

History's Insights into Martha's Vineyard —  
Today and Tomorrow

*The 1850 Map by  
Henry Laurens Whiting*



# Harvard Forest

Est. 1907

Harvard University's  
4000-acre Laboratory  
and Classroom



HISTORICAL INFLUENCES  
ON THE  
LANDSCAPE  
OF  
MARTHA'S VINEYARD

PERSPECTIVES ON THE MANAGEMENT  
OF THE  
MANUEL F. CORRELLUS STATE FOREST



DAVID R. FOSTER  
GLENN MOTZKIN

1999

*A Meeting of Land and Sea*

*Nature and the Future of* MARTHA'S VINEYARD

DAVID R. FOSTER



2017

Harvard Forest Freshman Seminar *Reading and Conserving New England*

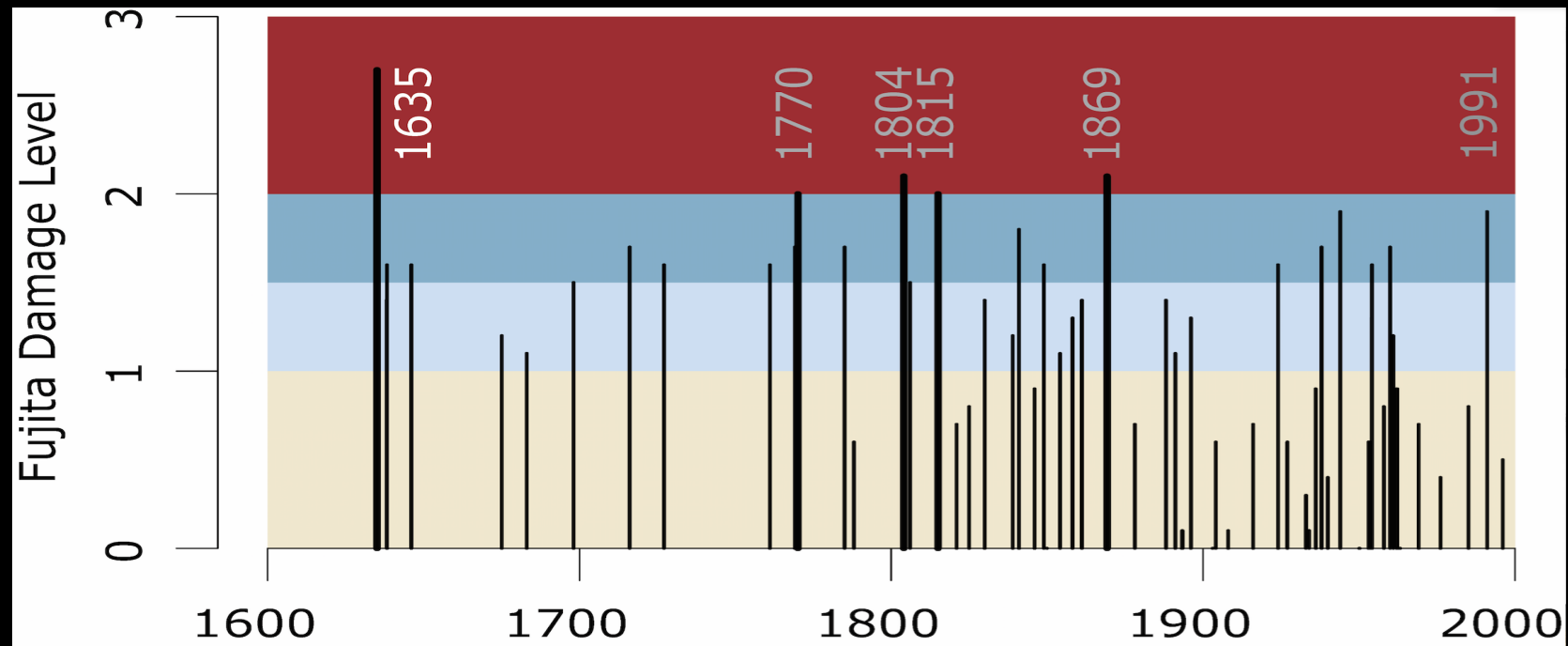
Nathaniel Shaler

-- Quansoo Farm --

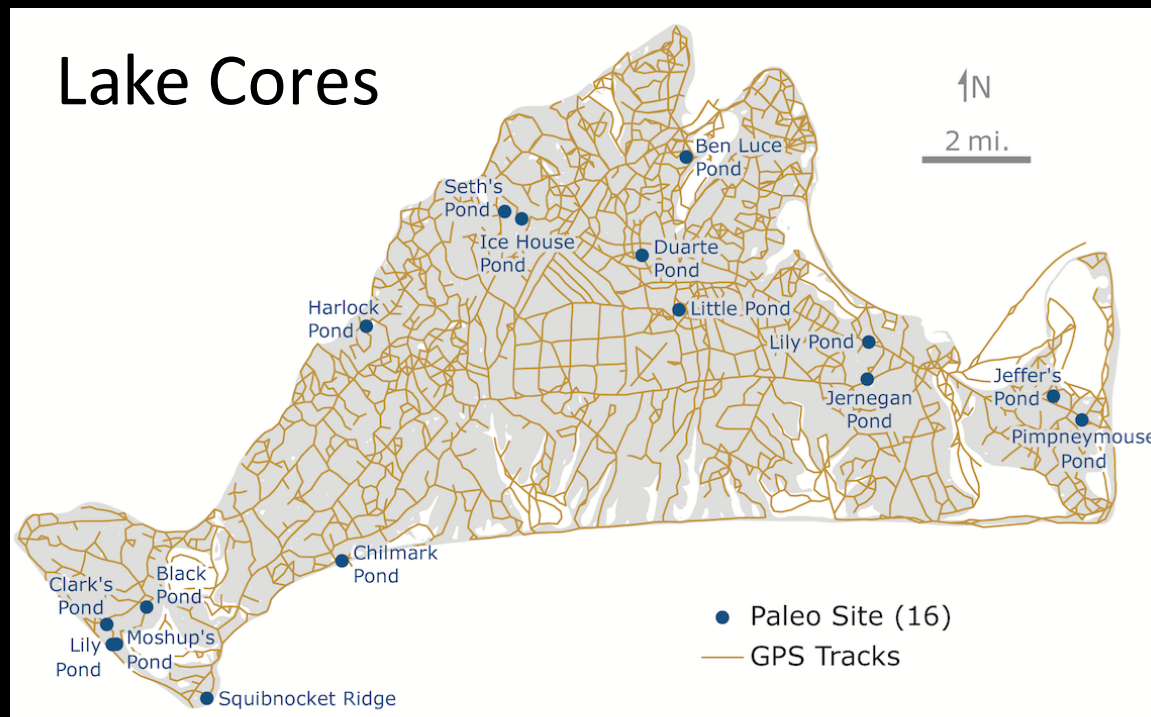
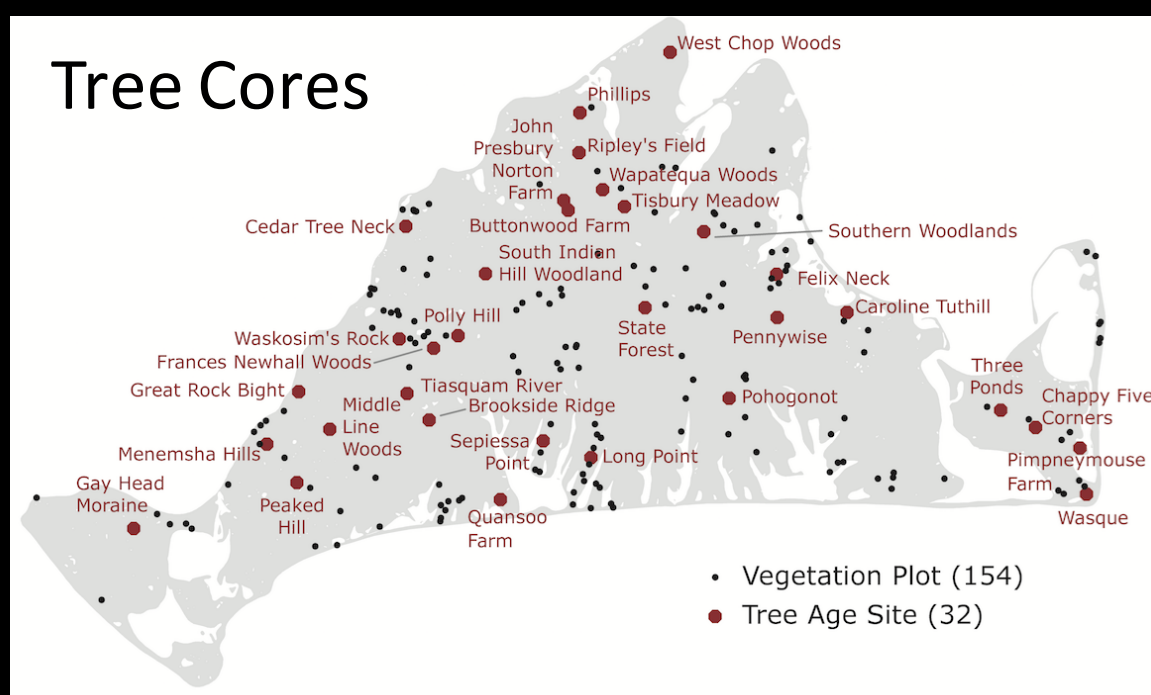
-- Seven Gates Farm --



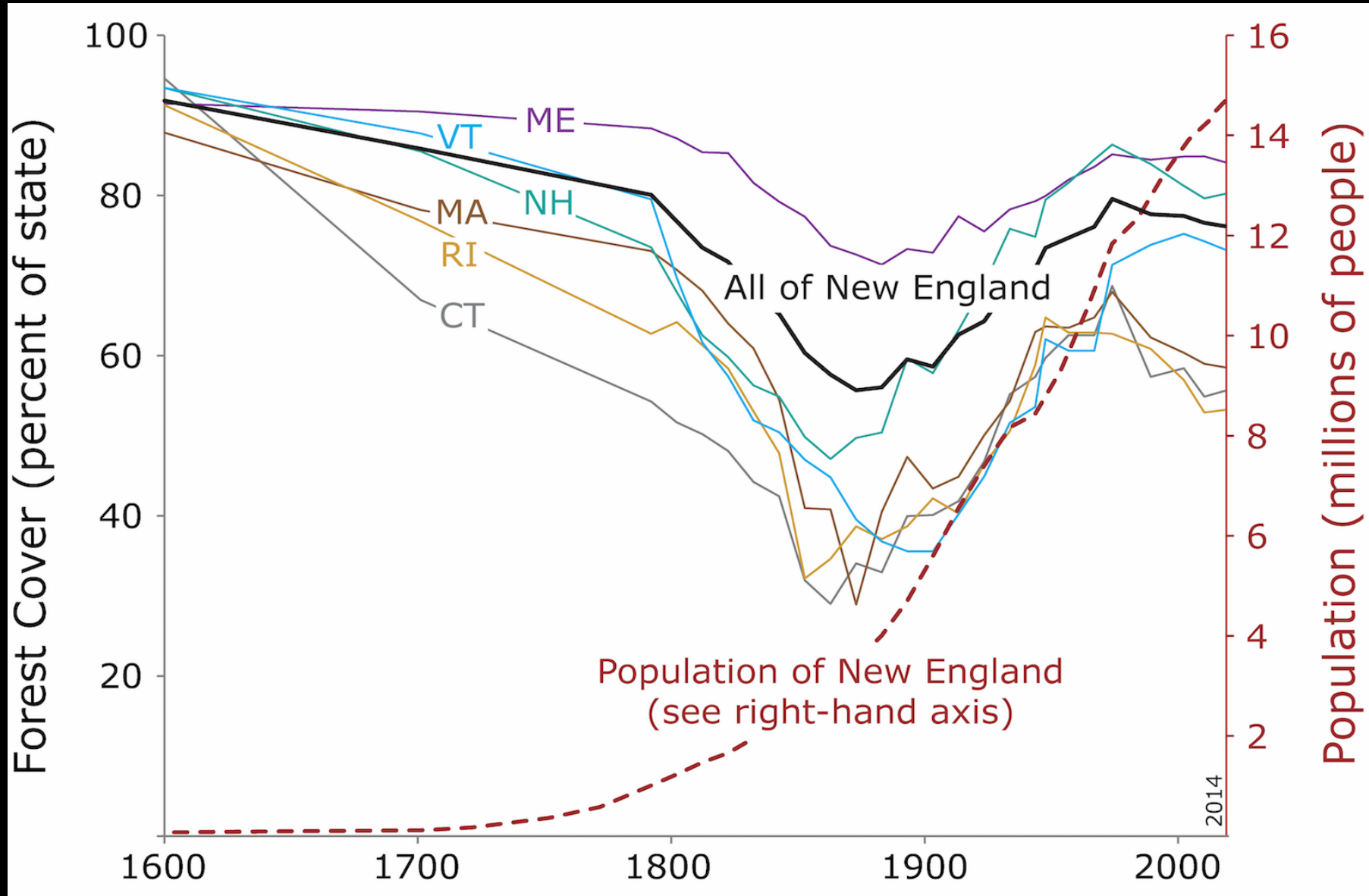
*The more you know about the past, the better prepared you are for the future ---- Theodore Roosevelt*







# Forest Cover and Population Trends in New England



1880

Farm dominated

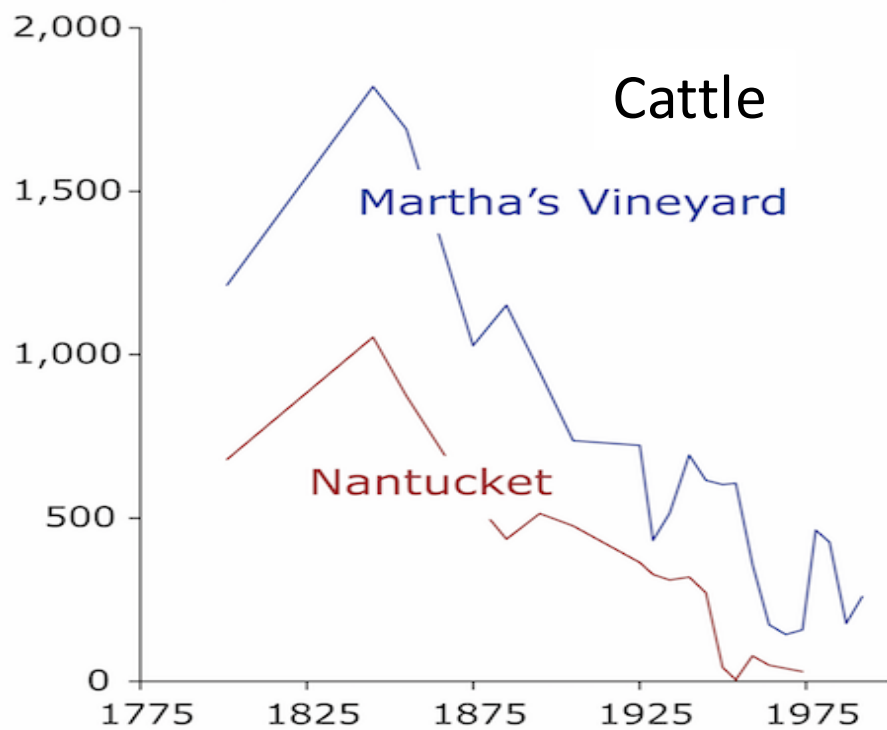
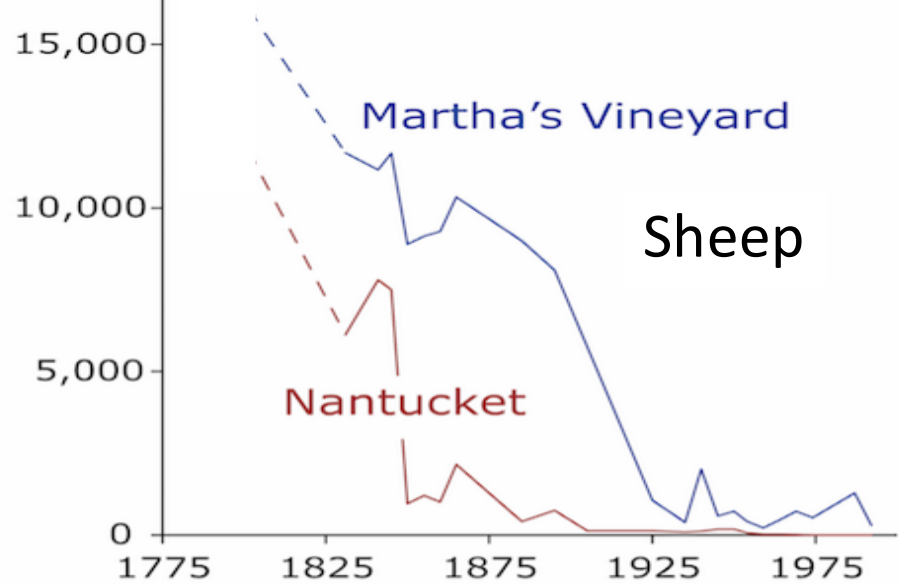


2015

Forest dominated







# 1830 Forests



# 2010 Forests



1830

State-wide

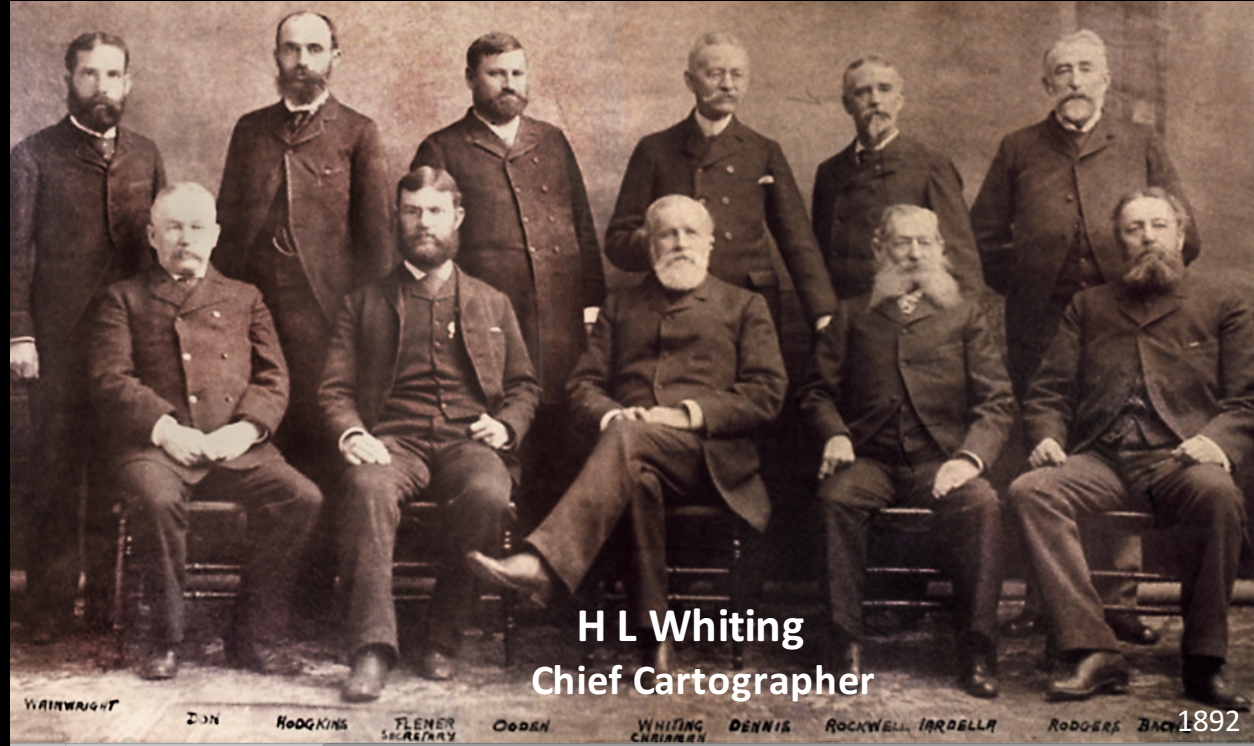
Mapping

## H.H. Crapo 1830 Chappaquiddick





# U.S. Coastal Survey

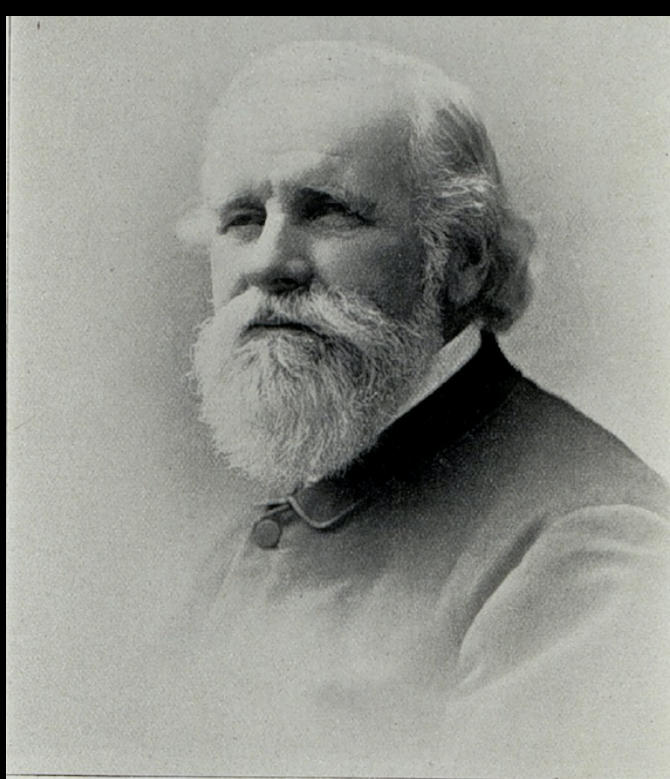


H L Whiting  
Chief Cartographer

Navigation

Defense

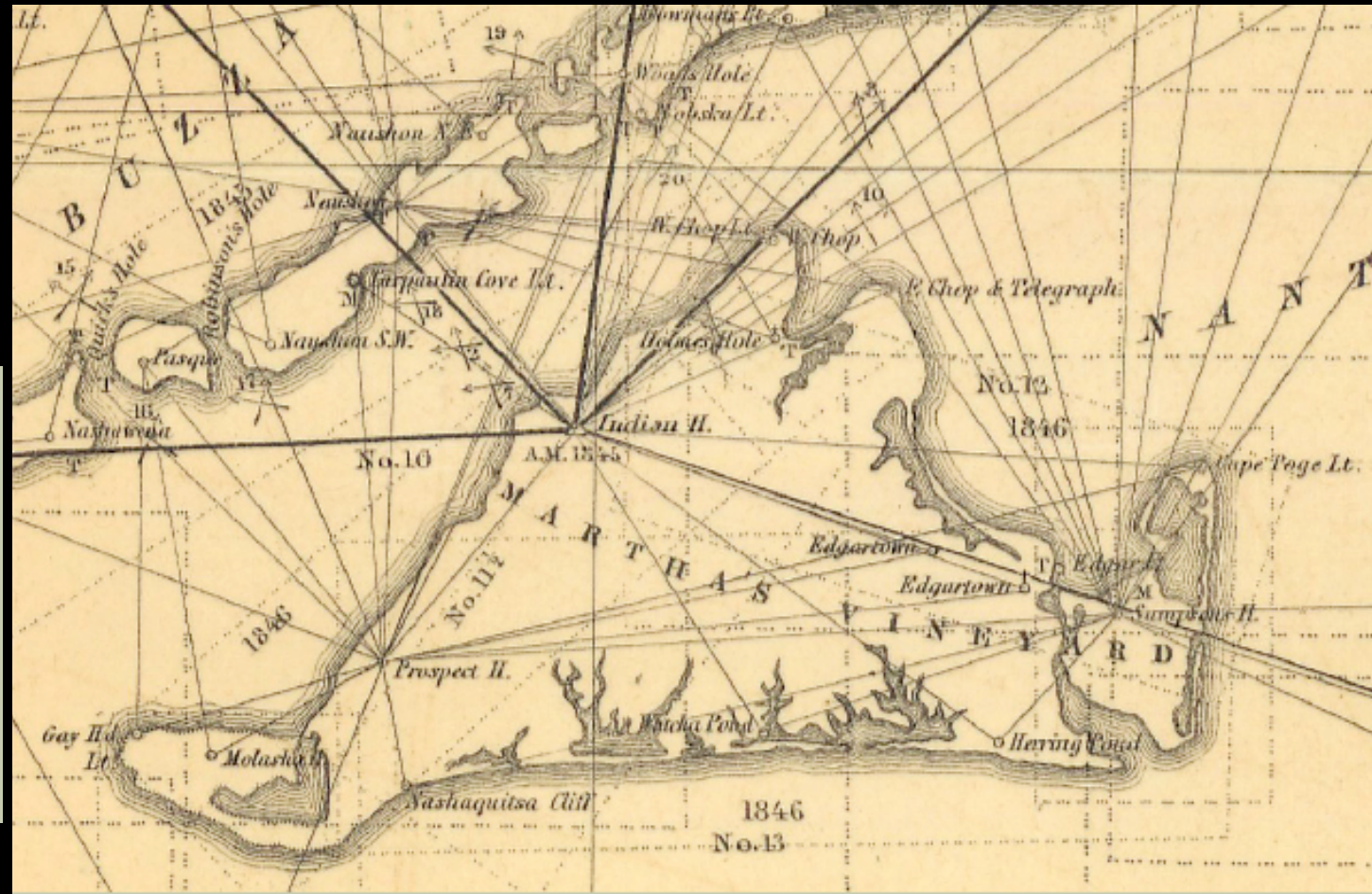
Infrastructure & Commerce



# Henry L. Whiting 1821-1897

## Chief U.S. Cartographer

And, because of that, a West Tisbury Farmer



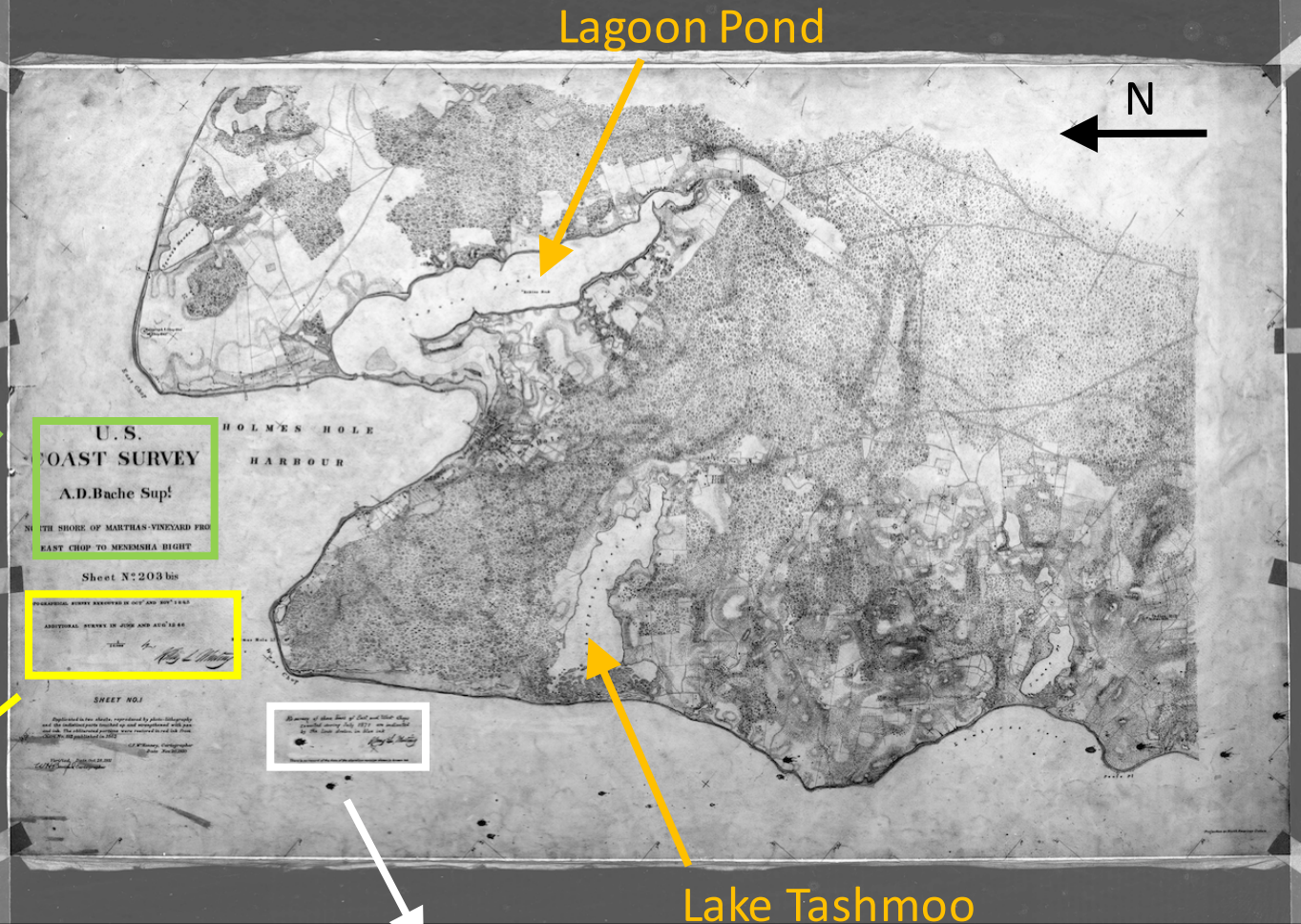
*“Henry Whiting could make a better map of the far side of a hill without seeing it than others could while standing before it.”*

U. S.  
COAST SURVEY

A.D. Bache Sup<sup>t</sup>

NORTH SHORE OF MARTHAS-VINEYARD FROM  
EAST CHOP TO MENEMSHA BIGHT

NOAA Archives



Lagoon Pond

N

U. S.  
COAST SURVEY  
A.D. Bache Sup<sup>t</sup>

NORTH SHORE OF MARTHAS-VINEYARD FROM  
EAST CHOP TO MENEMSHA BIGHT  
Sheet No: 203 bis

SHEET NO: 1  
Published in the sheets, represented by plain lines, and the measurements made on and corrected with care  
The map was published in 1846

Re-survey of shore lines of East and West Chops  
executed during July 1871 are indicated  
by the lines drawn in blue ink

Lake Tashmoo

TOPOGRAPHICAL SURVEY EXECUTED IN OCT' AND NOV' 1845

ADDITIONAL SURVEY IN JUNE AND AUG' 1846

$\frac{1}{10,000}$

*Henry L. Whiting*

*Re-survey of shore lines of East and West Chops  
executed during July 1871 are indicated  
by the lines drawn in blue ink*

*Henry L. Whiting*

# Holmes Hole

1847

“Topography by

H. L. Whiting”

## THE HARBOR OF HOLMES' HOLE

Harbor of Refuge No. 1

Founded upon a Trigonometrical Survey  
 under the direction of A. D. BACHE, Superintendent of the  
**SURVEY OF THE COAST OF THE UNITED STATES**  
 Triangulation by C. M. EAKIN, Assistant  
 Topography by H. L. WHITING, Assistant  
 Hydrography by the party  
 under the command of G. S. BLAKE, Lieutenant, U. S. Navy

Published in 1847

Scale 2500

### TIDAL NOTES.

Corrected Establishment of Holmes Hole	M. XVIII
Rise of Highest Tide observed above the plane of reference	5' 00
Fall of Lowest Water observed below do.	0' 50
Height of Mean Low Water above do.	0' 50
Height of Mean High Water above do.	1' 50
Mean rise and fall of Tides	1' 00
Mean rise and fall of Spring Tides	1' 50
Mean rise and fall of Neap Tides	0' 50
Mean duration of Flood, reckoning from the middle of one	0' 50
Mean duration of Ebb, do. to the middle of the next	0' 50
Mean duration of Slack Water	0' 50

The soundings are expressed in feet to 10 feet, or within the dotted air line, beyond that in fathoms, and above the depth at mean low water of Spring Tides (the plane of reference). The dotted surface represents the bottom within the respective depths of 0, 12, and 10 feet.

Latitude of West Chop Light of 1842 44° 48' 31"  
 Longitude of do. West of Greenwich Obs? 76° 56' 11"  
 Longitude of do. in time from data to 1846 42° 52' 45"  
 Variation of Magnetic Needle at Indian Hill, in Aug. 1846 0° 50' West

### SAILING DIRECTIONS.

Entering this Harbor from the Westward, East Chop well open, with West Chop Light II, clear you of the Middle Ground, then the West Chop a berth of 1/2 a mile until you are past the buoy off Low Point. The Chart will then be the best guide. You can beat in with perfect safety the shores being bold and clear. Ships may anchor in 25 fathoms, and West Chop Light just open with woods on Low Point. Small vessels may anchor farther in, and immediately off the Town. Holmes Hole Light is first, elevated 60 feet above the sea, and is visible 16 miles.

The characteristic soundings only are given on the maps. They are selected from the numerous soundings taken in the survey so as to represent the figure of the bottom.

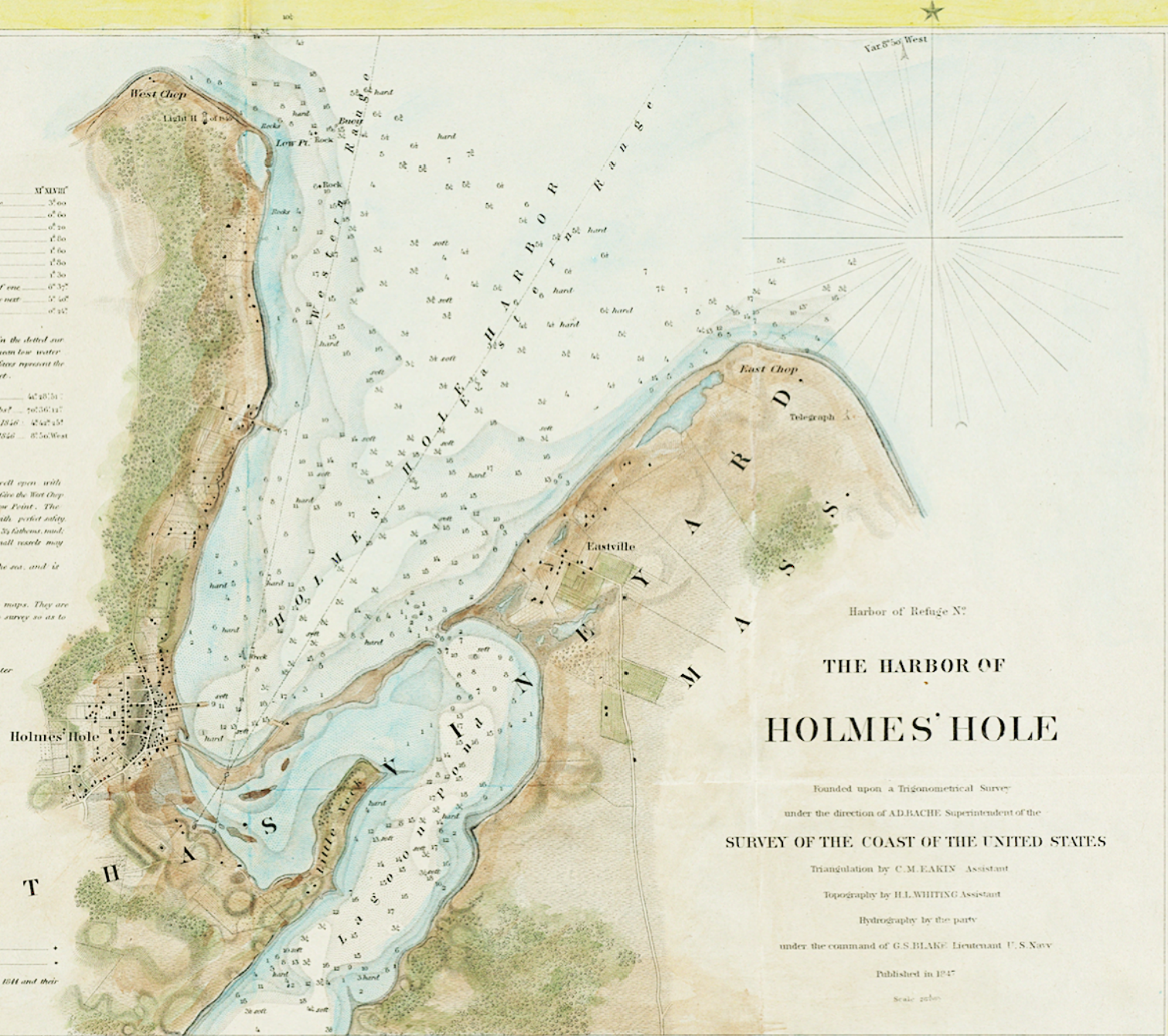
### NOTE

O, P, Q, proposed sites of Beacons giving ranges to enter the Harbor

M A R T H A

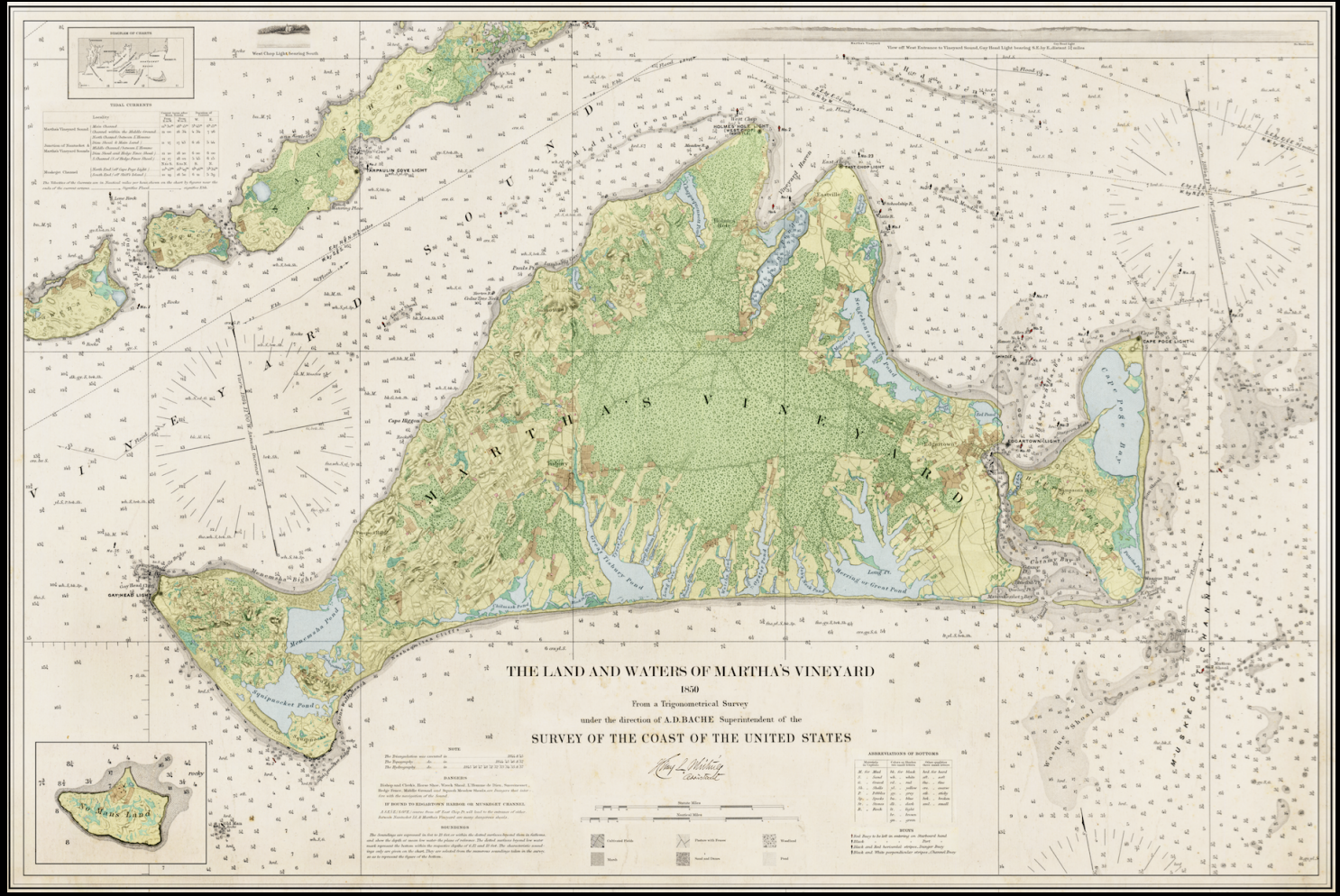
Sign for sunken rock  
 Sign for rock awash

The Triangulation of both Harbors was executed in 1844 and their Topography and Hydrography were executed in 1845

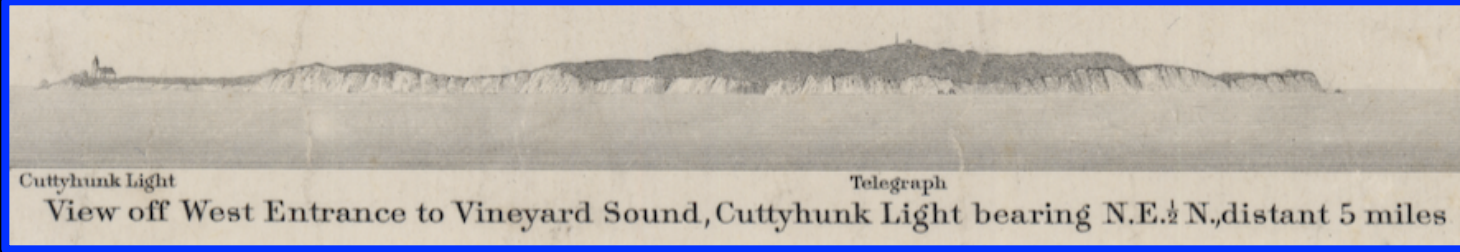
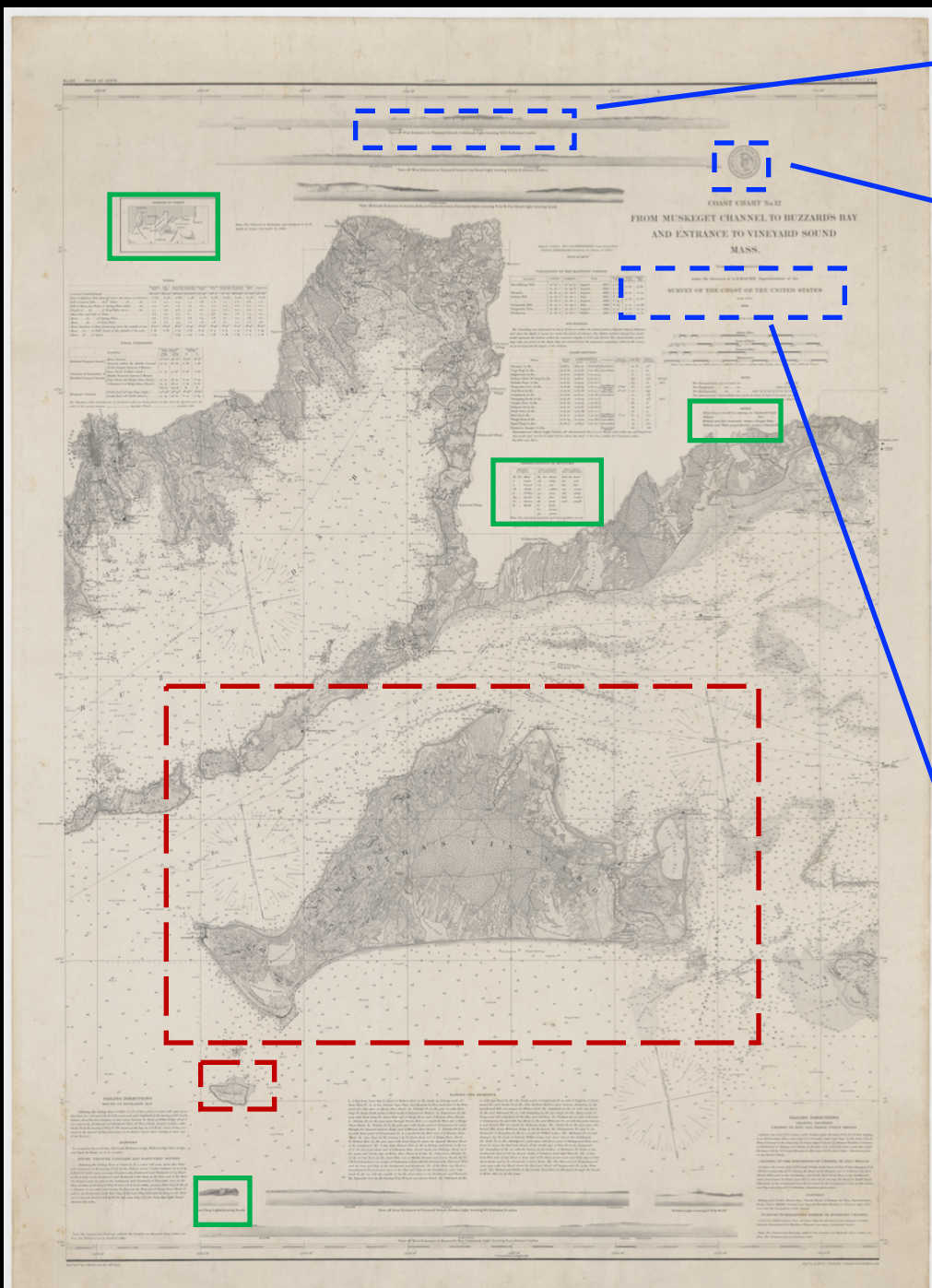




COAST CHART No.12  
FROM MUSKET CHANNEL TO BUZZARDS BAY  
AND ENTRANCE TO VINEYARD SOUND  
MASS.







*Mary S. Whiting*

From a Trigonometrical Survey

under the direction of A.D.BACHE Superintendent of the

**SURVEY OF THE COAST OF THE UNITED STATES**

Scale 30,000

1860



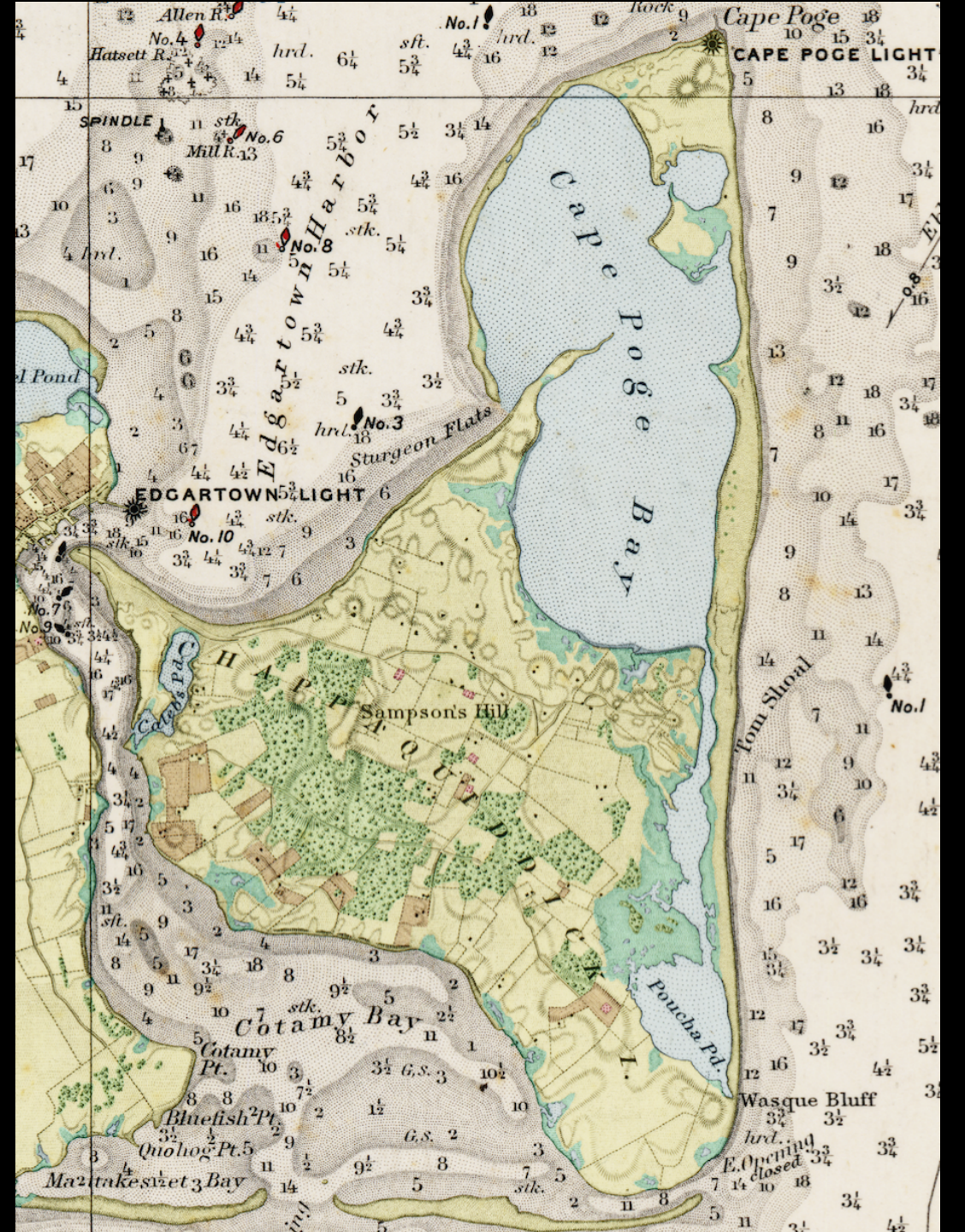
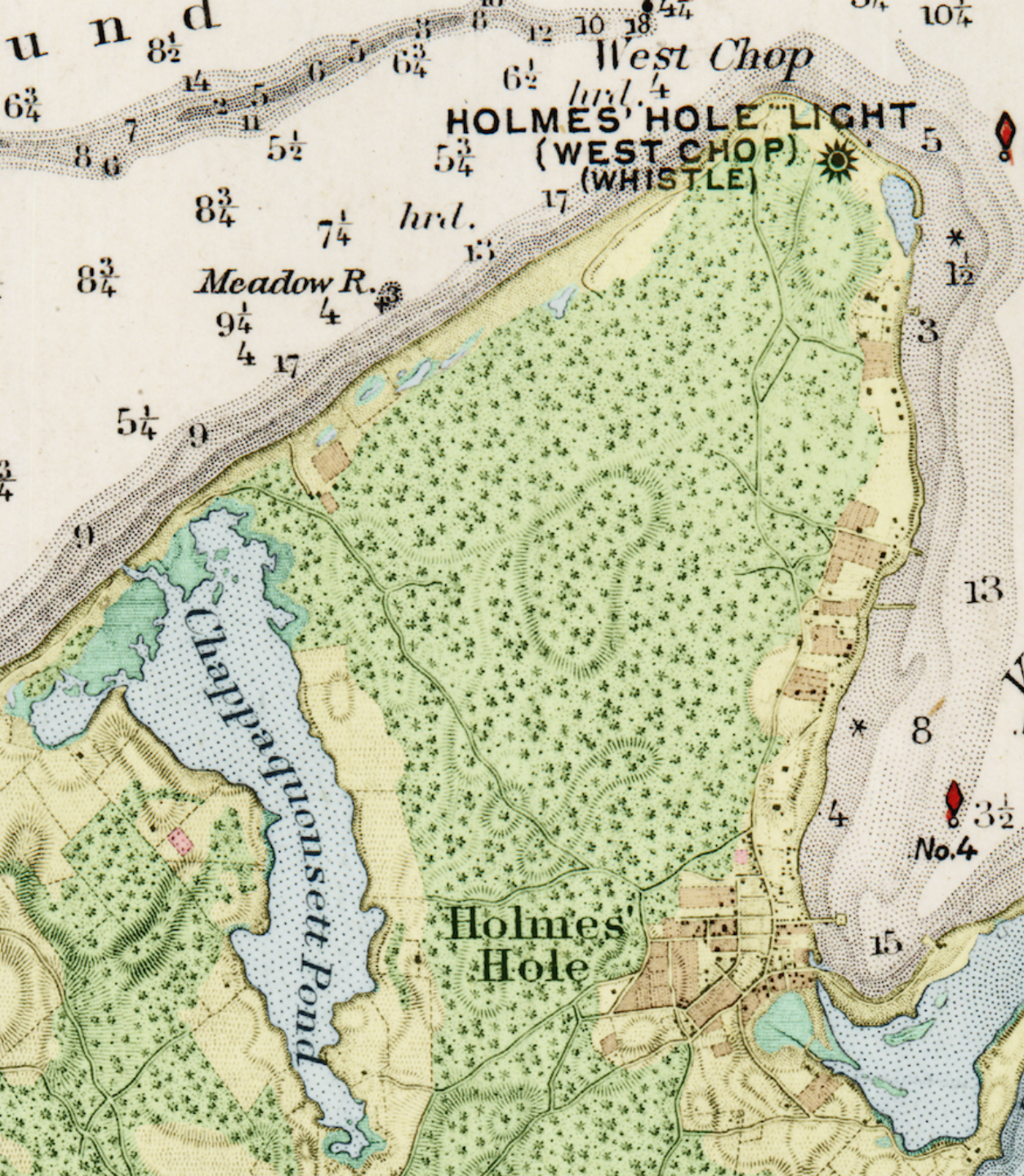
“We learn that a  
...map of the  
island, will soon  
be published”

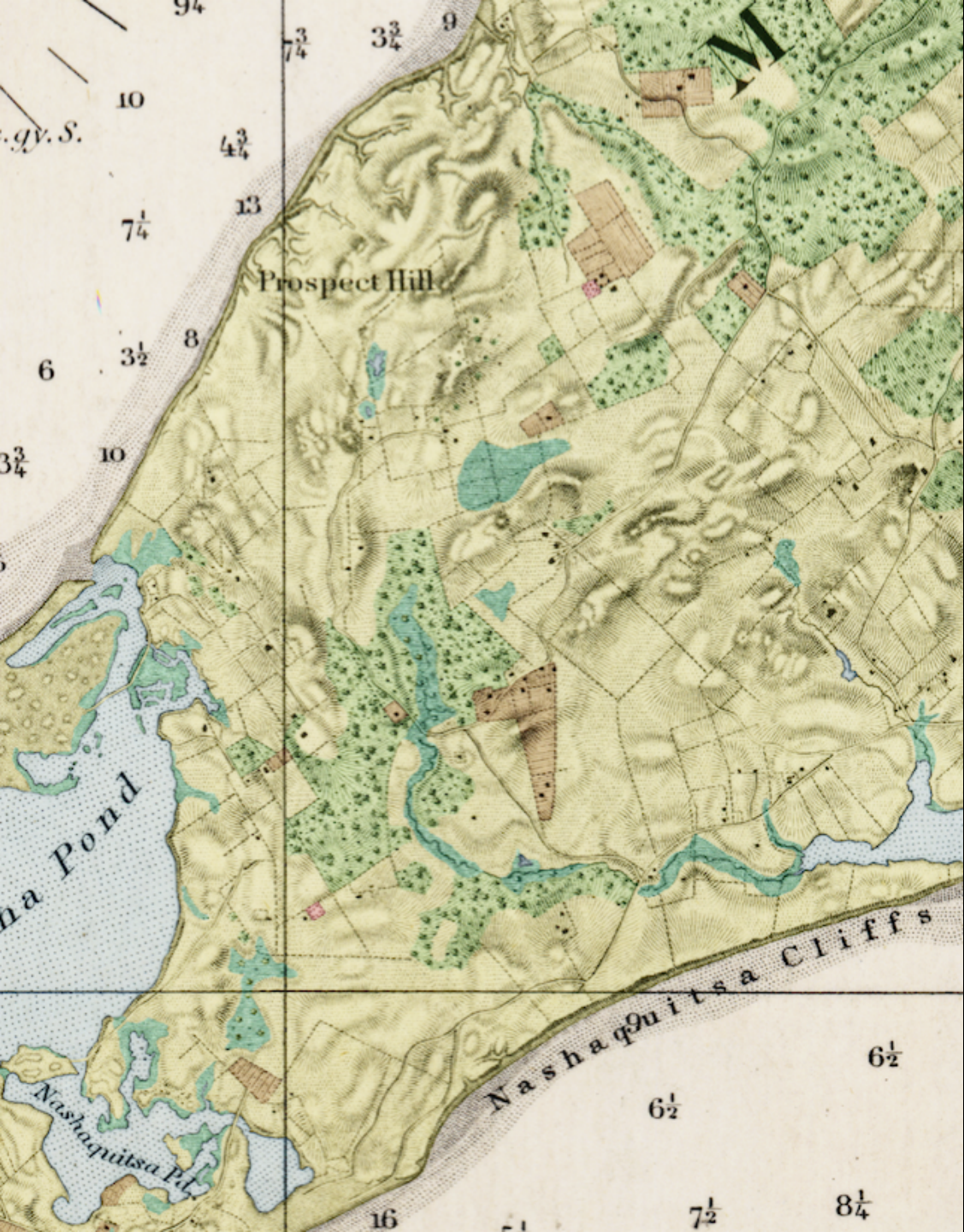
*Vineyard Gazette*  
January 28, 1848

*Were our people aware of the manner in which these charts are engraved and published, there is not a family in town but would procure one as soon as possible.*

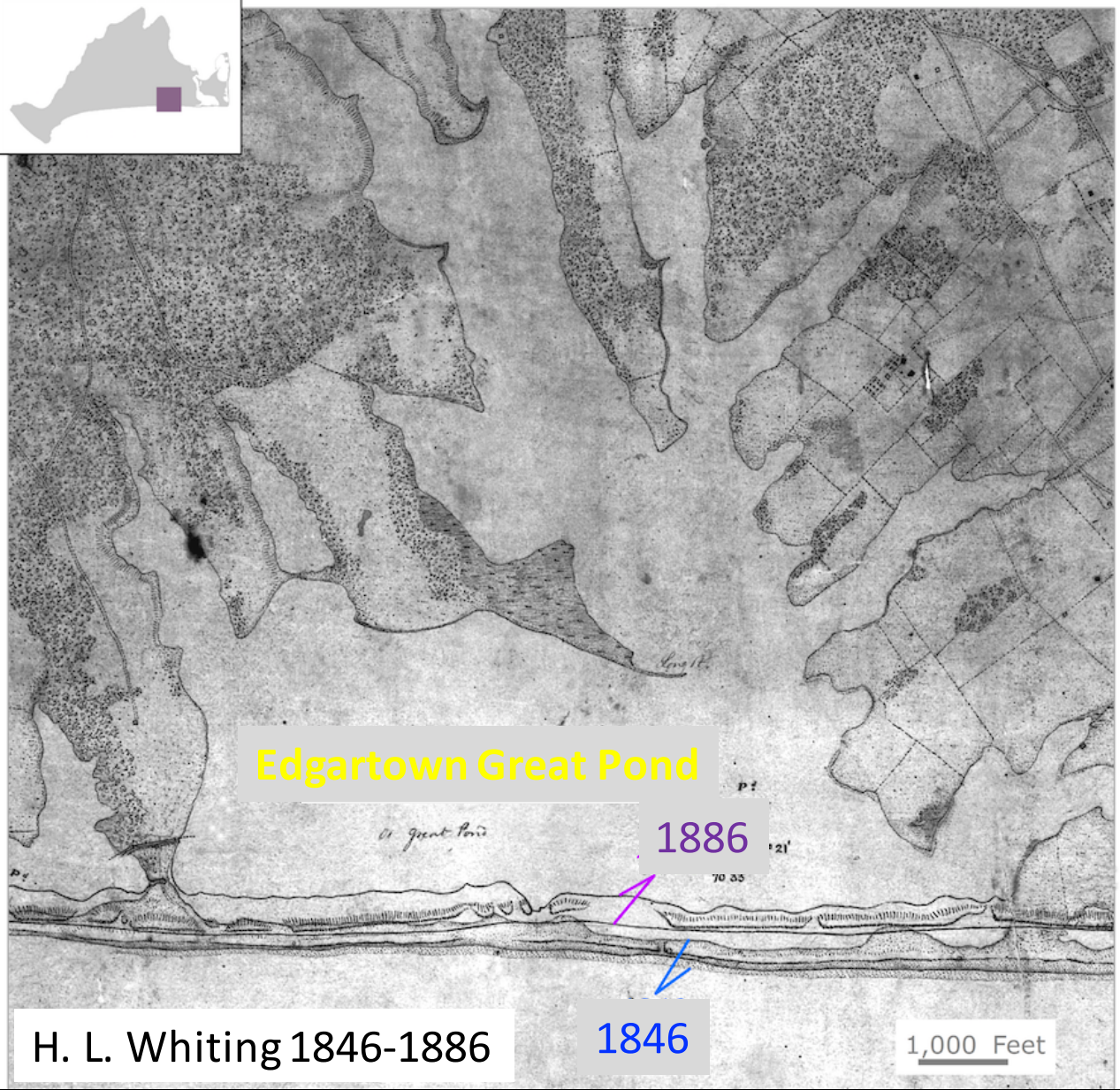
*What surprizes us most is, that the roads running to and on the island, are laid down so correctly... A correct description of every pond, with its outlet, or path leading thereto...besides a scale of miles, by which anyone can ascertain the exact distance (within a foot or less) from one point to another.*

*But this is not all. To the mariner, passing in and out of our harbor... this chart contains information of incalculable importance. The outlines of the coast, the position of the light houses, buoys and rocks, with shoals and soundings, are... perfect, or as near perfection, as science, at the present day will admit. It is, in fact, beyond improvement . . .*

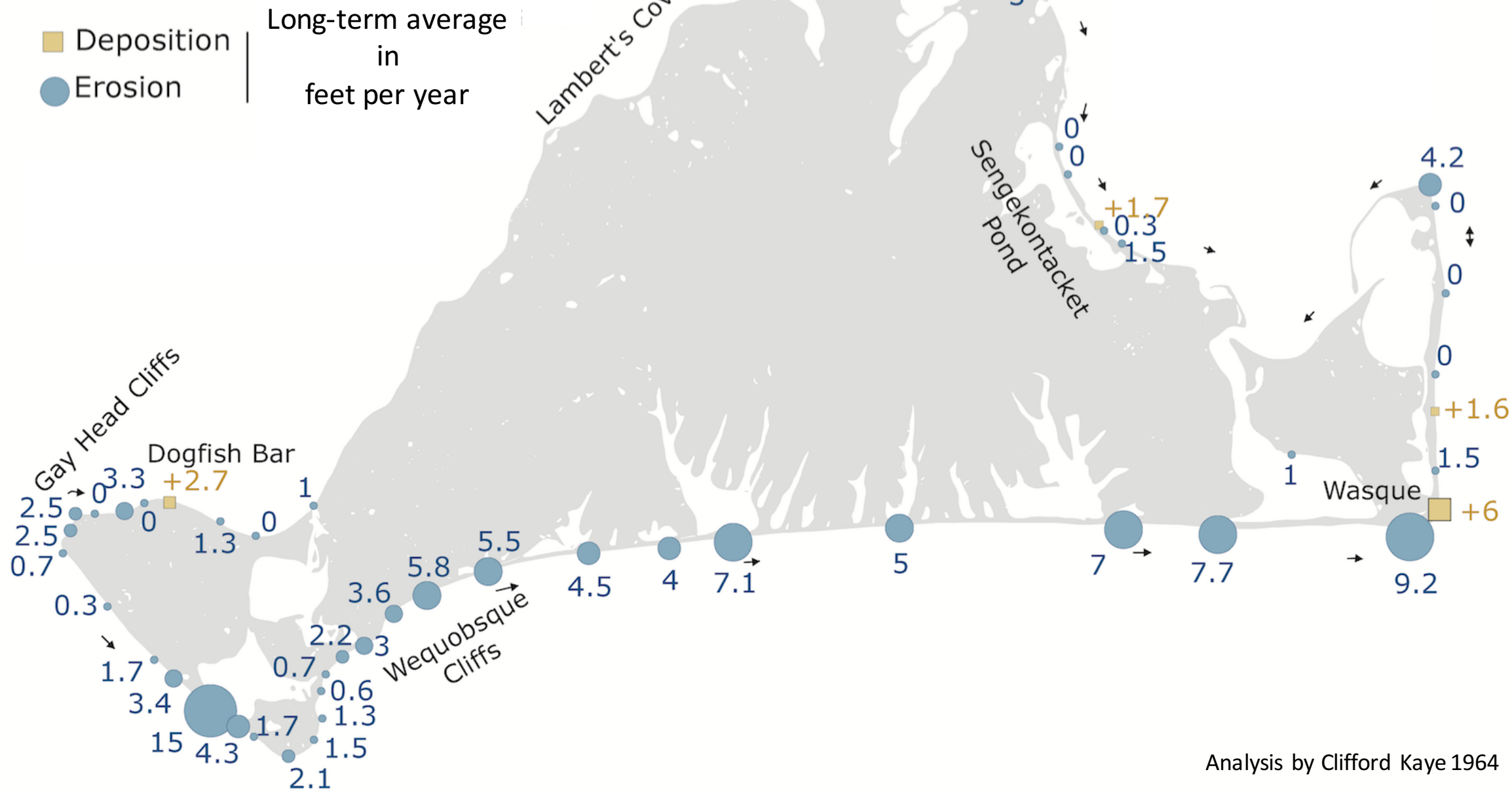








# Erosion Rate - since 1850







Prepared in cooperation with the Massachusetts Office of Coastal Zone Management

# Massachusetts Shoreline Change Mapping and Analysis Project, 2013 Update

Mass.gov

State Offices & Courts

State A-Z Topics

State Forms

No Active Alerts

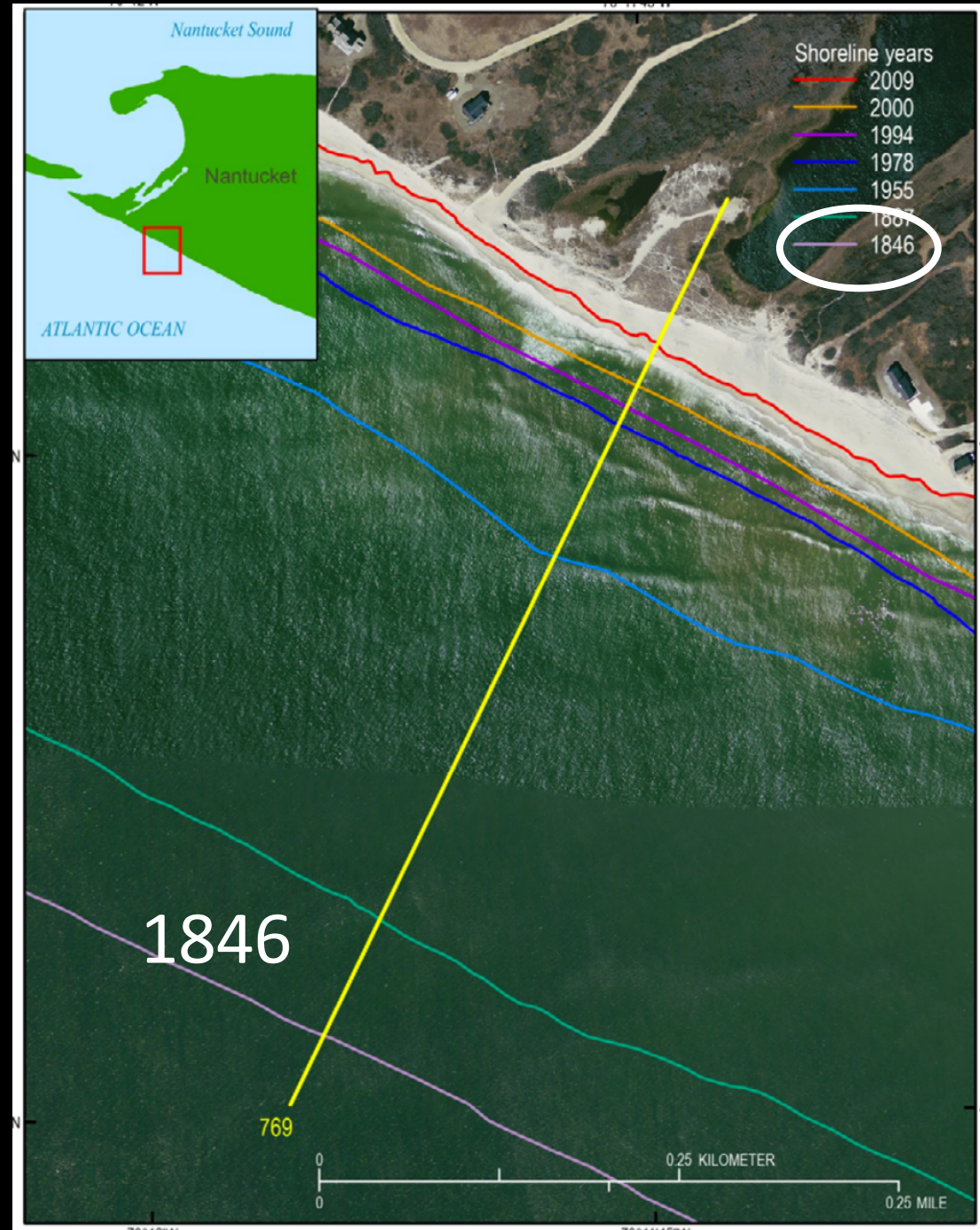


The Official Website of the Executive Office of Energy and Environmental Affairs

Energy and Environmental Affairs

Search...

Massachusetts Office of Coastal Zone Management (CZM)





## Whiting, H. L. 1886.

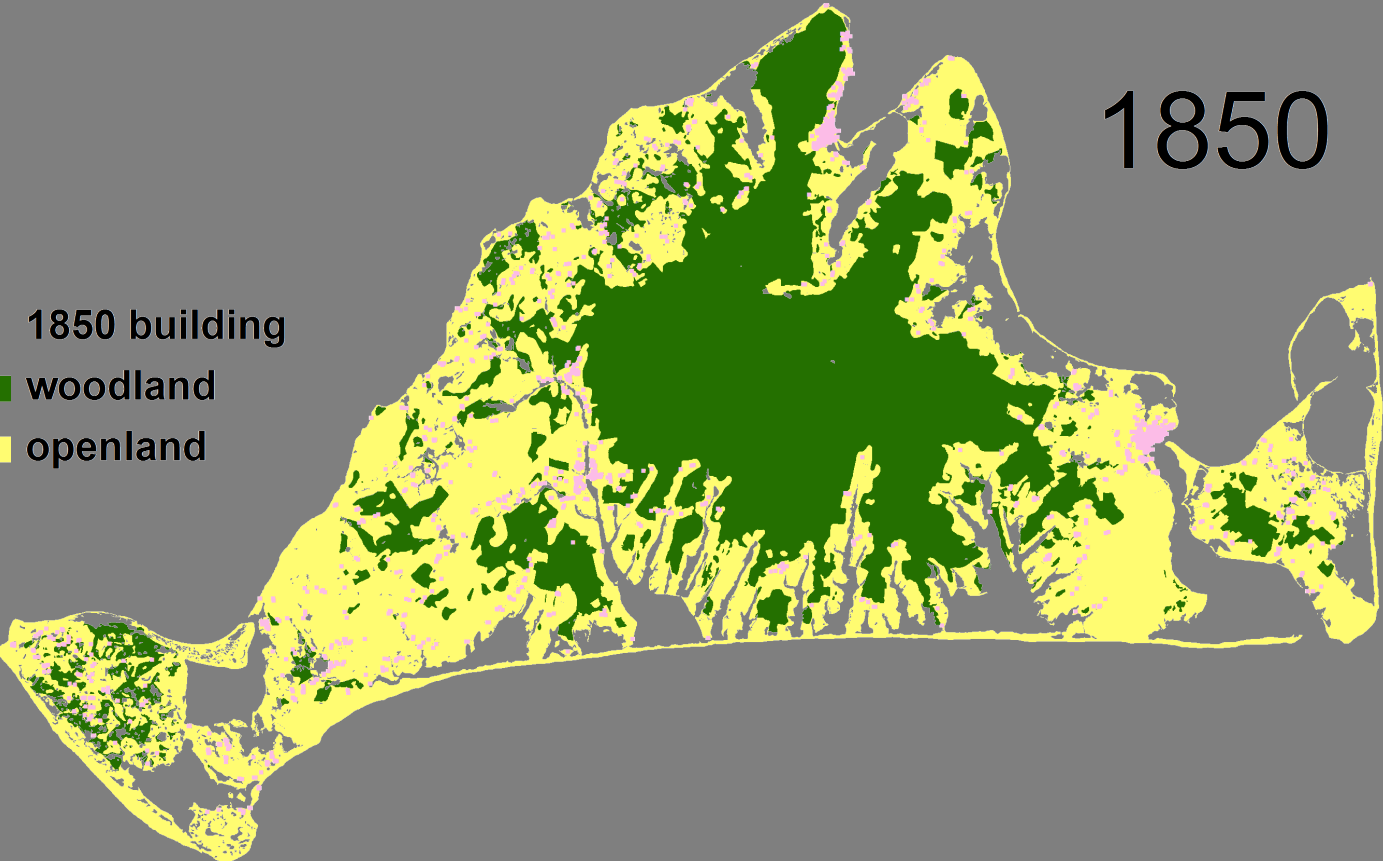
Report of Changes in the Shore Line and Beaches of Martha's Vineyard as Derived from Comparisons of Recent with Former Surveys

1850

1850 building

woodland

openland



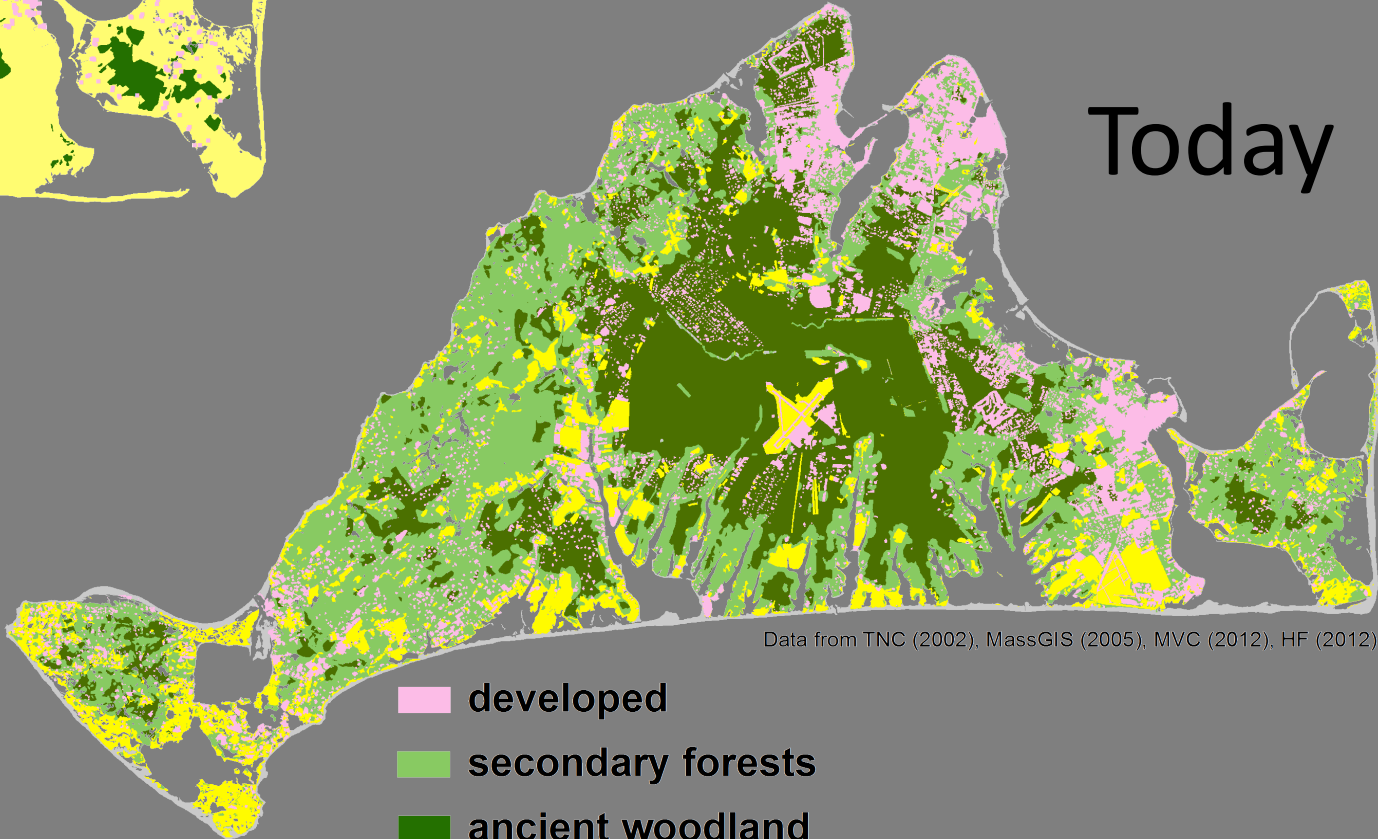
Today

developed

secondary forests

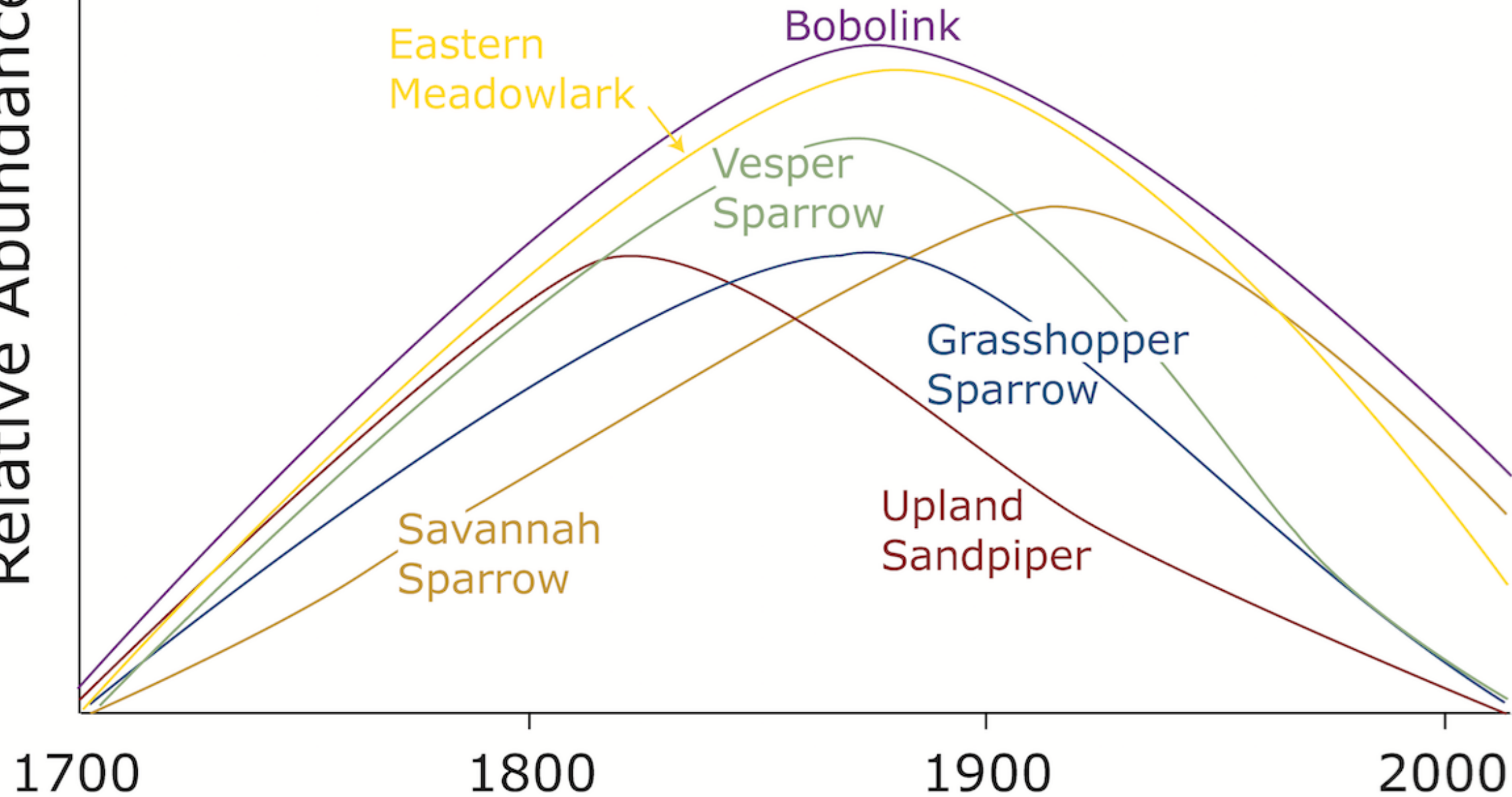
ancient woodland

openlands (active agriculture, grass types, heath, shrublands, old fields)



Data from TNC (2002), MassGIS (2005), MVC (2012), HF (2012)

Relative Abundance





# A New Opportunity for Agriculture in Conservation

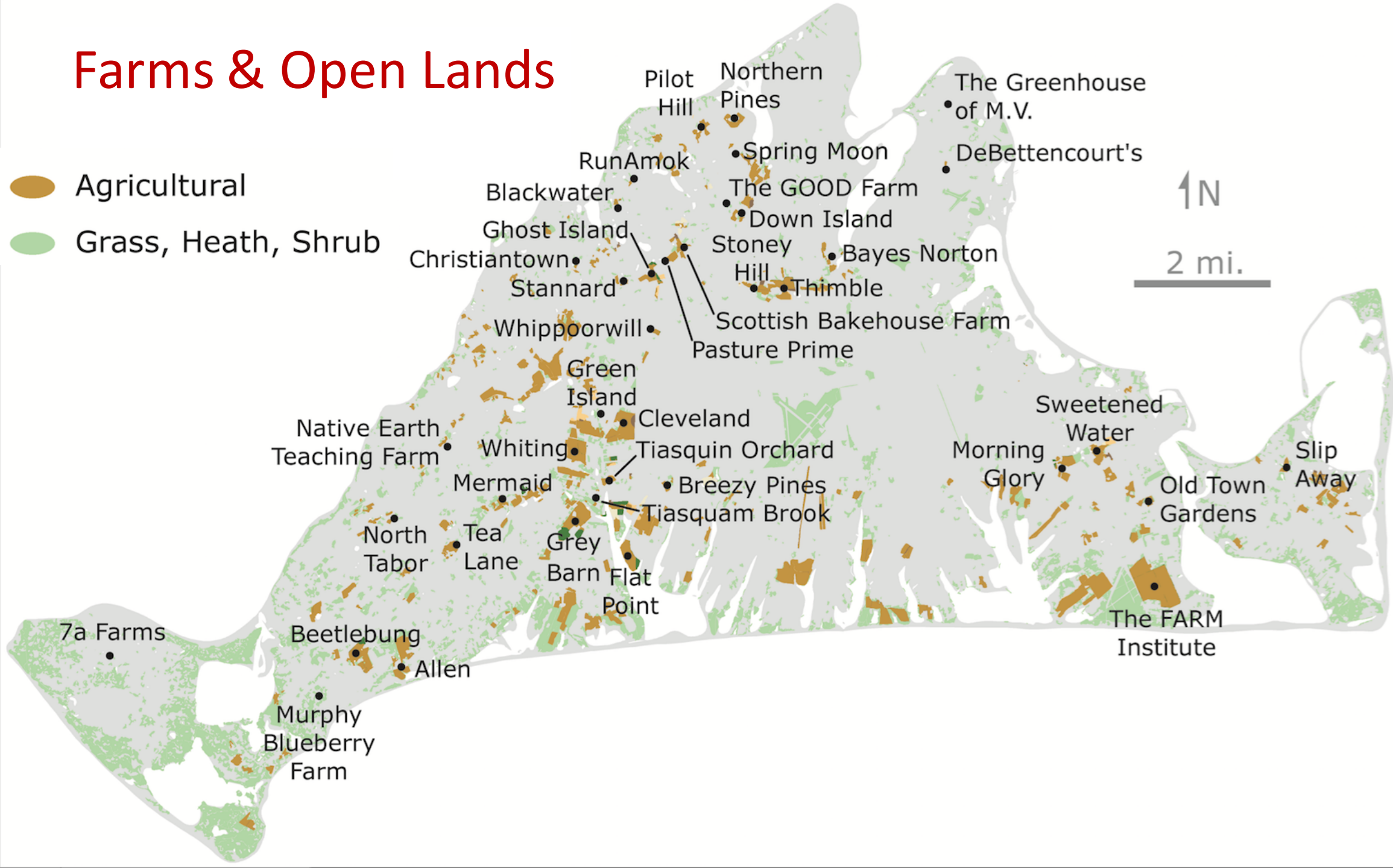
Farm Land -- Managed by Farmers

Conservation Land -- Managed by Conservationists



# Farms & Open Lands

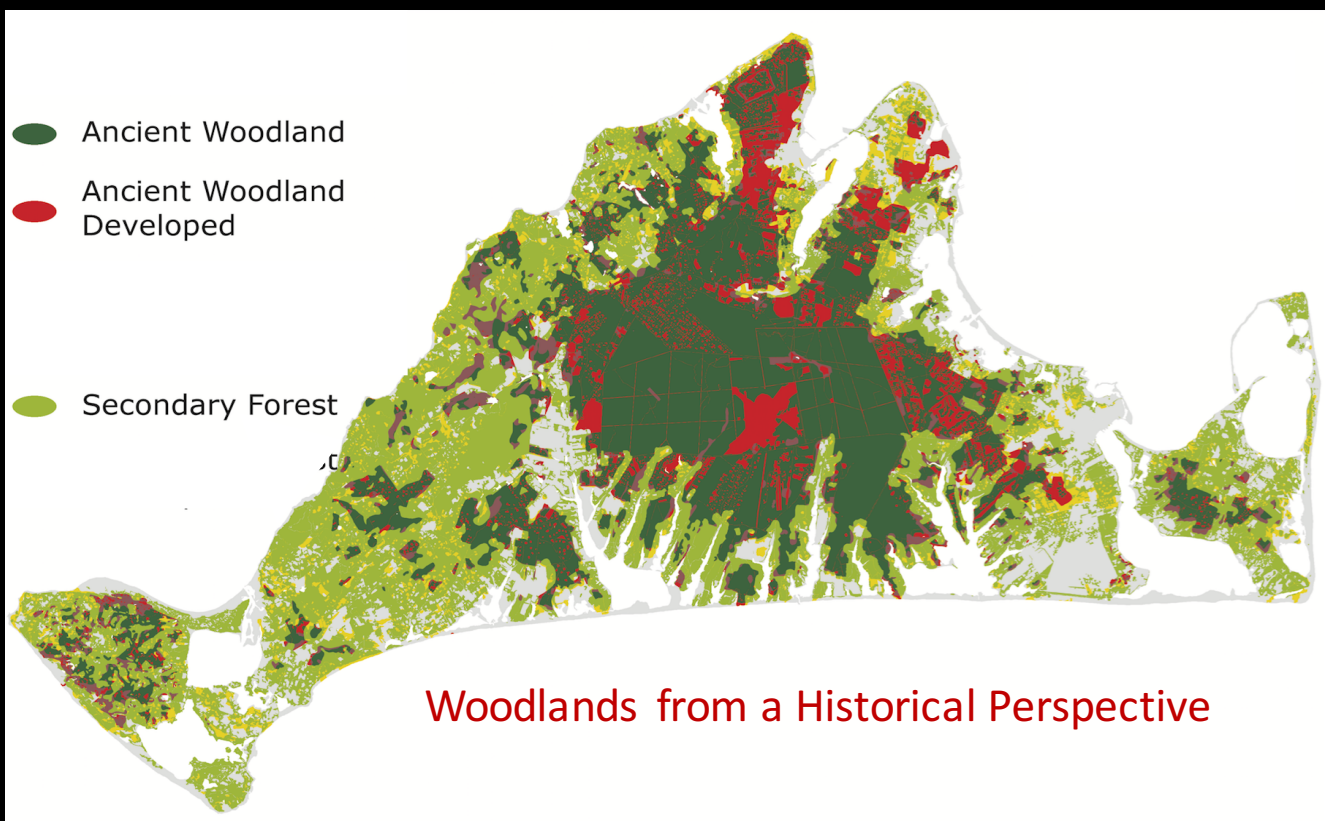
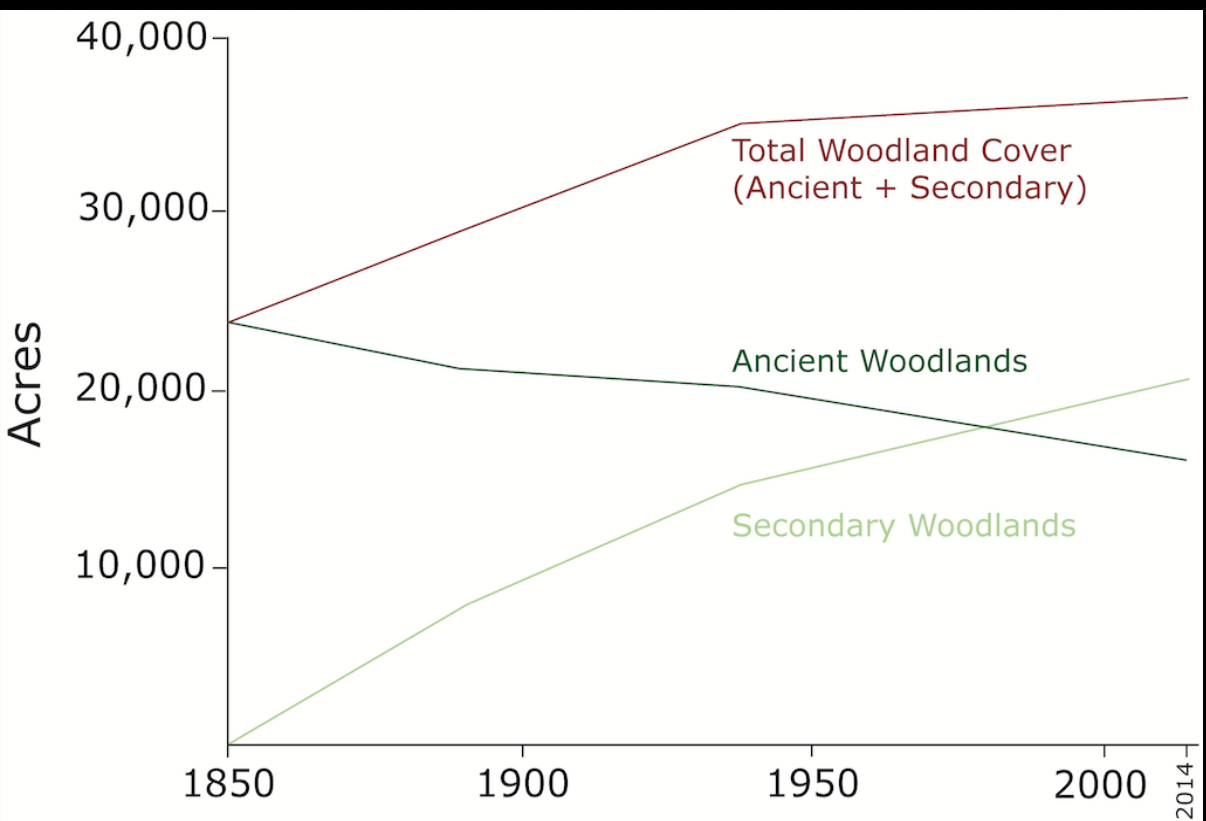
-  Agricultural
-  Grass, Heath, Shrub





Martha's Vineyard Land Bank. From Mowing Machines to Renters and now Owners.... of Goats

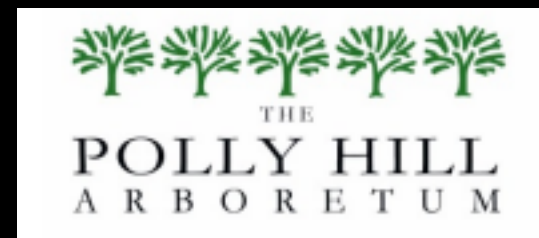






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*Vineyard Gazette, 1848*



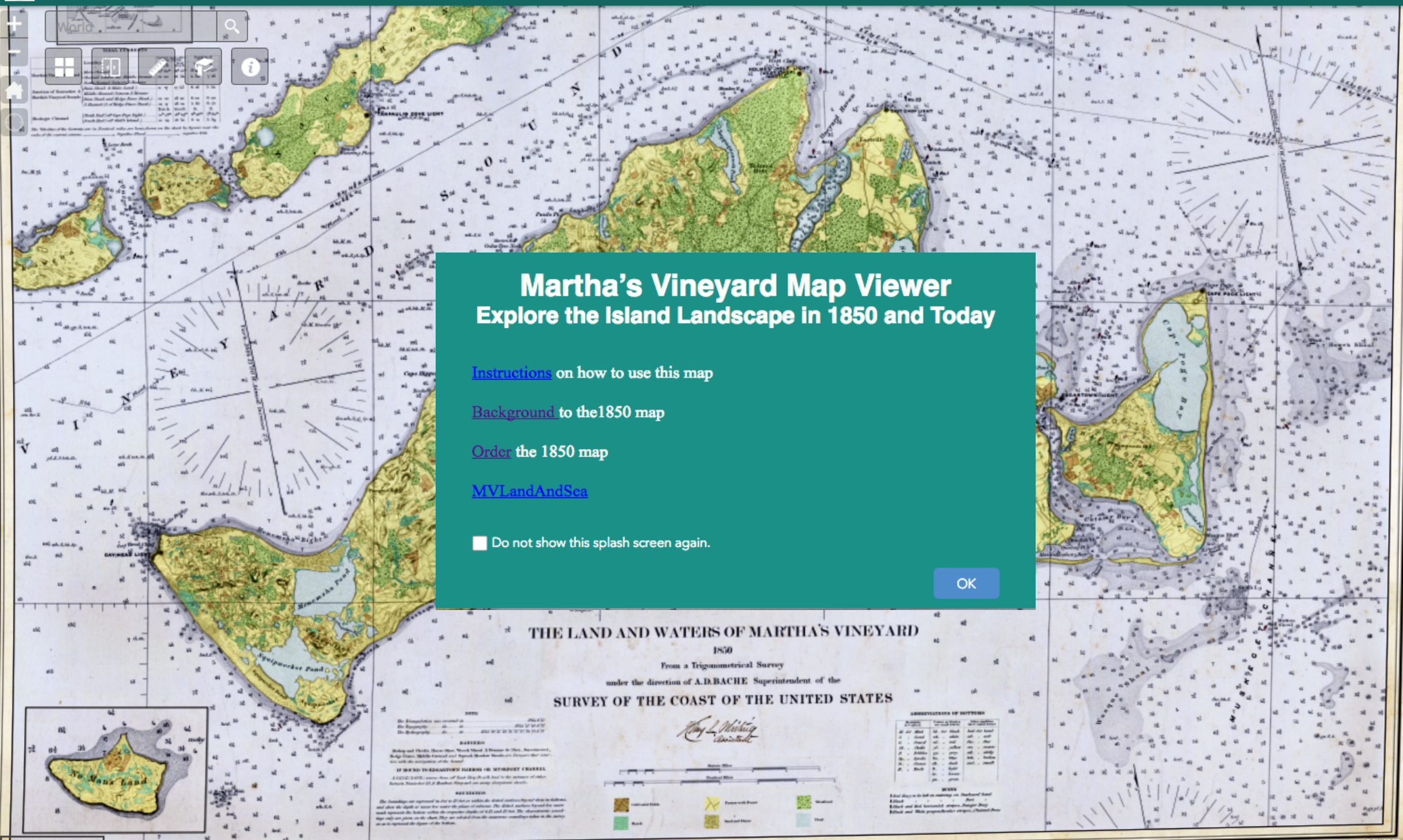
All proceeds support the development of a new Martha's Vineyard flora and research in plant conservation and forest ecology.

\$35 at Polly Hill Arboretum or by Phone

Bunch of Grapes

Granary Gallery

Martha's Vineyard Museum



**Martha's Vineyard Map Viewer**  
 Explore the Island Landscape in 1850 and Today

[Instructions](#) on how to use this map

[Background](#) to the 1850 map

[Order](#) the 1850 map

[MVLandAndSea](#)

Do not show this splash screen again.

OK

MV1850.com



World

12 1/4

bl 7, brk..Sh. 11 1/4 5 15

11 3/4 9 1/2 3 3/4 17

11 1/4 6 1/4 11

11 4 3/4 5 3/4

11 4 3/4 3 1/4 12





World

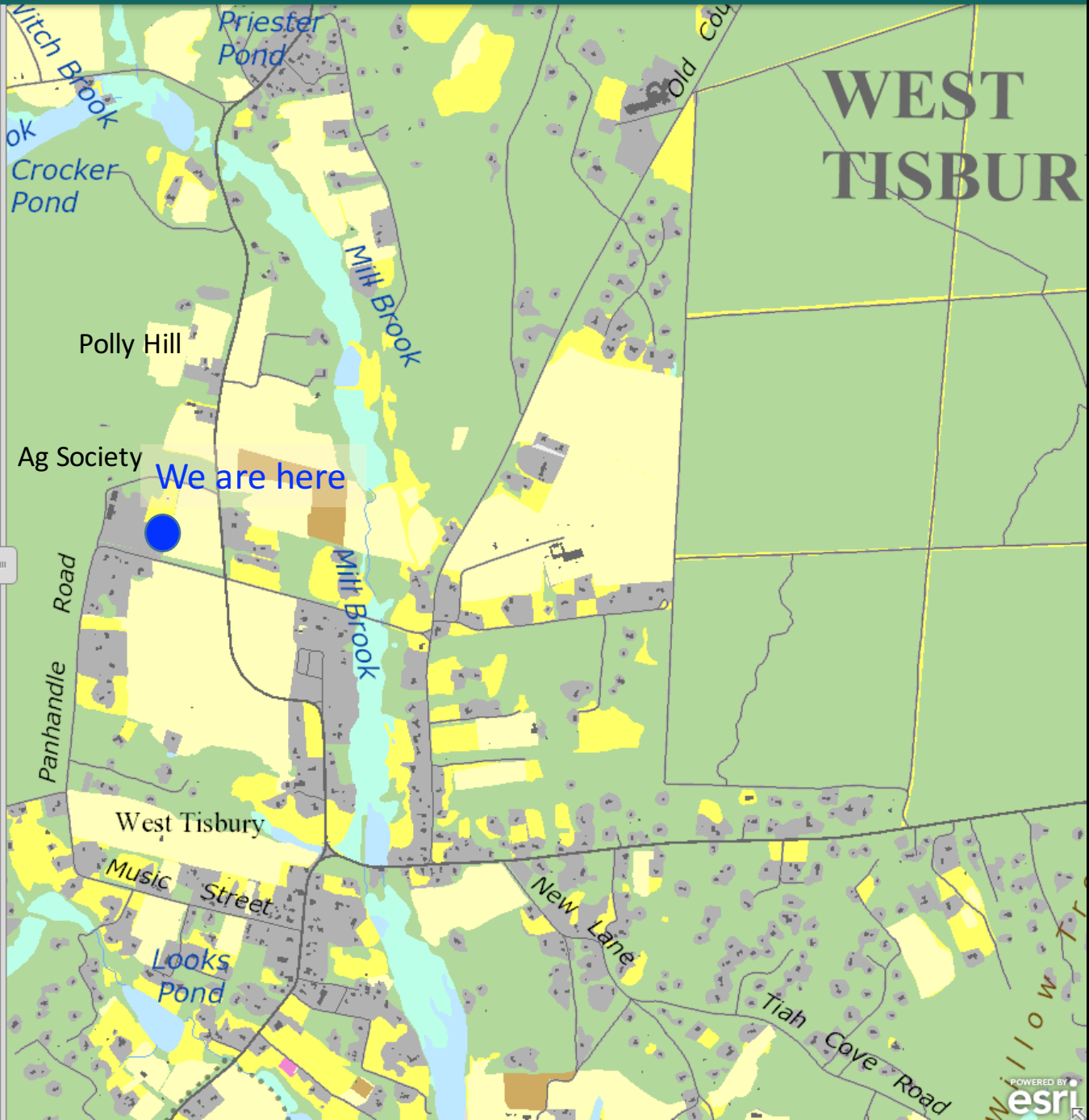
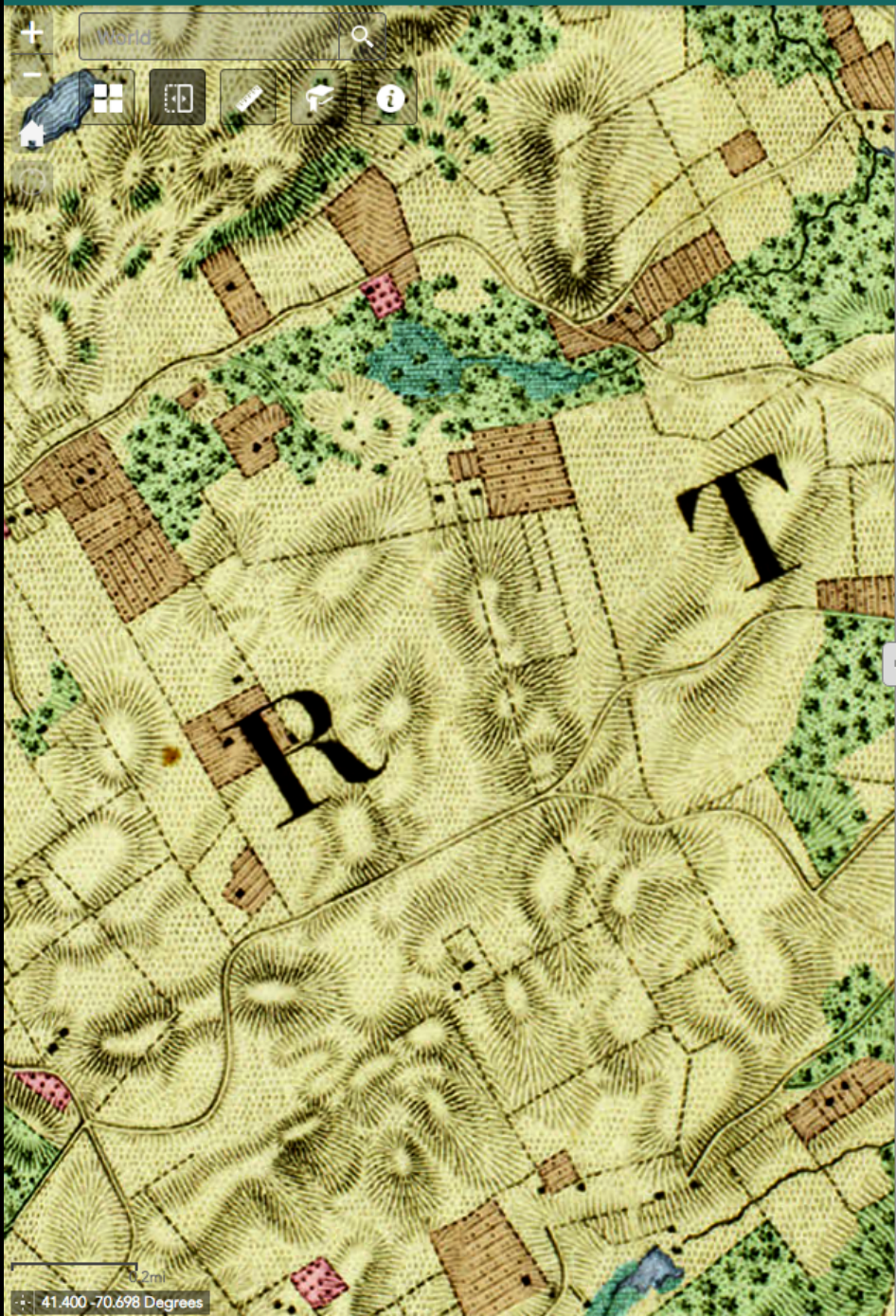


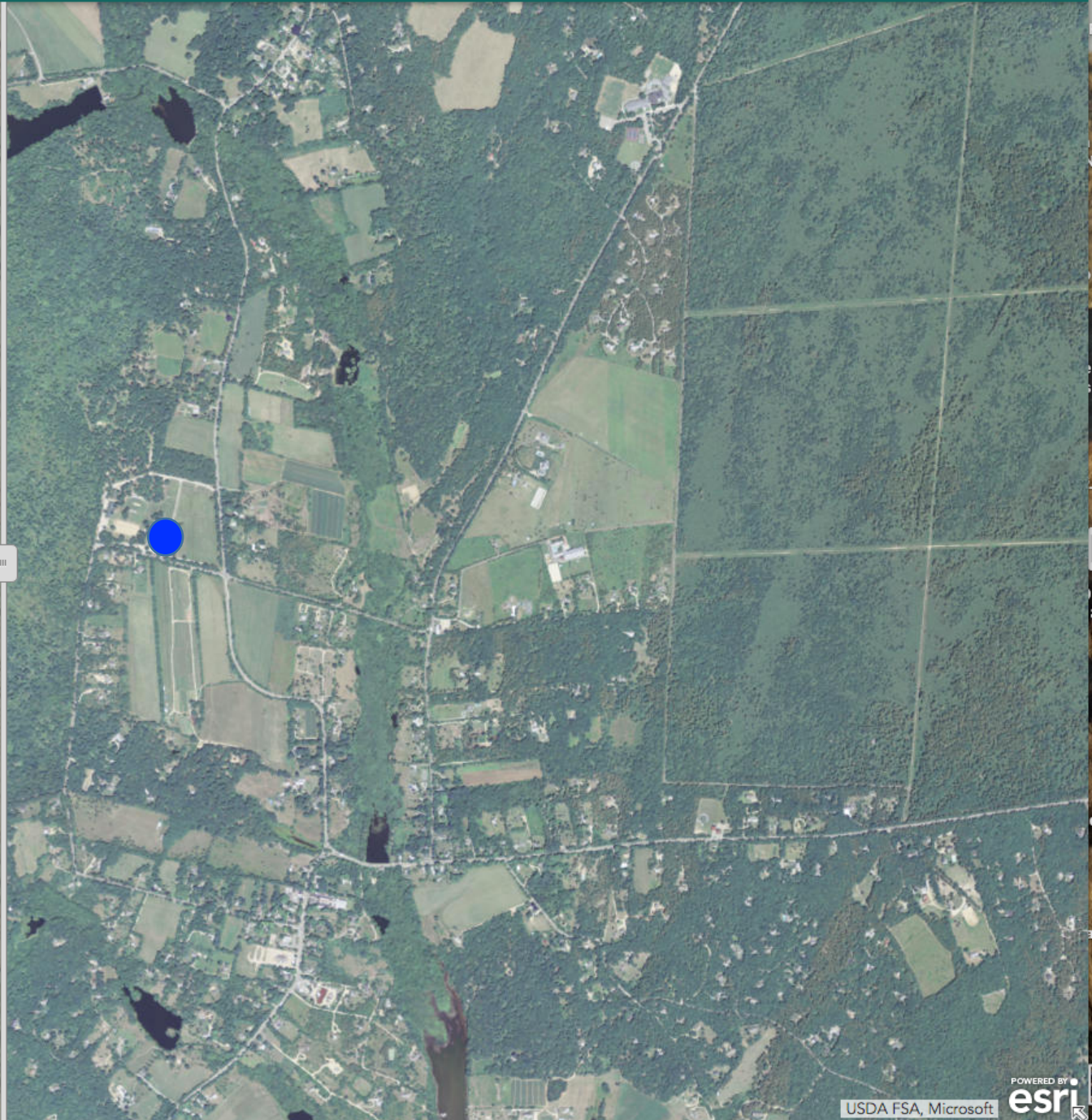
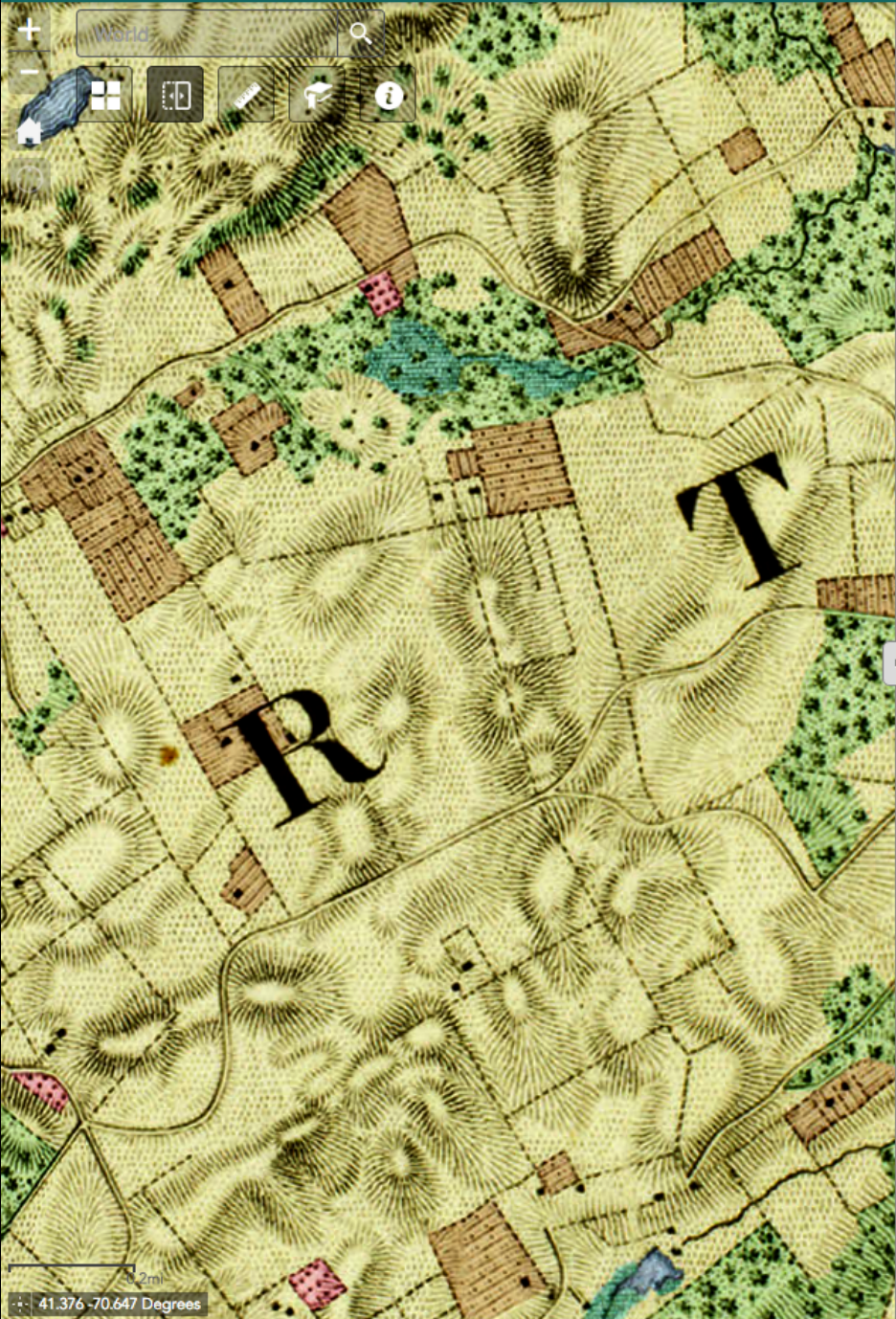
2mi  
-41.402 -70.689 Degrees





World







World

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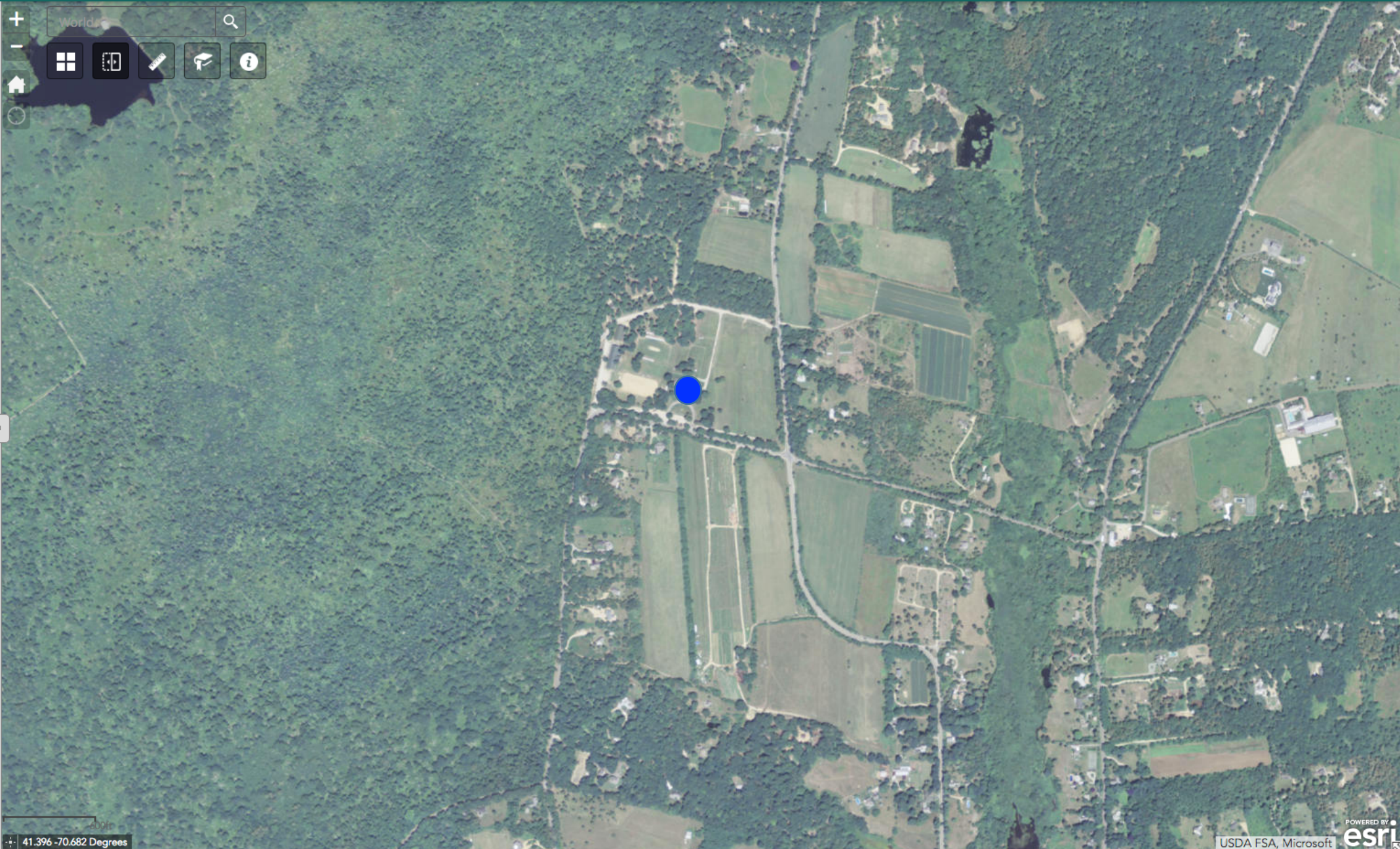
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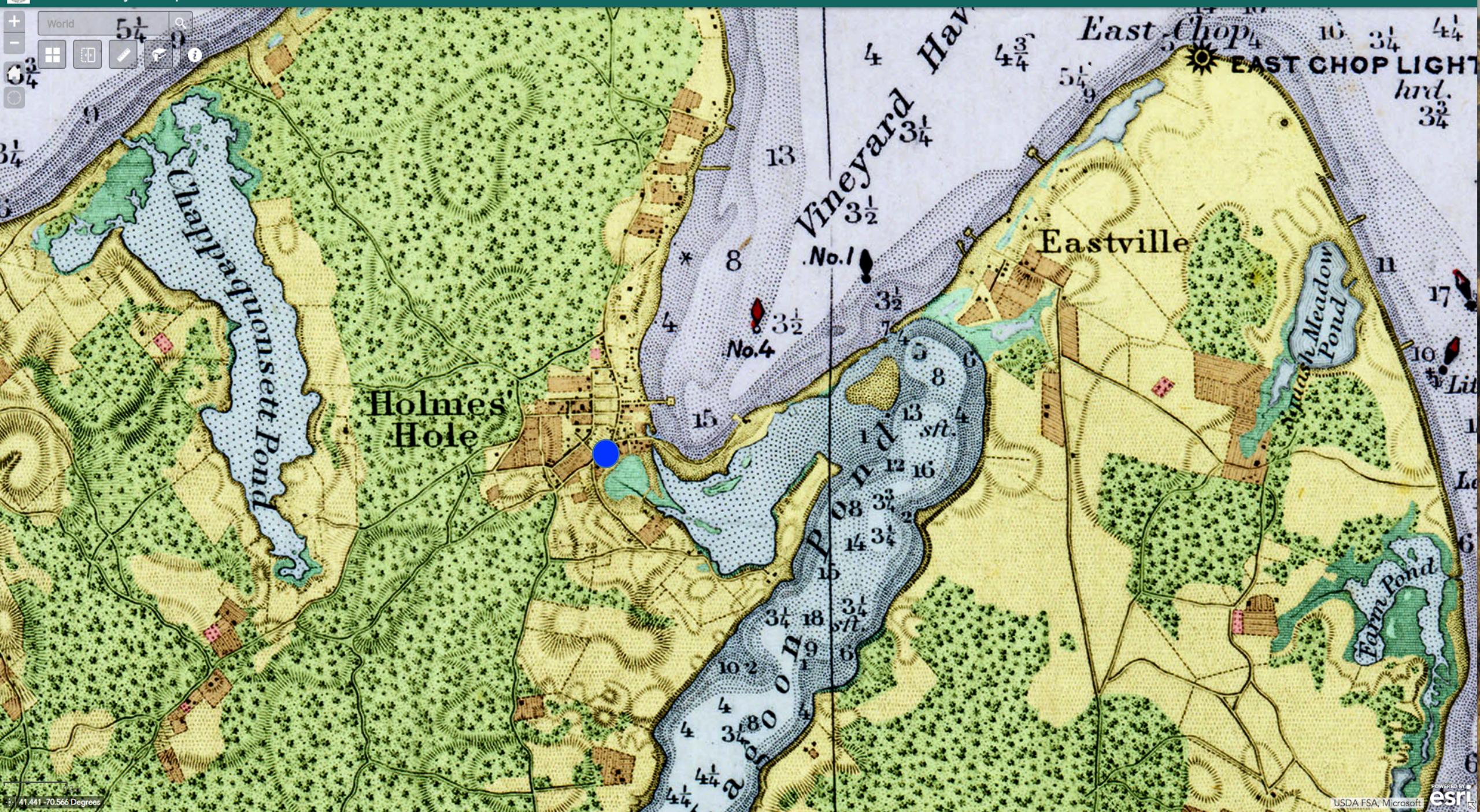
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World 5 1/4

Map navigation controls: zoom in (+), zoom out (-), home, search, and other navigation icons.



MVLandAndSea.com



Insights into the Island's history, ecology and conservation



[About the Book](#)



[Explore the 1850 Map](#)



[Launch the Map Viewer](#)

# Thanks

Brian Hall & Jenny Hobson

Clarisse Hart & Julie Pallant

Dave Dandridge & Nancy Weaver

Tim Boland, Karin Stanley, & Tom Clark

Fritz Knight

Steve Spongberg & John Flender

Tom Dunlop & Hilary Wall

Allan Keith

Jim Athearn

Bow Van Riper

Linda Mirabile @ Ravenmark

Mark Wisniowski @ Villanti Printers

Highstead Foundation

National Science Foundation

A.W. Mellon Foundation

Edey Foundation

George & Doris B. Daniels Wildlife Trust

Martha's Vineyard Museum

Vineyard Gazette

Leventhal Map Center – Boston Public Library

Polly Hill Arboretum

Yale University Press



Martha's Vineyard

*A Meeting of Land and Sea*

