# *American Drawing Books and Their Impact on Fitz Hugh Lane*

ELLIOT BOSTWICK DAVIS

SELF-TAUGHT ARTIST Fitz Hugh Lane (1804–65) earned accolades during his own lifetime and, after being rediscovered during the second half of this century, is now generally acknowledged as one of the foremost American marine painters. The means and methods by which Lane—and presumably other aspiring American artists in the Northeast—taught themselves to draw, however, has not been adequately understood. The extent to which Lane's most successful marine paintings show that he was familiar with contemporary drawing practices published in drawing books is explored below. An examination of Lane's sketches and paintings suggests that he assimilated information readily available in contemporary American drawing books to develop his own unique style.

Lane's early life and artistic training in Gloucester remains uncharted territory. He was born in Gloucester in 1804 and probably attended the Gloucester district school,[1] where he may have

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1. John Wilmerding, *Fitz Hugh Lane 1804–1865. American Marine Painter* (Salem, 1964), 10. Although it is likely that Lane did attend the local common school, there is no

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initially encountered formal drawing lessons in the course of learning geometry, a skill that involved drawing the basic geometric shapes of triangles, squares, and circles and that was largely devoted to solving practical problems. At least one extant nineteenth-century geometry notebook that belonged to David Bailey, a student at the district school in the fishing community of Dunster, Massachusetts, demonstrates how geometry lessons relied upon basic drawing skills to solve practical problems. In order to determine how to sail in different winds to precise locations, Bailey painstakingly constructed various angles and triangles in his copybook.[2] Lane may have been introduced to drawing through similar lessons taught in the Gloucester school, and he may have been inspired to augment basic geometric drawing instruction with the study of fishing vessels sketched from life in and about Gloucester harbor.

Because attitudes of the residents of Cape Ann proved no exception to those held in the United States regarding a career in the fine arts, the young Lane may have felt compelled to pursue a practical avocation as a shoemaker. When he soon realized, however, that he could 'draw better than he could make shoes,'[3] he began to nurture his creative talents. The local Gloucester printer, W. E. P. Rogers, eventually recognized Lane's artistic ability, and he recommended the aspiring artist to William S. Pendleton, owner of the lithographic firm in Boston where Lane would pursue his formal training.

Eagerly embarking on his new avocation and the opportunities afforded at Pendleton's shop, Lane received his introduction to the professional art world. Unlike Philadelphia and New York, Boston did not have an academy of art until the last third of the nineteenth century; thus apprenticeships at commercial printing

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record of his name on the school rosters preserved in the archives of the Town of Gloucester.

2. For a reproduction of one of the pages from the copybook, see Elliot Bostwick Davis, *Training the Eye and the Hand: Fitz Hugh Lane and Nineteenth-century Drawing Books*, Exh. cat. (Gloucester: Cape Ann Historical Association, 1993), Fig. 3.

3. John Wilmerding, *Lane*, 11.

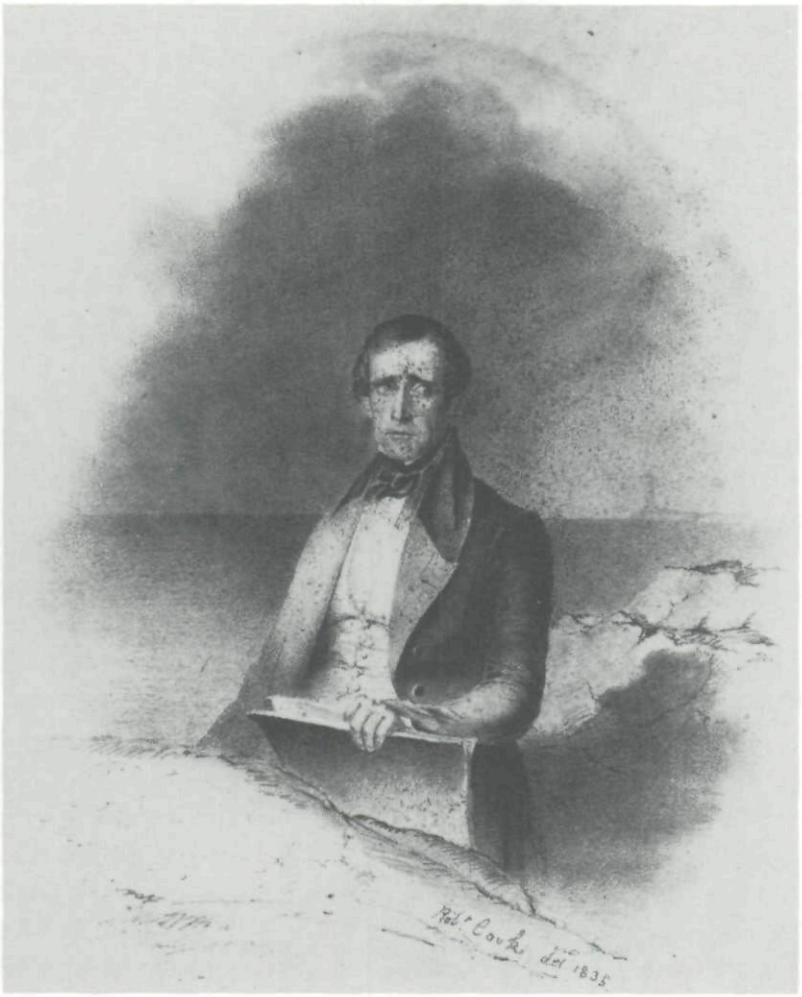



Fig. 1. Robert Cooke, *Portrait of Fitz Hugh Lane*, 1835. Graphite, 8⅝ x 7⅝ in. (22 x 19.4 cm.). American Antiquarian Society.

firms functioned as important training grounds for young artists. One of his colleagues at Pendleton's, Robert Cooke (c. 1810–43), produced a highly finished pencil drawing of Lane (fig. 1)—presumably executed while the two artists visited the Gloucester

coast together—and several proficient anatomical drawings now in the collection of the American Antiquarian Society. Surrounded by artists who upheld the high level of draughtsmanship practiced at Pendleton's, Lane nevertheless held his own. Recalling Lane's technical proficiency during his apprenticeship at Moore's, the successor to Pendleton's, his colleague Benjamin Champney (1817–1907) observed: 'F. H. Lane, afterwards well-known as a marine painter, did most of the views, hotels, etc. He was very accurate in his drawing, understood perspective and naval architecture perfectly, as well as the handling of the vessels, and was a good all-around draughtsman.'[4] Although Lane thrived on the comradery at the Pendleton-Moore atelier where he worked between 1833 and 1840, he would have recognized that opportunities for systematically acquiring artistic instruction were sorely lacking. If Lane wished to consult drawing books as alternative sources for learning the rudiments of an artistic education, he would have needed to glance only as far as his colleagues' easels. Many of the artists whom David Tatham traced to the Pendleton-Moore shop during Lane's tenure there created their own drawing books. For example, Thomas Edwards wrote *Juvenile Drawing Book* (1830), Benjamin F. Nutting later produced small packs of drawing cards for children that reproduced successive drawing lessons printed on a series of cards, and Rembrandt Peale wrote *Graphics*, which would later appear in at least four editions and at least fourteen printings.[5] Although John Rubens Smith did not actually work at Pendleton's, one of his drawing instruction books was produced there during the 1830s.[6]

Bolstered by his experience at a major lithographic firm, Lane was confident enough of his abilities to list himself in the *Boston*

4. Benjamin Champney, *Sixty Years' Memories of Art and Artists* (Woburn: Benjamin Champney, 1899), 10.

5. For information on the locations of the aforementioned drawing books and drawing cards, see Janice G. Schimmelman, *American Imprints on Art Through 1865: Books and Pamphlets on Drawing, Painting, Sculpture, Aesthetics, Art Criticism, and Instruction* (Boston: G. K. Hall and Co.), 1990.

6. David Tatham, 'The Pendleton-Moore Shop, Lithographic Artists in Boston, 1825–1840,' *Old-Time New England* (LXII, No. 2): 40.

*Almanac* of 1844 as a marine painter. Lane declared his professional status as the influence of the Hudson River School of American landscape painters exemplified by Thomas Cole (1801–48) was waning. Discouraged by his inability to attract American patrons for his ambitious, European-inspired landscape narratives, Cole expressed his disappointment with American attitudes towards the fine arts. He observed that: 'We are too young and too poor for the patronage of the Fine Arts to any extent is a common remark; but it is not a true one. We are old enough to build magnificent steam boats and decorate them with a perishable splendor that vies in costliness with the superb palaces of Europe.'[7]

Although contemporaries, Cole and Lane would later epitomize distinctly different generations of American landscape painters; nevertheless, Lane undoubtedly would have agreed with Cole's assessment of Americans' attitudes toward the fine arts. Lane, however, may have turned Americans' preoccupation with technology and their pragmatic approach to drawing to his own advantage. Cape Ann merchants appreciated Lane's accurate depictions of vessels engaged in the shipping and fishing industries that had kept their fortunes afloat, and readily patronized his ship portraits and marine scenes. Clarence Cook, who wrote a review of Lane's works in *The Independent* in 1854, observed: 'His pictures early delighted sailors for their perfect truth. Lane knows the name and place of every rope on a vessel; he knows the construction, the anatomy, the expression—and to a seaman every thing that sails has expression and individuality—he knows how she will sail under this rig, before this wind; how she looks seen stern foremost, bow foremost, to windward, to leeward, in all changes and guises; and, master of detail, he has earned his money thus far mostly painting "portraits" of vessels for sailors and owners.'[8]

7. Thomas Cole, *Lecture*, paginated in Cole's hand, 13. The New York State Library at Albany in the Archives of American Art/Smithsonian Institution, New York, Roll ALC-3.

8. Clarence Cook's article is quoted in William H. Gerdts, '"The Sea is His Home": Clarence Cook Visits Fitz Hugh Lane,' *American Art Journal* XVII, No. 3 (Summer 1985): 48–49.

In distinguishing Lane's compositions, with their distinctive horizontal design complementing balanced arrangements of sailing vessels, from those of the earlier generation of Hudson River School artists such as Cole, John Baur was the first to associate Lane with a 'luminist' style in nineteenth-century American landscape painting.[9] Scholars have since noted Lane's affinities with works by self-taught American artists sometimes known as 'folk artists,' or as I prefer to call them, limners, who learned to draw from drawing books.[10]

Lane exemplifies the claim made by John Gadsby Chapman on the frontispiece of *The American Drawing Book* (1847): 'Anyone who can learn to write can learn to draw.' Chapman's text eventually became the most popular drawing book in nineteenth-century America, where approximately 145,000 copies of drawing books were in circulation between 1820 and 1860,[11] a period that nearly spans the decades of Lane's active career. Given that 'how to' manuals for drawing were readily available, the resemblance of Lane's works to those of self-taught artists, particularly a certain conceptual approach to depicting landscape, may be attributed in part to his reliance upon drawing books. Regardless of the level of artistic instruction to which an artist aspired in nineteenth-century America, drawing books were readily accessible to professional artists, amateurs, and limners alike and undoubtedly contributed to their formation. Since Lane did not travel abroad in search of further instruction by copying the works of the great European masters—as Clarence Cook lamented in his review—drawing books undoubtedly provided him with rudimentary instruction. Limners clearly had an economic incentive to rely on drawing books. Joseph Whiting Stock (1815–55), who was active

9. For an overview of the Luminist style, see Barbara Novak, "On Defining Luminism," John Wilmerding, "The Luminist Movement: Some Reflections," and Theodore E. Stebbins, Jr., "Luminism in Context: A New View," John Wilmerding, ed., *American Light. The Luminist Movement 1850–1875* (Washington, D.C.: The National Gallery of Art, 1980).

10. See Barbara Novak, *American Painting of the Nineteenth Century. Realism, Idealism, and the American Experience* (New York: Harper & Row, 1979), 99–100.

11. Peter C. Marzio, *The Art Crusade. An Analysis of American Drawing Manuals, 1820–1860* (Washington, D.C.: Smithsonian Institution, 1976), 1.

during Lane's lifetime, owned Charles Davies's drawing book *Treatise on Shades and Shadows* (1832), which allowed him to apply shading to his portraits so as to command more from his clientele.[12] Similarly, drawing books could assist Lane in creating pleasing compositions and accurate arrangements of sailing vessels on the open ocean which would appeal to his patrons who, in turn, may have been schooled to appreciate his rendering of perspective through the methods disseminated by drawing books.

Nineteenth-century American drawing books trace their ancestry, ultimately, to the thirteenth-century medieval pattern books of Villard d'Honnecourt. Unlike a pattern book, which provided a repertoire of patterns for an artist or artisan to copy exactly, a drawing book served to instruct artists in how to draw through both illustrations and an accompanying text. During the late eighteenth century in Britain, the popularity of drawing as a genteel pastime encouraged amateur draughtsmen to copy from print portfolios as the first step in learning to draw. British portfolios such as William Austin's series of plates entitled *A Specimen of Sketching Landscape* (1781) were accompanied by a page of introductory text, whereas John Martin's *Character of Trees* (1817) reproduced several plates of different species. As the demand for instruction in landscape drawing grew during the nineteenth century, print portfolios swelled to include more extensive written instructions, and the forerunners of nineteenth-century American drawing books were born. Although nineteenth-century drawing books produced in the United States drew from Italian, French, German, and Spanish sources, British drawing books had the greatest impact. Like their British counterparts, the majority of American drawing books were devoted to teaching artists how to render landscape; moreover, the British texts which served as models for American drawing books did not require translation; therefore the works could be rapidly pirated and put into circulation with minimal effort on the part of American publishers and booksellers.

12. See Elliot Bostwick Davis, *Training the Eye*, Ph.D. diss., 284–85.

The techniques described in British landscape drawing books were readily grafted by American artists onto a long tradition of mapmaking and surveying that had thrived in the 'New World' out of necessity. Just as Michael Baxandall considered contemporary practices of barrel gauging or mathematical games to have a significant impact on fifteenth-century painting in Italy,[13] so the appreciation of works produced by American painters and draughtsmen was conditioned in part by the value society placed on the skills of rendering vast tracts of land in perspective.[14] Early nineteenth-century educators in the United States evidently regarded surveying and rendering accurate maps as skills important to a society attempting to impose Western order upon the uncharted landscape surrounding them, and accordingly, American drawing books often included sections on surveying. Reporting on the primary-school system instituted in Maryland in the late 1820s, the *American Journal of Education* published in Boston had this to say about the importance of surveying: 'it can hardly be necessary to enlarge upon its utility. In a country so essentially agricultural as ours, where almost every man has occasion to apply in practice the principles of surveying, some general knowledge of the art is important both for his interest and convenience. He ought to understand, at least in theory, the nature and use of the compass; the measurement of land by courses and distances; and the computation of areas on the most improved methods.'[15]

The young Fitz Hugh Lane no doubt learned to improve his draughtsmanship skills by putting the techniques of mapmaking and surveying to work. Lane executed drawings out of doors in a way that essentially surveyed the landscape in small segments. In

13. Michael Baxandall, *Painting and Experience in Fifteenth-century Italy. A Primer in the Social History of Pictorial Style* (New York: Oxford University Press, 1988), 29–108. I will be further analyzing the relationship of American drawing books to the emergence of a 'period eye' evident in the landscape, figural, and perspective drawings and paintings by nineteenth-century American artists in my forthcoming book.

14. Lisa Fellows Andrus, "Measure and Design in American Painting, 1760–1860," Ph.D. diss., Columbia University, 1977, and her subsequent essay, "Design and Measurement in Liminist Art," in Wilmerding, ed., *American Light*, especially, 40.

15. *American Journal of Education*, III (Boston, 1828): 147.

a drawing of *Castine from Hospital Island* (1855) now at the Cape Ann Historical Association, he pieced together six pages from his sketchbook to create one continuous drawing.[16] He very likely drew the scene before him, taking in as large a portion of the landscape as was possible on a single sheet of paper. When it was necessary to move on to the next sheet of paper, he carefully marked with an 'X' the exact place where the sheets joined to eventually form the entire length of the designated scene. After returning to his studio, he subsequently selected which portion of the continuous harbor view he would reproduce in print, just as he indicated on a section of his drawing of Castine, 'original of my lithograph.' Lane continued to utilize such an approach in his later work when he transformed a drawing into a painting.

Although Lane experimented in his early prints and drawings with the bird's-eye vantage point favored by British drawing books for its ability to capture the terrain below, as in his lithograph *View of the Town of Gloucester* (1836) and his drawing of *Majebigweduer Narrows from North Castine* (1855),[17] his works gradually shifted away from a sweeping panorama of the landscape to more restrained horizontal compositions. Such a shift in Lane's works may have been inspired by the landscapes published in such drawing books as the text written by Fielding Lucas, Jr., and illustrated by an anonymous amateur who has been identified as Benjamin Latrobe.[18] *Lucas' Progressive Drawing Book* (1827) was largely based on the text of a British drawing book by John Varley entitled *A Treatise on the Principles of Landscape Design; with General Observations and Instructions to Young Artists* (1816–21).[19] Lucas praised Varley's work as the 'best which has yet been published in

16. For a reproduction of *Castine from Hospital Island* see Elliot Bostwick Davis, *Training the Eye and the Hand: Fitz Hugh Lane and Nineteenth-century Drawing Books*, figure 11.

17. For reproductions of both works, see Elliot Bostwick Davis, *Training the Eye and the Hand*, figures 8 and 10, respectively.

18. The identification of Benjamin Latrobe is made by John W. Foster, 'Fielding Lucas, Jr., Early 19th Century Publisher of Fine Books and Maps,' *Proceedings of the American Antiquarian Society* 65 (October 1955): 161–210.

19. Martin Hardie, *Water-colour Painting in Britain, Vol. II, The Romantic Period* (London: B. T. Batsford, Ltd., 1966), 101. For a discussion of Fielding Lucas, Jr., see Foster, 'Fielding Lucas, Jr.,' 161–211.

England'[20] and excused his reliance on Varley for the simple reason that he intended to be instructive rather than original. Landscape painters in the United States undoubtedly appreciated Lucas's adaptation of the British drawing book to an American audience; he claimed that in order for his drawing book to have an even greater interest than it would as a British reprint and to stamp it with a national character, he included sixteen hand-colored aquatints of American views taken from original sketches by Latrobe.[21]

Two of the plates from Lucas's drawing book, a view of the 'Susquehannah River Above Havre de Grace' and 'Scenery on the Hudson,' bear a striking resemblance to Lane's painting of *Bar Island and Mount Desert Mountains from Somes Settlement* (Erving and Joyce Collection, 1850).[22] In *Bar Island*, Lane envisions a sliver of foreground anchored by an upturned boat in the lower left corner, which together complement the vertical sails and hills in the scenery beyond in a manner similar to that of Lucas's depiction of the Susquehannah. The composition of Lucas's 'Scenery on the Hudson,' which leads the viewer into depth by placing a standing figure on the shore, two figures wading into the water, and vertical masts in the middle and backgrounds is also similar to the arrangement Lane created in his scene of *Stage Fort Across Gloucester Harbor* (1862, Metropolitan Museum of Art). Another plate from Lucas's drawing book, 'View on the Susquehannah' (fig. 2), depicts a solitary figure balancing a staff on his shoulders as he stands on a promontory of dark rocks with his back to us and appears to contemplate the tranquil harbor. Lane selects a similar composition for his scene of *Owl's Head, Penobscot Bay, Maine* (1862, fig. 3), in which a single figure balancing a staff also stands with his back to the viewer as he surveys the calm waters of the Maine inlet.

20. Fielding Lucas, *Lucas' Progressive Drawing Book* (Baltimore, 1827–28), 5.

21. Lucas, *Progressive Drawing Book*, vi.

22. For reproductions of illustrations from *Lucas' Progressive Drawing Book* see Elliot Bostwick Davis, *Training the Eye and the Hand*, figures 18 and 19, respectively. For an illustration of *Bar Island and Mount Desert Mountains from Somes Settlement*, see John Wilmerding, *Paintings by Fitz Hugh Lane* (Washington, D.C.: National Gallery of Art, 1988), catalogue 50.

Fig. 2. Benjamin H. B. Latrobe, 'View on the Susquehannah,' *Lucas' Progressive Drawing Book*, Plate x (Baltimore: Fielding Lucas, Jr., 1827). Etching and aquatint with hand coloring. 8¾ x 11 in. (22.2 x 29.9 cm.). Metropolitan Museum of Art, New York, Department of Drawings and Prints, Transferred from the Library, Gift of Samuel P. Avery (42.105.20).

From the second part of Lucas's drawing book I have just described, Lane may have derived inspiration for his major paintings; however, the first part of *Lucas' Progressive Drawing Book* provided artists like Lane with a systematic approach to learning how to draw landscape scenery. Lucas's drawing book featured step-by-step instructions about how to draw species of trees. Accompanying Plate Five, for example, Lucas observes: 'We do not pretend to say that the leaves of the Poplar have the figure of three shape, which we have given them in the plate; that the Pine is a collection of sharp points round a circle, or that the Oak is composed of the diamonds which we have drawn for its leaves: but these characters, when joined together, as we have joined them in the plate, produce an effect, such as remind us of the trees

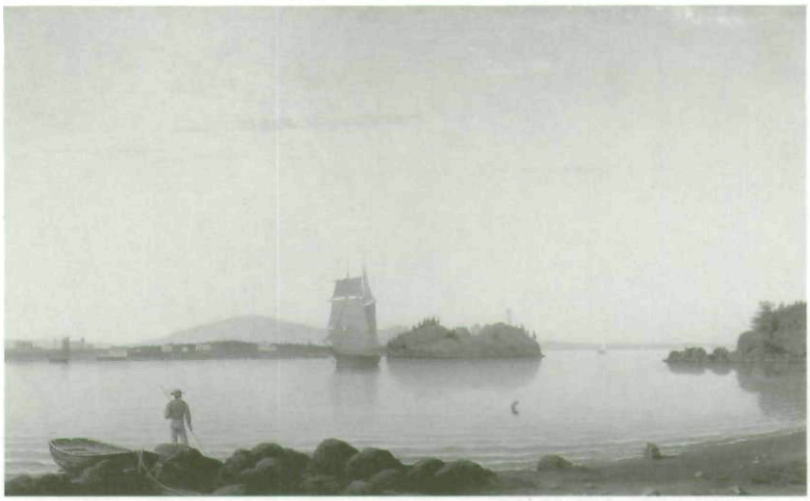


Fig. 3. Fitz Hugh Lane, *Owl's Head, Penobscot Bay, Maine*, 1862. Oil on canvas. 16 x 26 in. (40.6 x 66 cm.). Museum of Fine Arts, Boston, M. and M. Karolik Collection. Courtesy, Museum of Fine Arts, Boston.

they represent.'[23] An example of a typical landscape drawing by Lane, a pencil study of a single tree in the collection of the Cape Ann Historical Association, indicates that he was working in the manner Lucas describes. One cannot be certain that Lane learned techniques of differentiating tree species in the Gloucester scenery directly from Lucas's drawing book; he may well have known such approaches to drawing foliage from numerous contemporary American drawing books reproducing instructions similar to Lucas's, including *Drawing Book of Trees* (1841) by Benjamin H. Coe (fig. 4) or William Bartholomew's *Sketches from Nature* (c. 1855). Just how prevalent these techniques were in nineteenth-century America is shown in this sketchbook belonging to a young woman, Lucy Treadwell, who carefully copied the plates of Coe's *Drawing Book of Trees* (fig. 5).

In addition to *Lucas's Progressive Drawing Book*, the most influential drawing book published in the United States during

23. Lucas, *Progressive Drawing Book*, Explanations to Plate Five.

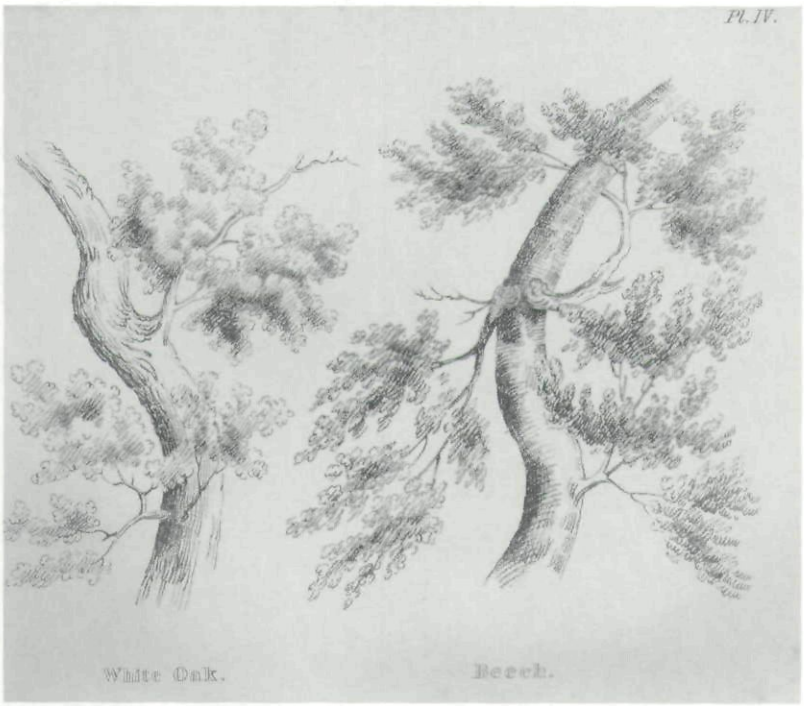



Fig. 4. Benjamin H. Coe, *Drawing Book of Trees* (Hartford: E. B. and E. C. Kellogg, 1841), Plate Four. Lithograph. 6¾ x 9⅛ in. (17.2 x 23.2 cm.). The Metropolitan Museum of Art, New York, Department of Drawings and Prints, The Elisha Whittelsey Collection, The Elisha Whittelsey Fund, 1954 (54.509.11).

Lane's career was John Gadsby Chapman's *The American Drawing Book*, which first appeared serially in 1847 and was reprinted well into the 1870s. Lane undoubtedly knew Chapman's drawing book if not by way of fellow artists or by browsing through bookstalls, then most likely through the Massachusetts Charitable Mechanics' Association, which sponsored annual exhibitions of industrial products and artistic works at Fanueil Hall in Boston. A hybrid of the art pavilions of European expositions and American country fairs, the Massachusetts Charitable Mechanics' Association exhibition was an extravaganza of arts ranging from taxidermy to decoupage to the latest industrial gadget. The fine arts section of

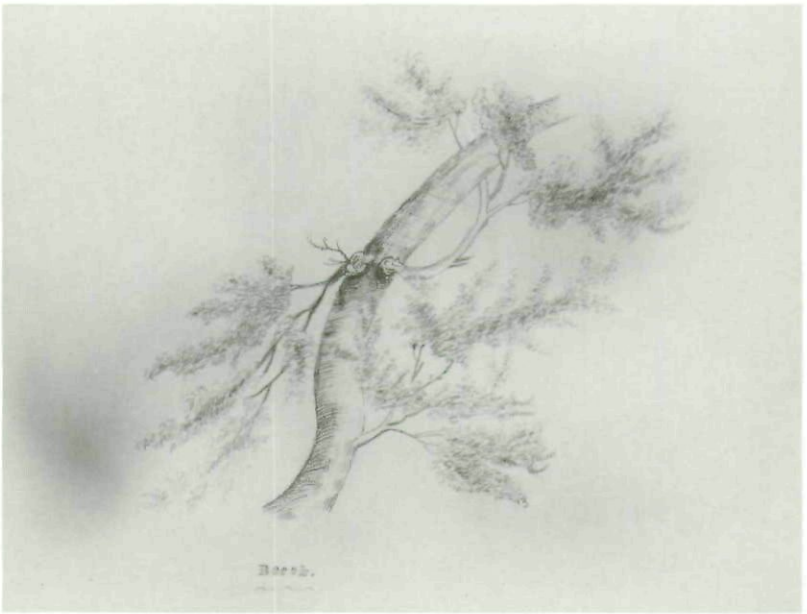


Fig. 5. Lucy Treadwell, *Sketchbook*, ca. 1844. Graphite. 9 x 11 11/16 in. (22.8 x 29.7 cm.). American Antiquarian Society.

1847, which was found lacking in quality, displayed one of Lane's paintings along with Chapman's *The American Drawing Book* and entries ranging from lead pencils manufactured in Concord to japanned furniture from Boston. Although Lane's submissions to earlier exhibitions were favorably judged, his current work was deemed weak in aerial perspective.

The committee's emphasis upon drawing skills and improved instruction may have inspired Lane to hone his skills in rendering aerial perspective by studying a drawing book like Chapman's. Lane could have resorted to Chapman's distinct and extraordinarily efficient means of rendering perspective utilizing proportional relationships. Chapman declared that it would be easier to create the illusion of a squared pavement and define every inch of it than it would be to impose a perspectival grid on the open

ocean, and yet he maintained that even marine scenes were subject to the laws of perspective.[24] There were only two constants in a marine scene—the horizon and the point of sight—from which the artist could generate proper perspective proportions. Chapman therefore instructed the artist to begin by drawing a horizontal line beneath the hull of one of the vessels and parallel to the horizon line (fig. 6). To determine the height of the vessel, a perpendicular line was then drawn from that horizontal line to the tip of the ship's mast, and being so drawn, the perpendicular established the vertical height of the ship. Having located the horizon line where the water meets the sky, the artist could fix the point of sight at any point on the horizon for the purpose of creating perspective. The artist then extended diagonal lines from the point at the top of the mast and at the base of the hull to meet the point of sight on the horizon line. The relationship of the diagonals drawn from the initial vessel and the point of sight determined a proportional scale on which the heights of the other ships floating on the calm sea could be ascertained. For example, if a ship four times the height of the initially-drawn vessel appears floating at the position indicated by the line FF in Chapman's illustration, then a perpendicular line extending from where the line FF intersects the lower diagonal to the upper diagonal will measure proportionally one length of the ship's height. To determine how tall the second ship must be to appear in proper perspective according to the vessel initially drawn, the artist then multiplied the perpendicular distance by four. The method could be repeated as many times as necessary to disperse ships of varying heights throughout the composition.

Lane's drawing of the *View in Gloucester Harbor* (fig. 7), which comprises three sheets of paper joined together, demonstrates that his method of rendering perspective indeed parallels the approach Chapman describes in *The American Drawing Book*. On the left panel of the drawing, a vessel appears on the calm water just off the rocky shore. Lane determines the height of that particular

24. John G. Chapman, *The American Drawing Book* (New York: J. S. Redfield, 1847), 144.

horizontal line through the point on which his leading figure stands, he takes the height of that figure (say six parts, or six feet), which, reduced to a scale on that line, gives all that he requires as a basis for after-operations. He must now decide upon the point of sight, which necessarily gives with it the line of the horizon, then the distance of the picture, etc. If he desires to tesselate the floor, for instance, lines drawn from the point of sight through the divisions on this horizontal line will repeat the scale as justly on the ground line and throughout the whole perspective plan of the picture as if he had begun as first suggested; the horizontal line first assumed, serving the practical purposes of a base line and with equal efficiency.

62. Again, as in the case of a view that it would be almost impracticable, if it were even necessary, to reduce to a measured perspective plan, we may select any one object which may be considered as a definite standard, and on such premises reduce all other objects and details into perfect perspective harmony, by means most simple and easy. In the case before us, it would be as difficult as unnecessary to draw a geometrical plan. It is easier to tesselate a pavement and define every inch of it than to tesselate the traceless ocean, and yet do objects floating on its calm or disturbed surface come as equally within the government of the laws of perspective. Here we have all our lines of operation and verification to assume, except our line of the horizon and point of sight. Whichever object we select as our standard, if it be the sloop (D) nearest to us, for instance, we take its full height by a perpendicular from its vane to a central point between the water lines which mark its floating position on the perspective plane of the picture (61), and connect the extreme points of this perpendicular with the point of sight. We next decide upon the position of the ship (A) by the line F F. Supposing the ship (A) to be *three* times the height of the sloop (D), a perpendicular elevated anywhere on the line F F three times the height that the sloop would be if she were perspectively on that line (F F), will give the true height of the ship as exemplified; for it is evident that if the sloop were at the same distance as the ship (A), that is, on the line F F, her height would appear as indicated—a b—etc. Again, still more remote from us, let us suppose another ship (D) *four* times the height of the sloop, the horizontal line o o expressing that distance. By a like process do we attain the height of the ship D under such circumstances; while another ship (H), still more remote, supposed to be of the same height as A, may be thus equally, and by a similar method, brought into true

Fig. 6. John G. Chapman. *The American Drawing Book* (New York: J. S. Redfield, 1847), 144. Engraving. 12 x 9 1/2 in. (30.5 x 24.1 cm.). The Metropolitan Museum of Art, New York, Department of Drawings and Prints, Harris Brisbane Dick Fund, 1954 (54.524.2).

Fig. 7. Fitz Hugh Lane, *View in Gloucester Harbor*, 1850s. Graphite. 9 1/2 x 34 3/4 in. (24.1 x 88.3 cm.). Cape Ann Historical Association, Gloucester, Massachusetts. Gift of Samuel H. Mansfield.

ship by creating a vertical line at the seam where the left and center panels of the drawing join. As Chapman instructs, the artist could begin to generate perspectival relationships by establishing any vertical line of known length which would then act as a constant. Consistent with Chapman's description of selecting a vertical and a point of sight, Lane draws two diagonal lines which meet the horizon line. From that triangular area in the central panel of the drawing, all the proper perspectival relationships for the scene could be generated. Lane establishes the height of the vessel he has drawn at the left by demarcating the base of the ship's hull with two horizontal lines, just as Chapman specifies.[25] Having established horizontal lines at either side of the boat's hull touching the lower diagonal, Lane draws a perpendicular line to the upper diagonal. In his *View of Gloucester Harbor*, that distance between the two diagonals is equal to the height of the vessel at the left, and Lane casts horizontal lines from the upper and lower points of the appropriate diagonal over to the left to determine the proper perspective of the sailboat. In rendering perspective, Chapman also notes that he presumes the vessels float on tranquil water in order for the proper proportional relationships to be determined accurately; Lane similarly chooses to render his vessels in the *View of Gloucester Harbor* on a becalmed inlet. With respect to the tranquil state of water, Chapman's method is indeed prac-

25. Chapman, *American Drawing Book*, 145.

Fig. 8. Fitz Hugh Lane, *Gloucester Harbor from Rocky Neck*, 1844. Oil on canvas. 29½ x 41½ in. (74.9 x 105.4 cm.). Cape Ann Historical Association, Gloucester, Massachusetts. Gift of Jane Parker Stacy in memory of George O. Stacy.

tical and efficient in establishing perspective heights without the elaborately constructed perspectival grid, which, as he observes, is impossible to create upon the surface of a vast ocean.

Several of Lane's oil paintings further suggest that the same techniques of constructing perspective underlie his finished works as well. In a work such as Lane's *Gloucester Harbor from Rocky Neck* (1844, fig. 8), which was painted before Chapman published the first edition of his drawing book, the arrangement of vessels on the water conjures up a scene of toy boats navigating a pond. By the mid-1850s, however, well after Lane may have encountered Chapman's drawing book at the Massachusetts Charitable Mechanics' Association exhibition in 1847, Lane clearly mastered the rendering of ships in perspective. Two major oils depicting *Boston Harbor at Sunset* (c. 1850–55; Museum of Fine Arts, Boston, fig. 9, and Collection of Jo Ann and Julian Ganz, Jr.), for

Fig. 9. Fitz Hugh Lane, *Boston Harbor at Sunset*, 1850–1855. Oil on canvas. 26 1/4 x 42 in. (66.7 x 106.7 cm.). Museum of Fine Arts, Boston, M. and M. Karolik Collection, by exchange. Courtesy, Museum of Fine Arts, Boston.

instance, derive their extraordinary symmetry and balance from Lane's ability to create an engaging arrangement of vessels on calm water. One can certainly imagine Lane constructing the relative heights of the vessels in *Boston Harbor at Sunset* (fig. 9) by casting diagonals from the height of the tallest ship down to meet the point of sight on the horizon line just as Chapman describes. In the Boston Harbor pictures as well as *Gloucester Harbor at Sunset* (late 1850s, private collection[26]), Lane disperses vessels along diagonals leading the spectator to the horizon line in a way that bears a striking formal resemblance to the illustration for Chapman's discussion of how to render perspective in a marine scene.

Chapman's discussion of perspective allows that the point of sight could be fixed arbitrarily on the horizon line. The role that the point of sight played in rendering perspective, however, was

26. For an illustration of *Gloucester Harbor at Sunset*, see Elliot Bostwick Davis, *Training the Eye and the Hand*, figure 27.

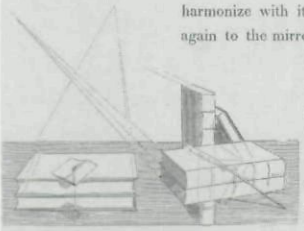
integral to the importance of training the eye through nineteenth-century drawing instruction. Educators stressed above all that the eye was the most important of all five senses in learning and processing new information. In the *Connecticut Common School Journal* of 1842, for instance, educators claimed that students should shrug off knowledge acquired by other means and should be told that 'in order to draw correctly, he must accustom his eye to see things as they are presented to it by Nature; that is, as the infant sees them.'[27] Although Americans trusted such tools as the rule and compass to verify drawing accuracy, the majority of drawing books as exemplified by Rembrandt Peale's *Graphics* adamantly stated that the 'compasses should remain in the eye.'

Lane's drawings housed at the Cape Ann Historical Association indicate that he judged distance by eye rather than by submitting the scene before him to the rule or compass. In depicting scenes of the Gloucester Harbor and Penobscot Bay, Maine, Lane frequently oriented himself by drawing vertical lines at intervals along several sheets of paper joined together to comprise a long, panoramic view. The lines may appear as though they were measured exactly in a work such as *Camden Mountains from the South Entrance to the Harbor* (1855, Cape Ann Historical Association), however, when measured against the ruler, they are drawn at irregular intervals suggesting that the artist approximated the distances by eye. None of the extant Lane drawings at the Cape Ann Historical Association reveals traces of the compass in rendering perspective, the alternative method which Chapman described in his drawing book, but which appears to have been eschewed by Lane.

Chapman further expands his discussion of perspective to describe how an artist should depict reflections. Describing still water as a mirror of the 'real' world (fig. 10), Chapman observes: 'Fortunately in our most frequent occasions to represent reflections, they are given back by a mirror, ever most true of all other

27. *Connecticut Common School Journal*, IV, No. 4 (Hartford: February 1, 1842): 39.

but of the reality, and the way is plain. To illustrate and verify this, place a mirror level on a table, and upon it any object that first comes to hand, a book, a pen, a letter, anything—the perspective direction of the lines of the reflection will be found perfectly to harmonize with its original, and its image perfectly inverted. Look again to the mirror on the mantelpiece or wall, and remark how perfectly the perspective of the objects presented by it responds to the originals. Should the glass be not perpendicular, an irregularity, as it were a general upsetting of everything, will be perceived; for thus the perpendicular plane of its picture is thrown out of harmony with nature, and all its lines follow. The same would be the case if the mirror were placed flat, but not perfectly level, with regard to all objects retaining their horizontal and perpendicular character, but the reflected images of those resting on its surface would still harmonize with their originals, in the degree of inclination of its plane, etc.



Fortunately, in our most frequent occasions to represent reflections, they are given back by a mirror, ever most true of all other objects to the level—Nature's mirror—not duplicating her perspective pictures, as presented to the eye, as if by a mere inverted tracing of their outlines, but with all the truth of an actually inverted image of the reality. Such objects as rise or occupy a position perpendicularly in reference to the mirror-like surface of the tranquil water, preserve their real proportions. Thus, the cliff that rises in an unbroken perpendicular above its base, throws its reflection to its full height; while that of the receding hill or distant mountain, although much higher, may scarcely be seen at all, though rising far above it—the boldness of the perpendicular cliff perspectively covering the inclined plane. If the point of observation could be placed exactly on a level with the water, then, and then only, would the real picture be repeated; but the slightest elevation of the point of view,

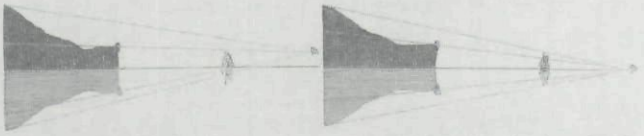
Fig. 10. John G. Chapman, *The American Drawing Book*, 167. Engraving. 12 x 9 1/2 in. (30.5 x 24.1 cm.). The Metropolitan Museum of Art, New York, Department of Drawings and Prints, Harris Brisbane Dick Fund, 1954 (54.524.2).

objects to the level—Nature's mirror—not duplicating her perspective pictures, as presented to the eye, as if by mere inverted tracings of their outlines, but with all the truth of an actually inverted image of reality.'[28] Regarding the rendering of reflections in a marine scene, Chapman notes that if objects rise perpendicularly above the surface of the 'mirror,' which is created by the surface of the tranquil water, the shapes of the objects will preserve their real proportions.[29] Chapman is explicit that there is only one instance in which the real picture of the object's projection above the water equals the height that the object is reflected in the water; that phenomenon exists if the point of sight is exactly at the level of the water (fig. 11). For Lane to replicate Chapman's interpretation of reflections on water and to view the scene exactly at the level of the water, he would have to adopt a frog's-eye view.

Departing from methods of creating reflections described in nineteenth-century European drawing books, Chapman's discussion of reflections suggests the influence of transcendental concerns in American culture. The eye was deemed the sense most important for receiving and interpreting information about the outside world by Ralph W. Emerson, who vividly describes in his essay 'Nature' (1836) how the eye surveyed the landscape and ultimately transcended nature through vision and contemplation. He proclaims that 'The lover of nature is he whose inward and outward senses are still truly adjusted to each other.'[30] In section three of the essay devoted to 'Beauty,' Emerson observes that: 'Such is the constitution of all things, or such the plastic power of the human eye, that the primary forms, as the sky, the mountain, the tree, the animal, give us a delight in and for themselves; a pleasure arising from outline, color, motion, and grouping. This seems partly owing to the eye itself. The eye is the best of all

28. Chapman, *American Drawing Book*, 145–46.
29. Chapman, *American Drawing Book*, 148–49.
30. Ralph W. Emerson, 'Nature,' reprinted in *The Portable Emerson*, ed. Carl Bode in collaboration with Malcolm Cowley (New York: Penguin, 1981), 17.

and consequently of the line of the horizon, above the level of the water, affects the general outline of everything reflected that is not perpendicular to the water's edge, as more fully demonstrated



in the annexed profiles, showing the perspective relations of the various elevations. In objects projecting over the water, as the beam in the example, the reflection will of course be naturally longer than the receding lines of the original. An arch may repeat its outer semicircle as perfectly in its reflection as it really is, and so may be also its more receding outline, but the archway itself is not perfectly duplicated. In the original we see less of its internal form than we do in the reflection, for the elevation of our point of view enables us to see farther into the reflection than within the arch itself.

Although brought to a conclusion of this chapter without having covered, as it may seem, the whole ground of perspective, the artist-student will find therein, if not a recipe for all his requirements, the elements and principles of the art sufficiently explained to enable him, upon their basis, to meet any difficulty that may be presented in the course of his practical operations. The fear of big books and elaborate treatises drive many a one from the pursuit of knowledge, and most of all, those devoted to the arts of design; whose restless spirits unwillingly bear the control of any established routine; unapt to delve in the mine of abstruse investigations, they hasten to conclusions; and, most fortunately, all their requirements of knowledge are progressive. Discovery and possession beget wants, and he who lives the longest, and knows the most, has more still to learn. In the next chapter it will come in place in some degree to review the subject of perspective as to its practical application in drawing and sketching from nature, when an opportunity will be presented of introducing at least more generally pleasing subjects for illustration than mere diagrams, (in which the author begs to acknowledge in advance the assistance with which he has been favored by many of his brother-artists, as well as the productions of those of other times), that can not fail to prove acceptable.

Fig. 11. John G. Chapman, *The American Drawing Book*, 168. Engraving. 12 x 9 1/2 in. (30.5 x 24.1 cm.). The Metropolitan Museum of Art, New York, Department of Drawings and Prints, Harris Brisbane Dick Fund, 1954 (54.524.2).

artists. By the mutual action of its structure and of the laws of light, perspective is produced, which integrates every mass of objects, of what character soever, into a well colored and shaded globe, so that where the particular objects are mean and unaffecting, the landscape which they compose is round and symmetrical.'[31]

Through his study of Chapman's *The American Drawing Book*, Lane's extraordinary compositions of the 1850s and 1860s, which have been revered by art historians for their particular qualities of balance, symmetry, and polished reflections on water that invite contemplation, give visual expression to Emerson's transcendentalism. The magic of Lane's works emanates from his ability to achieve equilibrium between his depictions of nature based on drawings rendered out-of-doors in front of the 'real' scene and his vision of the scene as he imagined it in his mind's eye, suspended in time. Although his seascapes seem at first glance to represent the Gloucester scenery with a high degree of verisimilitude, his awareness of Chapman's *American Drawing Book* may have inspired him to render the world around him in a particularly idealized way. In the *Western Shore with Norman's Woe* (fig. 12) reflections in the water are handled so masterfully that the viewer is confronted with an image that evokes both contemplation and disorientation of where the real land leaves off and the illusion of its reflection begins. By selecting a gently angled slice of the curved inlet at the Western Shore, Lane encourages the viewer to enter the composition at the lower left corner and to follow the inclined shore around to a diminishing spit of land leading back out to the horizon. Lane's viewpoint allows the spit of land to join the water's edge precisely at the horizon and to effectively extend the horizontal formed by the shore to the shape of the small island of Norman's Woe, which floats just off the coast. Above the gleaming surface of the calm water, the land swell of Norman's Woe assumes an abstract, two-dimensional shape, which appears to be gradually whittled down to a fine point. Lane may have ex-

31. Ralph W. Emerson, 'Nature,' 13–14.

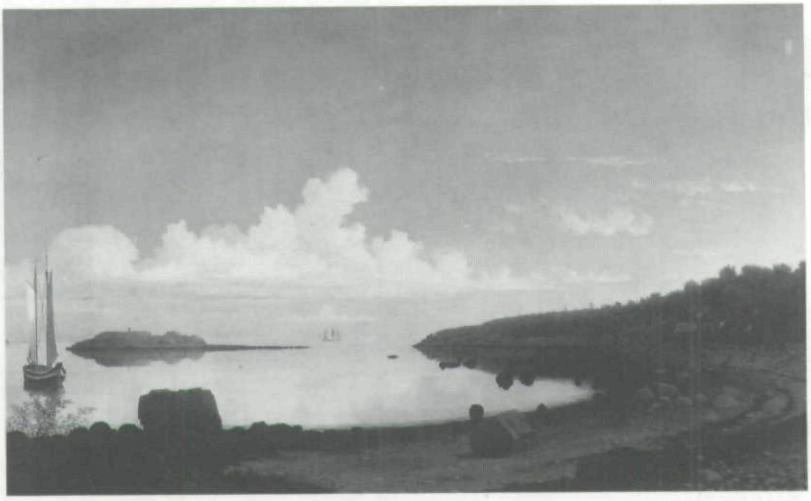


Fig. 12. Fitz Hugh Lane, *The Western Shore with Norman's Woe*, 1862. Oil on canvas. 21 1/2 x 34 1/4 in. (54.6 x 89.5 cm.). Cape Ann Historical Association, Gloucester, Massachusetts. Gift of Isabel B. Lane.

ecuted his drawings of the Gloucester coast in a small skiff, which would have placed his eye nearly at the water's level, yet his creative choice in selecting the point of sight at the level of the water nonetheless remains consistent with both Chapman's instructions and the image he envisioned in his mind's eye.

Other American artists would also take up the rendering of reflections in which the height that the land rises above the water is exactly equal to the reflection of the land in the water. John F. Kensett depicts such reflections in his view of *The Shrewsbury River* (1859, The New-York Historical Society), and Thomas Eakins creates similar reflections in his view of *Max Schmidt in a Single Skull* (1871, The Metropolitan Museum of Art). Winslow Homer would later experiment with rendering the frog's-eye view in his watercolor, *The Mink Pond* (1891, Fogg Art Museum).

Just as Emerson began with the empirical facts of nature and worked toward the spiritual through contemplation, so Lane's

viewpoint, placed at exactly the level of the water, balances in a perfect and timeless state an image of the real world based on his knowledge of topographical drawing and an image of the ideal world inspired by Chapman's discussion of rendering perspective. As Clarence Cook observed of the artist in 1854: 'The man who can comparatively late in life take up a new art, and without masters, without models, without great encouragement from without, can reach in fifteen years the point which Lane has attained, has true genius, and will make men acknowledge it. He has reached the point by patient hard labor, by the simple but severe method which genius always uses, and always used.'[32] And, as one might add to Cook's assessment, Lane reached that pinnacle of visual expression with a little help from nineteenth-century drawing books.

32. Gerdts, 'The Sea is His Home,' 49.