machinery.<sup>7</sup> A prolific writer and lecturer, Griffiths was probably the most influential American figure in his field, and the only one in his country to publish regularly and criticize publicly the latest trends in shipbuilding.

The 1850s saw the appearance of a handful of American publications on marine drafting and mold loft work. Perhaps the most interesting is *The Shipwright's Handbook and Draughtsman's Guide* by Leonard H. Boole, which showed for the first time in an American source the progressive construction of a vessel's lines plan to modern standards of completeness and accuracy. Some very interesting commentaries aside, this book, like McKay's, was meant chiefly as a remedial guide for shipwrights with no formal training in their field.<sup>8</sup> Progress in shipbuilding, for Americans at least, was thus one of individual endeavor with rare opportunities for formal instruction. Such a situation was bound to leave the country in a precarious way, as indeed happened following the collapse of American foreign shipping during the years 1857 to 1865. During this period, European shipyards took the initiative with the building of more efficient steamships and the replacement of wooden hulls with iron and steel. For decades, American yards lacked the technology and economic support to reply. Only in the late nineteenth century was their production capacity restored. This event was closely tied to the founding of the earliest American schools of naval architecture.

For every clipper, fast packet, and steamer built in New England, there were probably built dozens of hulls whose form and behavior showed no progress at all in ship design since 1800 or earlier. It can be argued that in some types of marine commerce, improvements could not be justified for sound economic reasons; however, in many instances the shipwrights used archaic design methods and held conservative attitudes



fig. 1. *The Burning of the Packet Ship "Boston,"* 1830, watercolor, 19 $\frac{1}{4}$  x 27 in., after a sketch by E. D. Knight [Cape Ann Historical Association]

that prevented them from making significant changes. The shipwright uneducated in his trade in the 1830s was the result of a hand-me-down tradition wherein ownership and operation of a yard passed from father to son or from master to apprentice, together with a collection of framing molds, basic rules of proportions, and crude tables of timbering dimensions. Much of this knowledge was not even on paper, but passed along verbally; its sources often dated back to the colonial period. This system worked so long as changes were gradual and work methods were consistent. In a period when ships were not highly specialized, a standard hull form for a given tonnage could suit many customers with but a few modifications to suit individual tastes.<sup>9</sup>

During the 1830s empirical design methods were replaced by use of the builder's half-model, which was made by carving one side of a vessel's hull to a convenient scale. The finished hull was disassembled and its parts were traced and measured to obtain a table of dimensions for making the frames. Said to have been introduced by Isaac Webb (there are conflicting claims of origin), the half-model gave the shipwright the opportunity to visualize hull form as none of the old methods could allow.

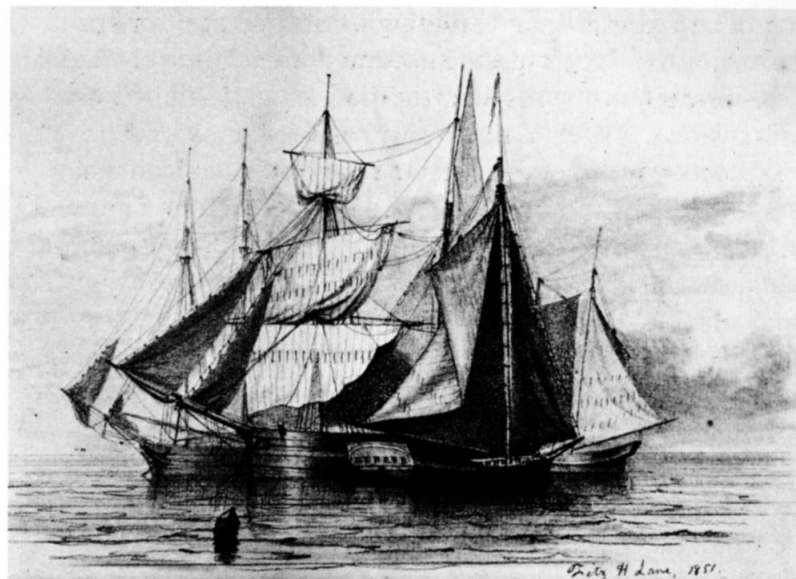


fig. 2. Lane, *Study of Sailing Vessels*, 1851, pencil, 6 $\frac{1}{2}$  x 9 in. The rigs, left to right: fore-and-aft schooner, hermaphrodite brig, sloop, and schooner; the last called a pinky, for its double-ended hull form with a "pinked" stern [Cape Ann Historical Association]

Such a tool enabled better judgment of form, opportunities to modify the design, and, most important, an inexpensive way to create altogether new hull shapes.<sup>10</sup> In the hands of a Webb or McKay, the opportunities were unlimited; in less ambitious hands, new mediocrities were fashioned whose marginal improvements did not seriously help or hinder their sailing qualities.

Between the extremes of progressive and static designers was a large group of shipwrights who responded to the needs for larger, faster, or more specialized craft, and who produced successions of handsome, able ships and boats whose looks and performance set the standards for their classes. Such vessels included fishing and pilot schooners, schooner- and sloop-rigged packets, and many smaller ships, barks, and brigs built to ply the lesser trade routes. Specialized craft filled out the broad spectrum of vessel types that dotted the New England coastline and sailed onto Fitz Hugh Lane's canvases. Lane's sensitivity to the full breadth of this spectrum is perhaps the most remarkable aspect of his choice of nautical subjects, for his attention to the details in a humble lumber drogher is as keen as for that in a clipper ship or steamer. As these vessels are enumerated and de-

scribed in greater detail, we must consider them not just from the qualitative aspects of their accuracy and realistic placement, but also from the quantitative question of relative numbers of different vessel types. It is probably not possible to establish numerical answers of any weight, but an impression might be gained that Lane did not especially favor certain types of vessels for subjects; that the groups of watercraft in his canvases, while artfully arranged, are in fact unselected assortments of ships and boats actually observed.

Lane's drafting technique and sensitive eye for detail and proportion were undisputedly as good as those of the best specialists in ship portraiture of the day, and in some respects, even superior. Freehand drawing apparently came naturally to Lane, for he was able to proceed from a faint outline sketch to intricate detail in pencil with bold strokes and very few mistakes or erasures. Most of his drawing and painting techniques appear to be freehand, with little if any use of drafting tools like straightedges, curves, and compasses. This conclusion is often difficult to accept without minute scrutiny of the works in question, yet it is exactly this skill that creates an illusion of precision and delicacy, which the ruthless uniformity of mechanical drafting techniques would destroy.

If Lane's drafting abilities were innate, they were rigorously disciplined by his work in lithography, a medium that requires freehand drawing skill and does not tolerate carelessness. Not only did it offer Lane discipline, but it undoubtedly honed his awareness of values and his ability to juxtapose light, delicate tones against darker areas to create contrasts of desired power or subtlety. Lane's progress in this respect is evident in a comparison of his earliest known watercolor, *The Burning of the Packet Ship "Boston,"* 1830, with his pencil drawing, *Study of Sailing Vessels* (figs. 1,2). Both views reveal a sure knowledge of the subject matter and ability to render it accurately, but the watercolor has none of the subtleties of tone that the drawing possesses. The latter indeed seems to have a lithographic quality in the delicacy and balance of its light and dark areas. When this drawing is compared to Lane's lithograph, *View of Gloucester Harbor,* 1836 (see p. 10), the artist's debt to his work on stone is obvious.

No erasures are detectable in *Study of Sailing Vessels*; given the difficulty of making clean erasures on so small a drawing, one may conclude that Lane was in the habit of rendering his

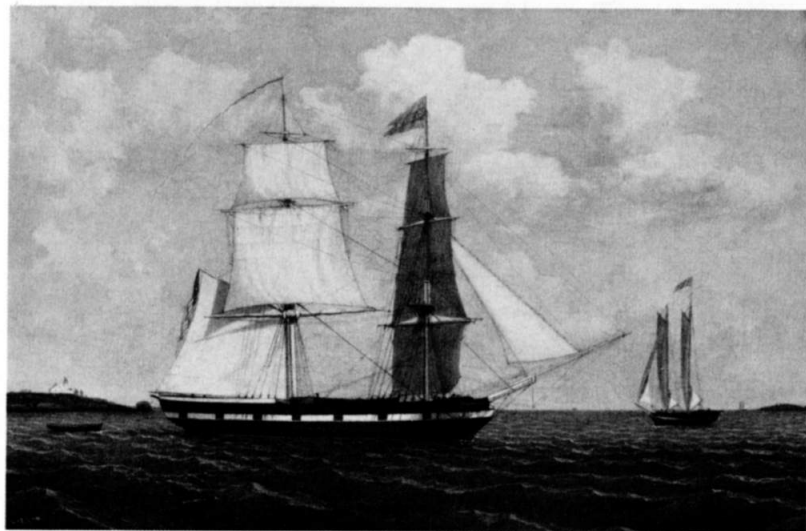


fig. 3. Lane, *Brig "Cadet" in Gloucester Harbor*, late 1840s, oil on canvas, 15 $\frac{1}{4}$  x 23 $\frac{1}{2}$  in. [Cape Ann Historical Association]

subjects correctly the first time, with very few or no mistakes. The assuredness, and probable rapidity, of his drawing technique is dramatically evident in one of his simplest sketches, *Square Topsail* (see p. 7), c. 1850. The subject could be either the whole topmast of a large topsail schooner or a vignette of a large square-rigger's topsail. Topsails in this state, "hanging in the gear," appear in many of Lane's paintings. The yard is lowered and hanging by its lifts and the sail has been clewed up (gathered up by the lower corners to the center of the yard on the aft side); the buntlines have been mostly hauled up, pulling portions of the sail up to the yard at its mid-point; reef tackles and flemish horses (foot ropes) are rigged at the yard arms. Lane must have made this sketch very quickly, yet its correctness of detail and the impression it gives of heavy canvas hanging slack are ample proof of the artist's knowledge, keen observation, and ability to capture what he saw in a few bold strokes.

Lane's ship portraits are relatively few in number, and his preference to paint in oils gives these canvases a very different quality from the watercolors preferred by most European painters. A good example from the 1840s is *Brig "Cadet" in Gloucester Harbor* (fig. 3), which offers a broadside view of a small merchant brig outward bound on a probable voyage to Surinam. She is hove-to with her fore sails aback, waiting to pick up a pilot from what is likely a pilot schooner approaching her. In the background, bits of Gloucester harbor scenery have a decidedly

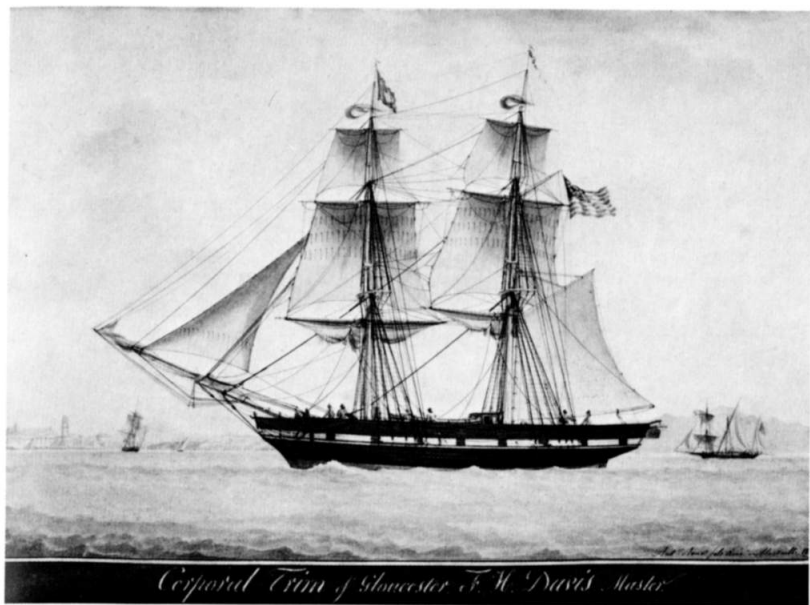


fig. 4. Ange-Joseph Antoine Roux, *Corporal Trim of Gloucester*, F. H. Davis, Master, 1825, ink and watercolor, 17 $\frac{1}{4}$  x 23 $\frac{1}{2}$  in. [Cape Ann Historical Association]

different look from the busy European ports; otherwise, the treatment of subject is very similar to what we find in the European ship portraits.

Two European paintings of a very similar Gloucester-owned merchant brig are available for comparison (figs. 4,5). Both are watercolors representing the brig *Corporal Trim*, one painted by Antoine Roux (the younger) at Marseilles, 1823; the other, by Antonio Lenga at Malaga, Spain, 1816. The watercolor by Roux is very typical of the artist in terms of composition and treatment of detail: the vessel is in profile view under most plain sail with a polacca and a chebec in the background against the Marseilles skyline. The work by Lenga is closer to Lane's treatment with the brig hove-to, awaiting a pilot, with the entrance to Malaga in the background. Antonio Lenga has escaped mention in American works on marine artists, though works by Malaga painters with the last name of Lengo or Lengi—and other first names—have been discovered. His style bears a marked resemblance to that of Roux, although it is somewhat cruder.

Roux and Lenga undoubtedly followed similar sequences in making a ship portrait. First, the vessel and all background detail were drawn in pencil on a sheet of watercolor paper with great care, using drafting tools to rule in the sheer and planking,

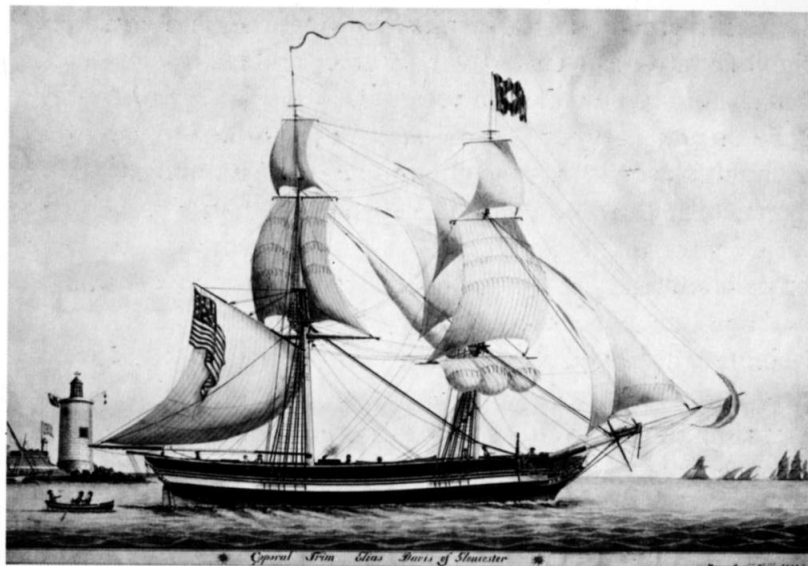


fig. 5. Antonio Lenga, *Corporal Trim*, Elias Davis of Gloucester, 1816, ink and watercolor, 18 $\frac{1}{2}$  x 26 $\frac{1}{2}$  in. [Cape Ann Historical Association]

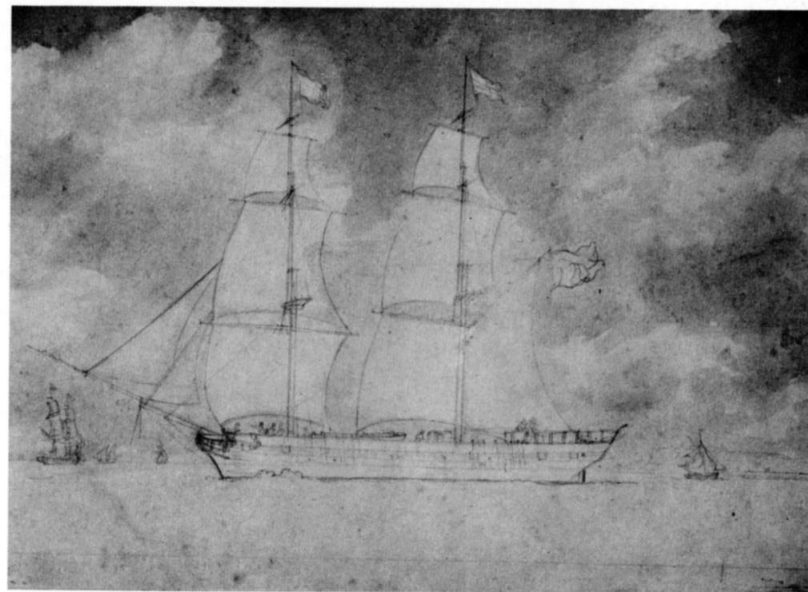


fig. 6. François Joseph Frédéric Roux, *Unidentified Brig*, c. 1847, watercolor and pencil, 16 $\frac{1}{4}$  x 22 $\frac{3}{4}$  in. See note 11 [Peabody Museum of Salem]

the spars, outlines of the sails, and the rigging. The sky and cloud formations were then applied in thin washes, followed by the sea and shoreline in heavier washes. The light ecru tones of the sails were painted in, together with shading, to show sail

contours and some shadow detail; colors and shading of the spars and flags were probably added after that. The overall colors of the hull and visible deck details were the last masses of color applied. Having done all this, the rigging and hull details could be ruled in.<sup>11</sup>

Close examination of Roux's and Lenga's treatment of rigging, sail and spar outlines, and hull planking indicates extensive use of straightedges and drafting curves as ruling guides. Some of the spars and any rigging under great tension (shrouds and backstays) are straight lines; all others are curved, reflecting the filling of the sails, the sag of the rigging from its own weight, and the gentle sweeps of the rails and plank seams as they follow the sheer. The artists may have employed a set of shipwright's ship curves, each curve with a slightly different shape. Alternatives were flexible battens, which were bent to the desired shape and held in place by weights, or a flexible batten was mounted at its ends to a rigid wooden stave and its shape was altered by a series of thumb screws. These drafting aids were in widespread use in European shipyards, hence were readily available to any marine artist who chose not to make his own. The Roux family, being sellers of hydrographic charts and marine drafting instruments, were in a particularly advantageous situation for obtaining these tools.

Having selected a curve or shaped a batten to the desired form, the artist could rule in the rigging and plank seams with a ruling pen and ink or thinned watercolor. Hull seams and decorative carvings were frequently highlighted with white ink, and very small lines and details were added freehand, using a very fine brush or quill pen. All of this work is necessarily exacting and the net result, in terms of time spent in its execution, is actually more the product of mechanical drawing than freehand sketching and painting.

The greatest obstacles to achieving realistic results are heavy-handedness or excessive neatness in the ruled line work. Here, Roux was much more skillful than Lenga by allowing the bowlines to break up the smooth outlines of the square sails, using lighter tones for the rigging, and giving greater variation to the tones, shading, and highlights of the hull planking. The watercolor by Lenga exhibits a very noticeable defect due to excessive dependence on curves: an unnatural S-curve in the sweep of the bright main wale of the hull, and far too much sheer amidships, while the bow seems to sag. Lenga may have in-

tended to create an illusion of the vessel heeling, but it is a failed experiment and detracts from the otherwise convincing appearance of the profile. However contrived some aspects of these paintings were, they have great charm, and some could indeed be very accurate representations. Lane was undoubtedly familiar with many pictures like these and probably studied some in detail in the years before he painted *Cadet*.

Lane probably painted the *Cadet* canvas in the time-honored way with oils: the masses of color for sky, sea, sails, and hull were blocked in, followed by glazes that added detail, illumination, and shadow. His handling of the sail contours and shadows is more sophisticated than the port painters' methods. Subtle shading reveals sail contours compounded by wrinkles in the luffing main sails, while the main yard and main topsail cast clearly outlined shadows on the spanker. Sunlight is here treated as true point-source illumination, rather than as diffused lighting, which casts undefined shadows in the Roux and Lenga watercolors.

*Cadet's* rigging is also more convincing in overall appearance, as each line varies in weight and value, lending a shimmering effect to the whole, not unlike that of many old photographs of sailing ships. Like his contemporaries, Lane allowed lines to hang in subtle catenary curves while shrouds and backstays kept their characteristic look of tautness. Unlike Roux and Lenga, he did not draw them mechanically. To sight down any of the rigging lines at a glancing angle to the canvas (so their lengths are compressed visually), it is evident that Lane painted them freehand, with a very fine brush. Whether Lane used any aids beyond a maul stick for steadying and guiding his brush hand is now impossible to determine. It seems highly probable that his training with the lithographic crayon did much to enable him to execute fine line work with such impressive neatness.

The unconventional aspects of Lane's ship portraits were undoubtedly due to boredom with the routine broadside views and repetitive treatment of sails and rigging demanded by owners and shipmasters. His paintings of ships are marked by a skillful use of perspective and an understanding of its effect on these objects of complex form. This is hardly surprising for an artist of the luminist movement, for the play of light on a hull and the reflections and shadows that reveal its contours are most interesting when viewed from unusual angles. Lane

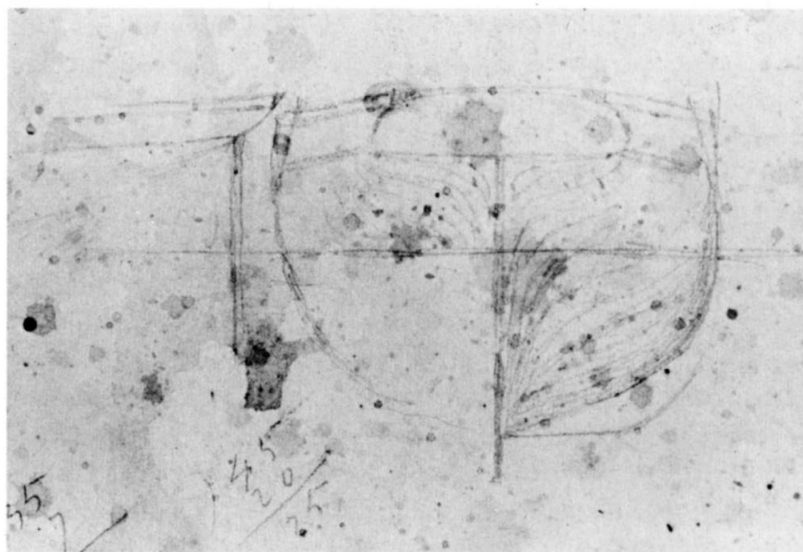


fig. 7. Lane, Detail from *Gloucester from the Outer Harbor*, 1852, pencil and watercolor,  $9\frac{1}{2} \times 31\frac{1}{2}$  in. [Cape Ann Historical Association]

showed no hesitation to place ships in very difficult poses, and in most cases he was able to convey the geometry of the hulls and the perspective of the rigging very convincingly. His knowledge of hull form is evident in many of his pencil drawings, and on one he actually sketched a hull in end view with a number of sections which, when compared with sections in a naval architect's lines plan, suggests that he made a serious study of hull form (fig. 7). This sketch, in fact, resembles the thumbnail sketches many naval architects make during the planning stage of a new design, or simply for amusement. Another drawing shows a small sloop with vertical lines sketched lightly on the hull, revealing its contours. This treatment would leave little to guesswork when making a painting of the sloop from it. In many of Lane's drawings, hulls are sketched without any contour lines, but effective shading technique makes their forms readily discernible.

Lane's mannerisms of delineation and treatment of detail strongly suggest a familiarity with both American and European literature on nautical science and the practices of seamanship and rigging. His insistence on originality of composition leaves scant evidence that he copied directly from these works, and then only when dealing with completely unfamiliar subjects. His drawings of two Indonesian sailing craft, a bugis from Borneo and the Celebes, and a pirate proa from the Sulu Archipel-

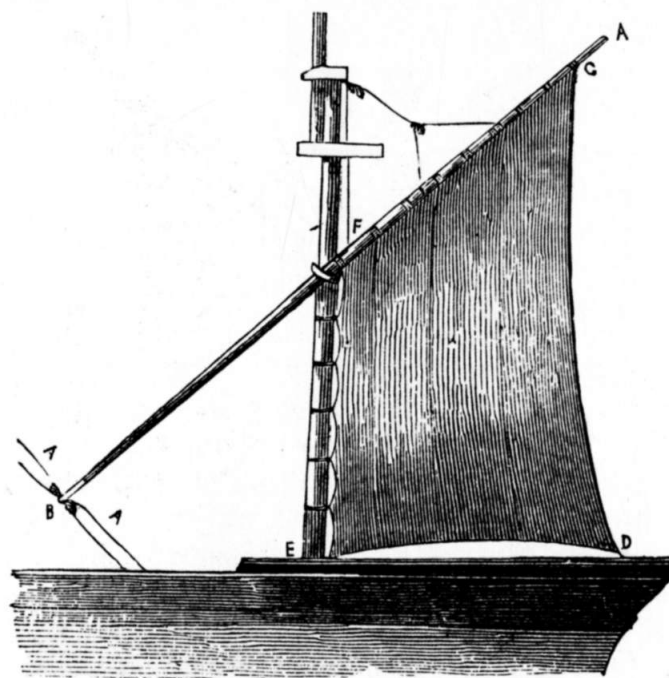


fig. 8. *l'Artimon*, 1860, engraving,  $2\frac{1}{4} \times 2\frac{1}{4}$  in. [Babson, *History of the Town of Gloucester, Cape Ann*, 1860, after Jal, *Glossaire Nautique*, 1848]

ago, indicate that he had access to some of the literature on the exploration of the western Pacific containing views of native watercraft. Lane was certainly exposed to one of the great marine dictionaries of the nineteenth century when he was called upon to illustrate the precursor to the gaff rig of schooners for Babson's history of Gloucester.<sup>12</sup> His engraving follows closely that in Jal's *Glossaire Nautique* (figs. 8,9), with the author's keyed caption below it in the original French.<sup>13</sup> These fragments hint tantalizingly at a wealth of information Lane had either ferreted out on his own, or which had been placed at his disposal for commissioned work.

Given the near-photographic treatment of many of his ships, it is logical to wonder if Lane resorted to photographs as drawing guides or as sources of information. Among his sketches at the Cape Ann Historical Association is a photograph of the coastal passenger steamer *Harvest Moon* at wharveside in Portland (fig. 10). A grid has been carefully drawn in pencil over the image to enable accurate enlargement when drawing the steamer to the desired size on the canvas. While this method of transferring from photographs became extremely common later

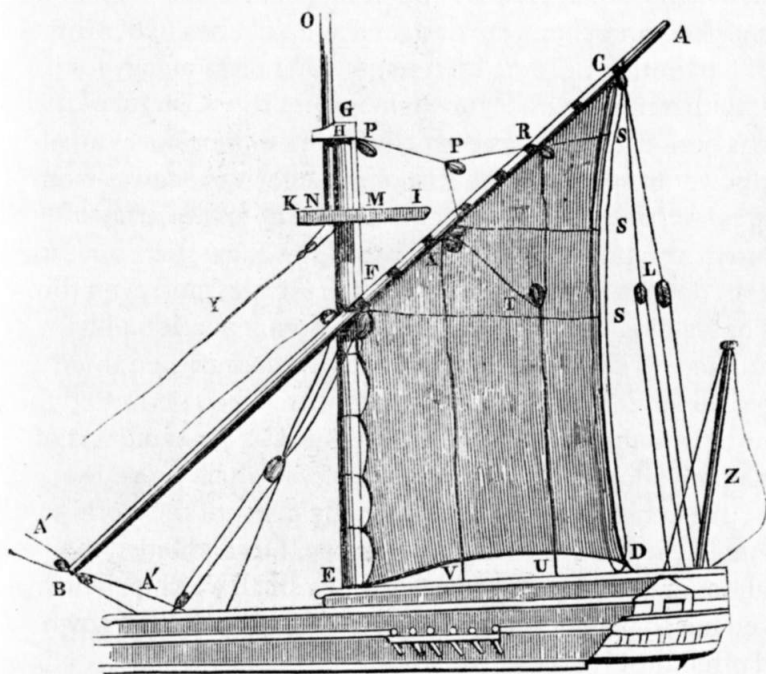


fig. 9. *l'Artimon*, 1848, engraving,  $3\frac{3}{4} \times 3\frac{3}{8}$  in. [Jal, *Glossaire Nautique*, 1848, Peabody Museum of Salem]

in the century, 1863 is a very early date to find the technique used with this subject matter. Very few, if any, well-regarded ship portraits or marine paintings from this period can be traced to photographs, and of Lane's contemporaries who did use them, William Bradford is perhaps best known; however, his use of photography came slightly later and with very different uses in mind. None of the daguerrotypes of clipper ships by Southworth and Hawes found their ways into contemporaneous paintings of merit, and no use of photographs by J. E. Buttersworth has been established for this period. The *Harvest Moon* photograph may thus be suspected to be a very early, possibly pioneering, example of this practice. Cost may be one reason, as the decorative value of the print is destroyed, so Lane must have had the incentive of a commission for marking it up this way. But once the novelty had passed, how long would Lane have used photographs in this mechanical way before he was again possessed by the urge to resume his more imaginative freehand drawing of ships? If an artist of his ability would balk at the chore of grinding out conventional ship portraits, it is difficult to believe that he would have been any happier to allow

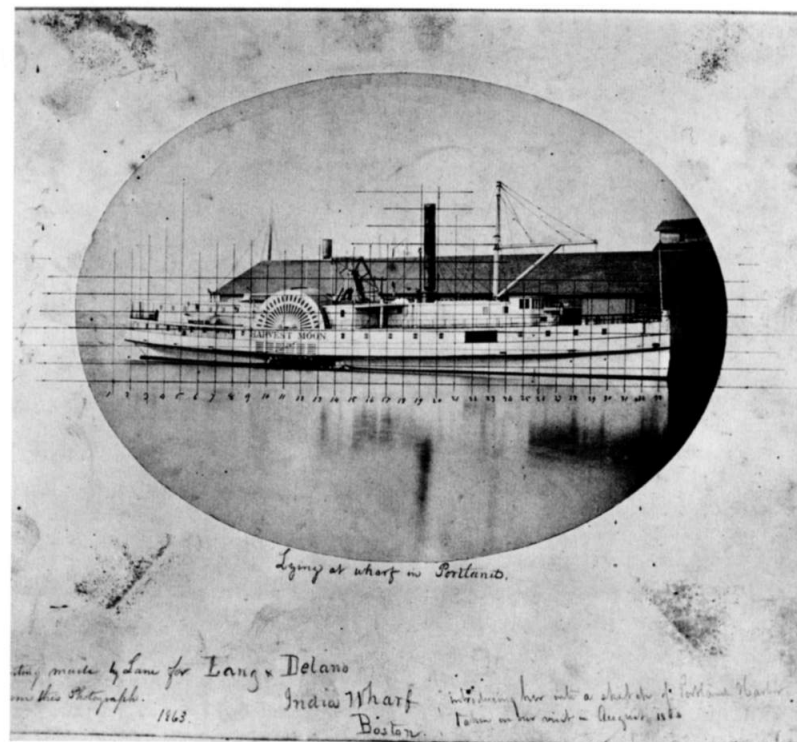


fig. 10. Steamer "Harvest Moon," Lying at Wharf in Portland, 1863, photograph and pencil,  $9\frac{3}{4} \times 10\frac{1}{2}$  in. [Cape Ann Historical Association]

photographs to supplant one of his most creative activities: drawing a ship as he personally envisioned it.

Despite his physical disabilities, Lane was probably as active as any other marine artist of his day, scouting the coastline and combing the waterfront for likely motifs for a picture, or for subjects that might become elements of one. His years at Boston afforded an opportunity to view the latest progress in ship design and his association with William S. Pendleton's lithography firm undoubtedly made his work sufficiently widespread to catch the attention of shipbuilders, naval architects, and vessel owners or their agents. This must have been the case when he made a lithograph of the steam propeller *Massachusetts* for her owner, Robert Bennett Forbes, and it was surely Forbes who suggested that Lane make a lithograph of the demi-bark *Antelope* for publication in *The U.S. Nautical Magazine* some ten years later (fig. 11). This journal, the brainchild of John W. Griffiths, was the first periodical on shipbuilding and naval architecture to appear in North America and the first publication apart from Griffiths' earlier book to offer serious criticism of the cur-



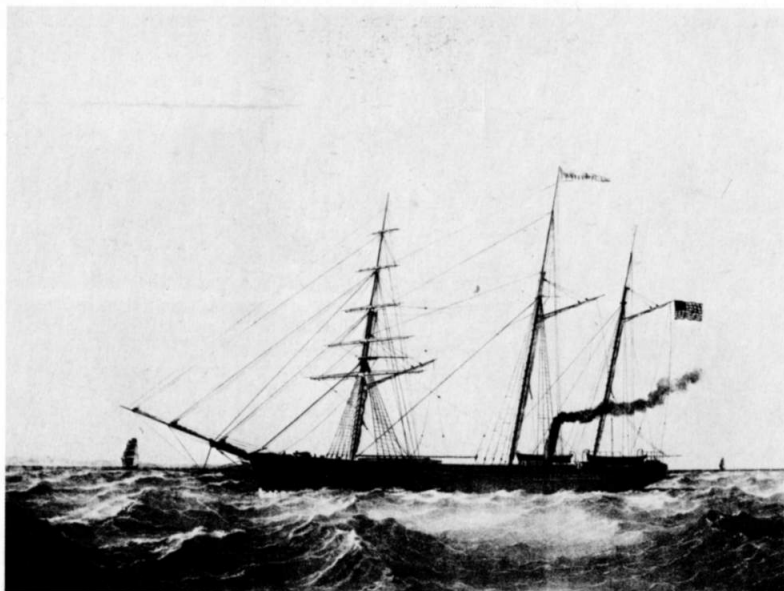


fig. 11. Lane, *Steam Demi Bark Antelope*, 615 tons, 1855, lithograph, 11 $\frac{3}{8}$  x 14 $\frac{1}{2}$  in. [*U.S. Nautical Magazine and Naval Journal*, October 1855]

rent state of shipbuilding. It served admirably as a pulpit for Griffiths' exhortations to improve American ships, and as a showcase for the designs of promising young shipwrights. It also published articles by experienced shipmasters whose ordeals at sea had led them to try their own innovations.

Foremost among inventive sea dogs was Robert Bennett Forbes, whose credentials as a sailor and shipmaster, and family connections in the China trade, guaranteed an attentive audience for his frequent writings and announcements of better ideas for ship design. Since 1830, he had had sailing ships built under his supervision or to his specifications, and in 1845 had begun to build steamers and a variety of vessel types with iron hulls.<sup>14</sup> Although constantly inventing and improving ships' gear, he remained mindful of the practical limits to any improvements, and so built a number of ships with novel features, but whose basic soundness of design and construction would assure outstanding performance. The "demi-bark" *Antelope* was such a design, being small but well furnished for her highly specialized role: trade between American merchants in China and the newly opened ports of Japan. Under Forbes' watchful eye, she was designed by Samuel Hall and Samuel H. Pook and built

at Hall's shipyard at East Boston in 1855. Her steam plant and uncoupling propeller were designed as auxiliaries to her three-mast barkentine rig, a rig then so new that terminology for it had not been settled. Steam engines were still wasteful of fuel in this period and Forbes correctly planned their use as auxiliary power to speed the vessel along in light airs or away from pirates. *Antelope* was equipped with an impressive array of steam-driven pumps that could pump the bilges, take out sand ballast, flood the powder magazines, fight fires, and even throw jets of scalding water on any pirates who might attempt to board her! To defend herself further, *Antelope* carried three large caliber deck guns on swivel mounts, which permitted the guns to be trained in any direction. This was the same sort of armament adopted by large naval cruisers which proved so effective in high-seas actions fought by many of the world's navies in the coming decades. *Antelope* thus combined the qualities of a fast auxiliary packet and a small warship, which allowed her to ply her trade unmolested in a then little-known and often hostile part of the world.<sup>15</sup>

*Antelope* was not Lane's first depiction of Forbes' innovative steamers, as earlier mentioned. In 1845, he made two lithographs of the auxiliary steam bark *Massachusetts* whose novelties included Forbes' double topsail rig and a swiveling propeller hoisting arrangement.<sup>16</sup> This ship was also designed and built by Samuel Hall. By 1854, when *The U.S. Nautical Magazine* began publication, the association among Forbes, Griffiths, and prominent Boston shipwrights had perhaps become the greatest influence on the progress of ship design in America. For an artist like Lane, the publication of his lithograph in this journal was indeed an important endorsement. In a newspaper article eulogizing Lane, appreciation of his talents by shipowners was evident, but in his association with Forbes and perhaps indirectly with Griffiths, we have evidence that his work was acclaimed by the severest critics one could possibly find in this field.

The *Antelope* lithograph illustrates a problem that faced all ambitious publishers in mid-nineteenth-century America: the difficulty of obtaining good pictorial material on short notice, particularly for periodicals. Griffiths commissioned a few other lithographs to illustrate his magazine, but the small format led to two unsatisfactory alternatives: printing a small image on heavy stock with one fold, or printing a larger image on thin vel-

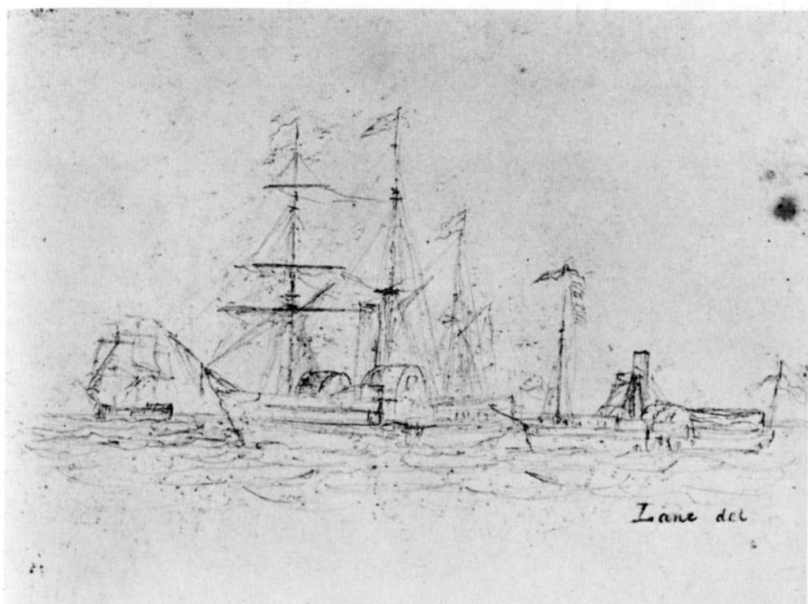


fig. 12. Lane, *Cunard Steamship Entering Boston Harbor*, c. 1840, pencil  $4\frac{1}{8} \times 5\frac{5}{8}$  in. [Cape Ann Historical Association]

lum or onionskin with two or more folds. Few examples of either have survived in good condition, and all have suffered from creasing and acid migration from the surrounding text paper. For a journal of naval architecture, the reproduction of ships' plans was essential for many articles, and the available means were highly unsatisfactory. Copperplate engraving, then in widespread use in Europe, was poorly utilized in American publishing due to a severe shortage of skilled engravers. For the precise line work needed in a ship's plan, the medium was ideal and in fact was used to illustrate the great European tracts on naval architecture of the eighteenth and nineteenth centuries. Lacking this resource, Griffiths relied mainly on much cruder wood block prints for illustrations. The deficiencies of this medium are readily apparent when the lines plan of *Antelope* is compared with Lane's lithograph of her.

By 1840, the steamship was no longer a novelty to Bostonians who were by then accustomed to the daily sight of coastal passengers, naval steam frigates, and a variety of towboats, ferries, and other harbor auxiliaries. The arrival of the Cunard steamer *Britannia* in that year, followed by her three sister ships, was more important by far as a commercial link with Great Britain. Her operation made Boston the most important American port

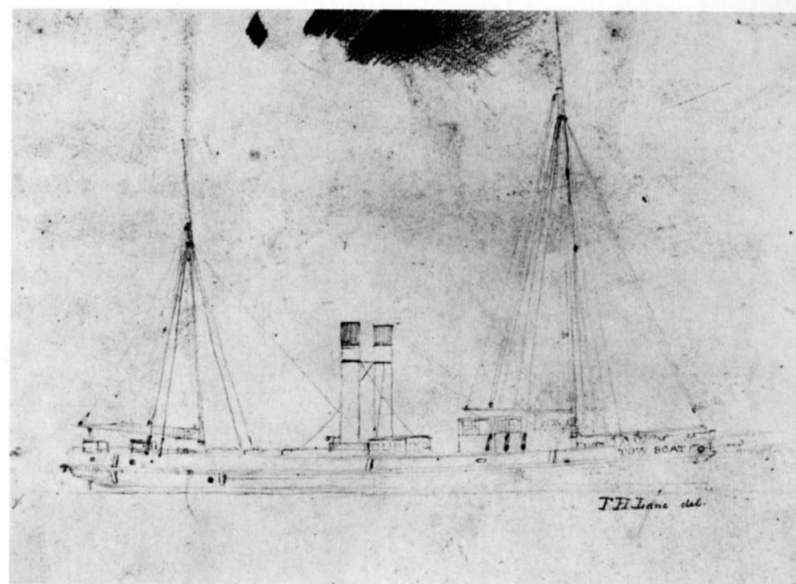


fig. 13. Lane, *Steam Propeller "Tow Boat,"* 1850s, pencil,  $8\frac{1}{4} \times 11$  in. [Cape Ann Historical Association]

for receiving mail and expedited cargoes from Europe.<sup>17</sup> In view of such intense public interest, it is not surprising that Lane's painting of *Britannia* in stormy seas is one of his most flamboyant works; indeed, what is surprising is the absence of a Lane lithograph of this ship, an obvious candidate for such popular treatment. One of Lane's surviving drawings depicts *Britannia* (or a sister vessel) being escorted by a towboat, which suggests other possible paintings by Lane that have since disappeared (fig. 12).

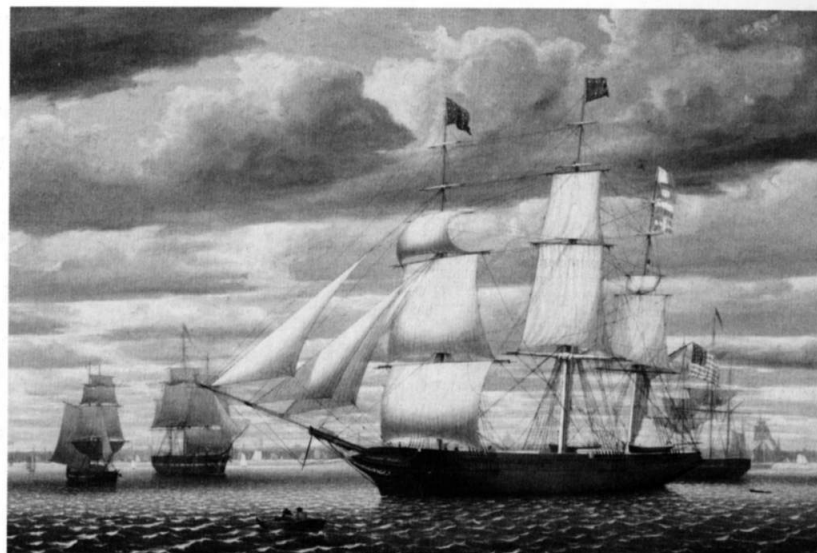
Lane's attention to commoner steamship types was no less meticulous. His harbor views of Boston and New York abound with towboats, ferries, and coastal steamers, all of them as carefully rendered as the sailing vessels. Among his drawings is a view of a large propeller towboat of about 150 feet in length, probably belonging to New York or Boston. This vessel was powered by an early compound steam engine, or perhaps an oscillating engine, which is why no engine parts project above deck or cabin level as in the case of "walking beam" engines. Steam was generated by two boilers mounted side-by-side, hence the placement of the funnels athwartships. The prominent masts, which are rigged to set riding sails to steady her motion in heavy seas, indicate that she was designed for off-

shore towing and for deep-water salvage. Even in so early a state of development, the large coastwise towboats had acquired their essential characteristics; subsequent decades would see improvements to hull form and machinery, and more extensive superstructure, but the basic arrangement had been established by the 1850s (fig. 13).

In contrast to Lane's large towboat, the smaller harbor tugs were still in transition from paddlewheelers with cross head or walking beam engines, to screw-driven hulls with less cluttered and awkward topside structures. *New York Harbor*, 1860 (cat. 38) offers a glimpse of this change with a brig (middleground) being "towed" by a paddlewheeler while the large merchant ship (foreground) is in the charge of a "propeller" whose cabin and pilot house more closely resemble those of later tugs. Although it is easy to become distracted by the bustle and apparent confusion in Lane's later canvases of Boston and New York harbors, the steamers warrant close inspection. They show clearly the emergence of the engine-powered vessel as a vital part of water transport, performing tasks in local situations for which it was far better adapted than sailing craft.

If, in Lane's time, steam vessels were promising signs of the future in marine transportation, the clipper ship was then the ultimate symbol of oceanic travel and the object of intense scrutiny by ship designers and overstatement by the press. Lane could not escape this contagion any more than his fellow marine artists, hence the survival of a number of his canvases with clipper ships. None is a portrait in the sense of Buttersworth's or Bradford's, and only one is of a notorious vessel. All are set against port scenes or pelagic backgrounds, which are as carefully composed and painted as the ship itself. In some examples, the setting is visually more interesting than the vessel, whose presence acts as a dark counterpoint to a brilliant pattern of water reflections or to a delicately balanced grouping of smaller vessels. In *Southern Cross Leaving Boston Harbor* (cat. 31), the meticulous detail of the subject's rigging and sails is barely able to hold the viewer's attention against a busy skyline, strong cloud formations, and a delicate tracery of waves. This is not to say that the clipper ship *Southern Cross* has been badly portrayed, only that the artist probably felt the need to include other strong elements in the canvas to sustain his own interest in the subject.

*Southern Cross* was regarded as a "medium clipper," a nebu-



cat. 31. *Clipper Ship "Southern Cross" Leaving Boston Harbor*, 1851, oil on canvas, 25 $\frac{1}{4}$  x 38 in. [Peabody Museum of Salem]

lous term for fast sailing ships that had the looks, but less extreme hull forms and rigs, of the "extreme clippers," as the quintessential examples were called. She was built (and presumably designed) by E. and H. O. Briggs at East Boston for Boston owners, and launched in 1851. Plagued by dismastings, fire at sea, and generally adverse weather conditions, most of her passages were disappointing and she was subject to several costly repairs. Her career ended in 1863 when she was captured and burned by the Confederate cruiser *Florida*. When new, *Southern Cross* was described at length in an article in *The Boston Atlas*, and this matches Lane's painting very closely, particularly the figurehead and trailboard carvings, with which Lane seems to have taken special care.<sup>18</sup> The picture also shows the ship flying Elford's marine telegraphic flags at the mizzen truck, an early American signal system in widespread use before 1860. *Southern Cross*' signal reads, from top to bottom, "3-4-2-5," which corresponds with the vessel's actual listing in the code book for Boston vessels. The pennant colors, red and white, differ from the blue and white originally prescribed by Elford in the 1820s, although the system was extensively modified for regional use in subsequent years. Whether Lane copied the pennant colors from life or guessed their colors from the signal book, which does not specify colors, is unclear.<sup>19</sup>

In canvases where a vessel's name is shown clearly, it is very often safe to assume that the buyer of the picture also owned or commanded the ship. Despite statements that he painted numerous ship portraits for their owners, the vast majority of Lane's known paintings portrayed unnamed vessels, which are likely to keep their anonymity despite our best research efforts. This difficulty notwithstanding, a few unidentified vessels offer such strong clues to their identity that we can be very certain which ship was on the artist's mind, even if an exact likeness was not intended. A case in point is a canvas known for many years as *Gloucester Harbor at Sunrise*, 1850s (cat. 12), a harbor scene with a group of ships clustered at the right middleground and a much more prominent clipper ship at the left. The background scenery belies the title, for it cannot be reconciled to that harbor's geography at any conceivable vantage point, nor can the sun rise over the mouth of the outer harbor, which faces south southeast. For similar reasons, Boston Harbor can also be ruled out as the setting. Lane was too familiar with both ports to allow anything less than an instantly recognizable rendering of their skylines. Since the artist was spending many of his summers in Maine in the 1850s, a seaport north of Gloucester seems the most likely source for this setting.

The ship itself has the appearance of an extreme clipper, but it has features that immediately set it apart from the clippers of Donald McKay. Most prominent is the beakhead with headboard and headrails, cheek knees and trailboards, and a very small figurehead in the likeness of a woman. McKay's clippers by contrast were largely devoid of elaborate headrails and moldings, leaving the carved scrollwork and figurehead to stand by themselves. Lane's clipper has a form of beakhead decoration that was very popular for packet ships of the previous decade, but not popular at all among the sleekest flyers of the early 1850s; moreover, the adaptation of these carvings to a much sharper bow and raked cutwater would have widely varying results on the diverse handful of extreme clippers that had them. The one vessel that so closely resembles Lane's clipper ship is *Nightingale*, built at Portsmouth, New Hampshire by Samuel Hanscom in 1851. Launched in June, she remained in Portsmouth through July, when she was towed to Boston to await the untangling of her builder's financial embarrassment and her sale to a prominent Boston shipping firm.<sup>20</sup> Her stay in Portsmouth could have coincided with Lane's travels to Maine

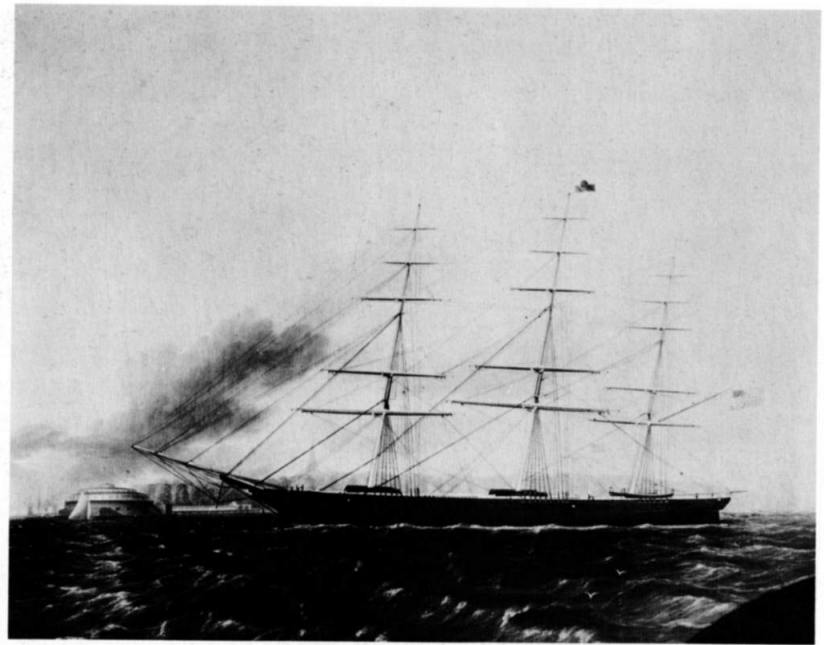
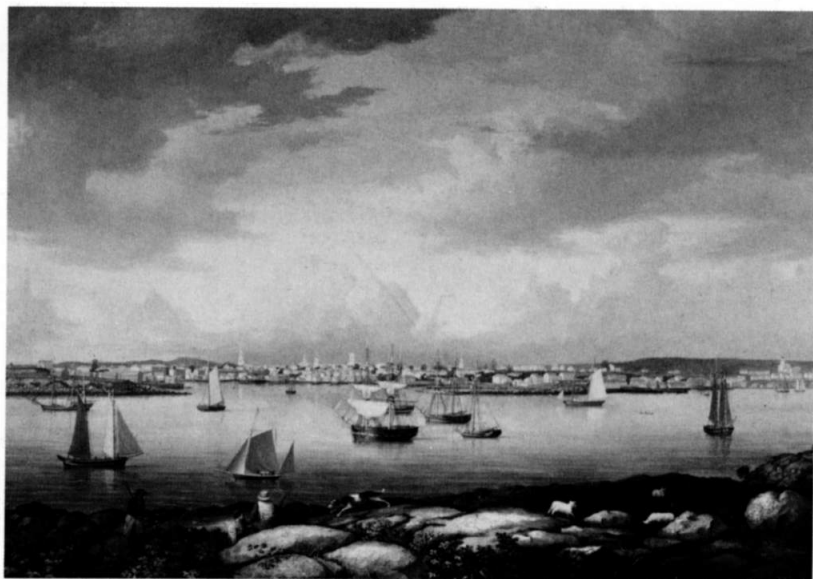


fig. 14. Unidentified artist (possibly J. E. Buttersworth or a Chinese copyist), *Clipper Ship "Nightingale" in New York Harbor*, c. 1851, oil on canvas [Peabody Museum of Salem]

in that year, and because this city was a convenient stop for artists and "rusticators" making their migrations to cooler climes, it is difficult to imagine that Lane would have shunned the opportunity to view a ship that had gained so much notoriety and admiration (fig. 14).

If *Nightingale* is indeed the main subject of this canvas, the setting conforms but vaguely to the geography of the mouth of the Piscataqua River, to the east of Portsmouth Harbor proper. If we can imagine an anchorage off Fort Point, Newcastle, then the low land mass in the left background would be Gerrish Island, with Wood Island to the right of center. Whaleback Lighthouse, an important sea mark just south of Wood Island, would be obscured by the vessels in the right middleground. Given the hazy depiction of important landmarks, it is difficult to state flatly that Lane had a specific Portsmouth setting in mind. His itinerary probably denied him adequate time to master the geography of the area, thus compelling a vague treatment of the setting. For now we can say that this painting possibly shows the extreme clipper ship *Nightingale* bending sail at the mouth of the Piscataqua River in the early summer of 1851.



cat. 2. *Gloucester Harbor from Rocky Neck*, 1844, oil on canvas, 29½ x 41½ in. [Cape Ann Historical Association]

Lane's paintings of yachts and important regattas are less numerous than his portrayal of pleasure craft. Even his harbor scenes, with their purposeful portrayal of commerce and fishing, show an occasional "party boat" taking summer guests out for a day of fishing and sightseeing. Perhaps when Lane encountered occasional pleasure craft in an overwhelmingly commercial milieu, he added them, as a matter of record, to the scene; similarly, when working craft stumbled upon the scene of a yacht race, or just looked on as part of the spectator fleet, he treated them as much as a part of the scene as the racing vessels. One of Lane's earliest and most charming depictions of pleasure craft is found in *Gloucester from Rocky Neck*, 1844 (cat. 2). The yawl-rigged boat closest to the foreground (fig. 15), with its party of sightseers on board, was likely built for this activity, the cockpit arrangement being best suited for a comfortable and relaxed day's excursion. The leg-of-mutton mizzen sail steadied her motion and allowed the helmsman some relief from steering to give more attention to his guests.

In the 1840s and 1850s, small pleasure craft for personal use probably were converted workboats or built along workboat lines. Lane's sketch of Joseph L. Stevens, Jr.'s father's boat (fig. 16) shows a hull typical of boats used in the shore fisheries; likewise, his sketch of *General Gates*, the boat he used for

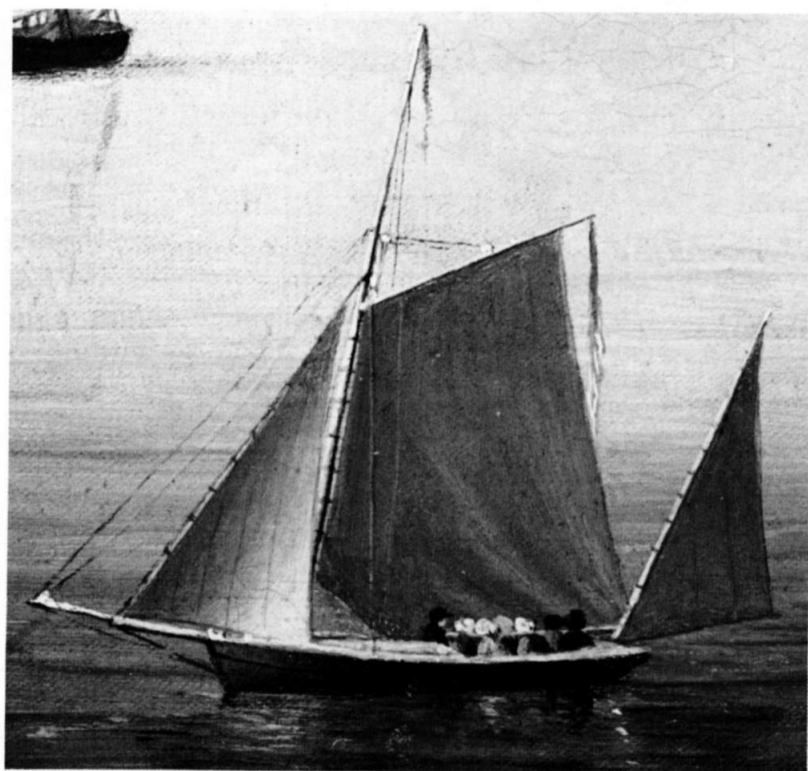


fig. 15. Detail from left foreground of cat. 2.

his Maine cruises, shows another workboat of traditional appearance.

Yachting, in the sense of racing and cruising by gentlemen with professional crews, was beginning to flourish in America in the 1840s and 1850s, and Lane was to portray some of the most important vessels and events. His earliest depiction of a yacht may be his painting of the schooner *Northern Light*, 1845, made from a drawing by Robert Salmon. *Northern Light* was designed by Louis Winde in 1839, probably along the lines of the Boston pilot schooners whose performance was the standard by which other vessels were judged. Winde, a young Danish immigrant with formal training in naval architecture, is credited as being the first professional (by modern standards) ship designer in America, and his yacht designs were seminal in the development of the type in New England.<sup>21</sup> Lane's painting therefore commemorates an important development in the progress of American shipbuilding; moreover, he infused Salmon's composition with elements of his own, setting this greyhound among

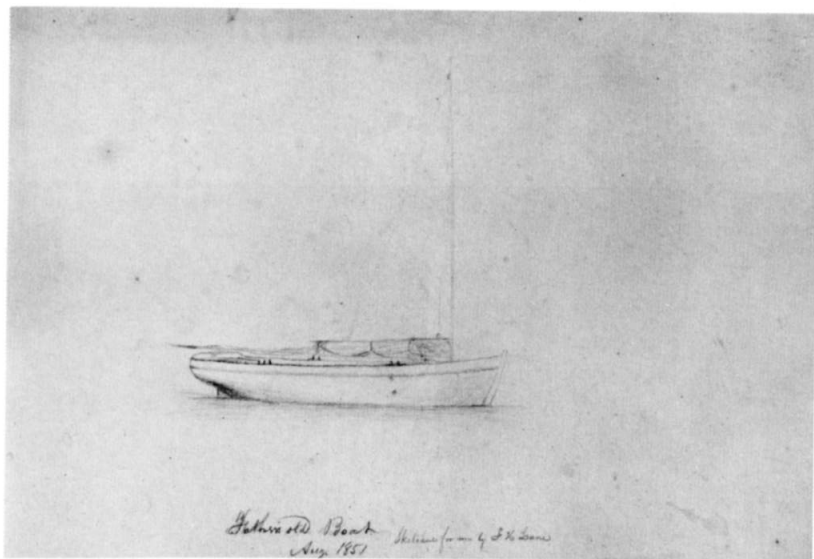


fig. 16. Lane, *Father's [Steven's] Old Boat*, 1851, pencil, 10 $\frac{1}{4}$  x 15 $\frac{3}{4}$  in. Belonged to the father of Lane's close friend, Joseph L. Stevens, Jr. [Cape Ann Historical Association]

small fishing vessels so characteristic of his Gloucester and Maine paintings (cat. 26, see p. 49).

The sensational accomplishments of the schooner yacht *America* inspired at least two paintings, one derived from English sources at the time of her race; the source of the other is open to speculation. Following her launch early in May 1851, *America* remained in New York for less than two months before sailing to Europe. If Lane had been in New York at this time, it would have been his only opportunity to see the finished schooner firsthand. Were this the case, then his painting with three views of the vessel could have been the result. There are notable differences in rigging details between this canvas and other sources, suggesting that he may have seen the yacht from some distance and was forced to guess at some rigging leads. It is also possible that he never saw *America* and simply used *Northern Light's* rigging as a model, as the leads are exactly the same in both paintings. What makes *Three Views* so interesting is Lane's careful treatment of her sails, which show the artist's understanding of the tightly woven canvas and careful sewing that gave them such an advantage over the loosely woven flax sails used by English yachtsmen. L. Francis Herreshoff, a renowned yacht designer and one-time owner of this painting, was emphatic on the accuracy of Lane's depiction of the vessel:

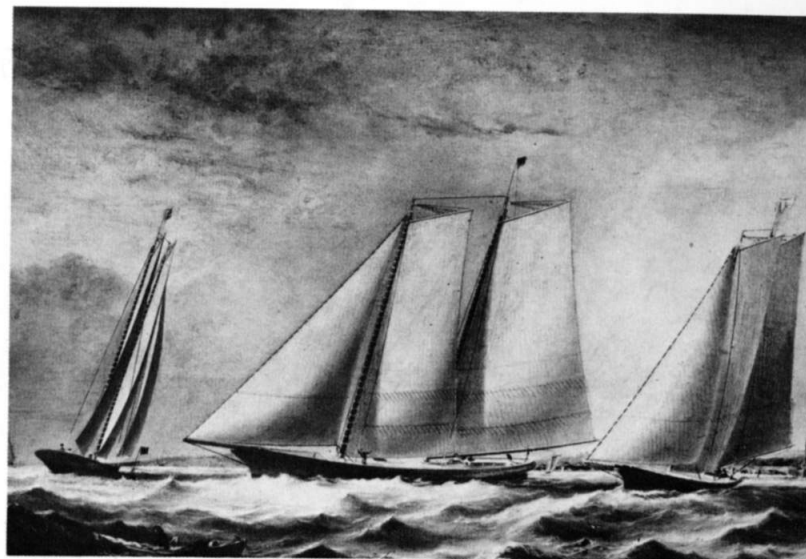


fig. 17. Lane, *Three Views of Yacht "America,"* 1851, oil on canvas [Peabody Museum, Salem]

Three views of the *America* as she appeared in her races in England are shown . . . This painting by the accurate artist, Fitzhugh (sic) Lane, is very interesting. In the view from astern you can see that her sails are almost perfect airfoils, just twisted aloft correctly for the higher wind velocities there. . . .<sup>22</sup>

While Herreshoff thought this to be a view of *America* racing in English waters, a dory in the left foreground almost certainly identifies the scene as American, and thus a record of *America's* trial racing activity before her departure for Europe. The view of the dory is in itself important, as its hull and gear are close to that used by banks dories in the last half of the nineteenth century, though dories at this time were confined to the shore fisheries (fig. 17).

The New York Yacht Club regatta of 1856 brought Lane to New Bedford to paint and sketch some of his liveliest yachting scenes. The sloop- and schooner yachts, then as now, had a look of pristine sameness that no doubt encouraged him to punctuate this procession of black hulls and white sails with steamers and a ragtag assortment of small spectator boats. One of his surviving sketches, *Sloop Yacht with Detail of Topmast Rigging* (fig. 18), is likely to have been made at this time. It and the paintings show that the sloops and schooners favored by New York yachtsmen in the 1850s were only beginning to acquire characteristics of their own, and still showed their origins based on



cat. 36. *New York Yacht Club Regatta*, 1857, oil on canvas, 30 x 50 in.  
[Dr. and Mrs. Thomas Lane Stokes]

New York work boat types, which were much shallower and wider than their counterparts in Boston. These vessels were usually fitted with centerboards, and with their large sail plans they could be tricky to handle in a strong breeze. With the advent of the deep, narrow cutter from England, a long-winded controversy over these rival hull forms (and everything in between) raged for the rest of the century.<sup>23</sup>

The design of fishing schooners remained conservative until

the late 1840s, when the practice of icing fish for transport to market in a fresh state was introduced. Prior to the creation of this fresh-fish market, the catches were salted on deck by the crew and brought to port pickled in casks. Less commonly, a live catch was brought home in a live well (a specially partitioned section of the hold that allowed sea water to flow freely through it) of a schooner called a smack. Increased demand for fresh fish was beyond the capacities of the well smacks, so ice was used to preserve the catch in specially fitted partitions, or pens, in the schooner's hold. A faster schooner was needed to get the fish to market before the ice could melt, and two types were developed

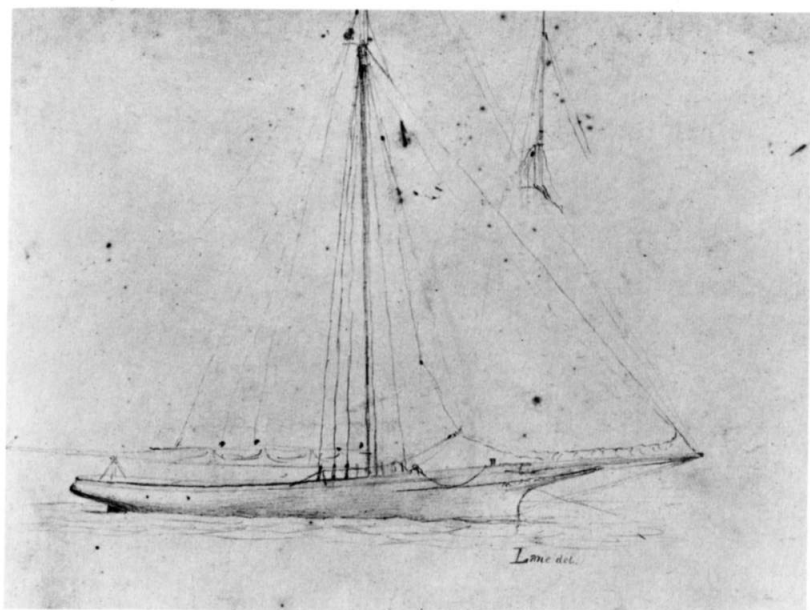


fig. 18. Lane, *Sloop with Detail of Topmast Rigging*, c. 1857, pencil, 10 $\frac{3}{4}$  x 14 $\frac{1}{4}$  in. [Cape Ann Historical Association]

in response: the “sharpshooter” and the “clipper” schooners. Both looked very similar when afloat, but the clipper’s hull form was somewhat more capacious relative to its depth, and this type eventually replaced the sharpshooter. The need to get iced fish to market as quickly as possible soon led to serious competition, as schooners vied with each other to reach port first to secure the highest bids. The fish market then as now was an auction, and fish prices floated on the fluctuations of supply and demand. So important had this market become that vessels built for this service had to be fast sailers, even at the expense of the crews’ safety.<sup>24</sup>

For all their speed and dashing looks, few sharpshooter and clipper schooners have been found in Lane’s paintings, and none is more than part of a busy port scene. The handsomest example lies in the right middleground of *Gloucester Harbor*, 1852 (cat. 7, see p. 26) just off Fort Point, under jumbo (fore stay-sail) and main sail. A second appears in the same painting in the far right background, lowering her fore sail. While both schooners are small elements of a large canvas, they are painted with great care, revealing much detail, particularly the former vessel. Here we find precise rigging leads, accurate hull form, sails hanging realistically in the still air, and the yawl boat hanging from the wooden stern davits in the way we see in later photo-

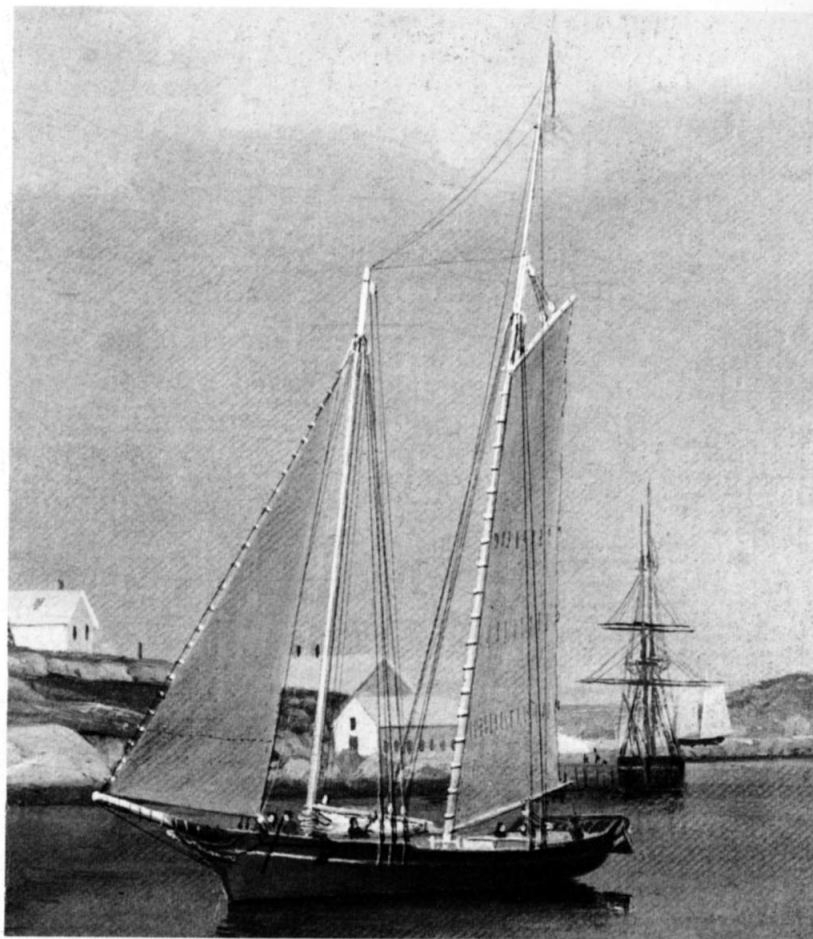


fig. 19. Detail of sharpshooter fishing schooner in cat. 7.

graphs. Very noticeable too are the strongly raked masts, a feature confirmed by sail plans of vessels of this type and period (fig. 19).

A smaller example of a sharpshooter appears in the right middleground of *Ships in Ice off Ten Pound Island*, 1850s (cat. 3, see p. 23). The high quarter deck and its bulwarks suggest that this is an earlier example of the type. Unlike the previous examples, her beakhead is only a gammon knee, lacking trailboards and head rails, but probably fitted with a small billethead or eagle’s head. Unlike many clipper ships whose unadorned bows proclaimed their pedigree, a plain stem on a fishing schooner only bespoke its owner’s limited means. The first class schooners of the Gloucester fishing schooners became renowned for their fine workmanship, handsome finish, and artistic carvings. Lane’s paintings indicate that by the early 1850s that custom was already well established.



GLOUCESTER HARBOR IN THE LAST TWO DECADES OF LANE'S life was a classic colonial seaport in the process of shedding its traditional economy and waterfront infrastructure for a more specialized role as the leading fishing port of the American industrial revolution. The old port of Gloucester combined its fishing activities with coastal trade, the Surinam trade, some West Indies trading, and a host of other mercantile endeavors on a small if far-flung scale. Until the 1840s, Gloucester's shipping activities, like Boston's, reflected the need for self-sufficiency in the absence of a strong regional economy. However, as canals and railroads improved inland transportation, bringing growth and prosperity to the largest seaports, the smaller ports saw their trade dwindle and their merchant fleets disappear against rising competition. Specialization was the key to survival, and through the combined fortunes of geography and an established fishing and fish processing industry, Gloucester made this transition quickly and profitably.<sup>25</sup> In the 1840s, the vessels in Lane's views of this port were a mixture of trading and fishing craft, mostly Gloucester-owned and managed. By 1860, his canvases showed the harbor occupied by many more and larger fishing vessels with little change in the number of other types of ships. To compare Lane's views of the harbor from his lithographs of 1836, 1846, and 1855, his large canvases of 1844 and 1852, and his smaller harbor views of the 1850s and 1860s, is to witness the gradual change in vessel types, their hull forms and rigs, and their relative numbers as harbor commerce changed its emphasis.

The larger merchant vessels were square rigged, either three-masters (ships and barks) or two-masters (brigs and brigantines). Lane painted splendid examples of all types. In *Three Master on the Gloucester Railway* (cat. 39), a full-rigged ship dominates the skyline while in smaller harbor views the type often appears in the background. Between 1789 and 1857, at least twenty-eight ships were registered at Gloucester with an average tonnage per vessel of 269. The rig was most numerous between 1805 and 1835, and only three were registered after 1850. The barks, while having a slightly simpler rig, averaged 324 tons and were more common in the 1840s and 1850s (eighteen were registered from 1809 to 1870). The largest examples were registered in the 1860s under Boston ownership; the nature and extent of their trading activity in Gloucester is unclear at this time. Barks figure prominently in many of Lane's Gloucester views, with good examples

in *Ships in Ice off Ten Pound Island* (cat. 3) and *Gloucester Harbor at Sunset*, late 1850s (cat. 13).<sup>26</sup>

Most of the ships and barks owned by Gloucester merchants tended to be rather small, in the vicinity of 300 registered tons, due to the shallowness of the inner harbor where the best wharves lay. A deeply laden inbound vessel could not approach the wharves without partial discharging of its cargo to lighten its draft. This was done at "Deep Hole," an area of deep water just inside the mouth of Inner Harbor, where the vessel anchored while lighters took off the cargo. All three of Lane's lithographs of the harbor show large ships moored at this location.

The large square-rigged vessels in Lane's Gloucester views were probably all engaged in the Surinam trade, which this port dominated from 1821 to the early 1860s. Gloucester vessels laden with salt fish for Surinam would return with cargoes of sugar, molasses, and cocoa; this trade seems to have grown out of the port's regular commerce in the West Indies, and grew significantly in the 1840s and 1850s. During this period, the numbers of vessels do not seem to have risen in proportion to the volume of trade; instead, there was a transition from the use of brigs to ships and barks of greater tonnage.<sup>27</sup> In the 1860s, Gloucester lost much of its West Indies trade and the Surinam trade was largely taken over by Boston interests. Thereafter, large ships and barks with salt cargoes from Liverpool, Cadiz, and Trapani began to make regular visits, since schooners formerly in the West Indies trade were no longer returning with salt cargoes from that region.<sup>28</sup>

While the Surinam trade may not have employed all the brigs and brigantines owned by Gloucester merchants, they were undoubtedly the rigs of choice for this commerce in the 1840s. The brig and the true brigantine bore a close resemblance to each other, but by Lane's time, the latter had disappeared, leaving brigs as the only two-masted vessels with square sails on both masts. The rig is common in Lane's large lithographs and paintings of the harbor, most examples looking quite handsome in naval fashion, with elaborate beakhead carvings, painted false gunports, and a generally smart appearance. The most handsome and most detailed view is the ship portrait of *Cadet*, but the brigs in the harbor scenes are usually shown in perspective from subtle and unusual angles. Lane's deft handling of perspective gives a very clear impression of the full-ended, burdensome hulls and the complexities of their powerful rigs,



fig. 20. Lane, *View of the Town of Gloucester, Mass.*, 1836, lithograph, 13 x 19<sup>3</sup>/<sub>4</sub> in. In the foreground is Smith's Cove with the inner harbor lying beyond. The point in the left middleground is Rocky Neck; the island in the right background is Five Pound Island. In the background at extreme left is Fort Point; in middle left, Duncan Point. The square-rigged ship at center is anchored in

the Deep Hole. From left to right, the various rigs are: beyond Rocky Neck, schooner, topsail schooner; in Smith's Cove, three schooners under sail with a New England boat at anchor; on hard ground alongside a wharf, a pinky; in the inner harbor at right, schooners [Cape Ann Historical Association]

which are not fully appreciated from a profile view.

In contrast to the handsomely finished square riggers of the deep-water trades, the sailing vessels of the coastal trade were usually much plainer in hull form and rig, presenting a readily discernible contrast when the two are seen in the same picture.

The common rigs for "coasters" were the hermaphrodite brig, the topsail schooner, the fore-and-aft schooner, and the sloop. While square sails are a conspicuous part of the first two rigs, all are predominately, or exclusively, fore-and-aft rigged, that is, carrying mostly staysails and jibs, gaff-rigged sails, and gaff top-

sails. Prevailing westerly winds along the Atlantic coast have long favored the fore-and-aft rig for its ability to point higher into the wind than the square rig, and for its more economical use of sailcloth, spars, cordage, and manpower. When sailing off the wind, the square sails of the hermaphrodite brig and the topsail schooner added significantly to their sail areas, and thus to speed; moreover, these sails pivot along their vertical center axes and are thus “balanced.” In heavy offshore swells and light winds, ships were subjected to constant rolling, causing their gaff sails to swing violently from side to side, straining the slatting canvas and rigging and causing it to wear prematurely. Square sails set high aloft would not swing and slat while their higher vantage points enabled them to catch breezes unaffected by ocean turbulence, thus helping to give the vessel a steadier motion. The price of this savings on wear and tear was the cost of extra sails, spars, and rigging, and the manpower to tend them. For a coasting vessel making long passages along the Atlantic seaboard, and perhaps to the West Indies as well, the addition of square sails was justified; for coastal traders working from port to port, never out of sight of land, it was not.<sup>29</sup>

In Lane’s time, the topsail schooner rig was fading from the scene, while the hermaphrodite brig was gaining favor, growing in size, and changing in hull form to conform to more progressive ideas for its use. Few American topsail schooners survived long enough to be photographed, while photographs of the later hermaphrodite brigs looked very different from their antebellum precursors. Topsail schooners are nevertheless quite common in Lane’s harbor and coastal views. Two of his best paintings for studying this rig are *Becalmed off Halfway Rock*, 1860 (cat. 41) and *Lumber Schooners at Evening on Penobscot Bay*, 1860 (cat. 61). These compare very closely in detail and proportions of rig to a contemporaneous photograph of an unidentified topsail schooner under sail (fig. 22). The long gaffs with low angles of peak and the very large fore staysail are characteristic of schooner sail plans dating from the first half of the nineteenth century. Although Lane’s picture is dated 1860, the vessel he portrays has the hull profile of a schooner from the 1840s.

The origins of the hermaphrodite brig are obscure, apparently dating to the late eighteenth century, and tangentially connected with the development of the brigs and brigantines, which have a common etymology and history. Its name denotes the combination of a square-rigged fore mast and a fore-and-aft-

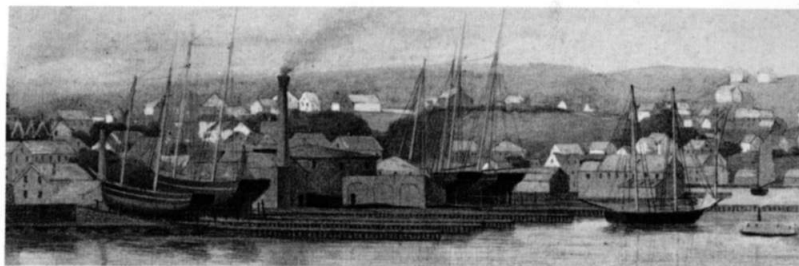
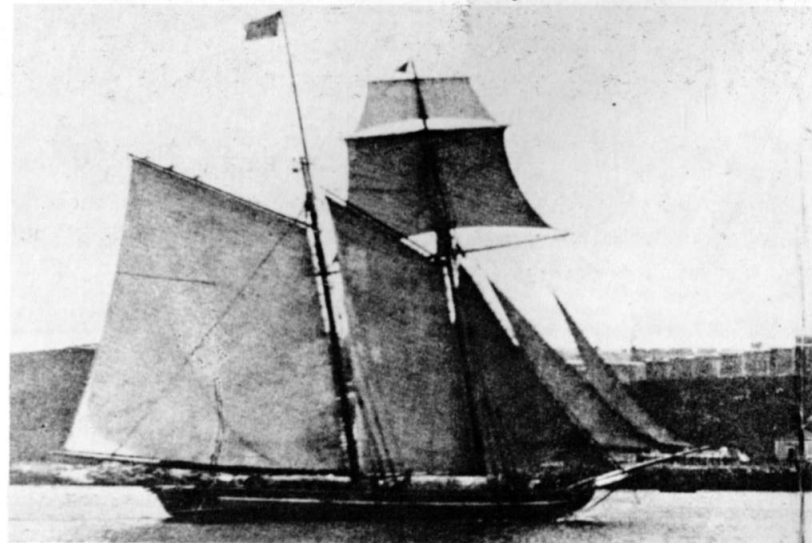


fig. 21. Detail from *View of Gloucester, Mass.*, 1855, lithograph. Schooners are hauled out at Burnham’s marine railway on Duncan’s Point. At the extreme right, a small passenger ferry approaches Burnham’s Wharf. The building at the extreme left, with triple gables, is a rare depiction by Lane of his own house [Cape Ann Historical Association]



cat. 2, *Gloucester Harbor from Rocky Neck*, 1844, detail. Vessel types, from left to right: brig, schooner (behind brig), hermaphrodite brig, and sloop  
fig. 22. *Unidentified topsail Schooner Entering Havana Harbor, Cuba*, c. 1860, Stereograph image [Peabody Museum of Salem]



rigged main mast, combining equally the qualities of the brig and schooner. Lane's painting, *Gloucester from Rocky Neck*, 1844 (cat. 2) offers a good example in the center middleground, between the brig and the sloop. Several more can be found in subsequent paintings of the harbor and in many of his Maine scenes. The view of Castine shows the rig under sail, while the dominant vessel in the sketch *Study of Vessels* (fig. 2) is a hermaphrodite brig at anchor, drying sail. In contrast to Lane's jaunty brigs of the Surinam trade, these craft have boxy, burdensome hulls, drab color schemes, and no carvings or ornamentation. They are quite often shown deeply laden, usually with large deckloads of lumber, which only emphasizes their ungainly looks. In terms of hull form and size, they are closer to schooners than to brigs. As the economics of the coastal trade forced vessel owners to cut their expenses, the hermaphrodite brigs were cut down to schooners and the rig was abandoned for this trade. This did not mean the end of the hermaphrodite brig, for in the 1850s large examples were being built for foreign commerce, and in the second half of the nineteenth century the type prospered as a handsome deep water trader of 300–500 tons.

The fore-and-aft trading schooner that became the ubiquitous "coasting schooner" of the late nineteenth and early twentieth centuries was easily recognizable in Lane's time, though still evolving in hull form. Due to its maneuverability, this was the rig most favored by merchants sending small cargoes from one small coastal community to another. What had been the task of the earlier colonial ketches was passed along to the schooner in the eighteenth century. If it is correct that the schooner is a descendent of the seventeenth century ketch, this is not surprising.<sup>30</sup> Lane's coasting schooners are hardly distinguishable in hull form from his hermaphrodite brigs: slab-sided with blunt ends and plain looks. To allow them to reach shallow harbors and river ports several miles inland, their hulls tended to be shallow and broad, a characteristic confirmed by surviving builders' half models of this type and retained by later schooners in this trade.

Lane's harbor views show many inbound schooners with large deckloads of lumber from Maine and the maritime provinces of Canada. The woodlands of Gloucester and most other coastal towns of southern New England had long since been denuded of trees suitable for construction of any kind, compelling

the importation of pine, spruce, cedar, and the northern hardwoods in very large quantities. Upon discharging their cargoes, coasters might return to home port with a variety of food, domestic items, and industrial wares, such as returns from the sale of their lumber cargoes might allow. No doubt much molasses and sugar from Surinam was resold to schooners returning to Maine ports.

Hay was another conspicuous cargo carried by coasting schooners, and Lane shows one example in *Gloucester Harbor at Sunset*, late 1850s (cat. 13) in the left foreground. Hay was much lighter than lumber, and despite the enormous deckload, the vessel is riding high in the water. Tarpaulins are stretched over it to prevent soaking; while under way, a lookout was posted to give the helmsman steering directions. Vessels used in this commerce tended to be older, outdated designs, but still had tight seams so seepage could not ruin the hay stowed in the hold. With the abundance of fields and salt marshes around Cape Ann, Gloucester was very likely self-sufficient in this commodity, so the vessel in Lane's painting is probably in transit to Boston with its cargo.

Merchant sloops are occasionally, if not frequently, shown in Lane's port scenes of Gloucester, but their heyday in the 1820s and 1830s had passed. The best examples are to be found in *Gloucester from Rocky Neck*, 1844 (cat. 2) (center middleground) and in the pencil drawing *Study of Vessels*. Both have high quarter decks, while the latter has square glazed ports across the transom, suggesting that they are packet sloops fitted to accommodate passengers and special freight for direct passages to other New England ports. As seaport towns prospered and grew, the need for faster direct communication grew, and larger packet vessels were needed. The sloop rig became very unwieldy for larger hulls and was largely abandoned for the schooner rig. Only in the highly specialized business of freighting stone from Cape Ann quarries did the rig survive; the large single mast was ideally suited as a derrick post for working the heavy loading boom. A few of the older stone sloops survived to have their pictures taken; they did not differ appreciably from their packet counterparts in Lane's views (fig. 23).<sup>31</sup>

Although the numbers of fishing schooners increased markedly in the 1830s and 1840s, this was a static period for their design as well as older fishing methods. Fishing on Georges Bank began early in the 1830s, giving rise to a class of large, heavily

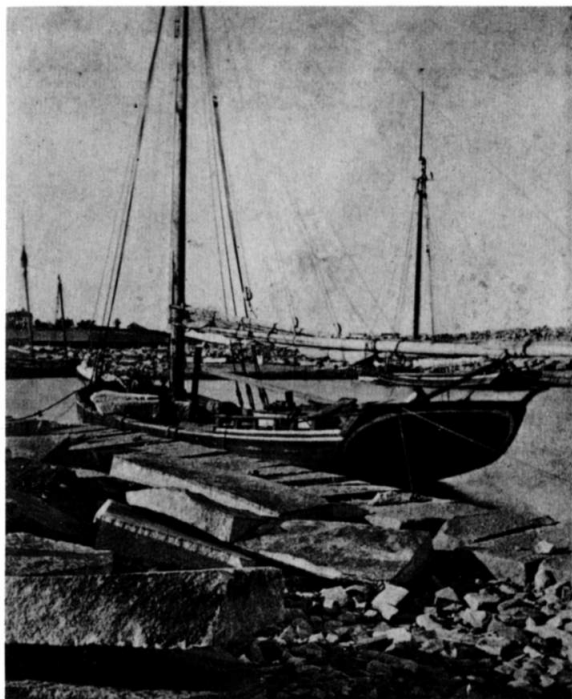


fig. 23. *Stone Sloops at Pigeon Cove, Massachusetts*, c. 1890, stereograph [The Mariners' Museum, Newport News, Virginia]

built schooners called “bankers,” which brought their catch to market salted, and which had a reputation for slow sailing and poor handling to windward. Without the market incentive—and ice—to bring fish to market speedily, slow burdensome schooners were favored because their owners got more carrying capacity for their investment than with sharper hulls.<sup>32</sup> Lane’s painting *Gloucester from Rocky Neck*, 1844 (cat. 2) shows two bankers in the right middleground, while *Gloucester Harbor*, 1848 (cat. 10) shows five or six excellent examples of the type. Well-built of durable materials and handsomely finished, their appearance is otherwise unremarkable.

Smaller, but much more distinctive, was the pinky, a double-ended schooner-rigged boat whose bulwarks and rails projected aft around the rudder head and ended in a graceful upswEEP, which served as a crutch for the main boom when sails were lowered. The type name is derived from the much older term “pink,” which described a multitude of European rigs whose hulls had a similar form of stern. The pinky and its smaller antecedent, the Chebacco boat, were lineal descendents of the colonial shallops, large double-ended open boats with two-mast rigs. Pinkies were regarded as one of the most seaworthy vessel types ever used in the fisheries, but the design had practical limits to



fig. 24. Martha Hale Harvey, *Pinky and Mackerel Seiner*, Gloucester Harbor, c. 1900, glass plate photograph, 5 x 7 in. [Annisquam Historical Society]

size and deck arrangement.<sup>33</sup> As larger schooners were added to the fishing fleet in the 1830s, construction of pinkies declined on Cape Ann until no more were built after 1845, although several of them survived into the twentieth century. Their picturesque appearance must have interested Lane, for they are frequently to be seen in his paintings, drawings, and lithographs, and are not confined to his Gloucester scenes. The sheer line and stern of this type are very challenging to draw correctly, particularly in perspective, yet Lane did not hesitate to depict them from any angle, and very successfully in most cases. Indeed, it is possible that Lane’s representations of pinkies are more accurate than photographs of relict examples whose many rebuildings and alterations had destroyed much of the original form and detail. A model of this type built recently by the author, using plans derived from a builder’s half model, bore a much stronger resemblance to Lane’s representations than to photographs of aged and rebuilt pinkies.

In most views, Lane’s pinkies are either at anchor or in the process of entering or leaving port with few hints as to the nature of their fishing gear. In *Becalmed off Halfway Rock*, 1860 (cat. 41) we find one fitted out for gillnetting, mackerel being the likely fare. By the 1840s, setting gillnets for fish swimming near the surface (an old European method) had been adopted

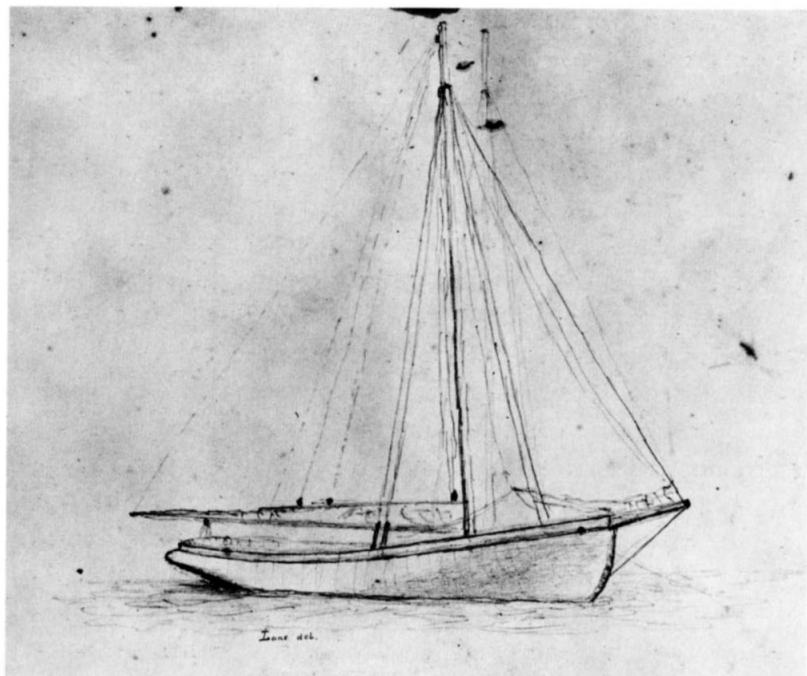


fig. 25. Lane, *Sloop*, 1850s, pencil, 9½ x 11¾ in. [Cape Ann Historical Association]

by poorer New England fishermen whose smaller boats could not compete in the banks fishery. By setting the nets in the way of a suspected school of mackerel, herring, or menhaden, large numbers could be caught without the expense of trawl lines, bait, and large crews. Only the schooner, the net, two boats, and a small crew were required.<sup>34</sup> Lane's painting shows a dory and a larger net boat (possibly a discarded whaleboat) in tow.

Sloop-rigged fishing boats are difficult to identify in Lane's paintings. An occasional merchant sloop is to be seen, while some of the very small sloops could be pleasure craft. A few, such as the one in the middle foreground of *Gloucester Harbor*, 1852 (cat. 7) are really yawl boats—rowing craft whose sails are a secondary form of propulsion. It has long been presumed that the small fishing sloop (or "sloop boat," as Cape Ann fisherman called this rig in its diminutive form) had its origins on Cape Ann and spread to other New England ports.<sup>35</sup> If so, this process was only beginning in Lane's time and very few caught his attention, as in the left middleground of *Fresh Water Cove from Dolliver's Neck, Gloucester*, early 1850s (cat. 8) (the sloop in the center is probably a small freighting vessel). The boat in the



fig. 26. *Maine Fishing Sloop*, c. 1890, photograph [Maine Maritime Museum]

center of *Gloucester from Magnolia* may also be an early sloop boat. One of his sketches from the 1850s is a fine example of the hull form and rig associated with sloop boats built as late as the 1890s (fig. 25). A photograph of a Maine fishing sloop from the turn of the century shows how little the type changed over the next fifty years (fig. 26).

Chebacco boats and pinkies were certainly not the only descendants of the colonial shallops; indeed, the two-mast double-ended open boats with lapstrake hulls evolved into later types that kept a much closer resemblance to their eighteenth-century forebears. By the late nineteenth century they had differentiated into local types such as the Hampton boat, the Casco bay boat, and the Isles of Shoals boat.<sup>36</sup> In Lane's time, there were many small boats that met the basic shallop description, but if their type was defined, the name has been lost. A model of established provenance, representing a two-mast boat from Rockport in the 1850s, is labeled the "sloop" *Susan*, suggesting that the term "sloop" embodies a definition by hull form, not rig.<sup>37</sup> Since the word "sloop" is derived from "shallop," this is apparently a case of an archaic definition surviving locally, long after it had changed in other areas. Given this confusion, and lacking any better local terminology, students of this small craft type have chosen "New England boat" as a general term, reserving specific names for the later regional variants.



fig. 27. *Lobster Fisherman and Dory, Lane's Cove, Gloucester, c. 1900* [Peabody Museum of Salem]

Thus named, the New England boat is a common denizen of Lane's harbor views, particularly as an element of the background scenery. In *Good Harbor Beach, Cape Ann, 1847* (cat. 5) and *Gloucester Harbor, 1852* (cat. 7) examples of the double-ended type figure prominently, while a later version with a transom stern appears in the right middleground of the latter. Most of these boats are pictured with gaff-headed sail plans; spritsails are uncommon. Larger examples often have short bowsprits, jibs, and stayed masts; the very largest appear to be decked over to some extent, usually in the form of cuddies at the ends. With some modification, New England boats survived in Cape Ann harbors until the first decade of this century. They were principally used in the shore fisheries, lobstering, hand-lining, gillnetting, and trap fishing. A poor man's boat, they largely disappeared from Gloucester Harbor after the Civil War and became fixtures of smaller Cape Ann fishing communities, principally Rockport and Pigeon Cove.

The smallest boats used in the fisheries were the yawl boat and dory. The former was intended as a lifeboat and tender for larger schooners, from whose stern davits they hung. Yawl boats were usually of the best materials and workmanship and thus not cheap, but old boats discarded by the bankers were put to use in the shore fisheries. These craft were often purchased by chandleries and other waterfront businesses as water taxis and errand boats.<sup>38</sup> They were frequently rigged for sailing, as in

*Gloucester Harbor, 1848* (cat. 6) using either a gaff or sprit rig. In the foreground of *Gloucester Harbor, 1847* (cat. 10) a yawl boat is shown overturned while its owner is filling the seams with hot pitch. This type had probably been carried on in form and function for over a century when Lane was drawing them, and its use in the fisheries would last until the 1880s, when the fishing methods of the bankers were superseded altogether by trawling with dories. Schooners in the coasting trade carried them to the end of their working days (the 1940s), while a few relics of that type that have survived in the summer cruise trade in Maine use very similar modern versions of yawl boats.

While we think of the dory as a boat carried in large numbers on the decks of fishing schooners for trawling and hand-lining on the banks, in Lane's time it was used only in the shore fisheries, usually by individuals too independent to go fishing with others and too poor to afford anything but the cheapest boat and gear.<sup>39</sup> Dories frequently dot the shorelines of Lane's harbor views and one occasionally wanders into an offshore scene. Their simple yet distinctive hull form with straight sides and angular ends contrasts strikingly with the rounded forms of the yawl boats and New England boats—something Lane no doubt appreciated and utilized in his compositions. In some paintings there is human activity involving dories, possibly because their work in such proximity to the shore allowed Lane to observe and sketch them in detail. In *Good Harbor Beach, Cape Ann, 1847* (cat. 5), the dory at the right is pushing off, to be joined by the New England boat also getting under way. The two craft will probably work together setting a gillnet. In the left background, a solitary dory can be seen tending such a net. Another shore detail, in *Sunrise through Mist, 1852* (cat. 42), shows a dory and yawl boat with their crews hauling them ashore and taking out the fishing gear.

A number of offshore scenes also show dories in action; the fishing dory in the ship portrait *Three Views of Yacht America* has already been mentioned. In *Becalmed off Halfway Rock, 1860* (cat. 41), a particularly interesting situation appears in the left foreground, where a lobsterman rows his dory with several lobster pots in the stern. This is very useful graphic documentation of this fishery, which is otherwise sparsely described at this time. Forty years later, a photographer could still take pictures of the same types of boats and gear. About the only thing that changed was the style of the hats the fishermen wore (fig. 27).

Several of Lane's scenes of Gloucester are of interest for the waterfront activity they show, ranging from the sublime to the mundane. Of the latter, the pitching of the yawl boat's bottom in *Gloucester Harbor*, 1847 (cat. 10) has already been mentioned. Regarding fishing activity, *Gloucester Harbor*, 1848 (cat. 6) offers a foreground view of a New England boat hauled ashore with a splitting table set up alongside it for cleaning and dressing the catch. Two of the crew are carrying away dressed fish while a third continues with the splitting. The pile of fish heads and entrails under the table looks like early testimony to the pollution of Gloucester Harbor, then as now.

Icing over of the harbor caused much of the work usually done at wharves to be moved to unaccustomed places. In the winter of 1855–1856, the inner harbor froze solidly out to an imaginary line between Rocky Neck and Duncan's Point. The following year, the entire harbor froze over, with a line of ice stretching from Eastern Point to Norman's Woe. *Ships in Ice off Ten Pound Island*, 1850s (cat. 3) records what is probably an early stage of the second freeze and was undoubtedly painted from direct observation from Lane's second floor studio at Duncan's Point. The group of people in the center background is busy cutting a channel through the ice to free the outward-bound schooner and bark.

Lane's most imposing waterfront scene is *Three-Master on the Gloucester Railway* (cat. 39), which was originally a shop sign for John Tarr's paint shop located in the railway's machinery building. The sign was much publicized when it was hung in 1857, and each building, particularly houses belonging to owners of the railway and adjacent businesses,<sup>40</sup> was identified as to its owner. Comparison of their locations in the painting with building positions given on city street maps reveals a number of discrepancies, the net result being that buildings belonging to the railway or its owners are given prominence. The railway site itself is quite accurate in the layout of its buildings and the orientation of the finger piers. The perspective views of the vessels are seemingly satisfactory, if not representative of the most graceful hull forms, and the rigging seems very reasonable in proportions. When this painting is compared to a photograph of a similar situation, the similarities of common features are quite startling (fig. 28). Were it not for the fact that the photograph was taken five years after Lane's death in a shipyard two hundred miles to the east, it would be easy to speculate that he had

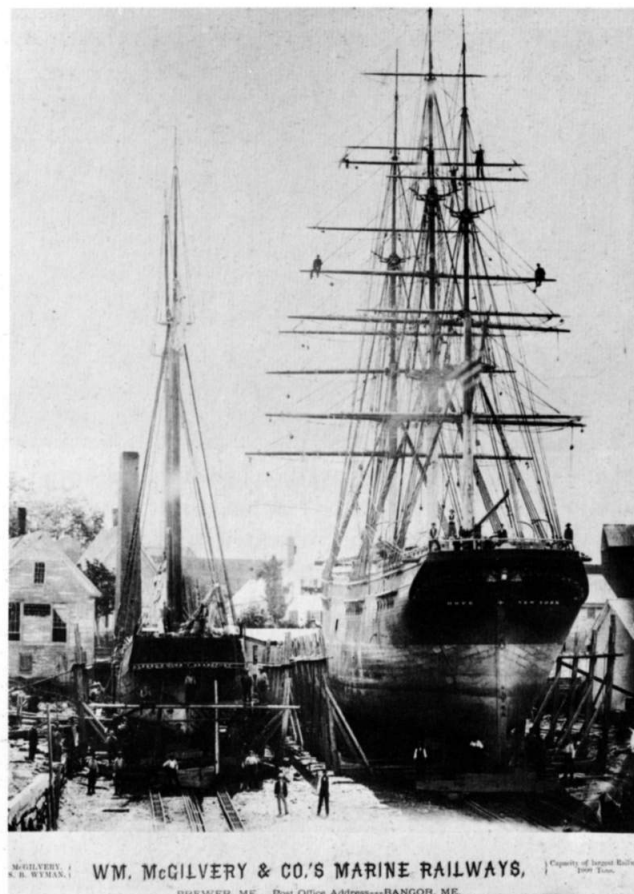


fig. 28. *Wm. McGilvery & Co's Marine Railways*, 1870 [Peabody Museum of Salem]

used the photograph for reference. While this coincidence is striking, it lends credence to the view that Lane's draftsmanship was nothing less than masterly and that he had full command of every situation that made critical demands on his handling of form, proportions, and perspective. If discrepancies exist between his compositions and the subjects, they are more likely to be intentional than accidental, reflecting his ideas, and perhaps his customers' wishes. So well had Lane sharpened his eye for delineating the images he saw or wanted to see, and so well had he mastered his drawing technique, that his hands could draw with easy deliberation while his mind and eye could dwell on the problems of light and color, which brought realism and vitality to his pencil lines.

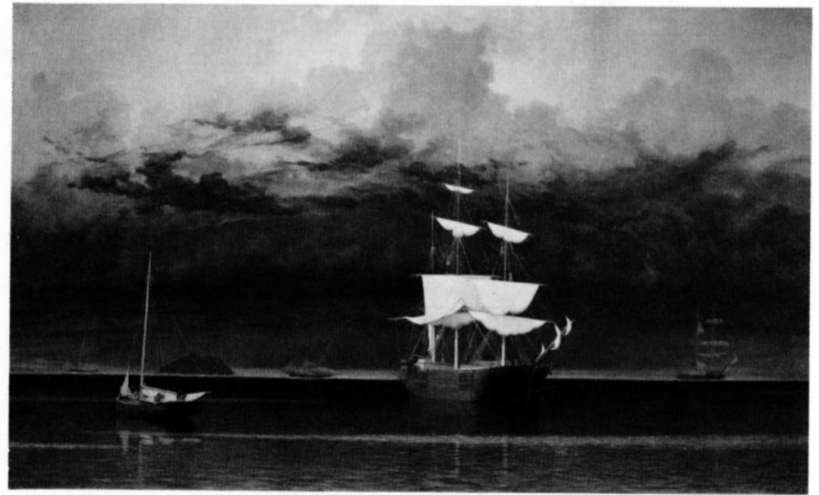
While Lane discovered in Maine's coastline a new world to





fig. 29. *Northport, Maine*, c. 1880. The hard gravel shoreline of this inlet provided good conditions for hauling small craft and beaching larger vessels for repairs. The schooner is a good example of the plainer type used for freighting stone, lumber, hay, and other bulky cargoes [private collection]

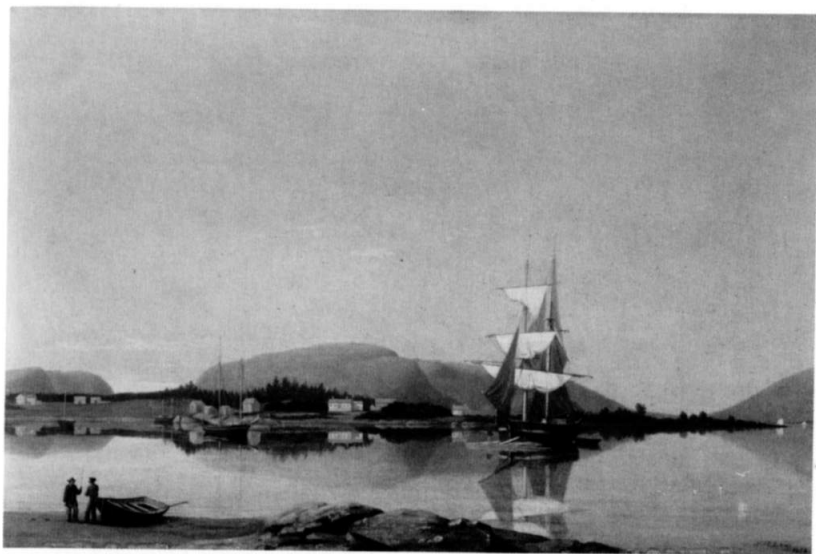
paint, most of the ships and boats he encountered must have been very familiar. Cape Ann was both a terminus and a temporary refuge for the Maine coastal traders as they sought markets to the south and west for lumber, hay, stone, lime, potatoes, and whatever else could be coaxed from a reluctant land, dragged to the sea or riverbank, and loaded onto a freighting vessel. In Lane's time, the sea was the most important route of access to Maine; overland, it was impassable for movers of bulk loads, and even the railroads were unable to remedy this situation for much of the coast line. Not until the advent of asphalt highways and motor trucks in the 1930s were there major changes in the transportation of freight to, through, and from this state.<sup>41</sup> The bulk of Maine's population was then concentrated along its shore line whose peninsulas and islands project like fingers out into the Atlantic. From Searsport to Castine is seven miles by water across Penobscot Bay, but twenty-five miles by the road that goes around it. Compound this geography with winter weather that makes roads impassable, and the necessity of seaborne transport in Maine should be obvious. For an artist visiting this state in summer, the sea lanes were not only essential for travel, but sublime in their beauty born out of a reluctance to be tamed and reshaped in the image of southern New England. Against this background, the simpler rigs and plainer hulls of coasters and fishing boats would have seemed more logical and in keeping with their surroundings.



cat. 51. *Approaching Storm, Owl's Head*, 1860, oil on canvas, 24 x 39<sup>5</sup>/<sub>8</sub> in. [private collection]

Among the larger trading vessels portrayed by Lane, hermaphrodite brigs, topsail schooners, and fore-and-aft schooners predominate. An occasional ship or bark appears, as in *Approaching Storm, Owl's Head*, 1860 (cat. 51), which serves to remind us of farther flung ambitions of many Maine shipowners and shipbuilders. In this period, Maine shipbuilding was hitting its stride as the leading producer of deep water tonnage on the American east coast. The largest ships were built for commerce between foreign ports and major American seaports to the south; they seldom, often never, returned to the places where they were built. This exodus did little to build up foreign commerce with Maine, but it kept thousands of inhabitants of coastal and river communities steadily employed in shipyards.<sup>42</sup>

If the rigs of Maine coasters looked familiar, their environment was most striking. Anchored in tidal inlets, sometimes hard aground at low tide, the idyllic surroundings of woodlands and sparsely settled villages present a jarring contrast to the businesslike waterfront of Gloucester Harbor, not to mention Boston. In *Bar Island and Mt. Desert Mountains from Somes Settlement*, 1850 (cat. 50), Lane has captured a sense of this environment, which yields reluctantly and only temporarily to man. The grounded schooner at the right is very typical in its small size, shallow draft, and flat bottom which combine to make the vessel take the ground more easily as the tide ebbs. To load a coaster under these conditions, the vessel was sailed up to the



cat. 57. *Entrance of Somes Sound from Southwest Harbor*, 1852, oil on canvas, 23<sup>3</sup>/<sub>4</sub> x 35<sup>3</sup>/<sub>4</sub> in. [private collection]

shore or riverbank where the bottom was free of rocks; whatever loading ramps or gangways were needed were put aboard or ashore, and loading (by hand) commenced.<sup>43</sup> Larger vessels might have to be loaded at a mooring, using barges or floats. The hermaphrodite brig in *Entrance of Somes Sound from Southwest Harbor*, 1852 (cat. 57) is being loaded this way. Loading ports have been cut in her bow so lumber can be passed into her hold without having to pass each board over her decks and awkwardly through small deck hatches. However the vessels were loaded, land lay close aboard, often rising precipitously and cloaked with vegetation which threatened constantly to reclaim any man-made structures. A stereograph view of Rockport, lying halfway up the west shore of Penobscot Bay, conveys a sense of this tenuous balance (fig. 30).

In the part of the Maine coastline that Lane visited, fishing was done on a much smaller scale than at Gloucester. Pinkies were still very much in favor, with their ideal size for the herring and mackerel fishing that prevailed in this area. Many of the larger pinkies had been built on Cape Ann and were sold down east, some new, others used. The larger examples differ little from those Lane painted in his Gloucester scenes. Pinkies were built in Maine, though they tended to differ in ways that maritime historians are still studying.<sup>44</sup> The type remained popular in this state until the early 1900s.

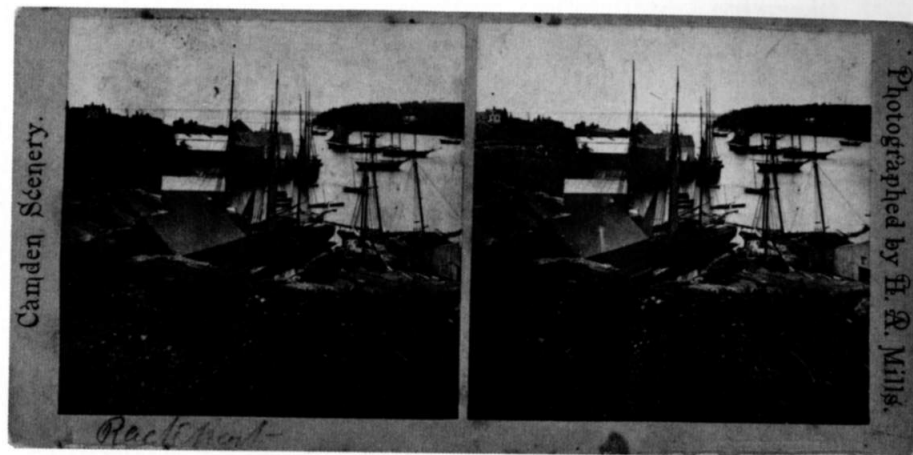
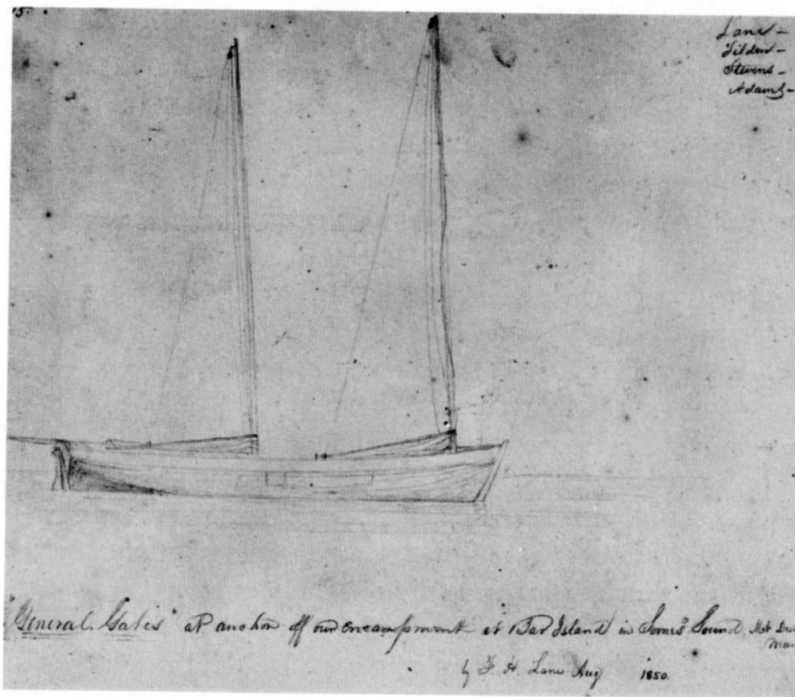


fig. 30. H. A. Mills, *Rockport, Maine*, c. 1880, stereograph [Maine Maritime Museum]

fig. 31. "General Gates" at anchor off our Encampment at Bar Island in Somes' Sound, Mt Desert Maine, August 1850, pencil on paper, 9<sup>1</sup>/<sub>2</sub> x 11 in. [Cape Ann Historical Association]



Among the smallest Maine boats for fishing and harbor commerce, a transom-sterned version of the New England boat appears in several of Lane's pictures. A drawing of one example is *General Gates* (fig. 31), in which he did most of his cruising; this may also be the boat that appears in his view of Castine. A very similar example (if not the very same boat) is the subject of *Fish-*



fig. 32. Martha Hale Harvey, *Schooner-boat Gray Eagle at Head of Lobster Cove, Annisquam*, c. 1890. This large Casco Bay boat is a derivation of the New England boat, from which the Hampton boats also descended. The type is often regarded as a variation of the Hampton boat [Annisquam Historical Society]

ing Party, 1850 (cat. 48). Transom-sterned New England boats became quite popular in Maine, and one distinct version came to be known as the Casco Bay boat in the 1880s. Named for the body of water on which Portland is situated, examples of the type survived to the end of the century, one of them ending its days in a small Cape Ann harbor. Surviving plans and photographs seem to indicate that some later Casco Bay boats were sizeable enough to warrant simple schooner rigs with stayed masts (fig. 32). They were usually of lapstrake construction.<sup>45</sup>

The watercraft of Maine probably offered no surprises to Lane, who in turn treated the subject realistically on canvas. His depiction of individual craft seems neither flattering nor condescending, and if they are fewer in number, the striking contrasts they make against wooded coves and sparse settlements serve as effectively as the complex gatherings of mast and sail against the harbor skylines of Gloucester and Boston.

While Boston and New York were the principal centers for the advancement of merchant ship design and the production of innovative sailing and steam vessels, their highest proportions of tonnage consisted by far of older, conservatively designed ships and boats. Lane was obviously aware of this situation and his port scenes of these cities are veritable concourses of the old and the new, the traditional and the experimental in ship technology. Having discussed Lane's pictures of innovative craft, some mention of the others is needed.

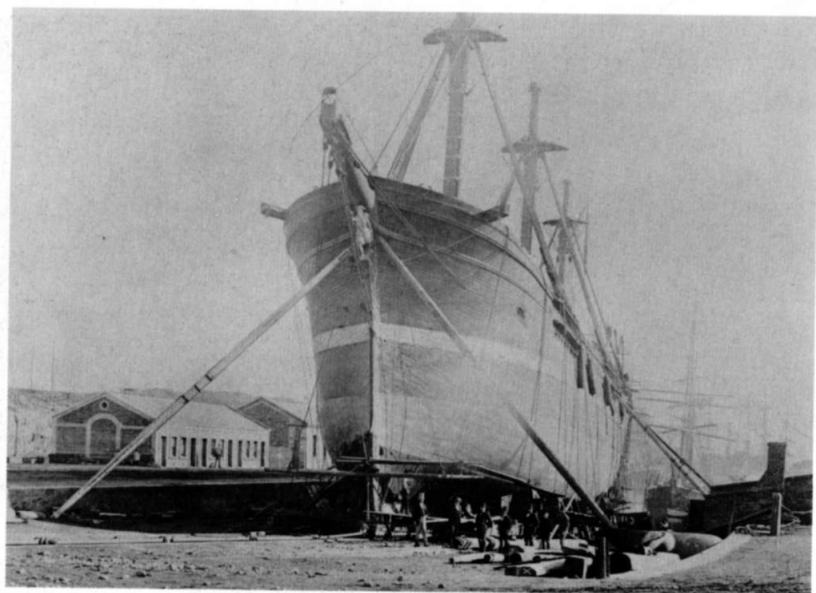


fig. 33. Ship "Sacramento" on Marine Railway, c. 1870 [Cape Ann Historical Association]

The large full-rigged ship was the workhorse of the deep water trade, carrying the heaviest and bulkiest goods in the largest quantities possible. Its hull form was governed by tonnage laws that determined arbitrarily the vessel's cargo capacity for purposes of levying harbor dues by port customs agents. Capacity was expressed in tons and was based on measurement of length, beam, and depth of the hold between specified structural points. The measurements were then applied to a formula, minus certain allowances, which was divided by ninety-five to give a measurement of volume called registered tonnage. By this formula, a vessel was always said to *measure* so many tons, never to *weigh* that amount. Because the points of measurement were arbitrarily chosen and no effort was made to determine actual hull volume or displacement weight, it was not difficult to design hulls whose tonnage measurements looked modest on paper, but whose hold capacity far exceeded that envisioned by the rule makers. Length and beam were measured over upper portions of the hull, so builders were free to make the ends as full and bluff as they wished; in some vessels, the sides of the bottom bulged out until the hull in cross section resembled an iron kettle, hence the nickname "kettle-bottom." The sleek hulls of the clipper ships and the rage for speed in the 1850s had some moderating effect on this trend, but not until 1864, when



cat. 37. *New York Harbor*, mid 1850s, oil on canvas, approx. 23½ x 35½ in.  
[private collection]

tonnage legislation based on actual measurements of hull volume was passed, did builders have incentive to use more wholesome designs for ships in bulk cargo trades.<sup>46</sup>

A photograph of the Boston-owned merchant ship *Sacramento* shows very well the bottom form of a very burdensome large merchantman; her beam under water is almost three feet more than at her rails (fig. 33). This ship was built in 1865, exactly the time when the new tonnage laws took effect, so her

design was probably conceived in the previous year with the old regulations in mind. Even so, she is moderate by comparison with the “kettle-bottoms” in the cotton trade of a few decades earlier. *Sacramento*’s hull is an excellent one to compare with burdensome examples in Lane’s paintings and drawings. The large merchant ship in the left foreground of *New York Harbor*, mid-1850s (cat. 37), is decidedly of similar hull form, and Lane’s delineation of the bluff ends and tumble-home sides conveys an

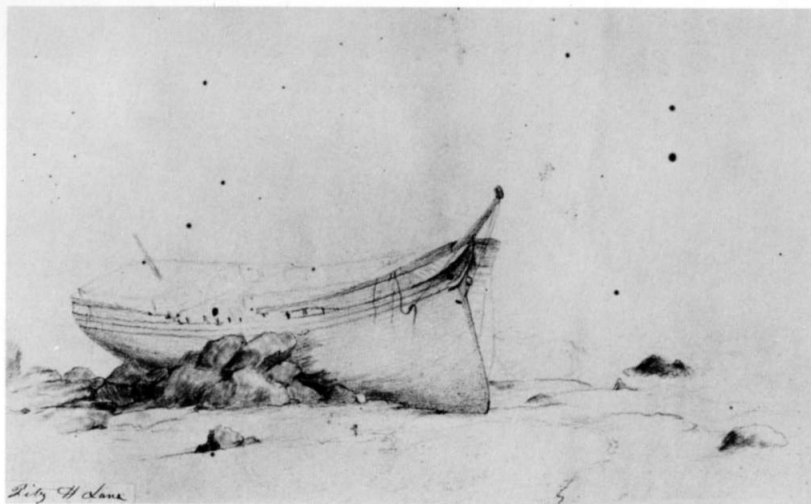


fig. 34. *Beached Hull*, 1862, pencil, 14 x 15 in. [Cape Ann Historical Association]

accurate image of the topside mass while giving the impression that there is considerable submerged bulk as well.

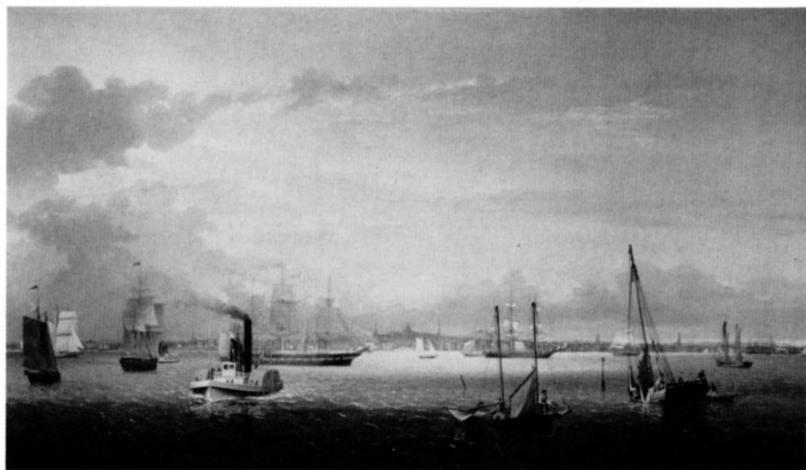
An even better idea of Lane's comprehension of this kind of hull form can be gained by comparing the photographs of *Sacramento* with his oil, "*Dream*" *Painting*, or the sketch he made for that canvas (fig. 34). Despite the visual obstruction of the rocks and the twisting of the hull, it is obvious that Lane had a firm grasp of the geometry of this hull type and could delineate it with accuracy. The concept of hull mass is a difficult one for artists to master unless they have spent considerable time studying plans of ships' hulls and sketching the actual vessels when hauled out so their underwater shapes are plainly visible. Too often a painting conveys the impression of a hull floating on the surface of the water with no part of it submerged, in total contradiction to the physics of displacement by floating objects. This is a lesson Lane mastered and put repeatedly to good use. In *Boston Harbor at Sunset*, 1850–1855 (cat. 24), we have a textbook study of floating vessels in perspective, each hull posing a very different problem in terms of form, degree of immersion, and angle of view. The wall-sided brig at left floats as if half her hull volume is submerged, as it would be for a vessel partially loaded or in ballast (carrying no cargo, but having extra ballast in the hold for stability). The large packet ship at right is seen from nearly the same angle as the stern view of *Sacramento*; having discharged all her cargo, she is said to be floating



cat. 24. *Boston Harbor at Sunset*, 1850s, oil on canvas, 26 x 42 in. [Museum of Fine Arts, Boston]

light. The little New England boat, left of center, is also correctly trimmed for hull bearing only a light load. Of particular interest is the sloop to right of center with her main sail and staysail set; the perspective of this hull warrants comparison with that of a deeply loaded schooner photographed some forty years later. The sloop is a bit more boxy in shape, but the S-shape of the sheer at the rails is very similar and rises gracefully at bow and stern (fig. 35). Both vessels are carrying heavy loads, giving the impression that their hulls are mostly under water and rather resistant to motion unless at the prodding of a good breeze. It is this awareness of hull mass, how a ship floats, and how it moves through the water that so often sets Lane's ships apart from those of his contemporaries. Lane both appreciates these properties yet treats them with such ease that we sense their correctness without thinking, without feeling compelled to analyze them to the point of being distracted from their beauty. This unlabored treatment is undoubtedly also why his vessels fit so easily into his compositions, for they blend with their uncontrived surroundings, harmonizing rather than competing with other elements for the viewer's attention. By painting ships this way, Lane has given us a visual record whose value transcends that of purely technical information.

Minor watercraft vary considerably in their importance to scenes of Boston and New York. In *Boston Harbor*, 1854 (cat. 29), they dominate the foreground, relegating the ships to distant



cat. 29. *Boston Harbor*, 1854, oil on canvas, 23 $\frac{1}{4}$  x 39 $\frac{1}{4}$  in. [White House Collection]

objects of secondary importance, not unlike the large views of Gloucester Harbor. At right, a sloop (probably used as a lighter) has made fast to a mooring, possibly awaiting an inbound vessel whose cargo she will discharge. The crew has done a hasty job of lowering the main sail, which is trailing in the water, a demonstration of seamanship that deep-water sailors would have laughed at. The large New England boat to right of center has lowered her sails a bit less sloppily, but again in a display of boat handling viewed disdainfully by sailors who manned the clipper and packets. Other Boston views show similar if less prominent small craft at work, particularly in the foregrounds, and often with purposeful and sometimes amusing human activity.

Lane's New York port scenes offer a number of small craft that provide interesting contrasts to the very large ships and the gigantic scale of activity in that harbor. The 1860 view, which is packed with sailing vessels and steamers of every sort, gives its foreground over to a sloop (at left), a pulling boat (center), and a small coasting schooner (at right). The first may be a small version of the great Hudson River sloops, but a very plain one; the schooner is also very undistinguished. More interesting by far is the pulling boat, which seems to be a very large Whitehall boat, a type of rowing craft that originated in the boatshops of Whitehall Street, New York, and was used in great numbers for conveying people and goods around the harbor. Merchants and harbor officials used it as a water taxi; chandleries used larger versions to bring cordage and hardware out to ships; crimps

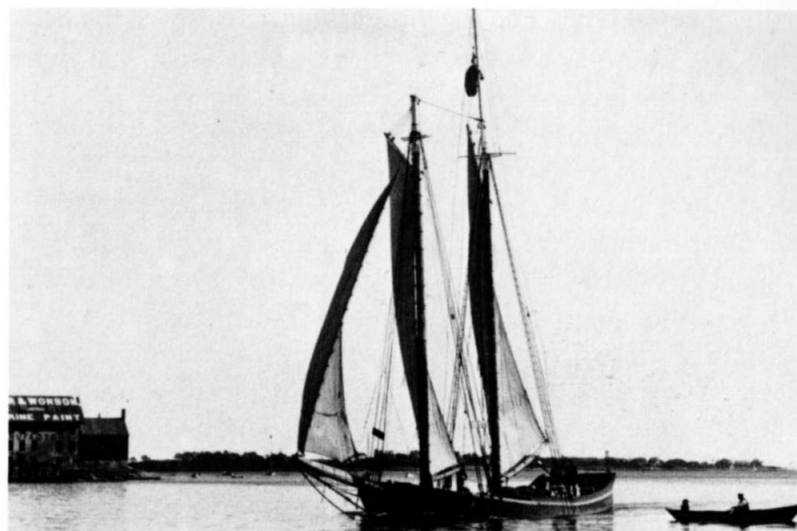


fig. 35. Ernest L. Blatchford, *Coasting Schooner off Rocky Neck, Gloucester*, c. 1900, glass plate photograph, 5 x 7 in. [Cape Ann Historical Association]

used the largest models to ply their nefarious trade-supplying vessels with crews “recruited” with liquor and two-fisted persuasion. Whitehall boats were similar to yawl boats, but of much finer model and lighter construction; they were designed and used as harbor craft, and were seldom carried as ships’ boats, and then usually as a gig for the captain’s personal use.<sup>47</sup>

The numbers and diversity of the ships and boats of Boston and New York harbors must have posed the most difficult sort of challenge to Lane in his efforts to depict these cities as recognizable seaports and not simply gatherings of ships against a detached coastline with a few recognizable features. To add to this problem, the scale of these seaport communities was matched by the scale of shipping activity, forcing the artist to portray the whole from a much greater distance. Inevitably, this resulted in a loss of the intimacy that we sense in his scenes of Cape Ann and Maine, and the city skylines, while instantly recognizable, no longer include the purposeful vignettes of waterfront activity that link the watercraft to the land. Perhaps in an effort to compensate for this, Lane gave a great deal of attention to the lesser craft, adding lively and occasionally humorous activity by their crews. We see the same kind of activity in his Gloucester views, but against a very different background, which harmonizes with it instead of offering stark contrasts. If Lane tired of the large scale of Boston and New York harbors, the endless di-

versity of vessel types, and the diminishing activities of the fishermen, it is no wonder that he turned to the tranquility and simplicity of Maine and Cape Ann harbors in his final years of painting.

In the last five years of his life, Lane produced what many art historians regard as his most interesting and perhaps most individualistic work. In terms of subject matter, there was a decided turning away from the busy harbor scenes and meticulous ship portraits to simpler compositions with only one or two vessels, and sometimes to subjects with no maritime theme whatever. Wrecked hulls were seldom seen in his earlier canvases; now, they were the dominant elements in many. Did these changes arise from a profound shift in Lane's outlook on life, or were there changes in the American shipping scene that caused him to turn to other subject matter?

In 1857, the fortunes of the American merchant fleet began to change, as iron shipbuilding in Britain and generally lower shipbuilding costs in the rest of Europe undercut the demand for American-built wooden ships, while iron-hulled steamers began to outperform the packets and clippers. American tonnage continued to rise until 1862, but the market for these vessels was glutted and profits from voyages were marginal to nonexistent. By the early 1860s, many merchants found it more profitable, and even expedient, to sell their ships to foreign firms and have their goods carried under foreign flags. The threat (however exaggerated) of Confederate commerce raiders transformed this trend into a stampede in 1863; two years later, the American fleet was barely more than half the size it had been at its peak.<sup>48</sup>

This did not mean that harbors like Boston were suddenly idle and deserted, for the wartime economy needed more foreign trade than ever, which was now handled by foreign shipping. Its volume rose to make up for the American tonnage deficit, and continued to grow as international commerce burgeoned as a result of wartime needs.<sup>49</sup>

The fisheries industries prospered throughout the war years as both civilian and military demands for fish increased steadily. Shipbuilding statistics in towns like Essex show a drop in productivity for these years, and this was likely due to a shortage of skilled workers and suitable timber as wartime needs diverted manpower and materials to the navy yards.<sup>50</sup> Severe storms took their toll on the fishing fleet, further exacerbating the problem of maintaining schooners in adequate numbers. Despite the dif-

ficulties, Gloucester Harbor was neither empty nor inactive in these years; those fishermen who did not enlist in the army or navy kept on at their work and prospered.<sup>51</sup> Nor is it likely that the character of the waterfront altered markedly, for the same reasons that few schooners were built. The greatest changes to the fleet and waterfront were to come about in the Reconstruction years and later.

If the content of Lane's paintings changed in his last years, it was not due to drastic alterations in the character of the harbors and vessels he once painted. If anything, wartime conditions may have arrested changes to the fisheries as the fishermen were forced to make do with the vessels and gear they already had. Gloucester Harbor would remain a familiar place to Lane until his death. If he sought new themes and subjects to paint, he must have done so in response to some inner need or drive, and the answer to this problem is not likely to be found by historians of ships.

Having examined Lane's drawing ability, his technical knowledge of ships, and his knowledge and understanding of maritime New England, an assessment of his accuracy has been attempted by comparing his work with surviving documentation of his subjects. Photographs have been the primary sources for this comparison with the conditions that the subjects be contemporaneous to the subjects in Lane's pictures, and that non-contemporaneous subjects demonstrate their relationship through close resemblance and demonstrable derivation. These provisions have narrowed the field of eligible material, and the sample at hand may be biased due to such narrow choices; however, there is a strong and consistent pattern of resemblance to Lane's pictures or elements in them.

This is not to say that there are no discrepancies between Lane's work and the photographic record. There are in fact numerous examples, particularly in the rigging of sailing vessels and in the placement and proportions of landmarks and buildings in coastal scenes. The former problem is largely a consequence of major changes to sailing ship rigs and their details following the Civil War; many older vessels were rerigged by the time they were photographed, hence their rigging leads and hardware were no longer reliable. In many such cases, the correct question to ask is: what did Lane know about local rigging methods that we don't? The latter problem is often one of artistic license, and Lane is no more guilty in this respect than his



cat. 44. *Baltimore Harbor*, 1850, oil on canvas, 23<sup>15</sup>/<sub>16</sub> x 36<sup>1</sup>/<sub>8</sub> in. [private collection]

contemporaries. The fact that so many of these differences are detectable and explainable from the viewpoint of artistic composition or a customer's wishes is ample ground for excusing them.

If critics cannot concede photographic precision to Lane's drawing, it is certainly very close to that—closer than Bradford's or Buttersworth's, and equaled in this country only by

Salmon's. We would have to resort to European masters like Huggins, Cooke, Mozin, and the Roux to find depictions of ships and harbors that some might fancy as being technically, if not esthetically, better. On balance, the evidence is compelling: Lane left an accurate and detailed pictorial record of the maritime world he witnessed.



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