



THE DUKES COUNTY INTELLIGENCER

VOL. 42, NO. 4

MAY 2001

Woods Hole Historical Museum.



The Yale family home in Holmes Hole.
Etching is by Doctor Yale's son.

Leroy M. Yale,
Family Doctor
In Holmes Hole
1829 to 1849

By his son
LEROY M. YALE Jr.

Thoughts of the Doctor On Religion, Politics and Life

Vineyard Haven from Cat Hollow in 1880

An etching by Leroy M. Yale Jr.

Geology of Martha's Vineyard And the Elizabeth Islands in 1823

by EDWARD HITCHCOCK (1793-1864)

Whaling: The Vineyard Connection

Did "Overfishing" in the 1800s Decimate the Whale Population?

by EDWIN R. AMBROSE

MEMBERSHIP DUES

Student	\$25
Individual	\$45
(Does not include spouse)	
Family	\$60
Sustaining	\$100
Organization/Business	\$150
Patron	\$250
Benefactor*	\$500
President's Circle**	\$1000

Tax deductible except
for \$15, *\$25 and **\$35.

Printed at daRosa's in Oak Bluffs, Massachusetts.

CORRESPONDENCE

We are grateful to Thomas Hodgson of West Tisbury who wrote in response to our question in footnote 2, p. 138, in the February 2001 issue, to state that "artistical purposes" for the use of alcohol "are many, not the least of which is as a thinner for shellac and 'spirit-based' varnishes." The question arose over Henry Baylies's proposal at a Temperance meeting to ban the sale of "spirituous liquors, except for medicinal and artistical purposes."

Dale S. Collinson of Chevy Chase, Md., wrote about footnote 2 in the Innisfail article in the same issue. The footnote wonders why Howes Norris chose "Oklahoma" as the name of his proposed subdivision, adding that Oklahoma did not come into the news until 20 years after 1872. Reader Collinson, who was raised in Oklahoma and certainly knows more of its history than the Editor, disputes that statement, writing that Oklahoma was in the news much earlier, especially when the Federal government forced the settlement of scores of Indian tribes in the territory. We agree that the *area* was in the news much earlier, but the question is when did the name *Oklahoma* come into the news? During those post-Civil War years, it was, our research suggests, known as Indian Territory. We have a school atlas used in the 1860s and later and the word "Oklahoma" does not appear in it. Our dictionary of Civil War places doesn't mention Oklahoma. But even if the name had been in the news then, our question remains: Why did Howes pick "Oklahoma"? Why not "Lazy Lagoon" or "Peaceful Acres" or "Vineyard Rest"? Or some other more relevant name.

THE DUKES COUNTY INTELLIGENCER

Vol. 42, No. 4

© 2001 M.V.H.S.

May 2001

Leroy M. Yale, Family Doctor
In Holmes Hole from 1829 to 1849 151
By his son LEROY M. YALE Jr.

Thoughts of Dr. Leroy M. Yale
On Religion, Politics and Life 171

Vineyard Haven from Cat Hollow in 1880
An etching by Leroy M. Yale Jr. 172-3

Geology of Martha's Vineyard
And the Elizabeth Islands in 1823 186
by EDWARD HITCHCOCK (1793-1864)

Whaling: The Vineyard Connection

Did "Overfishing" in the 1800s
Decimate the Whale Population? 192
by EDWIN R. AMBROSE

Editor: Arthur R. Railton
Research Editor: Edwin R. Ambrose
Founding Editor: Gale Huntington (1959-1977)

The *Dukes County Intelligencer* is published quarterly by the Martha's Vineyard Historical Society (formerly the Dukes County Historical Society). Subscription is by membership in the Society. Copies of all issues may be purchased at the Society's library, Cooke and School Streets, Edgartown, Massachusetts.

Memberships to the Society are solicited. Applications should be sent to P.O. Box 1310, Edgartown, MA, 02539. Telephone: 508 627 4441. Fax: 508 627 4436. Author's queries and manuscripts for this journal should be addressed there also.

Articles in *The Intelligencer* do not necessarily represent the opinions of the Society or its officers. Every effort is made to confirm dates, names and events in published articles, but we cannot guarantee total accuracy.

ISSN 0418 1379

"I believe, Mother, that something is due that ship."

Leroy M. Yale, Family Doctor In Holmes Hole from 1829 to 1849

By his son Dr. LEROY M. YALE Jr.

THIS BIOGRAPHY of Dr. Leroy M. Yale (1802-1849) was written 100 years ago by his son, also a doctor. He wrote it for family members to record the life of his father, who practiced in Holmes Hole (now Vineyard Haven) from 1829, after graduating from Harvard Medical School, until he died in 1849 of typhus fever contracted while treating passengers sick with the disease aboard a transient vessel from Ireland.

The author of this biography knew his father only as a child as he was just nine years old when Doctor Yale died. Son Leroy was born in Holmes Hole in a house that was destroyed in the Great Fire of 1883. His widowed mother moved the family to Brooklyn in the 1850s so he could attend Columbia College in the class of 1862. He died in Quisset in 1906, only months after he retired. Some of his etchings are owned by the Woods Hole Historical Collection and Museum.

ON THAT AFTERNOON in mid-July of 1829 the old wharf at Holmes Hole was a pleasant enough lounging place for anybody who had the heart to lounge at all. But the row of boys sitting on the string piece and the two or three adults leaning against the pile heads considered themselves rather actively engaged.

It had already been well established that the "scups had come." Everyone knows that along shore the scup is the marine analogue of the bluebird or the dandelion in things aerial and terrestrial. Its appearance announces the arrival of summer. The group upon the wharf was occupied in verifying this great fact of nature and incidentally in catching supper.

Dr. LEROY M. YALE Jr., (1841-1906), a graduate of Columbia and Bellevue Medical School, specialized in obstetrics and children's diseases. An author and a well-known amateur artist, he was a founder and first president of the New York Etching Club.

MARTHA'S VINEYARD HISTORICAL SOCIETY

Robert A. Lunbeck, *President*
Hugh Knipmeyer, *Executive Vice President*
Judith Bruguere, *Vice President*
Christopher J. Morse, *Vice President*
Thomas Hale, *Vice President*
Catherine Merwin Mayhew, *Secretary*
Anthony K. Van Riper, *Assistant Secretary*
Warren Hollinshead, *Treasurer*
Frederick W. Kingsley, *Assistant Treasurer*
David B. Vietor, *President Emeritus*

Board of Directors

Judith LoRusso, Carroll Moshier, James B. Richardson III,
Edward W. Vincent, Donald W. Vose,
Lynne Whiting - 2001
Paula Conover, Craig Dripps, Mark Lovewell,
John M. Morgan, James Powell 2002
Malcolm Goodridge, Townsend R. Morey, Jr.,
Mark A. Snider, Joseph E. Sollitto Jr., Peter B. Van Tassel,
Elizabeth St. John Villard -- 2003

Honorary Directors

Charlotte Hall Stanley Murphy John A. Howland
Kenneth A. Southworth III Frederick Williams

STAFF

Matthew Stackpole, *Executive Director*
Jill Bouck, *Chief Curator*
Dana Costanza, *Assistant Curator*
Candice Hogan, *Associate Director, Operations*
Linsey Lee, *Curator of Oral History*
Marie Connelly, *Office Manager*
Peter B. Van Tassel, *Archivist/Librarian**
Catherine Merwin Mayhew, *Genealogist**
Dorothea R. Looney, *Registrar**
Arthur R. Railton, *Editor**
Edwin R. Ambrose, *Research Editor**

* Unpaid volunteer

The fishing, however, was not so pressing as to preclude conversation. In that old Federalist town of Tisbury, politics were rarely in a very acute state, owing to the usual absence at sea of a great part of the voting population. Of late it had felt those influences which had brought General Andrew Jackson to the Presidency and Captain Billy and his neighbors on the wharf had exchanged a few perplexed observations regarding the newly promulgated theory of the distribution of spoils and had wondered who in the country would benefit by it. Their interest was rather academic as they well knew that no offices were coming to them.

In the intervals between nibbles their eyes swept the harbor mouth, the Hedge Fence, and the horizon beyond with that unconscious scrutiny common to seafaring men and to hunters. Sloops and schooners and an occasional brig, helped along by the west tide, cleared East Chop and danced across to West Chop, the wings of that watery stage, and disappeared.

The semaphore on the eastern point¹ hung its arms idly as if enjoying the mild atmosphere and soft fleecy clouds. Uncle Billy and his mates returned occasional remarks of identification or surmise regarding the passing craft: the *Rogers* from Saco; the Boston packet southbound; and other craft, all part of the pageantry of that by-gone coastwise trade.

Presently the head sail of a craft showed over East Chop. All hands were alert, for they knew the hoist of her jib. "There's Cap'n Bijah," said one and all agreed. "He's made time this trip." "Yes, leadin' breeze today and smooth enough for Jimmy Godfrey,"² and so on for all the rest of it.

Cap'n "Bijah" [Abijah Luce of Holmes Hole] ran a weekly packet to Boston, going up around the Cape in the early part of the week and returning in time to spend Sunday at home. His craft furnished the chief freight transportation between the little port and the great city.

"John Henry," said Cap'n Billy to one of the boys, "you just run up to Squire Hillman's and tell him Cap'n Bijah's comin'. Perhaps the new doctor's aboard and he'll want to know."

¹ A semaphore station on East Chop, newly built, signalled passage of vessels to a station at Woods Hole that relayed the news elsewhere before the telegraph.

² Does any reader know the meaning of this reference: "Jimmy Godfrey"?

Fishing was suspended as Cap'n Bijah made up to the wharf and got a line around a spile. Presently there had collected on the wharf quite a little company: shopkeepers expecting goods; people who had charged Cap'n with commissions in town; and the whole contingent of Athenian-minded¹ citizens. Each transacted his business as best he might. When a lull fell, Squire Hillman and one or two companions, who had stood a little aloof, stepped up to Cap'n Bijah, who turned to his passenger, sitting upon the companionway watching the commotion of arrival and enjoying the beauty of the harbor and the rather quaint village along its shore, and introduced him to the Squire as "Doctor Yale."

He was a young man of good height and bulk, erect but sparsely built. He was evidently a town dweller, his pale skin showing the sunburn of the voyage. His hair was of a rather dark brown, his "regulation" whiskers decidedly reddish, his eyes large and very blue, his shaven upper lip rather long for beauty, his mouth firm, as was his chin which was deeply dimpled.

A short walk through the sandy streets brought him to the Mansion House⁴, in which he was presently installed in the usual comforts of a rural inn.

The little village had a custom – perhaps it was not an uncommon one – of calling a physician with something of the formality that attended the call of a pastor. Just now the community had been disturbed to discover that it was to lose its medical man. He (Dr. Daniel Fisher) had been with them not so very many years, but by his energy, uprightness and efficiency, he had made himself valued. But he was to marry and the lady⁵ had persuaded him to remove to the village [Edgartown] where she resided and where an opening seemed to offer itself. It was not very remote but too far for this village to depend upon its medical men and a new resident must be secured.

To this end, a meeting was called. Not only was a physi-

¹ A reference to Boston's historic claim of being the Athens of America?

⁴ The Mansion House, which also was destroyed in the Great Fire, was on the site of today's Tisbury Inn on Main Street, Vineyard Haven.

⁵ The lady was Grace Coffin, 28, daughter of Timothy and Zaraida Coffin. Dr. Fisher was 29. They were married in September of that year. One of their children, born the year after Doctor Yale died, was named Leroy Yale Fisher. The handsome Dr. Fisher House on Main Street, Edgartown, was their home.

cian desired but one of some quality. So a committee was appointed which should write to the Medical Faculty of Harvard College stating the probable value of the practice and asking that there should be sent to it the man of the best qualifications and character who should be willing to undertake it. On the whole a very clever method of protecting their community from incompetence and charlatanry.⁶

I have been told that this meeting was held just after the young medical man arrived on this little trip and that Cap'n Bijah seized the opportunity to tell the meeting that he had with him a passenger, a Mr. Yale, who had just passed satisfactorily his examination at the Harvard Medical School. He had boarded, Bijah said, during his pupilage with Miss Daggett, whom they all knew. Miss Daggett was a Vineyard woman who resided in Boston where she kept a boarding house, which was also a house of call for all Vineyarders going there. On his frequent visits, Cap'n Bijah himself had often met this young man and had been attracted to him. Miss Daggett praised him as a religious and orderly person. The tax of studies had rather worn upon the young man and Miss Daggett had persuaded him to make the round trip with Cap'n Bijah, while he waited for his degree at commencement.

I believe however that this story is a little erroneous and that the meeting & Cap'n Bijah's participation in it had been somewhat earlier and that the trip had been the results of some plans of Miss Daggett and the captain. For [among my father's papers] I find the certificate of a special examination for his degree on June 2nd, 1829, and also the following letter, written in the beautiful penmanship of those days, which plainly shows that his visit was anticipated. The letter is addressed to "Doc't. Yale at the boarding House of Miss Daggett, corner of Milk and Federal Streets, Boston," a part of that city which long ago ceased to contain residences:

Holmes Hole, June 20th, 1829

Dear Sir –

This day the Inhabitants of this Village held a meeting on the subject

⁶ We have a copy of minutes of a meeting held in Holmes Hole 20 years later when Doctor Yale died at which it was voted to send Thomas Bradley, Esq., to Boston "to obtain a suitable physician for this place." It also passed a motion "showing our sympathy with the family to Dr. Yale, recently deceased."

of the removal of Doc't. Fisher, at which meeting it was mentioned your having signified your design to make us a Visit at which meeting a committee were appointed to superintend this business and should you come, as they wish you may, to meet and bid you welcome. You will not take it amiss if I recommend your bringing your diploma and any other documents you may think proper. Should any circumstance necessarily delay your coming, in your answer to this you will be particular to state at what time we may expect you.

Most Respectfully yours,

Elijah Hillman, in behalf of the Committee

The young doctor evidently responded promptly in person. His professional memoranda show that he was already the village physician as early as July 1829. Among the "documents" which he probably took with him is a letter of commendation dated July 15th signed by Amasa Walker⁷ and five others, all presumably citizens of position in Boston. But as the Commencement did not occur that year until August 26th, his certificate of Examination had to serve until that time in place of the "diploma." In due time this was sent to him. I have it, still in its old blue-gray wrapper addressed "In care of Captain Abijah Luce."

So began the life of Dr. Leroy M. Yale on Martha's Vineyard. His letters show that he thought his residence there only a temporary arrangement. But there his life took root, there his hand found its work and there the weeping villagers laid him away when that work was done.

The young doctor had been rather a wanderer for a landsman in those days of little travel. He had been born in the Connecticut town of Meriden and his family seems to have been poor. His grandfather was Nash Yale. This Nash was a great-grandson of Thomas, the immigrant, from whom all Connecticut Yales descend and grandson of another Thomas, the next older brother of Elihu, who was Nash's great uncle. Elihu left America when he was ten years old. He never returned, had no sons, but as godfather to a university, he has become the best known of the race.⁸

⁷ Amasa Walker was a leading businessman in Boston at the time. Soon after, he joined the faculty of Oberlin College in Ohio, as professor of political science. Elected to several Massachusetts offices and the U.S. House of Representatives, he was a founder of the Free Soil Party, among other accomplishments.

⁸ The author does not explain why his father, a Yale, would choose to attend Harvard. Perhaps the reason was that the Yale Medical School was relatively young at the time, Harvard being much older and of greater prestige.

Nash Yale had two sons, Nash and Amerton, the latter getting his mother's maiden name as a given name. Sometime before 1780, Amerton married. In a few years, his wife died, leaving him with a son, Burrage, and a daughter, Lucy. On January 21, 1790, he married again, this time taking for his wife Mercy Scoville. To them were born seven children, the sixth of whom, born December 21st, 1802, the one whose tale I am telling, was given the name of Leroy Milton.

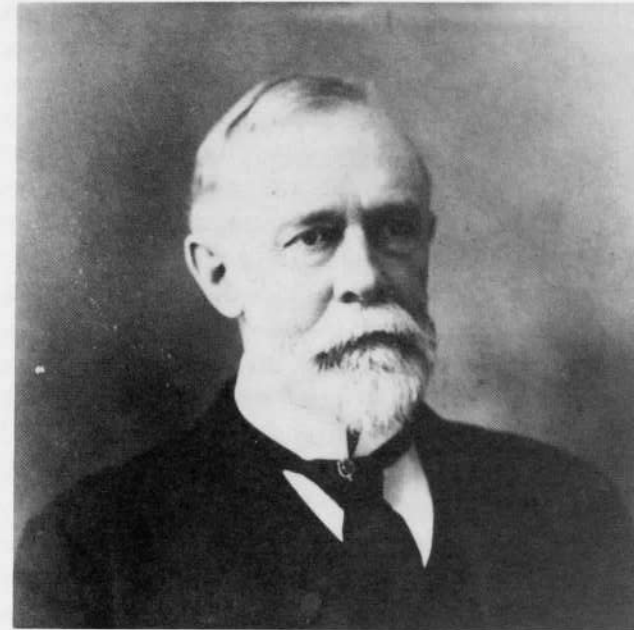
Before Leroy was five years old, on September 29, 1807, his father died. The widow was left with the five of their seven children who had survived. A few years later, just how many I do not know, but I think not above five, she married a certain George Jones, a widower with a family. This seems to have been not a fortunate "venture." I remember that the old lady, [my grandmother,] described him as "shiftless," not inappropriately as her first suspicion of his want of thrift seems to have been when a neighbor called to reclaim the shirt he had lent him for the marriage ceremony.

Some time after, she removed to New York state, [living] with her husband's family and also with some of her own kindred, the Scovilles. Of this part of her life I know little. She rarely spoke of it, seemed willing to forget it and preferred after coming to Martha's Vineyard to be called "Grandmother Yale."

In 1828, she had again become a widow and it is very probable that her residence with her relatives, the Scovilles, began then. I believe that all her children went to New York with her. One daughter married and died there. I do not feel entirely certain whether Leroy was with her or not, for I have very scant accounts of him before he went to live with his step-brother, Burrage. From a letter which he wrote in 1835 to his niece, Susan Hitchcock, it seems that he had been with his married sister, Myrenda Hitchcock, just previous to going to Burrage.

It is hard for us, in our time of constant and easy communication,⁹ to understand how completely in those days families might be broken up and the members lose trace of each other. In this letter expressing his gratification at being again in touch with

⁹ He is writing about the ease of communication in 1900. Imagine what he would think of today's facilities!



Dr. Leroy M. Yale Jr., who wrote his father's biography.

his kindred, Leroy says, "I have lost the names and knowledge of you all." Farther on, he says, "I went to live with Burrage and learned to make tin. Since then, I went to school for some years, then studied medicine and have since been in practice of it for the last six years in this place [Holmes Hole]."

Step-brother Burrage was a thrifty married man nearly twenty-two years his senior. His wife was eighteen or nineteen years older than the little boy and treated him with a kindness which he never forgot, and he testified his regard for her by giving to his own daughter her maiden name, Sarah Boardman.

Leroy learned the trade of tinsmith in the factory of his brother whose wagons peddled its wares over a wide extent of New England, where in those days the tin-wagon was a familiar sight. His natural dexterity made him skillful at the craft. Another tinsmith once told me that the youth in his 'prentice days had sometimes turned out in a day, half as much again of ware¹⁰ as was considered a good day's work. And I know that as long as he lived he

¹⁰ Tinware included the pots and pans essential to every kitchen.

kept the tools stowed away in a nook in the apothecary room and when he could spare the time he liked to show that he had not forgotten his handicraft.

While he was skillful and diligent, his heart was not in this sort of work. He had a desire for an education which would permit him to do better things. Before he was twenty he had a definite plan. His brother so far favored it as to release him from the last year of his apprenticeship, so that at the age of twenty he went as a pupil to the Bradford Academy under the charge of Benjamin Greenleaf, a prominent teacher of the time.¹¹ When he had acquired sufficient education to justify his so doing, he began the study of medicine. He registered, as was the custom, with Dr. Francis Kittridge, his apprenticeship dating from June 8, 1826. Later, I find him registered as pupil in Boston of Drs. Walter Channing¹² and Jackson.

To meet the expenses of his education, he had very little money. From the time he began to study at the Academy until he began to practice medicine there is an interval of nearly seven years. Whether in those years he worked at intervals at his trade I do not know. I find a certificate in 1824 of his competence as a school teacher in English, but I do not know that he ever taught. He borrowed money from his brother on the security of a life assurance policy.

During his pupilage in Boston his amusements seem to have been of a rather serious sort. About the only one open to a devout church member, or an orderly youth of any kind, in that place and time seems to have been music. He had a very good voice, then called bass, but which I think would today be called barytone, and had learned to use it skillfully. Among his earliest bills after he began to practice medicine, I find one for a flute, but in my memory the instrument had passed to my maternal uncle and my father never used it.

Another taste which he had developed was a fondness for natural history. From hints in letters, I infer that some of his fellow students were similarly interested. At all events, his classmate with

whom he corresponded for quite a long time, Dr. A. A. Gould, became rather a well-known conchologist and writer on some other scientific matters. This accomplishment of singing and his taste for science helped him through his earlier years of practice in surroundings, where, as we shall see, he very much missed the intellectual stimulus of lectures, libraries and good preaching to which he had become accustomed at Bradford and Boston.

When we left the young doctor, he had just arrived in Holmes Hole on the packet and moved into the village inn. At this inn, he settled down and it became his home until nine years later when he married and began a home of his own. The inn was then kept by a man named Timothy Luce and his wife, Jane, rather, strictly speaking, by her.¹³ For beside her natural ability for business, she had an incentive to take the lead in the broken health of her husband, who survived a little more than a year after the doctor came to their house. Timothy and Jane had two children, a daughter, who had completed her thirteenth year, and a son, who had entered his twelfth.

[Editor's note: The author does not describe how close Jane and her family became to his father, the young doctor. Doctor Yale had only been practicing on the Vineyard five months when a son was born to Jane's sister-in-law, Peggy (Luce), wife of her brother Ebenezer Smith. The baby was named Leroy Yale Smith.¹⁴ Doctor Yale lived in Jane's inn until he married. In his journal, he describes widow Jane as "actively engaged in mercantile business." Jane's illness is the first case he

¹³ Charles E. Banks, *History of Martha's Vineyard*, v. II, p. 56, *Annals of Tisbury*: "Jane, wife of Timothy Luce. . . kept open house for wayfarers, a business that has been maintained for a century at the same place; the present Mansion House. . . rises over the cellar hole of the modest inn of Mistress Luce." She was an exceptional woman who ran the Island's principal hostelry at a time when women did not usually do such things. The widowed matriarch of an extended family of adult females, she had living with her an unmarried sister, Hannah, and living next door was her sister-in-law, Peggy Smith, a widow. When Peggy died, Jane took in her children. The only adult male in the "family" was "Uncle" David Tilton of Chilmark, whom she had taken in as a child. Jane was the financial support of all of them and deserves more adequate treatment.

¹⁴ We assume that Ebenezer A. Smith, Jane's brother, and his wife Peggy (Luce) were the boy's parents. There is no record of his birth that we can find. In the 1850 census, Leroy Yale Smith, then a 20-year-old mariner, is recorded as living in the house of Jane, his aunt. His parents had both died.

¹¹ Bradford Academy in Haverhill, Mass., was a boys' preparatory school. Later, it opened the nation's first female seminary for teachers, also called Bradford.

¹² Dr. Walter Channing (1786-1876) was a famous obstetrician in Boston.

records in his journal, devoting two pages to it, many times more than to any other. A few years later, Jane became his mother-in-law when he married her daughter, Maria, fourteen years younger than he.

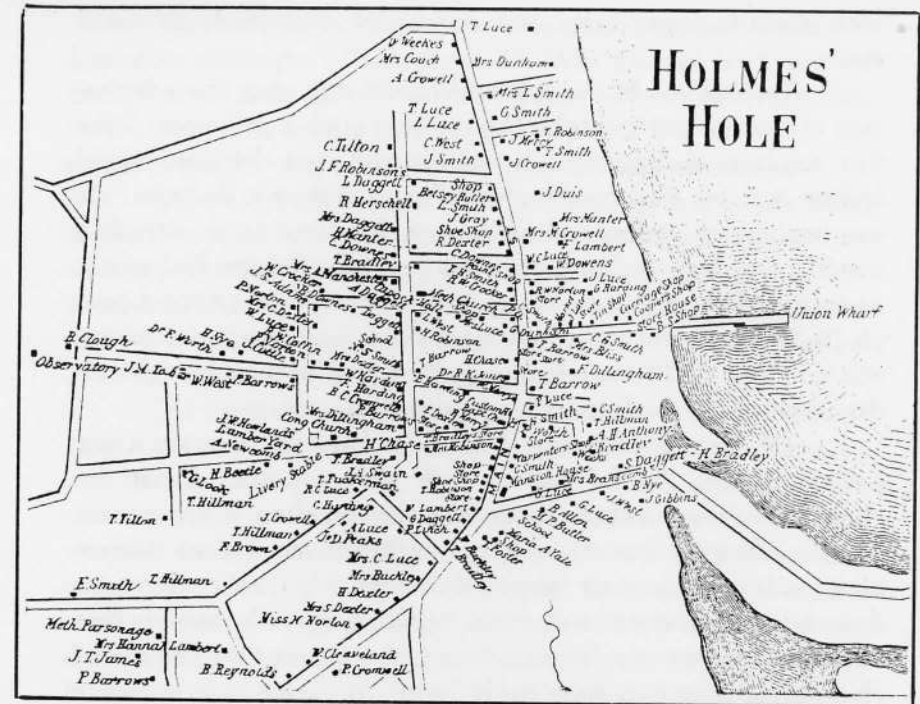
Without a close-knit, caring family of his own, the young doctor seemingly saw the Smith-Luce family as a stable platform on which to build his life. He says nothing of this in his journal, but it seems to be a safe conjecture. The author also does not discuss "Uncle" David, about whom he wrote a long essay for Scribner's Magazine in 1901, five years before he died in Quisset, Mass. Uncle David was David Tilton, son of David and Jedidah Tilton of Chilmark, and who, as stated in the article, "as a lad came into the family of my grandmother [Jane]." He was part of the family as long as Jane was alive. -- Editor]

Of his early years of practice in that village there is but scant record or tradition. That is to say, as regards those personal matters that we might like to know of an ancestor. For a few years, Doctor Yale kept a journal in which he wrote at intervals. Nearly all of its entries lie between 1832 and 1842 and reveal the man quite as much by what it does not record as by what it does. Primarily it is a medical notebook.¹⁵ Troublesome or interesting cases are written down. There is, besides, the long list of the births of the village for twenty years, which were at intervals duly reported to the Town Clerk.¹⁶ Occasionally, he makes general comments on epidemics or gives his views concerning some disease.

He also makes notes of his reading. In Boston as a student he had been a great reader, the list of books he gives as read within a given time discuss enough to have filled it without other occupations. He continues this habit, but medical reading necessarily limits the time he could give to books of a more general culture.

Nor are politics, domestic and international, overlooked. As the campaign of 1840 drew on, his Whiggery, which was keen, was aroused. Campaign issues are fully stated and, as he was a strong believer in a stable Civil Service, the Spoils System of Jackson gave him great annoyance.¹⁷

There is pretty constant reference to the conditions of the churches and of religious matters in the village. These were mat-



The doctor's house is just above the brook running off the bottom. His apothecary shop is alongside. Map, drawn after he died, lists Maira A. Yale as the owner.

ters of very genuine concern to him as was evidenced years afterward in his expending what for him was a very large sum in the building of a Congregational church [in Holmes Hole]. The slack state of the churches, the prayer meetings, poorly attended, the poor quality of the preachers, the attempts at separate places of worship are duly chronicled. When by any chance he hears a good sermon it is sure to be mentioned. Of the Dedication Services of the Congregational Church at West Tisbury, he says, "this sermon was excellent, though the singing was bad, owing to want of numbers." Even his devotion cannot overlook bad music.

With all this, he is puzzled at the lack of public spirit, the dislike of any one enjoying prosperity or wealth beyond mediocrity, the jealousy of any citizen not native-born sharing in public affairs, as if the natives had a vested right in them. He did not know that these were common to all small places and strong in proportion to isolation. His life had been spent in busy places,

¹⁵ This is the journal now in the Society archives.

¹⁶ Birth records were treated casually apparently, as fn14 suggests.

¹⁷ For the doctor's comments on non-medical matters see pp. 171-83.

with shifting populations and recognized differences in social status.

Perhaps too he did not understand that after the substitution of the voluntary for the tithe system of church support,¹⁸ the first result tended to church neglect and that denominational feeling is active in proportion as religious feeling is dormant. He was learning to understand what Capt. Matthew Luce, already a merchant in New Bedford, but a native of the village, had meant when he told him that he [Yale] was going to settle among a people "full of spite and piety." But he lived to see temperance reform and renewed vitality in religious matters and he records with evident satisfaction the formation of a debating society.

But next to religious matters in his consideration came natural history. As the journal ends with a minute about the church which he had been instrumental in building, it begins with one regarding the visitation of the seventeen-year locusts. Meteorology, eclipses, the great meteor shower of 1833, all come in for due mention but early in that year he writes that "the subject that occupies the most of my leisure moments at present is that of conchology" and he had been made happy by "a lot of fresh water shells received this week from Dr. Jay of N. York." Dr. Jay was a distinguished collector and his collection is now in the Natural History Museum of New York. A few weeks later Doctor Yale was elected a Corresponding Member of the Boston Society of Natural History. Next year, he is rejoiced at finding "some slipper shells (*crepidula*) spawning." His interest in natural science remained active. I find repeated acknowledgements from the Boston Society of contributions he had made to its cabinets. Also I find a notice that in 1837 he had been elected a corresponding member of the New Haven Natural History Society and a similar notice from the Hartford Natural History Society. While he was interested in all natural science, his situation gave him special opportunity for the study of conchology and ichthyology and these he especially followed. His friends, Dr. Gould and Dr. Storer, in preparing their well-known state reports on the shells and fishes of the old Commonwealth, called upon him with friendly freedom and were met in the same spirit.

¹⁸ Massachusetts was the last state to stop collecting taxes to support churches.

We find a remarkable reserve regarding personal affairs. He does note sparingly: "1838, April 23. Was married to Maria A. Luce. Started same day to visit my Mother whom I have not seen for 24 years. She resides in Pompey, N. York." He also gives the names of the Scoville relatives whom he and his new wife saw.

But he did not enter the birth of his first and dearly loved child. Two years later, it is mentioned incidentally in connection with my own birth, which appears only as an appendix to the weather and shipping report of the few previous days. A singular shyness in this Puritan blood which shrinks from verbal expression of a tenderness, which every act betrays.

His marriage was the happy termination of the physician's long romance. The little maid at the inn, daughter of Timothy and Jane Luce, innkeepers, was not yet thirteen when he went there to live in 1829. She was short, plump, black-eyed and sprightly in her manner. There is indeed a family tradition that even before coming to the Vineyard he had seen her with her mother at Miss Daggett's house in Boston [while a Harvard student] and had been attracted to the child with braids down her back. She and her girl friends often frolicked so freely with the rather grave Doctor that their elders would check them with, "Girls, you forget that the Doctor is a young man," or some such word of warning.

The doctor evidently had an interest in the little girl and partly, at least, through his influence she was sent to her first boarding school, Bradford Seminary, in the town where he had earlier been a pupil. Here she spent the summer of 1831, returning home about her fifteenth birthday. Among her companions at this school was Octavia Yale, daughter of [his step-brother] Burrage, and rather a favorite niece of the doctor's. She made some visits at Uncle Burrage's at vacation time. In one of her letters to her mother, she mentions having received Dr. Yale's letter with the note, "I don't know how he came to write to me." Perhaps the doctor already knew why, although to the young girl he doubtless seemed much too old to compete with the younger admirers already quite in evidence. Nevertheless, she is interested to find that one of her teachers is an old friend of the doctor and "cannot keep [from] wondering how much of a friend she was."

In October 1833, when just past her seventeenth birthday, Maria went to Ipswich Academy, a noted girls' school of the time. She remained at Ipswich six months and these months seemed to have been too much for the doctor's nerves. There are no letters from him or to him but letters from members of her family reveal it. He had become consciously her lover with her mother's approval and bystanders evidently assumed that he must be successful. Business took him to Boston, something else took him to Ipswich. The maiden of seventeen had not so clearly seen the road as had the man of thirty-one. Supposing himself trifled with, he asked for a definite answer. But she was too wise to accept until she knew her heart and was forced sadly to decline. But the doctor, so the elders have told me, would say in a determined way, "I'll have her yet." And he did.

Their wedding journey would seem rather peculiar now. To get to Pompey, they had no drawing-room cars or through trains. They left the Vineyard by sailing packet or the old steamboat *Telegraph* at Holmes Wharf. This took them to New Bedford. A stage coach of some sort took them to Newport, where a steam boat ran to New York. The voyage up the Hudson was made by another steam boat and from Albany westward to Pompey the canal boat was the principal conveyance and they left it at some point near that town, most likely at Syracuse. My mother told me of this journey, but more of the unusual method of travel than of details of places.

It must have been a strange sensation to Grandmother Yale already in her 73rd year to see her son, whom she had last seen as a child of 12, as a man of 36, settled in life with a young wife. But she was evidently not displeased at the sight. She quickly determined that she preferred to finish her days with them than to remain where she was for a few months later she appeared, without previous notices or at least without previous arrangement, on the Vineyard.

On a fly leaf of her old Bible I find in her handwriting this entry: "September 22, 1838, I left Pompey for Holmes Hole. I came here the 28th." Six days were required for a journey which can now be easily done within twenty-four hours. But she took such comfort as she could in travel. She sat in her little straight-

backed rocking chair all the way, on canal boats, steamboats or whatever conveyance she used where a chair could be placed. She sat in it habitually during her waking hours during the twelve years she continued to live. Although her coming was a surprise, she was made welcome and comfortable in her son's house and in it she outlived him, dying in her 85th year.

Just at the moment of her arrival, her son was invited by a large number of citizens of Edgartown to remove thither. I presume that this was due to the practical retirement of Dr. Fisher from practice, his lucrative manufacturing ventures engrossing his attention. The invitation was not accepted, the same kind of influence which led Dr. Fisher to leave the smaller village would lead Dr. Yale to remain. He did remain.

He bought the house which was his home for the rest of his life and of his family so long as they remained upon the Vineyard. The next year, his first child, Eliza, was born,¹⁹ and the usual result of an enlargement of the house followed at once.

Before his marriage, he had already practiced in the village about two years. His character was formed, his reputation established, his friendships well begun. They could be only continued to perfection by the years which remained to him.

Such important changes as came to him were within his own household. To him came children, five in all; but his first-born, Eliza, stayed but four and a half years. To his home from time to time came his kindred, some from places remote in those days of old-fashioned modes of travel and the friends of earlier days, old fellow students and former pupils. These faraway friends were all the more to him as many of his nearby men friends could be such only in the short intervals between long voyages. As well as he could he kept in touch with them and of their valued letters, scientific and personal, he seems to have destroyed none.

There is in the life of a country physician, of any physician indeed, something of picturesqueness and variety, but there is nevertheless a sameness in the variety. Only the local color varies. For him it was the village rounds, the calls to passing ships or coastwise craft, the trips across the harbor and inlets and the

¹⁹ Yale apparently did not report her birth to the Town Clerk (it is not included in the *Tisbury Vital Records*), nor did he record it in his journal.

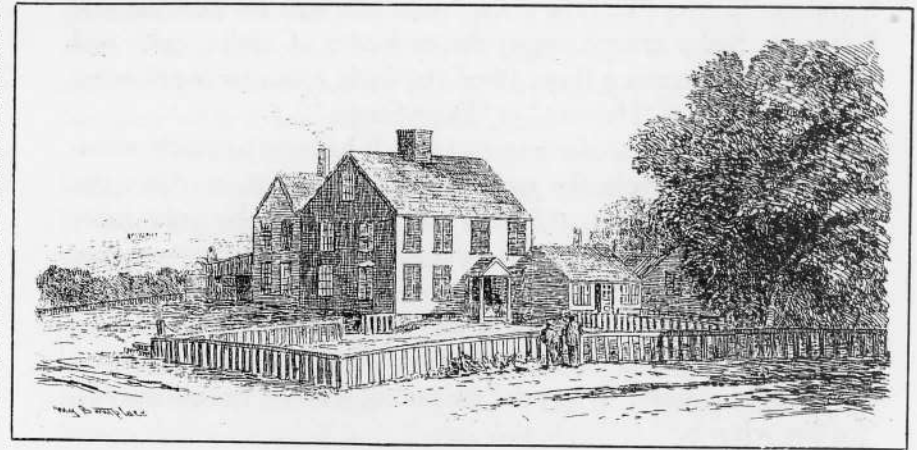
drives to the nearer and farther hills. In his earlier years, he rode a good deal, his saddlebags behind him. Not long ago, a very aged man told me with great glee how, having gone twelve miles for the doctor and knowing the speed of the doctor's horse, he forced him into a stern chase by whipping up while the doctor was mounting with his horse's head turned the other way.

But in my memory he was rarely in the saddle; the two-wheeled, high "Boston chaise" was his usual conveyance. The roads had become a trifle better, but were still bad enough. On short trips I was sometimes taken and in fine weather as far as the villages six or seven miles away. Even from these drives, when I was seven or less, I have kept something of his teaching of plants, but I think that his attempts to teach me to sing were fruitless.

The saddlebags were under the chaise seat. His pockets were filled with medicine cases and a broken phial was not an unusual accident. I can see my mother with her laughing brown eyes and dimpled cheeks – she was barely thirty then – try to scold as she cleaned the medicine stains from his coat. Once he got a coat of dark brown, "gold mixed," for in those days garments had to be made by the village tailor from such stuff as the local shops afforded. The golden silk threads gave it a color which justified Mother's nickname of "the rhubarb coat." "Never mind," said he, "it will show the tinctures less."

I recall, too, his winter riding garb; his fur cap with a visor, his red, knitted neckwrap, which I still have, and the long black overcoat with its large carved buttons of mother of pearl. These buttons, with their firm metal eyelets, seemed never to break and were passed from garment to garment. They were kept after his death as characteristic of their wearer. In turn I have worn them in my earlier days and still keep them for another generation to wear. It was in this garb that I remember him standing one afternoon, cleared after a drifting snowstorm, waiting for Allen Dunham's²⁰ 76 sleigh that he might answer a call "Down the Neck." The mischievous youth preferred to bring a sleigh of his own manufacture with runners of oak limbs. He returned triumphant, telling how he had succeeded in throwing the doctor into a snow drift.

²⁰ We are not certain of Allen's last name. The doctor's writing is illegible here.



Author's engraving of their home in Holmes Hole; small annex was probably the doctor's office and apothecary shop. House was built in 1780 by Abraham Chase.

His home life, necessarily limited by his calls away from it, was simple and gentle. By example rather than by precept, he taught us all the lessons to be helpful to all and to choose the best for companionship. Of sports he had few. I do not know that he ever shot; when venison came to our table it had fallen to the gun of Dr. Fisher, who "was a mighty hunter before the Lord." He had little time for fishing. Occasionally, he could get a summer afternoon in the harbor, not too far from possible calls, and a fine trout line of dark green silk that sometimes got into the chaise box made me wonder if Papa ever played a little when his rides took him to the hills.

Natural history continued to be his chief, his serious, recreation. The cases which filled the length of the consulting room were arranged to suit both his vocation and his avocation: the solid doors below, hiding professional books from prying eyes, glass doors above, revealing shells, birds, insects and natural objects of various kinds.

His rides were study hours as well as his evenings beside the lamp. His garden too gratified his outdoor taste. His only social indoor amusement was music. When he could be at church, he led its little choir. I often saw him slip out of the singers' gallery to answer a call and as quietly return to strengthen the doubting

harmony. In his office, the choir frequently met for practice and before we had a church organ the orchestra of violin, cello and bass with sometimes a flute, filled the little room to overflowing with the strains of "Hebron," or "Duke Street."²¹

The church, to the music of which he gave so much attention, was itself largely the result of his own exertion. After the abolition of compulsory tithes in Massachusetts, the voluntarily supported churches in the little village had thriven at the expense of the old, established [Congregational] one. But the doctor, while worshipping with one of the former, could not quiet his yearning for a Congregational church. Rightly or wrongly, he felt it to be a church of liberalism. "It stands," he said to some of my old friends, "for free schools."²²

He felt this enough to be willing to bear the major part of the expense of a new church in which the scattered adherents to the old forms could be gathered. This he accomplished in 1844. It aroused considerable feeling on the part of those who could not understand that he was moved by attachment to his own faith and not by enmity to theirs, but the body of his fellow villagers never doubted his good faith.

In the surroundings in which he was placed, the whale fishery could not fail to be the natural outlet for business enterprise. He joined with some of the more active men of the village in securing a strip of beach and building a wharf at which to fit and discharge the ships which they had bought. His last venture was in aiding the outfitting of the schooner *Rialto* to take to San Francisco a party of men eager to share in the new-found wealth of California.²³ She was owned in shares, most of the share owners being members of the party. My father's share was represented, I believe, by my maternal uncle, who was desirous of going to El Dorado. The *Rialto* sailed February 7, 1849. Long before she had reached Cape Horn, the doctor was dead and the news that he had

²¹ Here, too, we are not certain of the second title due to his scrawl.

²² Interesting, especially in light of today's school controversy. Nathan Mayhew was also involved in the church project. He taught at the North school of the village. The South school was next to Yale's residence (see map, p. 161).

²³ A number of vessels left the Island with gold seekers at this time (see "Vineyarders Catch the 1849 Gold Bug," by Joan Druett, *Intelligencer*, August 1989.)

gone shocked the party on their arrival in the new land. Not long after, a new schooner, built [in Holmes Hole] to make the same long voyage, was named for him by her builders and for years bore his name up and down the western coast.

The end had come suddenly, in the strength of his manhood. In this same month of February 1849 a ship loaded with Irish immigrants and bound for Boston had somehow gotten far enough south to make our harbor. All the way across, the famine fever had havocked her poor passengers and her first hail was for a doctor. My father responded. He did what he could to comfort the wretched creatures and the ship proceeded. But she had done her work with him. I remember his tale of the horrible squalor of the 'tween decks, crowded with young and old in all the terrors of typhus, unmitigated by the aid of physician or intelligent nursing, which through the hatchway, left open for air, the sleet beat in upon the sufferers.

Before long, the boatman who had taken him to the ship fell ill of the fever. Father attended him as long as he was able, supported in the chaise by Allen, who drove him, I believe, until the patient had begun to mend. Heavier and heavier grew his burden. "I believe, Mother," he would say to his wife, "that something is due that ship."

I remember him lying wearily upon the sofa whenever he could be at home. More and more tremulous and irregular became his writing of the nightly notes of his day's work and then it stopped. His old friend, Dr. Fisher, came to his help and came down the stair with bowed head and choking voice. "It is but a short journey now."

On the morning of the 11th of March, 1849, he reached the river of the deep waters. He heard the Voice and he knew the ford.

What it meant to the little village can hardly be understood today, even in similar villages. For twenty years, he had been the village guardian. He had witnessed the birth of the younger half of the dwellers in the town. Their elders he had comforted in their trials and had soothed the departing hours of those who had gone. In a peculiar manner, he had been the next friend to many a family entrusted to his care by its head when the day of departure

for distant seas had come. Into his hands, wife and children were trustingly committed and the trust was never lightly held. And in return, the mariners, whether cruising with the Pole Star high overhead or where the Southern Cross lighted them, never forgot to gather some shell or other token which should please his taste or express their regard.

His funeral was a simple house service, as my mother dreaded the publicity of the church. But the villagers were not content to thus lay him away. Despite the fact that he had died of a vicious fever, they stopped the bier at the corner of the street leading to the burying ground and caused the coffin to be opened that they might once more see the beloved face.

So ended this life, but its echo lasted and will last so long as those who felt its influence shall live. In my childhood, my constant greeting was, "I hope you will be as good a man as your father," with a shake of the head or a doubting look at the expression of such an unreasonable hope. Years afterward, when I had myself become a physician, I was walking with two friends through a wood not far from the village. As we met an old woman with a fagot, the elder of my friends spoke with her and said, "Do you know who this young man is? He is Dr. Yale's son." Instantly the fagot was dropped and there descended upon my head a blessing, fervid beyond the custom of our guarded American speech.

It was a simple life in unobtrusive stations, but it was a life of honest endeavor in the field that was open to it. Above all, it was a life marked with character, a character impressing all about it. It was the life of one who loved his fellowmen and who sought his God both in His word and in his work.

Acknowledgements

We are grateful to Marion Carey Alton of Williamstown, who generously donated Doctor Yale's journal to the Society and to other members of the Yale family who have provided material, including Elizabeth V. Brady of Crownsville, Maryland, and Thomas C. Morse of Paonia, Colorado. Thanks also to Jennifer S. Gaines, Curator, Woods Hole Historical Museum.

As mentioned in this article, a future *Intelligencer* will discuss the medical comments in the doctor's journal.

Thoughts of Dr. Leroy M. Yale On Religion, Politics and Life

THE FOLLOWING quotations are excerpted from the journal of Dr. Leroy M. Yale, the subject of the biography that starts on page 151. Doctor Yale kept the journal from 1832 until 1841, but only intermittently. There are many gaps. It is not a daily journal, but an occasional recording of happenings, medical and otherwise. He comments, as you will read, on his rationale for keeping such an accounting. We have extracted his non-medical comments and print here the most interesting in chronological order. They tell us much about the Vineyard during those years. The first entry was written about three years after he came to the Island. His medical notes will be discussed in a later article.

Nature

June 20, 1832. Locusts appeared on Martha's Vineyard in great numbers in the woods. They remained from one to two months and then disappeared. It is said by the inhabitants they appeared just 17 years before in the same manner – but never had been seen in the intermediate years.

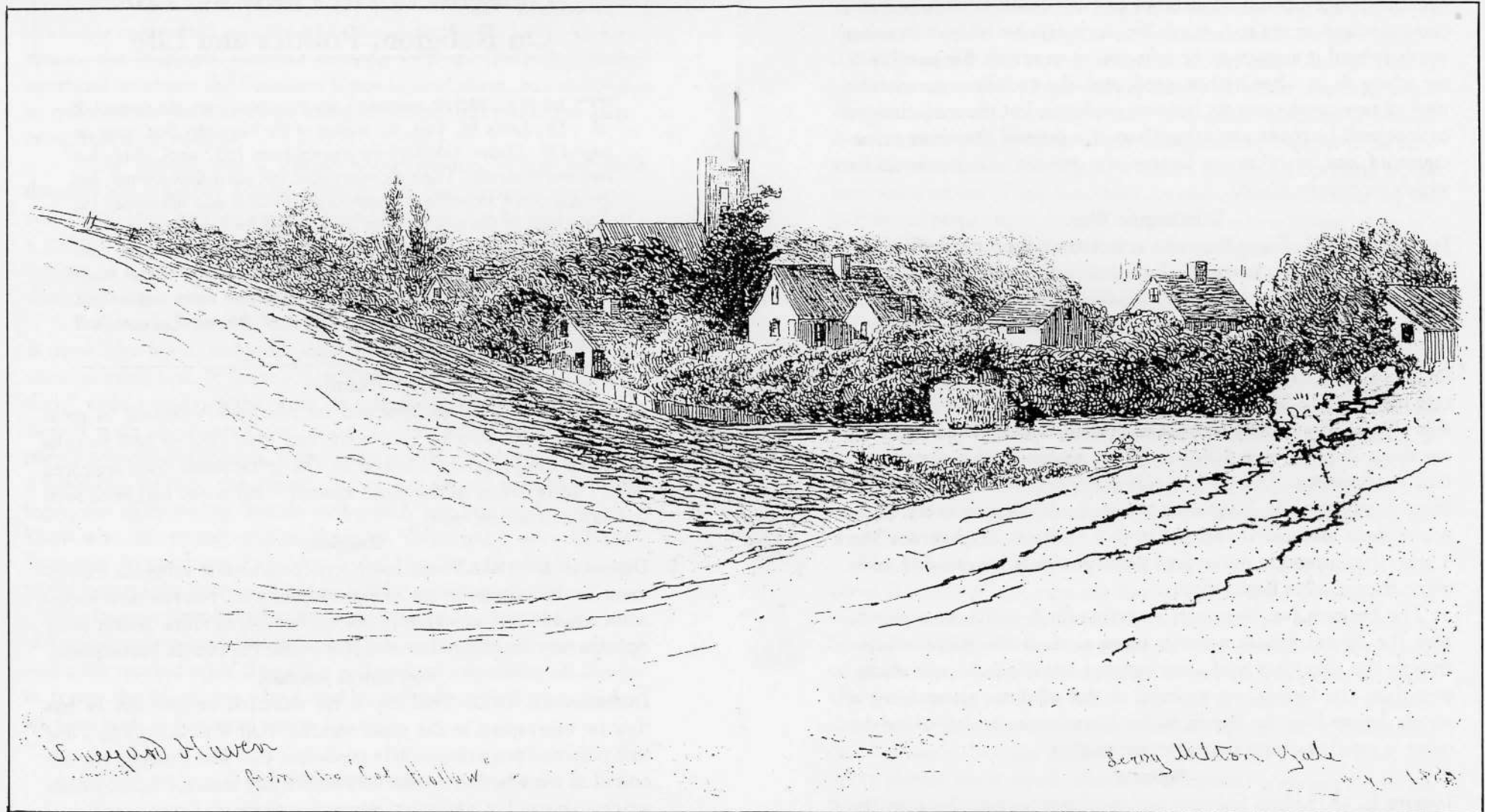
Religion

December 18, 1832. There has been considerable religious excitement in the village for six or eight weeks past, but has now somewhat subsided. It was chiefly among the Methodists. Much piety Spirit is now manifested on the part of the Baptists & Methodists.¹

Birthday & Journals

December 21, 1832. This day is my thirtieth anniversary & has thus far been spent in the usual manner, that is in attending a few sick patients, preparing a little medicine, etc. The thought has occurred to me whether a man may derive any material benefit from writing down his views at particular times and his occasional thoughts. The notice of them may serve to remind him at some future period of his particular situation which led to the train of thought & like the notice of occurrences of a particular nature as-

¹ The religious upheaval had begun about 1821, before Yale arrived, when "Reformation" John Adams, a dynamic Methodist evangelist, began a crusade that led to the rise of Methodism at the expense of Congregationalism, which was Doctor Yale's preferred denomination.



Vineyard Haven, as viewed from Cat Hollow, in 1880

An etching by Dr. Leroy Milton Yale Jr.

View is down into the hollow near today's Causeway Road and looks north towards the center of the village. The land rises sharply at left from Cat Hollow to Mt. Aldworth, at right to Skiff Avenue. Spire is the Baptist Church on Main Street, which was destroyed in

the Great Fire of 1883, soon after Yale made this etching. Other buildings are on Beach Street, which runs to the right down to Five Corners. Some were destroyed by the fire, including the Yale home, the large house in center (see p. 167). The harbor is at upper right.

sist the memory. Some importance perhaps ought be attached to a certain season or era in a man's life, such as a birthday or in other words [when] it appears to be a fit season to review his past life & see where & in what he has erred, and also to take a perspective view of new resolutions for his own guidance, but these resolutions cannot well be made any other than of a general character on account of our inability to foresee the precise circumstances in which we may be placed.

Whaling & War

January 4, 1833. Some fears are entertained that war will be declared by our Government & Buenos Ayers, in which event our Shipping, which is engaged in the whale fishery will be likely to suffer. The people of this Island are more extensively engaged in this business than any other and consequently depend on it chiefly for support. A large amount of capital is invested & almost every one that goes to Sea is personally engaged in the fishery. Out of this village, where there are not more than 500 inhabitants, there are about 75 or 80 men & boys who are absent most of the time in that employment. The greater part sail from New Bedford, a few from Edgartown & Nantucket, Boston, & almost every place where there are vessels engaged in that business. Ships fit for 3 or 4 years that intend to cruise for Sperm whales & for one & 2 years when they go after Right whales.²

The business has been very lucrative for 8 or 10 years past & now the Sperm fishery is much more so than the Right whales, though the latter has paid a fair percent but is much more uncertain than the former, on account of the markets, there being a steady demand for the Sperm oil for home consumption while the other is mostly reshipped to a foreign market.

Religion

January 6, 1833. It is Sabbath and we have no preaching in the village today. The only organized Societies in this place are the Methodists and Baptists and there is but one meeting house in which both Societies worship alternately, the Methodists employing a preacher half of the time & the Baptists at present one-third of the time only. Consequently we have no preaching a part

² Since most sperm whales were found in the Pacific, much longer voyages were required. Right whales were usually killed in the Atlantic.

of the time. It has been the case till very lately that both societies have attended the meetings of each denomination on the Sabbath indiscriminately but now it seems to be an effort on the part of each to maintain their ground separately & when one denomination occupies the meeting house the other occupies a School house, either with or without preaching as they happen to be situated, & the Methodists are now about building a meeting house for their own use. They have also opened a singing School for the purpose of preparing a choir of singers for the new house.

The Methodist minister that is now occupied here is Mr. Louis Jansen, an Englishman by birth, young, say 27 or 28, active, possessed of some natural talent but not a very thorough education & his sermons are mostly addressed to the passions of his hearers without being very instructive & this is true of most of the preachers of that denomination that I have heard. There has been however a good deal of religious excitement under his preaching and a number give good evidence of having met with a saving change & have united with the class, which I understand to be a state of probation for six months previous to joining the church, during which time if they walk orderly, they are afterwards admitted, but if not, rejected.

The Baptist minister employed here is Mr. Seth Ewer, a man about 50 years of age, very resolute & determined in whatever he undertakes, but is not generally well received by the people. Should not think him to be a man of very extensive information or much of a scholar but has a great degree of confidence & a faculty for showing what he has to the best advantage. His sermons though usually long are for the most part meager & uninformative & often quite irksome to hear, on account of the emphasis put upon almost every word, which is altogether misplaced. He has now been here almost two years and on the whole I should feel that little good had been affected by him as that Society has appeared to be on the wane ever since he came among us, besides some members of the church are so much disaffected toward him that they will not hear or support him.

Temperance

January 7, 1833. Have just been reading the 5th Annual Report of the American Temperance Society & the facts brought to light in

it are appalling & the arguments appear to be irresistible to a candid mind & enough to deter every one from trafficking in Spirituous liquors & from the use of them as a drink & the object [of the Society] is such as will make it a harbinger of peace to all who heartily embrace it.

Whaling

January 9, 1833. The Ship *Cicero* arrived in N. Bedford on the 8th from the coast of Africa, full of whale oil after an absence of 18 months. Also, the Barque *Minerva* from the Pacific with 1200 bbls Sperm, about three years.³

Public Attitudes

February 8, 1833. I have been for several days writing down rather a vague & indefinite account of the weather & I scarcely know for what, unless it be for the same reason that it is said the weather is a general topic of conversation among people when they meet for a few moments. That is because it can be spoke of without implicating persons & exciting jealousy, envy, malice or any of those feelings that are brought into action when topics of personal interest are the subjects of conversation. By warning of this, I will just say a few words respecting the State of Feeling in this village and first, in relation to one another of their own townsmen, there appears to exist an unusual degree of envy. So much so that there is a marked enmity towards any one who has prospered in business and apparently rising above the State of mediocrity in point of wealth. In relation to such as come to this place from abroad there exists apparently much jealousy lest they should take some interest in their affairs of a public nature, or in some way exert an influence for their individual benefit, as though they possessed some reserved or inherent rights which a Stranger (as they term those who gained a residence here) has not the right to interfere with. Hence there arises a peculiar inquisitiveness respecting the affairs of one another as though an interest was felt in a neighbour's prosperity, but is for the most part merely envy, and in regard to Strangers to learn their business, who they are, where they are from, etc.

There is very little public spirit manifested and it [is] difficult to

³ The fact that Yale writes at length about whaling suggests that he owns shares in a number of whalers, a common investment at the time.

persuade many to favour any object by which they are not to be personally benefitted,⁴ but notwithstanding most are very kind and obliging in the usual round of social intercourse.

On account of there being so few active men at home for any length of time, it is extremely difficult to carry into effect any design for improvement and consequently we have Societies or Associations for Scientific or Literary purposes. Primary schools, Sabbath schools & religious meetings are the only places of a public nature for instruction. The primary schools are 2 in number & average about 40 scholars each & are kept by male instructors the year. A Temperance society has been formed within the last year & a considerable number adopted the plan of abstinence. No Licenses for retailing have been granted in this town this year but the law appears to be evaded to some extent.

Fire in Village

March 1, 1833. This morning about 5 o'clock was waked by the cry of Fire. Turned out & discovered that the barn of Edward [Edmond?] Crowell was on fire, a small ten-foot building. Dressed and made my way to the spot as soon as possible but before I arrived the whole building was destroyed. Some wood & other articles which it contained. No other damage done. The building stood a few feet from the house to the westward & fortunately the wind was N.E., blowing fresh & snowing which circumstance alone prevented the house from suffering in the conflagration. I am told that there has been no building destroyed by fire in this place for 35 years before the present.

Witchcraft

March 8, 1833. Have just finished reading Walter Scott on Demonology & Witchcraft. It gives me a very good idea of the tendency of mankind to believe in the existence of supernatural powers & appearances when they are not sufficiently enlightened to account for them on natural principles & also how the credulity operates to overcome the better feelings of humanity & excite those of barbarity & unfeeling cruelty & how, when such opinions are in vogue, the malicious feelings of individuals may be vented upon the innocent by charging them as being the agents of the or-

⁴ It would seem he would not be happy to have his patients read this frank comment.

dinary accidents of life. How far the devil or any of his agents may be permitted to operate on the inhabitants of this world I know not, but that he can impart to any a knowledge of the future or grant any supernatural powers I very much doubt.

Whaling

April 21, 1833. Have just rec'd intelligence of the death of Chas. Luce who [was] killed by a whale in Nov. last. He went out on the ship *Gen'l Pike* of Bedford & while in pursuit of a whale the boat was struck & stove & he was not seen afterward.⁵

County Court

October 5, 1833. Attended Court last week. Little or no business done except in relation to Rum Selling on account of which several were fined.⁶ Business of all kinds very dull. Some families leaving the place.

Religion

November 6, 1833. The Methodist Society now are holding a protracted meeting in this place. Some excitement exists among some of the inhabitants on the subject of Religion.⁷

Meteors

November 13, 1833. Last night a very unusual appearance in the atmosphere. It was clear & somewhat cool & nearly all night there were a great number of Meteors, shooting in every direction so as almost to illuminate the whole atmosphere. Some were said very much to resemble a flash of lightning.

Marine News

December 1, 1833. Night before last a brig went on to the Hedge Fence Shoal & was abandoned being loaded with brick from Salem bound to Newport. She however went over the shoal & drifted two or three miles on to another Shoal from which she has been got off today & brought into the harbour, leaking about a thousand strokes an hour.

⁵ Starbuck says his name was Davis Luce, but that is incorrect. It was Charles Luce, 2nd Mate, as Yale wrote.

⁶ The doctor was very interested in the temperance movement, even to the extent of attending court cases, it seems.

⁷ Methodism was taking over the Island. At this time, Jeremiah Pease of Edgartown began exhorting Methodists at meetings in Eastville on East Chop. Two years later, the Wesleyan Grove campground held its first camp meeting.

Religion

December 19, 1833. Have just returned from the Dedication of the Congregational Meeting house at [West] Tisbury. Mr. Orin Fowler of Fall River preached the sermon & Mr. Poor made the first prayer. The weather being so boisterous, but few comparatively attended. The Sermon was excellent though the Singing was bad, owing to a want of numbers.⁸

Birthday & Life

December 21, 1833. This day another year has passed away with me & brought me to the age of thirty-one years. . . . I frequently resolve and re-resolve and after all affect but little in the way of improvement in any respect. I have felt & still feel in some measure as though the last 4 or 5 years of my life had been spent to but little profit to myself & but little to any one else. It appears as though my moral sensibilities had become in some manner blunted. Sins appear less heinous & there is less disposition to exercise the active virtues.

Shells

June 2, 1834. [On this day he made a lengthy report on his shell-fish interest and collecting activity.]

War & Whaling

February 17, 1835. For some days there has been much excitement here as in other places in this vicinity in prospect of a war with the French Nation.⁹ No place would probably feel its effects more Severely than this as almost all our inhabitants are interested directly or indirectly in the whale fishery & most of our active men are now absent on long voyages.

Marriage

April 23, 1838. Was married to Maria A. Luce.¹⁰ Started same day to visit my Mother whom I had not seen for 24 years. She resides in Pompey, N. York.

⁸ The West Tisbury church was built in the village cemetery. It was moved in 1865 to its present site on the corner of Music Street.

⁹ President Jackson in his State of the Union message had urged reprisals against France for its failure to pay Americans for damages done to their properties during the Napoleonic wars. A treaty had been signed by France agreeing to pay, but it had not done so. France began paying in the followig year.

¹⁰ A matter-of-fact remark (see pp. 163-4 for more details).

Debating Society & Politics

December 7, 1838. The young men of this place have formed a debating society. I have had one meeting for business. The question was: "Is the present License Law conducive to the cause of temperance?" The debate was well conducted & elicited more interest than I anticipated & if the interest in the Society continues it will be a useful association for those concerned. . . . Have been reading the President's message to Congress. It is rather formal & contains but little of interest. The subject of banks occupies, as usual, a considerable space & the Sub-treasury System is still urged. This however I should hope might not Succeed as it places the funds of Government too directly under the Control of the executive. That is, the receivers & keepers of the public monies are appointed by the President & consequently hold their offices only by his pleasure & under the consideration are liable to be influenced by him & as [he] shall dictate. This might become dangerous to the people & should be guarded against. New expedients & experiments should always be cautiously adopted by individuals & much more so by governments.

Birthday & Philosophy

December 21, 1838. This day I am thirty-six years old. Time flies rapidly & more & more so as I advance in life & now though yet young I find myself surrounded by but few of those who started in life with me. Many have fallen & some yet remain. How soon I may go to return no more is wisely kept from the ken of man. The last year has Brought me into new relations in life [his marriage] which though attended with increasing care & anxieties are not without their consolation & comfort. May a kind Providence order all things so that it may result in the advancement of our own happiness, the welfare of community & His glory.

National Politics

December 9, 1839. Perhaps there has been no time within the last 30 years when the Scarcity of Money has been so generally felt in this country as at the present moment. Several causes have probably operated to produce this, such as the suspension of specie payments by the U. S. Bank of Pennsylvania . . . While New York & New England, except in Rhode Island, continue to pay Specie for their bills. This necessarily obliges them to curtail their loans &

discounts so that at present it is difficult to sell any thing of any amount for cash or to pay one's note if he happens to owe. This State of things has been gradually advancing to the present crisis for the last 8 or 10 years, ever since the refusal of President Jackson to Recharter the U. S. Bank. This he did under the pretext that that institution used undue influence in political matters, but this was undoubtedly a mere pretense as were all the other accusations brought against it. Such as its being irresponsible, etc., for immediately after it was known that this institution would not be rechartered there was a demand for charters for a great number of local Banks which were granted by the several Legislatures & they issued paper to an enormous extent without any one to hinder or molest. This of course made money plenty & easy to be obtained on almost any security consequently there was an immediate mania for speculation arose in the community which was indulged in to a ruinous extent. Foreign goods were imported beyond example. Debt contracted abroad beyond the means of paying in produce of the country & consequently specie must be exported to meet the demands. This caused the suspension of 1837 but recovering from that they have pursued a similar course & similar results have been the consequence though not to so great an extent as before.¹¹

Birthday Musings

December 21, 1839. This is again my birthday & brings me to my 38th year. I can, in prospect of the future, only say that it is wisely concealed from us. What a day or an hour bring forth we know not, much less the term of a year. Year after year rolls on & each day brings with it its vicissitudes & cares. To look forward, time appears long, but when it is past it is as a moment & the lapse of years is as but yesterday. To accumulate wealth is the great & chief aim of a great proportion of mankind, but when obtained it is no a source of happiness, but often folly & vanity & moral ruin follows its acquisition & without early & deeply impressed convictions of moral duty few escape the commission of gross acts of immorality or are guilty of great dereliction of moral duty.

¹¹ This is a period of great unrest in the nation over slavery. Pennsylvania Hall in Philadelphia was burned down by rioters during an anti-slavery rally. Dr. Yale makes no remarks on the subject, suggesting that the Vineyard had no emotional or political involvement in the abolition movement.

Husbandry

January 2, 1840. Have today butchered a hog two months old that weighed 274 lb., it being the first I ever kept.¹²

Religion

April 1, 1840. The people here have been much aroused for a few days past on the Subject of Religion & there seems to be many who have apparently experienced a change.

Whaling

April 11, 1840. Today the ship *Pocahontas* arrived reporting 1400 bbl. oil after an absence of 22 months. Lost her first officer last October who was killed by a whale, Mr. Geo. West. He was much esteemed here & his loss greatly lamented.¹³

Warships Visit

September 13, 1840. This day the Frigate *Macedonia* & the Sloop of War *Levant* arrived in the harbour from the Eastward. They came in from the westward around the Island.¹⁴

National Politics

October 15, 1840. In this place all attention is paid to political affairs at present. The day of Election approaches & the points of difference appears to altogether now on a few questions of national Policy. One of which is the Subtreasury Scheme which has been urged upon the country by executive influence, another is that of a U. S. Bank. Another, whether the Public land shall be given to the States in which they lie or the proceeds distributed among the States equally. Another, which if not a national policy is certainly one of Executive policy, namely, the interference of government officers in popular elections. This may perhaps be said to form a new era in the history of our government especially it is known that many of these officers are giving public lectures on politics & in almost all cases they are getting up & heading political meet-

¹² Raising a hog in downtown Holmes Hole was apparently acceptable.

¹³ Starbuck says nothing about this. *Pocahontas* was a Holmes Hole whaler. The only record we find of a Tisbury George West is the birth of George to Jerual and Deborah West in 1792. This may be the lost mariner.

¹⁴ They must have sailed up Muskeget Channel between the Vineyard and Nantucket, after coming from the west. Two of the Navy's newest warships: frigate *Macedonian* (Yale had her name wrong), launched in 1836, was 164 feet long; *Levant*, 132 feet long, was one of two ship-sloops, "fine, powerful ships," built in 1837 (Howard Chappelle, *American Sailing Ships*, 1935, pp. 116-7).

ings & associations defraying the expenses in great degree. These things have been carried so far for the last 10 or 12 years that the community are getting awake to the subject & there appears now to be a determination to throw off the yoke by changing the heads of the executive departments. November will determine whether this is effected or not.¹⁵

November 9, 1840. [He lists the Tisbury vote count in the election.] This gives a majority in the county of Twenty-two for the Whig Ticket & last year the Democratic majority in the County was ninety-eight. We now feel from the news rec'd last night from New York quite confident that Wm. H. Harrison will be elected President for the ensuing four years from March next.

December 15, 1840. Politics have subsided & a calm seems to be coming over the people which I hope will allow them to attend to their own concerns without distraction. During the past political contest there has been a greater degree of excitement than probably ever existed before & yet there seems to have been no violence anywhere. The president-elect, Wm. H. Harrison, has rec'd a greater majority than was ever before given to any president in this country though he had to contend against the opposing candidates & an array of office holders who were working for their places, some to retain and some to get higher ones. The principle which was adopted by President Jackson of refusing all a participation in office who differed from him in opinion was in my judgment badly suited to the genius of our government & to the views of a great majority of the people of this country yet he carried it to a greater extent than any preceding president & his successor following closely in his footsteps so that in some cases if a man was suspected of thinking differently or of being inactive for the party he was removed & another put in his room. I have always believed this course to be very injurious. In the first place the President makes himself the president of a party & not of the people & in the next place its direct tendency is to make men dishonest by their making professions of principles which they do not believe either for the sake of obtaining or retaining some office under gov-

¹⁵ Again, no mention of the slavery issue. A year before, the now-famed slave-ship *Amistad* was taken over in Cuban waters and forced to sail to Connecticut by the mutinous slaves. Dr. Yale makes no mention of the event.

ernment. It also has a tendency to raise up a multitude of demagogues who will harangue & talk loud & boisterous about public matter & mislead the minds of sober men from the just points at issue, merely for the sake of gaining some personal or private advantage. It is an old maxim that honesty is the best policy and although many seem to think differently, I believe it to be as applicable to political matters as to any other matter & that it should be as strictly adhered to, for on any other principle I do not see that an elective government can long be maintained in its purity. Designing men may be thrust forward into high places by the force of circumstances & subvert the very fundamental principles on which the government is founded. The great mass of the people should be honest & they should be discerning & be able to select honest men to fill their offices & no circumstances should ever prevent any man from casting his vote for that man whom he believes to be the most honest & most capable of filling the station required.

Local Affairs & Whaling

February 9, 1841. Some time last week there was a debating club organized in the village & last evening they held their first meeting for business. The subject for discussion was: "Ought this Island to be exempt from military duty?" Decided by a tie vote.¹⁶ There was also a meeting of the Baptist Society in which they voted to appropriate their surplus funds, about 400 dollars, to the object of building a parsonage & Vestry. No whaling news of late of any interest to us. There appears to be quite a spirit of enterprise in getting out small vessels for the Atlantic Ocean. Some 2 or 3 having been bought to be fitted at Edgartown¹⁷ & many in other parts of country. For my own part I am in no doubt as to the best course to pursue in consequence of some apprehensions of War with Great Britain. The N. Eastern boundary line is not yet defined & concluded. . . Then there are some questions relative to the disturbance which took place in Canada 2 or 3 years since: the burning of the *Caroline* steamer, the subsequent arrest of McLeod who

¹⁶ Interesting that Vineyarders were seriously discussing whether they should be required to serve in the military.

¹⁷ There were five Atlantic-only whalers added to the Edgartown fleet in 1841 and 1842: Brigs *Pavillion*, *Vesta*, *Deborah*, bark *Rhine*, and schooner *Gornet*.

committed the act & the demand for his release by the British government.¹⁸ Then the searching of several American vessels on the coast of Africa & their seizure under the pretext that they were engaged in the slave trade. The occupancy of the Oregon territory by the British. . . the Blockade of the Chinese ports interrupting & embarrassing our trade with that nation. . . there is great probability in my mind that some of them or all together may sooner or later bring the two countries into a conflict. . . What will be the policy of the President Elect on this I know not. . .

Son Born

February 12, 1841. This day I had a son¹⁹ born about 12 o'clock M. & all well. It is two years & 6 days since my first child was born.

Religion & Reprisals

November 20, 1846.²⁰ [Recently] there has been a variety of changes & various occurrences in this place. In 1844, after much deliberation, Mr. James L. Barrows, Nathan Mayhew²¹ & myself formed the design of organizing a Congregational Church in this place & we obtained the services of Rev. Wm. Gould of Fairhaven who commenced preaching in a small school house & after a few weeks, a small church of ten members was organized which was soon increased by the addition of five or six more. Having thus made a beginning & not having a suitable house for worship, we determined on building a meeting house & in the course of that season erected one at a cost of nearly five thousand dollars in which we have since held our meetings, having settled as our first minister Rev. Samuel S. Tappan, who is still with us. This step, viz., the organization of the church & building of the meeting house, has called out the most violent opposition by the Baptists & Methodists, So much so that they or individuals of the Baptist Society have advanced money to the amount of 2 or 4 hundred dollars to set up a physician in opposition to me & the Methodists have built them a new house which they did not previously design.

¹⁸ The *Caroline*, an American-owned vessel, had been leased by Canadian William L. MacKenzie in his effort to overthrow the government with the help of some Americans. Canadian militia captured the vessel and burned it.

¹⁹ His namesake, who wrote the biography in this issue. It is the first mention of their first child, Eliza, who died of croup, two years after he wrote this.

²⁰ Note the gap of nearly six years without an entry. This entry ends the journal.

²¹ The well-known Holmes Hole teacher at the North School.

Geology of Martha's Vineyard And the Elizabeth Islands in 1823

by EDWARD HITCHCOCK (1793-1864)

Annotated and Edited by Paul S. Boyer, Ph.D.

EDWIN HITCHCOCK was born in Deerfield in 1793. In his early 20s, he was Principal of Deerfield Academy where he met his future wife, an instructor there. From 1821 until 1825, he was minister of the Congregational Church in Conway, Massachusetts. It was during these ministerial years that he visited Martha's Vineyard and wrote the following paper, published in the *American Journal of Science* in 1824.

In 1830 he was appointed State Geologist of Massachusetts, the first person to hold that position, which he kept until 1844.

He was the author in 1833 of an extensive work, published in four parts, totalling 700 pages: *Report on the Geology, Mineralogy, Botany and Zoology of Massachusetts*. A revised and enlarged edition appeared in 1841. From 1845 until 1854, he was President of Amherst College.

In this 1824 paper on the islands, he occasionally refers to an accompanying map, but none has been located. We have modernized his punctuation and spelling in places where his antique and somewhat idiosyncratic style might confuse the reader. (See inside back cover for a full account of his remarkable career.)

○

A SHORT VISIT to the island of Martha's Vineyard in the summer¹ of the present year [1823] enables me to say something of its geology, with that of the adjacent islands. I am the more induced to do this since those islands are not colored in the map of Maclure,² and they may not soon be visited by a geolo-

¹ Actually, Hitchcock's visit was in late spring of 1823, early June, when the oaks were only beginning to leaf out, as he mentions later.

² William Maclure (1783-1840) had published in 1809 the first geological map of America.

PAUL S. BOYER is Professor of Chemistry and Geology at Fairleigh Dickinson University, Madison, New Jersey. We are grateful to him for making this article available. Readers may like to compare Hitchcock's statements with those made by Albert C. Koch, a German paleontologist, who visited Gay Head in 1844, twenty years later, searching for fossils (*Intelligencer*, November 1990.)

gist who will have any better opportunity to examine their structure than I had, although I confess my researches were hasty and imperfect. This sketch, however, may furnish some assistance to succeeding observers.

Martha's Vineyard is about twenty-one miles in its greatest length, and from six to eight miles in its greatest breadth. It is divided into three townships: Edgartown, the most populous, occupying the southeastern part of the island; Tisbury, embracing the northwestern part; and Chilmark, the western and southwestern parts. The name of the island, given by the aborigines, is Nope³ or Capawock. These natives have long been celebrated in the annals of [Christian] missions, but those whose blood runs pure from foreign mixtures are now nearly extinct. A hybrid race, however, descended chiefly from the intermarriages of Negroes and Indians, are yet considerably numerous, perhaps about four hundred, who inhabit the western extremity of the island in the vicinity of Gay Head, and among them there exists an organized Christian church.

The small island of Chabaquiddick [sic] lies a little distance from the east end of the Vineyard, and Noman's Land [lies] not far from the southwestern extremity. The Elizabeth Islands, being about sixteen in number, are situated a few miles from the northwest end of Martha's Vineyard and form part of the southeast barrier of Buzzard's Bay. They contain a few scattered inhabitants.

[I sailed] out of New Bedford harbor. . . on passing [the Elizabeth Islands], I perceived a diluvial coast to be spread over their somewhat hilly surface, while the shores, in many places, exhibited steep declivities of sand. And on reaching the northwestern shore of Martha's Vineyard, I found its aspect very similar.

These islands, so far as I have examined them, appear to be made up of the three following formations⁴: 1. Alluvial; 2. Diluvial; 3. Plastic Clay.

³ Pronounced as two syllables, No-pee. This, and not Capawock, is the true original name according to Charles E. Banks, *History of Martha's Vineyard*, v. I, pp. 32-35.

⁴ A formation is a rock unit that is recognized by its physical characteristics and which can be readily mapped. In Hitchcock's day the concept was applied on a very large scale, so that a formation as he speaks of it is equivalent to a geologic system (all rocks formed during a geologic period) or an even larger unit.

Alluvial⁵

This formation occupies a considerable portion of the southern part of the Vineyard, reaching in some places even beyond the center of the island. Where I crossed it, it consists of a perfectly level, sandy tract, uninhabited and uninhabitable. I have rarely seen as extensive a region that was so cheerless and barren. It is covered by stunted shrub oaks rarely exceeding five feet in height, and when I saw them, they were entirely leafless, presenting to the eye a cheerless, wintry waste.⁶ On my right as I crossed this plain, at a distance appeared a ridge of high land and rounded eminences, but on my left nothing was to be seen except this uniform, unrelieved barrenness. I was immediately struck with the idea that this sandy desert must have been formed by the action of the waves of the vast Atlantic, which have beat upon this shore without obstruction for so many centuries.

In the southwesterly part of the island, the high perpendicular cliffs indicate that the waves have encroached upon the hilly part of the island and it would seem not altogether improbable that the sands and clays, thence worn down, might have been driven by tides and currents into this, their retired bosom. I am aware, however, that no instance is known in any other part of the world of so extensive an alluvial deposition from this cause; and perhaps if I had been able to spend more time in its examination, especially its southeastern margin, I might have discovered positive proofs of the incorrectness of such an hypothesis.

In short, although this part of the island is colored as alluvial, I am strongly inclined to believe that it is referable to an older and distinct formation.⁷

⁵ Alluvial, literally, describes a deposit from running water as by a stream. It is used here as an obsolete term referring to deposits of unconsolidated sediments, supposedly the latest in the history of the earth. Beach sands would be alluvial.

⁶ It would appear that he is travelling from Holmes Hole to today's West Tisbury, viewing the high ground of Indian Hill on his right and today's State Forest on his left. His comments are hardly flattering.

⁷ Hitchcock was correct in his tentative conclusion that what we now call the glacial outwash plain (included to a large extent within the State Forest) was not formed by shoreline marine processes. As he was not familiar with glacial processes, he was unable to recognize its origin, but deserves credit for distinguishing the coastal plain from other "alluvial" deposits. By his reference to being "colored" he is commenting on his map which we do not have.

Diluvial⁸

This formation invests in a very conspicuous manner the whole of the Vineyard with the exception of the part just described. All the northwestern extent of the island, several miles in width, is hilly and uneven, with no abrupt precipices. However, [it rises] into rounded eminences, which together constitute a ridge of considerable extent and nearly as long as the island.⁹ I should judge that in some places this rises three hundred, or even four hundred feet, above the ocean, and the quantity of huge boulder stones scattered over these hills on every side is immense. The land is mostly cleared, and the round masses are chiefly granitic, and of course of a white color, so that they may be seen at a great distance to good advantage. I had not a doubt, for a time, that the boulders I saw, so numerous and so large on the remote hills, were ledges of granitic rocks, and I could hardly believe the inhabitants who told me that no rocks were found in place on the islands.¹⁰ But whenever I had an opportunity to examine [them], these ledge-like appearances vanished on a nearer approach and the diluvial character of the surface became manifest.¹¹

So that I feel a good degree of confidence that the same will be found to be the case with those eminences that I did not visit. These loose stones vary in size from that of the smallest pebbles to that of masses ten or even fifteen feet in diameter. They are almost without exception of a primitive character,¹² consisting of granite, gneiss, mica slate and quartz. . . .

⁸ "Diluvial" is an archaic term referring to the deposits of the Noachian Flood, unconsolidated sediments somewhat older than the alluvium, but originating within the time of human existence. Today, most such material would be called Pleistocene.

⁹ Hitchcock here describes the typical topography of the Vineyard's highlands.

¹⁰ That is, none of the granite was *in situ* [in its original position] We now know that the boulders were glacially transported. In 1823, when Hitchcock was writing, the action of continental glaciers was very imperfectly understood and was certainly not known in America as an explanation for the origin of many sedimentary deposits and much of our landscape.

¹¹ Hitchcock is making the very valid distinction between rocks which are in place and those which have been transported to the place.

¹² "Primitive" is an obsolete term applied to crystalline rocks without fossils, which were assumed to be of very early origin. Even though his theory is now viewed as outmoded, his field observations and descriptions are apt.

The thickness of this diluvial mantle is not great. The sand from the plastic clay formation beneath it is indeed mingled with this as to give a predominant character to the soil, and even the clay beneath the sand is sometimes at the surface. In some tracts of considerable extent, little else but the sand is seen, the diluvial boulders and pebbles being very rare. It is obvious from this description that the soil of the island must be very light and poor, and so indeed it is. Some fertile tracts, however, occur along the margin of the small streams or brooks, and also in some instances in the immediate vicinity of the sea, and probably the soil is general is of much the same character as that along the adjacent shores of the continent. . .

I was told by an unquestionable authority that a rocking stone¹³ exists in Chilmark, a mile or two southwest of the Congregational meeting house. But I could not visit it.

Plastic Clay Formation

. . . Gay Head is well known for the bright and variegated colors of its clay, sand and pebble strata, which present a naked front of 200 feet in height. I was so unfortunate, however, through circumstances beyond my control, as not to be able to visit those cliffs, although I passed with two or three miles of them. But I felt my disappointment somewhat mitigated by having an opportunity to examine what I suppose to be a continuation of these cliffs in Chilmark, five or six miles from Gay Head, and probably near their northeastern termination.

Immediately beneath a thin stratum of diluvial soil lies a bed of shells, only a few inches thick, and most in fragments.¹⁴ Below this is a stratum of white sand with some pebbles, often several feet thick. Next occur irregularly alternating beds of various colored clays, sand, ferruginous sand, pebbles, clay and pebbles, and clay and sand intermixed. The clay beds are white, brown, blackish, red, light and deep yellow, and finely variegated with spots of white, red and yellow. The ferruginous pebble beds are

¹³ A rocking stone is so balanced on others that it can be rocked back and forth with relatively little effort. These curiosities had apparently aroused great interest at the time. The *American Journal of Science* had three papers in 1823-24 describing rocking stones in Durham, N.H., Roxbury, Mass., and Warwick, R.I.

¹⁴ For all we can tell, he might have been looking at the remains of an aboriginal kitchen-midden.

brown or reddish, sometimes a deep blood-red, and they are generally cemented by the oxide of iron, so as in some instances to require a considerable blow of the hammer to separate the fragments. This is particularly the case in the lower part of these strata, where the iron ore is sufficiently pure to be wrought.

Some of the clay beds are nearly half made up of small plates of silver-colored mica intimately mixed with clay, which appears to be kaolin. In this clay, beneath the ferruginous pebble beds, I found good specimens of well-characterized lignite. It consists of flattened trunks or branches several inches in diameter, of a clove-brown color, retaining distinctly its longitudinal, fibrous structure; but the cross-fracture is conchoidal and shining, and the concentric rings are invisible. The bark is a mere line in thickness. It burns without much difficulty, with considerable flame, and emits a rather pungent, unpleasant odor. It lies horizontal in the bed of clay. . . In other beds of clay, small masses of lignite occur, some exactly resemble common charcoal and burn as freely. . .

Viewed on a general scale, the beds are nearly horizontal. But numerous minor irregularities in the dip of the strata occur in the cliff. Indeed, instances may be seen of almost every degree of declination: in some, the best arch upwards, and in others they arch downwards. Whether this irregularity does not proceed from a partial sliding down of large masses of the cliff, I could not determine, though inclined to believe it does not. . .

I visited the Vineyard in early June, and the season being unusually late, I am unable to say much of its botany. . . A species of oak exists abundantly there which I have never seen upon the continent; but I could determine nothing concerning the species.¹⁵

A species of *Ranunculus* [the buttercup] also occurs, which is stemless and, I believe, undescribed. Very many of the boulder stones contain on their surface large quantities of the elegant *Borrera chrysophthalma*¹⁶ a lichen very rare in most parts of New England. Associated with this is abundance of yellow and beautiful species of *Parmelia*,¹⁷ with which I am unacquainted. . .

¹⁵ Vineyard oaks are all species known on the mainland, although they may, as here, be stunted and wind-pruned by environmental circumstances.

¹⁶ *Teloschistes chrysophthalmus*, which is the present name for the plant, is not reported from Massachusetts and does not characteristically grow on rocks.

¹⁷ A currently recognized genus of lichen occurring on trees and rocks.

Did "Overfishing" in the 1800s Decimate the Whale Population?

by EDWIN R. AMBROSE

Articles about whaling in the 1800s, such as those we have been running in this series, "Whaling: the Vineyard Connection," raise the question of overfishing as the cause of the decline in the number of whales now in the oceans. We summarize here the opinions of a number of researchers on the question: Did overfishing decimate the whale populations?

Yes, in the Case of Right Whales.

Rhys Richards, Pacific maritime historian from New Zealand, in a paper he gave at the Kendall Whaling Museum Symposium in October 2000, explained why the answer is "Yes" for the Right Whales:

They are called Right Whales because the sail whalers found them the 'right' whales to catch. They come close inshore, into sheltered waters, they swim only slowly, they were easy to catch and they floated when dead. Some pelagic whaleships chose to anchor in selected sheltered spots in shore. There they could prey upon the heavily pregnant Right Whale cows that sought calmer waters in which to calve and to suckle their young. The seasonal migration routes were so fixed and unvarying that the females kept arriving each winter and swimming right up to the waiting ships.

Another researcher described the nature of Right Whales this way: "Sometimes approachable. Playful and inquisitive: will poke, bump and push objects in the water."¹

Because Right Whales were so easy to kill, Norwegians and Basques were pursuing the species before the year 1000. The Basques hunted them first in the Bay of Biscay and, beginning in 1540, as far away as the Strait of Belle Isle off the coast of Labra-

dor. Their activities declined around 1600, largely because the defeat of the Spanish Armada in 1588 resulted in a loss of many of their whaleships that had been pressed into naval service. The Dutch, followed by the English, quickly stepped into the void and began to make a major effort in northern Atlantic waters hunting Right Whales.

The U. S. whaling industry began to compete in the late 18th century, but its ships were decimated in the Revolutionary War and the War of 1812. After the latter war ended in 1815, whaling soon resumed and year 1818 is usually considered the beginning of modern whaling. Major investment of capital and manpower by Americans quickly enabled the United States to become the major whaling country in the world.

The number of Northern Right Whales in the ocean at that time, 1818, is unknown, but it is believed to have been small. At present, the number is thought to be less than 300, below the point of minimum sustainable yield.²

The larger population of Right Whales was (and is) in the southern hemisphere where it has been estimated that in 1818 there were between 90,000 and 100,000 Southern Right Whales. That population has been reduced sharply:

About 75,000 were killed before 1840 by Americans, plus at least another 10,000 by French and British whalers. Breeding since then has been slow, and the total [Southern Right Whales] globally is probably still under 5000.³

One reason for the decline of the Right Whale population is their slow breeding: "Females have their first calves at 5 to 10 years and give birth every 3 to 4 years."⁴ Also, as mentioned earlier, they often gather in small groups in inshore areas where they feed and breed, becoming extremely vulnerable to harpooners.

Another whaling historian has expanded on that:

Female Right Whales are creatures of habit and will swim to exactly the same area year after year. We commonly see Right Whales we know well swim past the same rock they passed on their previous visit and they of-

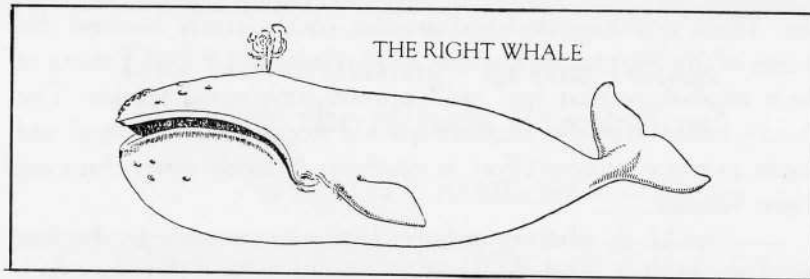
¹ Mark Carwardine, *Whales, Dolphins and Porpoises*, Dorling Kindersley Ltd., 1995, p. 44.

EDWIN R. AMBROSE is Research Editor of this journal.

² From talk by Charles Mayo, Senior Scientist, Center for Coastal Studies, Provincetown, given at M.V. Regional High School, April 21, 2000, Earth Day.

³ Richards, Kendall Whaling symposium.

⁴ Carwardine, p. 46.



ten return with their new calves to the same place in which they had raised a previous calf. Once they start having calves, we see most adult female Right Whales returning to the bays of Peninsular Valdes once every three years. Each time they come, they bring a new calf.

The five-meter-deep water in which mother Right Whales keep their calves during the first few months of the calves' lives is . . . just deep enough to float the mother.⁵

Another factor in the decline of the Right Whale population is that the female is always larger than the male. Female and male live in the same pod, along with calves and older young, and when a pod was approached by a whaleship, the boatsteerers preferred to head for the largest whale, the female, for obvious economic reasons.

This routine killing of the female Right Whales stacked the odds against the survivability of the species. The death of a female is a capital loss; a killed male is quickly replaced by other bulls in the pod.

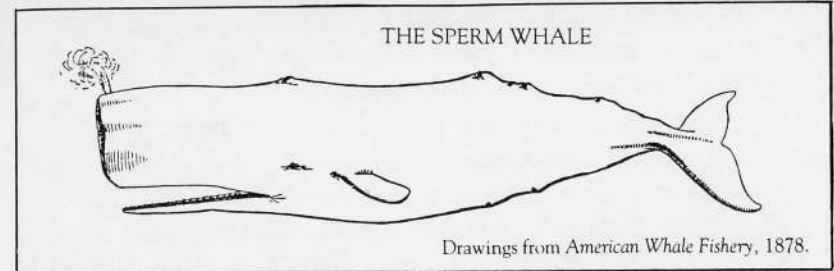
Though the number of the Southern Right Whales is slowly increasing today, the future of the Northern Right whale remains dim. Their number now is estimated to be only 295, with the expectation that they will be extinct in 2189.⁶

No, in the Case of Sperm Whales

Estimates of the Sperm Whale population in 1818 range between 1.8 million and 2.4 million, many times that of the Right Whale, both northern and southern. It can be shown that the killing of Sperm Whales through the years was not "overfishing"

⁵ Roger Payne, *Among Whales*, Charles Scribner's Sons, 1995, p. 104-5. The shallow water provides safety against sharks and killer whales (orcas). Peninsular Valdes is on the Atlantic Ocean in Argentina.

⁶ Mayo at Martha's Vineyard Regional High School, Earth Day, 2000.



when one studies the numbers. In an authoritative work on the subject, we read this:

One obtains an estimate of 177,000 Sperm Whales destroyed by Americans in the years 1805 through 1900. The total number killed by all whaling fleets would have been about 236,000. Whalemen appear to have killed, in total, between 8 and 18 percent of the initial stock in a harvest distributed across 96 years. Even the largest single-year American catch, that of 1837 (between 3760 whales if the killed whales averaged 45 barrels per whale and 6770 if an average of 25 barrels is used)⁷ was considerably less than 0.5 percent of the initial stock and only a small fraction of the maximum sustainable yield that lay within the procreative capacity of Sperm Whales.

Modern levels of Sperm Whale populations also suggest that damage by 19th century whaling was not disastrous. For example, estimates in Frost's monograph⁸ show that Sperm Whales numbered more than 850,000 in the late 1970s. They have survived both the American assault of the 19th century and the more formidable assaults of the 20th.

There are other reasons to believe that individual hunting grounds were not depleted on a large scale. Sperm whales are polygynous. A heterosexual pod – a group traveling together – typically consists of a bull and 10 or 15 cows and their young, including some full-grown but socially immature bulls (not yet competitive with the patriarch). Two or three mature bulls usually trail the pod at a safe distance, waiting to take over the cows when the patriarch dies or becomes disabled. The patriarch-dominated pod is formed during the breeding season. After servicing the cows, the patriarch leaves, and the pod is matriarchal until the next season. Between breeding seasons, patriarchs travel alone. Pods of socially immature, but physically mature, males travel together, occasionally with socially mature bulls who have yet to win harems.

⁷ The barrel average is used as we have no record of whales killed, only oil sold.

⁸ Sydney Frost, *The Whaling Question: The Inquiry by Sir Sydney Frost of Australia*, Friends of the Earth, San Francisco, 1979.

A very large fraction of the males in the male pods, the trailing bulls and the males traveling alone, could be taken without adversely affecting the reproductive power of the population.⁹

A recent study of Sperm Whale behavior tells us:

Like bull elephants, male Sperm Whales are loners. Females live in groups, but males leave at about age six to wander the seas. Maturing 20 years later, they were thought to mate randomly. But DNA work at Dalhousie University in Halifax, Nova Scotia, shows that although female groups are primarily matrilineal, they sometimes include members related only through their fathers. This suggests that males revisit the same group or in a single visit mate with more than one female.¹⁰

As mentioned, behavior habits of Right and Sperm Whales help explain why one is growing extinct while the other flourishes: On the one hand, given the initial stocks and the numbers caught, it seems the baleen [Right whale] populations were more likely to have been depleted than were Sperm Whale populations. There are two other factors . . . : baleens are monogamous and may even form permanent sexual attachments; and the female is larger than the male. The natural factors that helped protect the reproductive capacity of Sperm . . . the small relative size of the female, polygyny and the easy substitution of one male for another in breeding season, are absent among baleens.

Since mature male Sperm Whales are three or four times as large as females, they would have been preferred by hunters. . . [The] 19th century hunters did take disproportionately large numbers of mature bulls. Forty-two percent of the Sperm Whales taken were large bulls. . . If Sperm Whales had been taken at random from the total population, roughly one-half of those captured would have been immature, another one-quarter mature females, and only about one-quarter mature males.

Thus, given the total number killed, it seems highly unlikely that even concentrated hunting would have depleted the stocks of Sperm Whales or greatly eroded their reproductive power.¹¹

Many technological improvements have made 20th century whaling much different from the way it had been done previously. Earlier whaling could be described as manual or hand whaling, whereas 20th century whaling could be called machine whaling. The differences will be discussed in a future article.

HITCHCOCK, Edward, geologist, b. in Deerfield, Mass., 24 May, 1793; d. in Amherst, 27 Feb., 1864. He spent his boyhood in working on a farm, with an occasional turn at carpentry and surveying, acquiring such education as he could by study at night. It was his intention to enter Harvard, but impaired eyesight and illness prevented. In 1815 he became principal of the Deerfield academy, where he remained for three years, and during this period published a poem of five hundred lines entitled "The Downfall of Buonaparte" (1815). He also acquired some reputation by a controversy with Edmund M. Blunt, the publisher of the "American Nautical Almanac." A reward of ten dollars was offered for the discovery of an error in the work, and Mr. Hitchcock responded with a list of fifty-seven. As the publisher ignored the communication, the list was published in the "American Monthly Magazine." A year later the "Almanac" appeared somewhat revised, but, as no allusion was made to Mr. Hitchcock's corrections, he called the attention of the editor to about thirty-five errors in the improved edition. From 1814 till 1818 he calculated and published the "Country Almanac." Meanwhile he had chosen his wife from among his assistant teachers, and it was largely through her influence that his thoughts were turned to religion. In 1818 he determined to become a minister, and entered Yale theological seminary, where he was graduated in 1820. He was ordained in 1821 as pastor of the Congregational church in Conway, Mass., where he continued till October, 1825. While holding this pastorate he made a scientific survey of the western counties of Massachusetts, and later studied chemistry and kindred topics under the elder Silliman, in his laboratory at Yale. In 1825 he became professor of chemistry and natural history at Amherst, continuing as such for twenty years, giving lectures and instruction in chemistry, botany, mineralogy, geology, zoology, anatomy, physiology, natural theology, and sometimes natural philosophy and astronomy. In 1845 he was elevated to the presidency of the college with the professorship of natural theology and geology. These offices he filled till 1854, when he resigned the former, but retained his chair until his death. The college at the time of his accession to the presidency was struggling for existence, but Dr. Hitchcock procured new buildings, apparatus, and funds, to the amount of \$100,000, doubled the number of students, and established the institution on a solid pecuniary as well as literary and scientific basis.



Edward Hitchcock

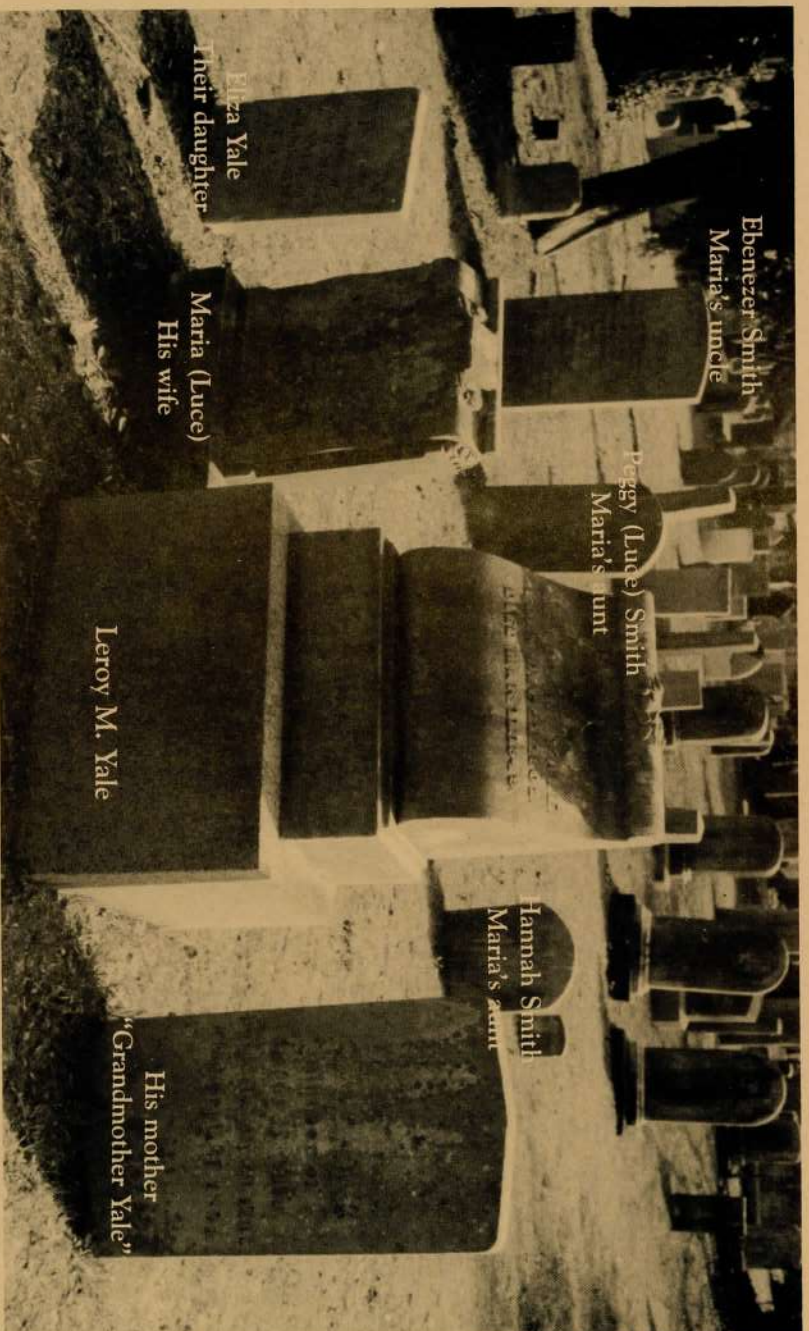
He also conducted the worship in the Amherst college church during his presidency. In 1830 he was appointed state geologist of Massachusetts, and he held this place until 1844, when he completed the first survey of an entire state that was ever conducted under the authority of a government. In this connection he published a report on the "Economic Geology" (Amherst, 1832), and later, in four parts, a "Report on the Geology, Mineralogy, Botany, and Zoology of Massachusetts" (Amherst, 1833). He was commissioned to re-examine the geology of the state in 1837, and subsequently issued his "Re-Examination of the Economical Geology of Massachusetts" (Boston, 1838), followed by a final report on the "Geology of Massachusetts," in four parts (Amherst, 1841). President Hitchcock was among the first to study the fossil footprints of the Connecticut valley, and to publish a scientific explanation of them. Specimens of nearly all of the known varieties were collected by him, and subsequently presented to Amherst college. He prepared the "Ichthyology of New England" (Boston, 1858), and "Supplement to the 'Ichthyology of New England'" (1855), which were published by the Massachusetts legislature. In 1836 he was appointed geologist of New York, and was assigned to the work of the first district, but he soon resigned. From 1857 till 1861 he was state geologist of Vermont, publishing annual reports in 1857-9, and "Report on the Geology of Vermont, Descriptive, Theoretical, Economical, and Scenographical" (2 vols., Claremont, 1861), in the preparation of which he was assisted by his two sons and Albert D. Hager. For several years he was a member of the Massachusetts board of agriculture, in 1850 was commissioned by the state of Massachusetts to examine the agricultural schools of Europe, and in 1851 published his report on that subject. He received the degree of A. M. from Yale in 1818, that of LL. D. from Harvard in 1840, and that of D. D. from Middlebury in 1846. President Hitchcock was active in the establishment of the American association of geologists and naturalists, was its first president in 1840, and in 1863 was named by congress as one of the original members of the National academy of sciences. His literary work was very great. Of his larger works besides those previously mentioned, the most important are "Dyspepsia Forestalled and Resisted" (Amherst, 1830); "Elementary Geology" (New York, 1840; London, 1854); "History of a Zoological Temperance Convention, held in Central Africa in 1847" (Northampton, 1850); "Religious Lectures on Peculiar Phenomena of the Four Seasons" (Amherst, 1850); "Religion of Geology and its Connected Sciences" (Boston, 1851); "The Power of Christian Benevolence illustrated in the Life and Labors of Mary Lyon" (Northampton, 1852); "Religious Truth illustrated from Science" (Boston, 1857); and "Reminiscences of Amherst College" (Northampton, 1863), which is largely autobiographical, and gives a complete bibliography of his works, including the titles of some 26 volumes, 35 pamphlets of sermons and addresses, 94 papers in scientific and literary journals, and 80 newspaper articles, making in all over 8,500 pages.

Edward Hitchcock's impressive career covers a full page in Appleton's Cyclopaedia of American Biography, 1887. Our article on p. 186ff. is one of his early writings.

⁹ Davis, Gallman, Gleiter, *In Pursuit of Leviathan*, National Bureau of Economic Research, University of Chicago Press, 1997, pp. 136-8.

¹⁰ "Sperm whales: Closer Bonds," *National Geographic Magazine*, July 1998.

¹¹ Davis, Gallman, Gleiter, *Pursuit*, pp. 139-40.



The Yale family graves in the cemetery behind the former Holmes Hole Congregational Church (now Town Hall) that the doctor helped finance. To the left and just out of the photograph are the graves of Jane (Smith) and Timothy Luce, Maria's parents.