

# SETTLING THE MAINE WILDERNESS



## Moses Greenleaf, Maine's First Mapmaker

---

### LESSON 19

### *Historic Maps of Maine*

#### SUBJECT

The evolution of maps of Maine over the past four centuries with an emphasis on the maps of Moses Greenleaf, including the tools and methods he used. Exploration of why maps and surveys are important to promote settlement.

#### STUDENTS WILL

- Become familiar with early maps of Maine
- Understand how ease of travel affected the chronological progression of maps
- Explain why Moses Greenleaf created maps of Maine

VOCABULARY survey chain, compass, GPS

#### PREPARATION

1. Read Chapter 16 of *Settling the Maine Wilderness*, “Greenleaf, the Mapmaker,” pp. 86-98. Read the GPS background information at [www.trimble.com](http://www.trimble.com).
2. Review the following from *Settling the Maine Wilderness*: Moses Greenleaf’s maps from 1815, 1820, 1828, 1843, the “Comparison of Map Details (p. 117),” and the image of “Surveyor’s Chain and Compass” (p. 122). From the *Maine Bicentennial Atlas* review: “Plate 65 John Smith’s 1617 Map of New England” “Plate 66 John Mitchell’s 1755 Map of the Northeastern Region of North America,” and “Plate 67 Osgood Carleton’s 1795 Map of the District of Maine.” If an LCD projector is not available for class viewing, copy the maps onto transparencies for use on an overhead projector.

3. Acquire enough compasses so each group of four students has one.
4. Gather materials for a survey chain: string, rope, paper clips, etc.
5. Provide each student with large sheet of white paper for mapmaking.
6. Copy student quiz, worksheet, and rubric for each student.

## BODY OF LESSON

### Introduction

Students will compare and evaluate several 17<sup>th</sup>, 18<sup>th</sup>, and 19<sup>th</sup> century maps, and learn how the chronological progression of maps followed patterns of exploration that were dependent on ease of travel. They will learn about the contribution of Moses Greenleaf, who mapped and surveyed the interior regions of Maine, and how maps and surveys facilitated settlement. Students will also learn about the 19<sup>th</sup> century tools used to gain information for making geographic maps (a survey chain and compass) and how these compare to modern tools such as the Global Positioning System (GPS). They will design and construct a survey chain that they will use, together with a compass, to make a map of a nearby park or the area around their school. They will compare the abstract experience of a map with the concrete experience of being at a place.

### Background

The earliest maps of Maine were of the coast, plotted from the journeys of sailing ships. Later explorations in smaller vessels allowed mapping of the rivers and nearby areas that were accessible by the waterways. Maps of inland areas, especially those farther from the coast, came later because exploration had to be by horseback or on foot. Moses Greenleaf was one of the first to comprehensively map the interior of Maine with a goal to promote inland settlement.

### Additional GPS Reference:

Anne Kelley Knowles, ed., *Past Time, Past Place: GIS for History* (Redlands, CA: ESRI Press, 2002).

## Activity 1.

Project the maps for this lesson chronologically (earliest to more recent) on an overhead or LCD projector and viewed simultaneously on individual laptops if available. Teacher leads classroom discussion on the changes in Maine maps over time as described in the background above and in the reading about Greenleaf's maps. Discussion will include Moses Greenleaf's reasons for mapping the state of Maine and how his information helped bring settlers to the area. (Knowledge about an area and the resources available would encourage people to move there if they found that the environment would meet their needs, i.e. where were the rivers, the roads, the mountains, the town centers, the available land, etc.) **(Knowledge, Comprehension)**

At Home Assignment:

Each student will find a modern map of a nearby place he or she has never visited. They will study the map then go to the place and locate the features shown on the map. They will write an essay about what they learned from the abstract experience of viewing the map and later experiencing the actual place. **(Application, Analysis)**

Activity 2.

Discuss mapmaking tools and show photos of a 19<sup>th</sup> century compass and survey chain. Show modern compasses and discuss how they work and compare them to modern GPS. Have the students design and construct their own survey chains. **(Application)**

Activity 3.

Divide the students into groups of four and have them take their tools outside to an area around the school or a nearby park. Each group will work together to take measurements and each individual student will use the information to design a map that they will work on in the classroom or at home. Maps will be displayed in the classroom. **(Synthesis)**

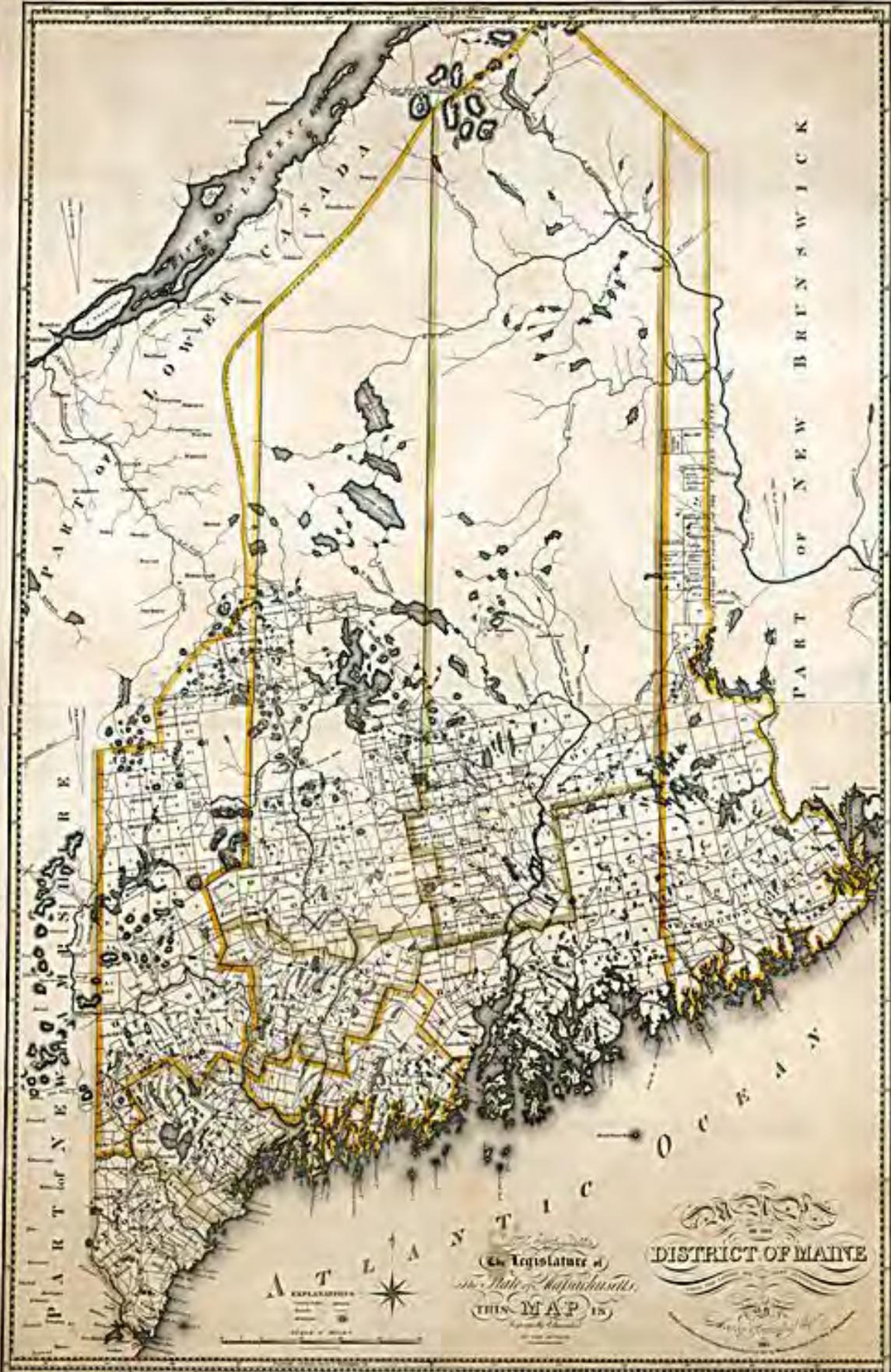
ASSESSMENT

Based on the "Writing Assessment" and "Student Quiz" provided.  
**Quiz Answer Key:** p, a, h, m, l, f and i, j

Maps will be assessed by their quality, design, and comprehensive nature according to the rubric attached.

## EXTENSION

Explore how the interests and attitudes of the first three presidents of the United States (who served during Moses Greenleaf's lifetime) may have influenced, supported, and promoted Greenleaf's desire to map the Maine wilderness. For example, George Washington was a surveyor, John Adams wrote much about the value of the Arts & Sciences, and Thomas Jefferson sent Lewis & Clark on their famous westward expedition. (**Knowledge, Application, Analysis, Evaluation, Synthesis**)



PART OF NEW BRUNSWICK

PART OF NEW BRUNSWICK

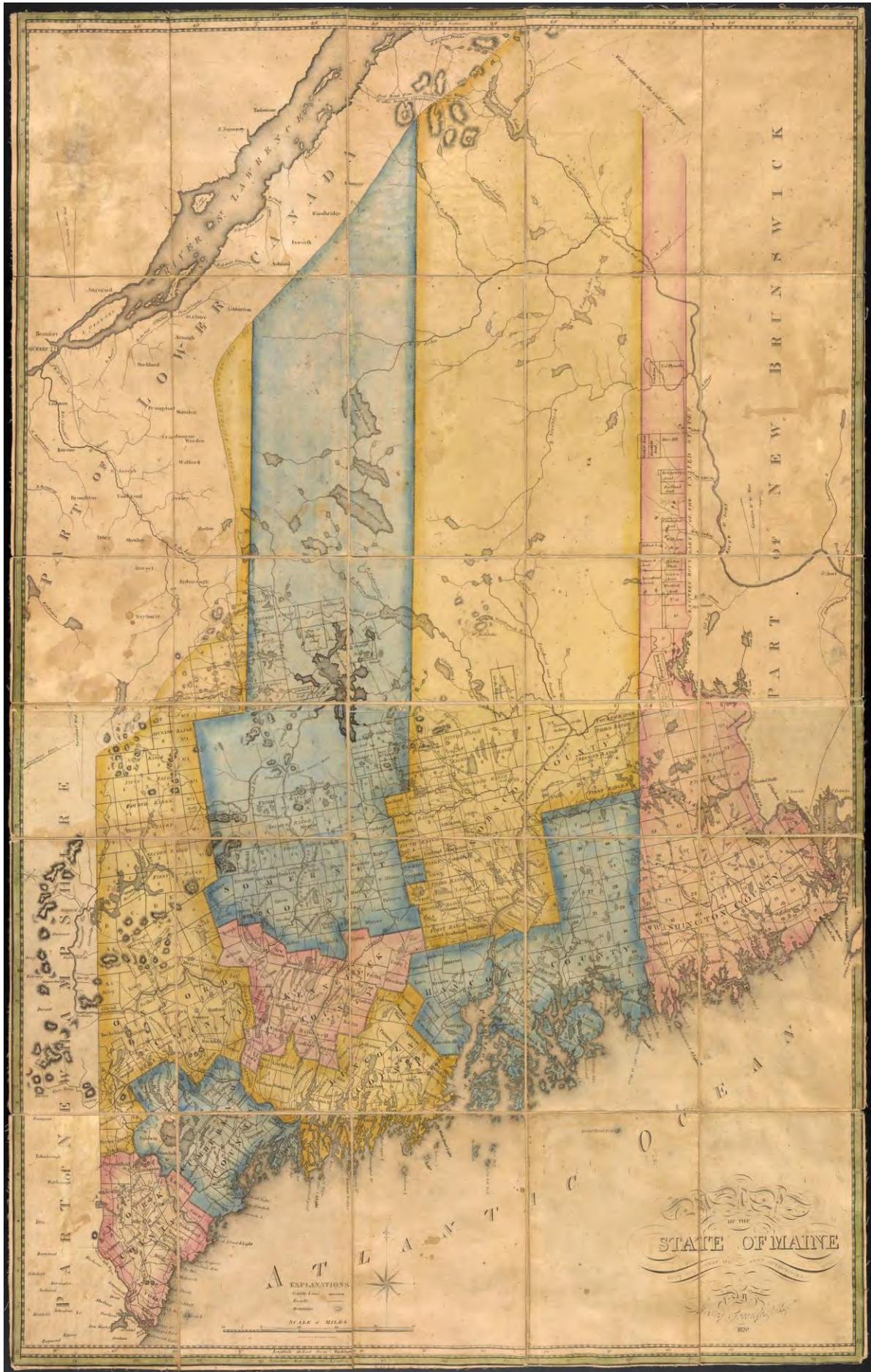
DISTRICT OF MAINE

By Legislature of the State of Massachusetts  
THIS MAP IS

ATLANTIC



EXPLANATION  
Scale of Miles



STATE OF MAINE

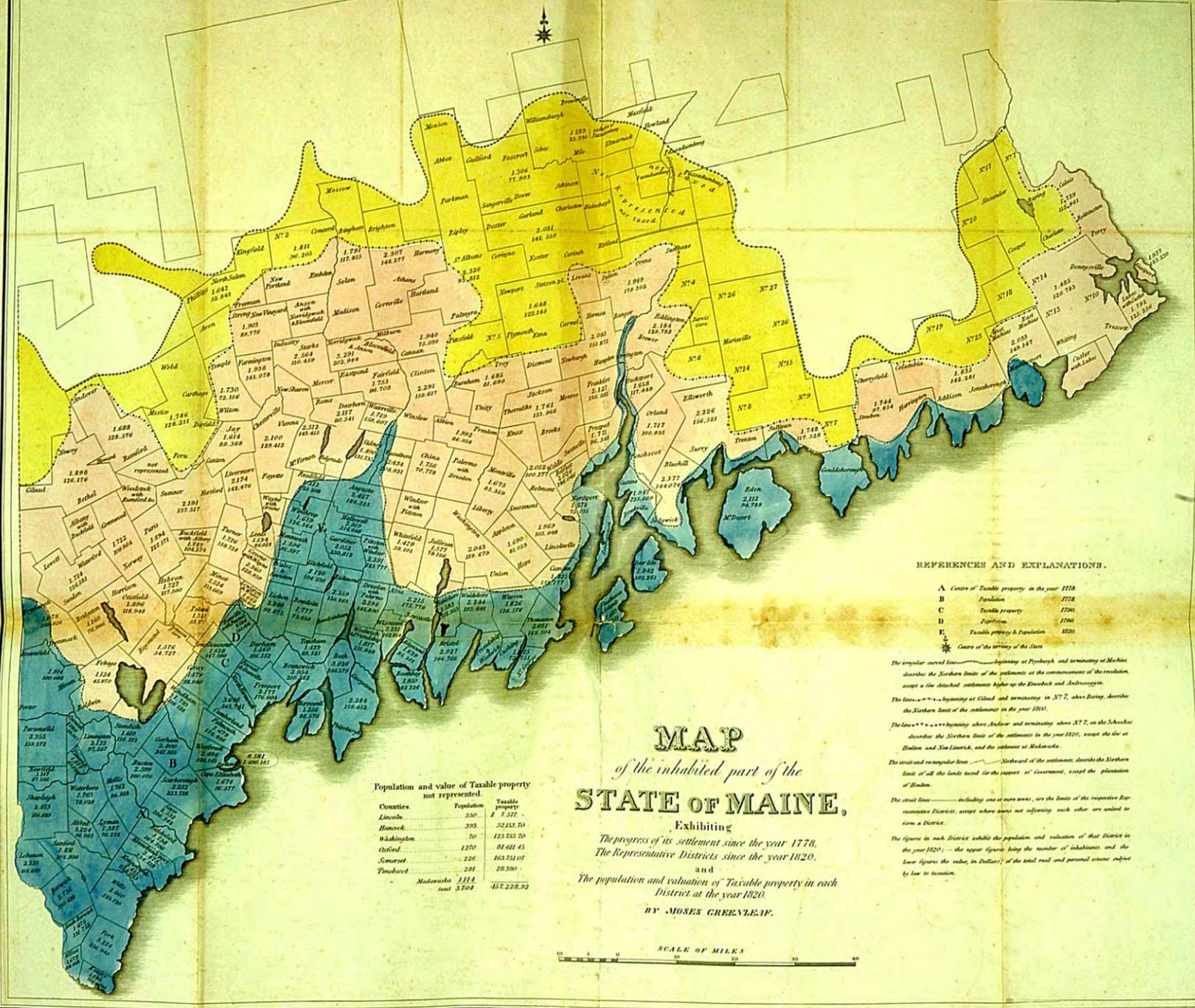
EXPLANATIONS  
County Lines  
Roads  
Water  
Scale - MILES

PART OF NEW BRUNSWICK

PART OF NEW BRUNSWICK

PART OF NEW BRUNSWICK

PART OF NEW BRUNSWICK



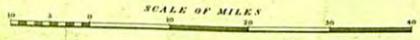
Population and value of Taxable property not represented.

Counties	Population	Taxable property
Lincoln	2,150	1,152,570
Washington	70	123,255.70
Oxford	1,270	81,621.45
Somerset	220	163,752.07
Penobscot	281	28,380
Madawaska	1,111	457,228.92
total	3,704	1,925,808.61

# MAP of the inhabited part of the STATE OF MAINE,

Exhibiting  
The progress of its settlement since the year 1776.  
The Representative Districts since the year 1820.  
and  
The population and valuation of Taxable property in each District at the year 1820.

BY MOSES GREENLEAF.



REFERENCES AND EXPLANATIONS.

- A Centre of Taxable property in the year 1776
- B Population 1776
- C Taxable property 1790
- D Population 1790
- E Taxable property & Population 1820
- ☆ Centre of the territory of the State

The irregular curved line beginning at Fryburgh and terminating at Machias describes the Northern limits of the settlements at the commencement of the revolution, except the detached settlements higher up the Kennebec and Androscoggin.

The line - - - - - beginning at Caledon and terminating in 37° 7, above Bangor, describes the Northern limit of the settlements in the year 1800.

The line \* \* \* \* \* beginning above Bangor and terminating above N77, on the Schoodic describes the Northern limits of the settlements in the year 1820, except the lot at Eton and New Lenoix, and the settlement of Madawaska.

The straight and irregular lines - - - - - Northward of the settlements, describe the Northern limit of all the lands held for the support of government, except the plantation of Bangor.

The small lines - - - - - including one or more more, are the limits of the respective Representative Districts, except where names not adjoining each other are united to form a District.

The figures in each District exhibit the population and valuation of that District in the year 1820 - the upper figures being the number of inhabitants, and the lower figures the value, in dollars, of the real and personal estate subject by law to taxation.



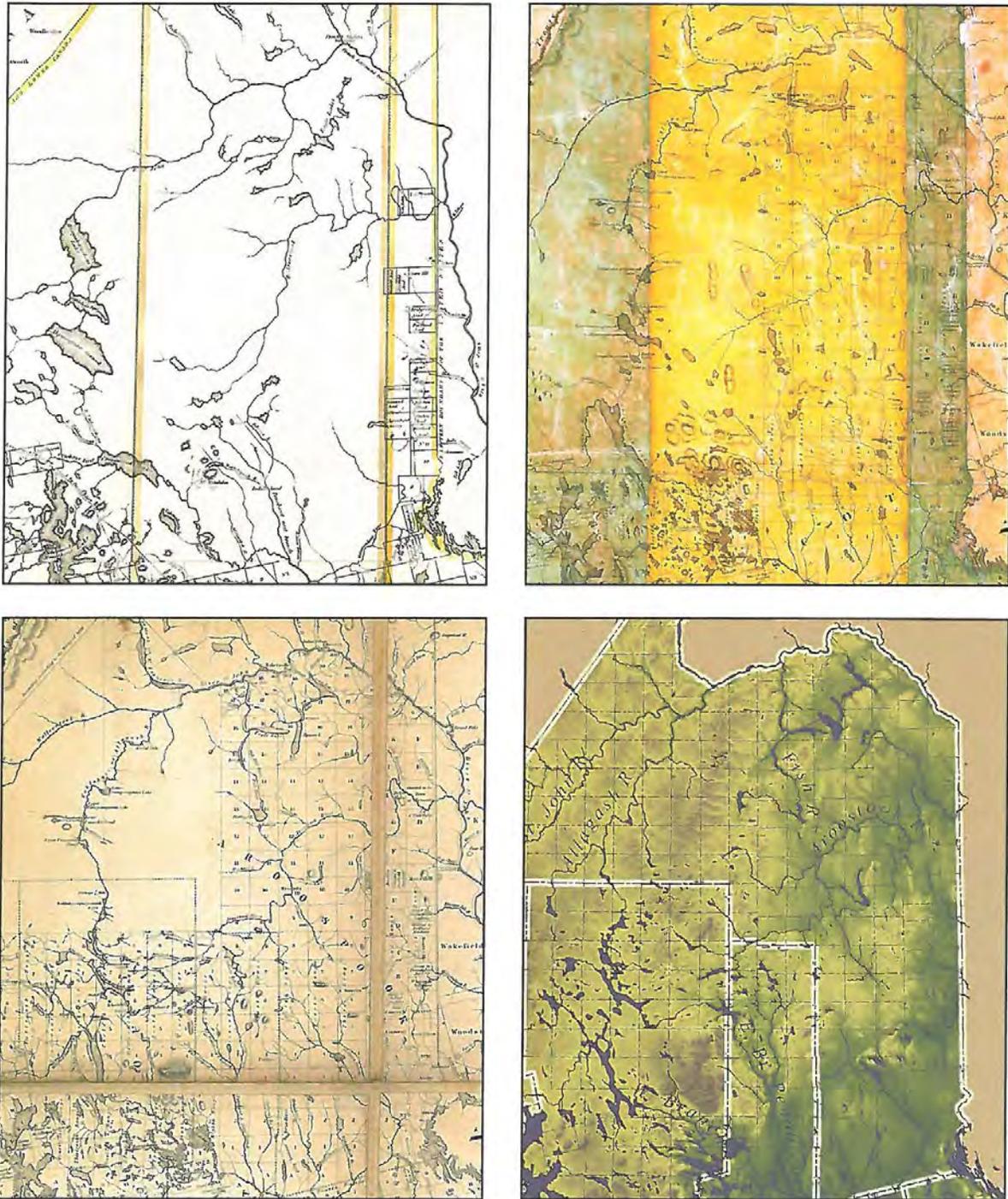


FIGURE 10: Details of the northeastern quadrants of (a) Moses Greenleaf's map of 1815 (see figures 3 and 4), (b) his map of 1829, (c) his map of 1844 (see figure 5), and (d) a modern map (GIS map was produced by Rosemary Mosher, Orbis L.L.C.).

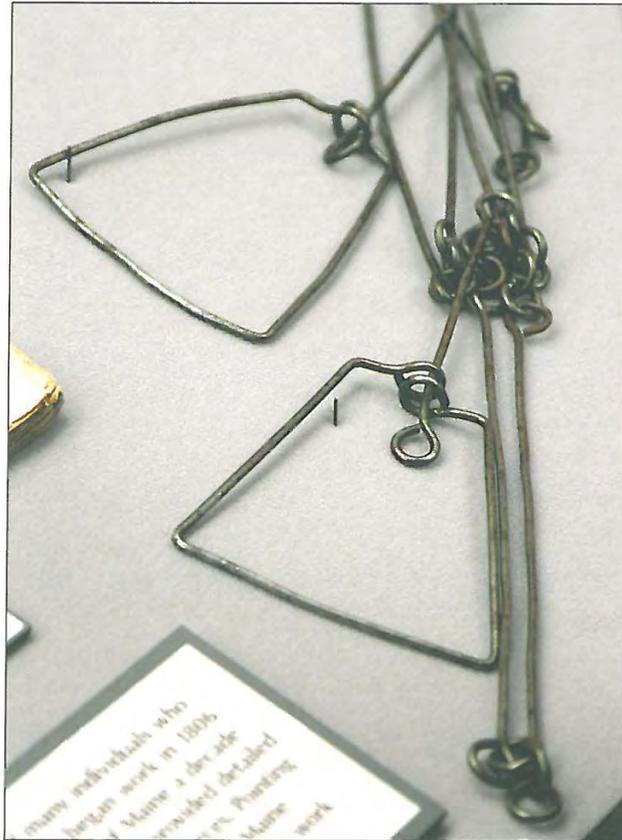
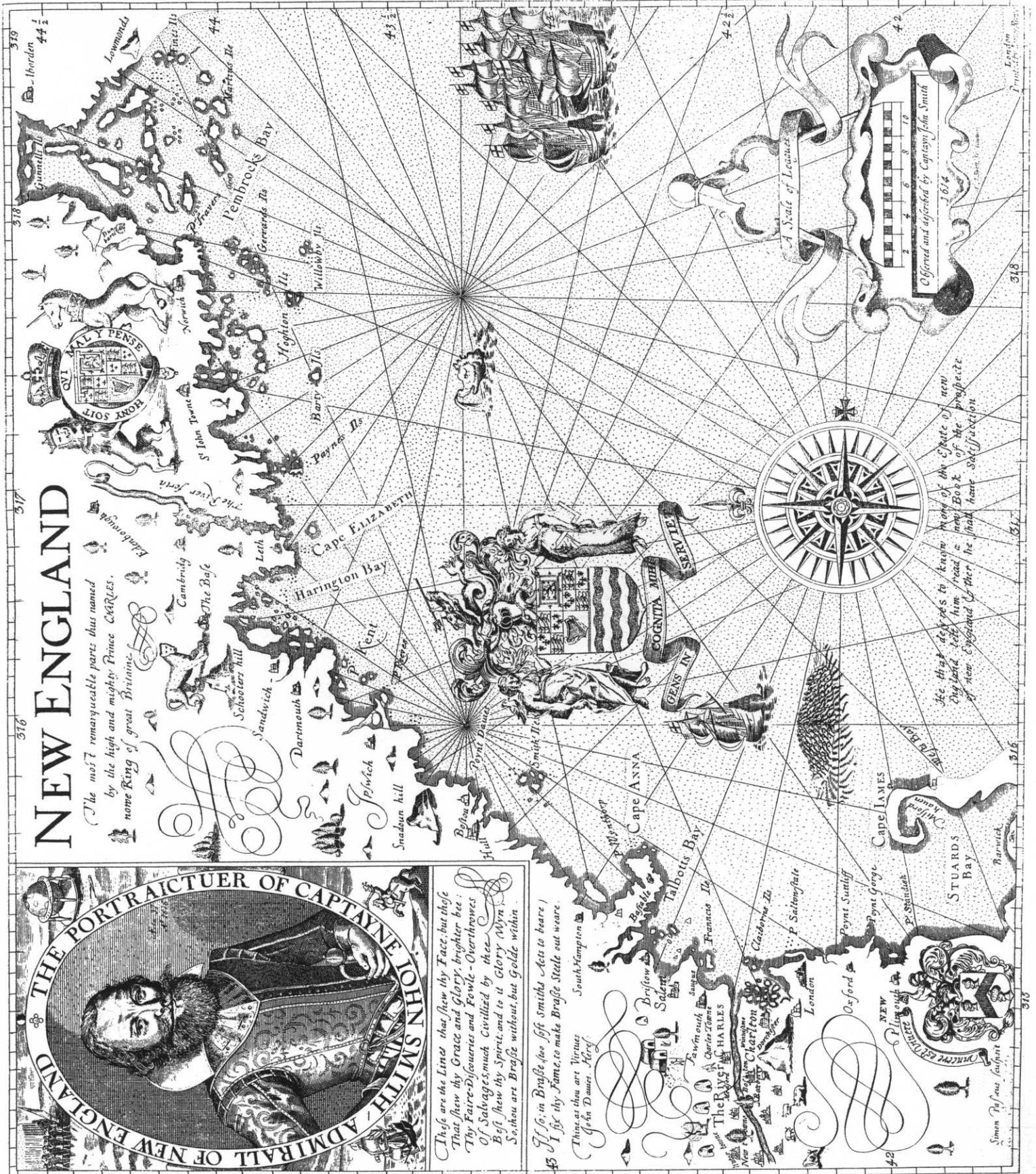


FIGURE 15: Surveyor's compass of the type used by Moses Greenleaf and surveyor's chain that belonged to Moses Greenleaf, reproduced from the Maine State Museum.



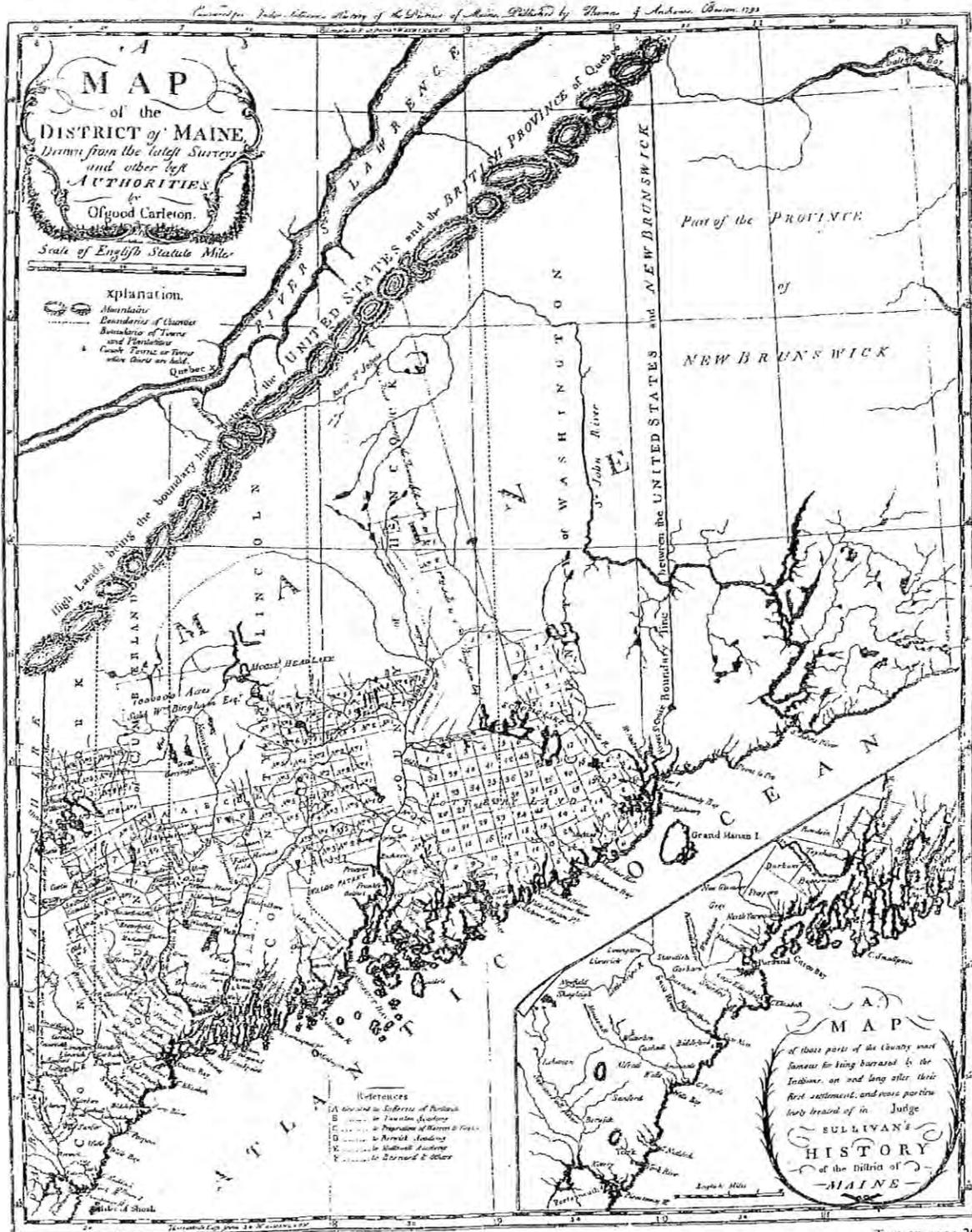
EXTRACT FROM A  
**MAP**  
 OF THE BRITISH AND FRENCH DOMINIONS  
 IN  
**NORTH AMERICA**

BY  
 Jn<sup>o</sup> Mitchell.

W. J. Stone Sc. Wash.

*This Map was Undertaken with the Approbation and at the Request of the Lords Commissioners for Trade and Plantations; and is chiefly composed from Draughts, Charts and Actual Surveys of different parts of His Majesties Colonies and Plantations in America, Great Part of which have been lately taken by their Lordships Orders and transmitted to this Office by the Governors of the said Colonies and others.* John Pownall Secretary  
 Plantation Office  
 Feby. 13<sup>th</sup> 1755.





Text on page 20

## STUDENT QUIZ

**Directions:**

Match the letter(s) on the right with the answer(s) that best describes the statement on the left. There are more answers than will fit the statements.

- |   |                             |
|---|-----------------------------|
| ___ the area of Maine mapped first                      | a. GPS receiver             |
| ___ modern tool used for mapmaking                      | b. John Smith               |
| ___ made several 19 <sup>th</sup> century maps of Maine | c. construction paper       |
| ___ important for a high quality map                    | d. yardstick                |
| ___ early maps helped promote this                      | e. Eben Greenleaf           |
| ___ 19 <sup>th</sup> century mapmakers used these tools | f. compass                  |
| ___ first maps of Maine were made in this century       | g. inland                   |
|   | h. Moses Greenleaf          |
|   | i. survey chain             |
|   | j. 17 <sup>th</sup> century |
|   | k. 18 <sup>th</sup> century |
|   | l. settlement               |
|   | m. accurate<br>measurement  |
|   | n. radio                    |
|   | o. blacksmiths              |
|   | p. coast                    |

## Writing Assessment

Name:

Class:

Date:

***Directions:***

Answer the following questions based on what you learned in class. Questions 1 and 2 are worth 40 points each and question 3 is worth 20 points.

1. Explain the changes in Maine maps over time.
  
  
  
  
  
  
  
  
  
  
2. Why did Moses Greenleaf want to make maps of Maine? How did his maps help bring settlers to the interior regions of Maine?
  
  
  
  
  
  
  
  
  
  
3. Name and draw the important mapmaking tools used in the 19<sup>th</sup> Century and describe how each was used.