CHARTING THE LAND OF FLOWERS
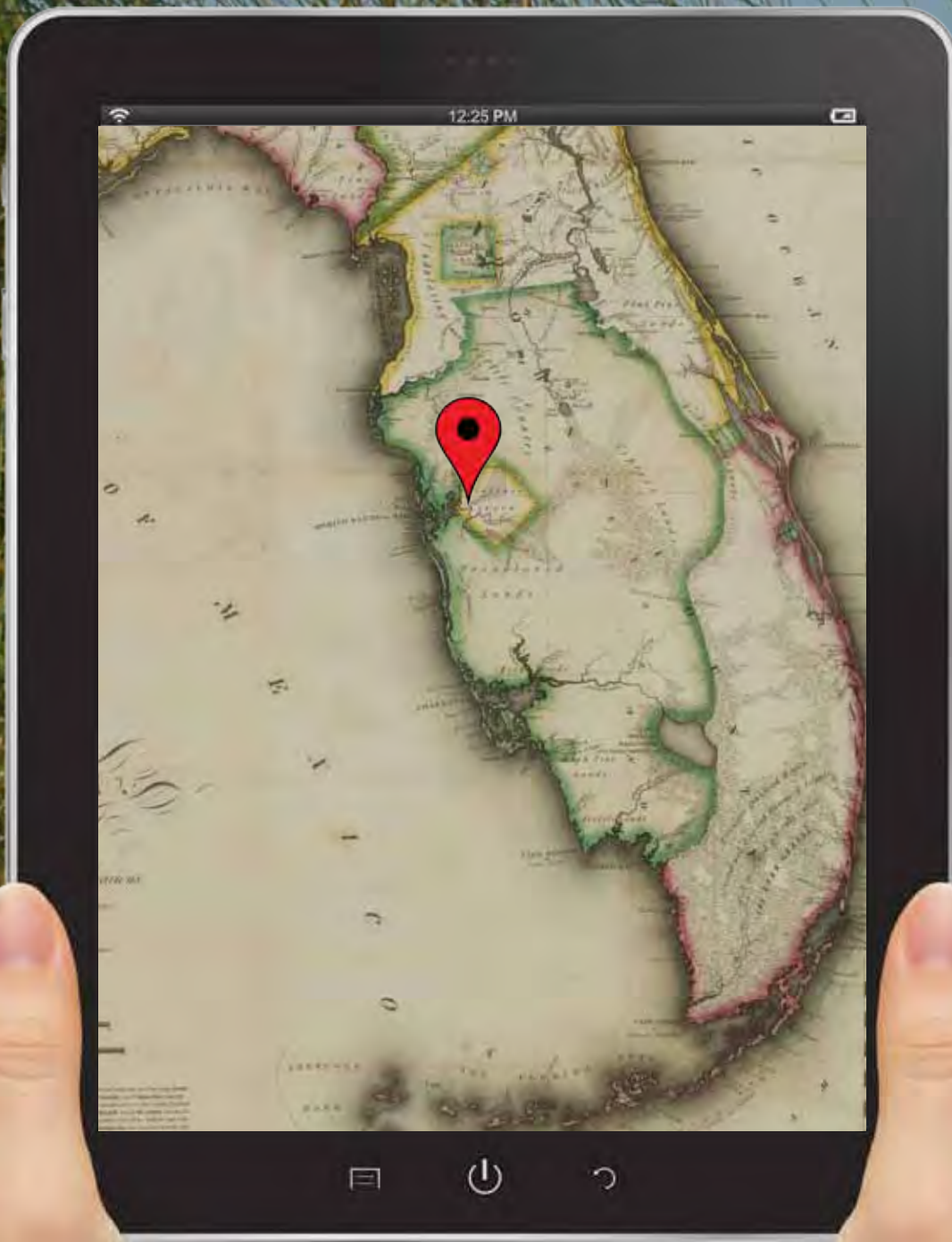## 500 Years of Florida Maps

Sept. 21, 2013 – Feb. 16, 2014
Tampa Bay History Center

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CHARTING THE LAND OF FLOWERS:
Perceptions AND *Perspectives*
ABOUT FLORIDA THROUGH MAPS

By Rodney Kite-Powell, Saunders Foundation Curator of History,
Tampa Bay History Center

Florida, as it appears in the map below, is a familiar sight to most. The prominent peninsula is distinctive, and the major cities (and theme parks) are clearly illustrated. We know this is Florida because we have seen the state from this perspective, and many others, our entire lives. We can find our place on this map.

For millennia, maps have shaped how we see the world, leading us to new places and ideas. Cartography – the art and science of making maps – has changed dramatically over the years.

Cartographers have documented Florida over the course of six centuries, creating maps that tell stories of our state's rich history and heritage. Today an almost endless variety of maps is available at our fingertips. With maps created through global positioning system (GPS) satellites and photos taken from space, the Sunshine State is hardly a mystery.

This was not always the case. To understand how we got to this point, we need to look back in time. Because Florida's pre-European people did not leave maps behind, early cartographers and artists struggled with the actual shape and interior details of Florida for more than 300 years. Their perceptions were formed by stories they heard from American Indians and European explorers as well as by their own motivations for creating the maps. By the 19th century, surveyors and mapmakers began to understand Florida's vast shoreline, and incursions into the peninsula dispelled some long-held myths about its environment and the people who lived there.

Twentieth-century advances in technology allowed views of the state previous generations could have only imagined. These new perspectives reinforce what we already know. The Unique Media map that appears below is strikingly similar to John Bachmann's *Birds Eye View of Florida* (Page 10) produced in 1861, while Benjamin Franklin's observations on the Gulf Stream were built on remarks made in the early 1500s and are illustrated dramatically by the NASA thermal imaging map that appears on Page 9.

Every person in Florida, whether a first-time visitor or ninth-generation resident, has a unique perspective on the state. The maps and information that appear within these pages were shaped by Floridians and visitors past and present, and their individual perceptions have helped create a more complete picture of our state.

FLORIDA

© Unique Media

EXPLORING WITH THE *TIMES*

MAPS OPEN UP THE WORLD

Maps are as old as language. They might be considered the first graphic novel. Mapmakers communicate information with pictures that tell stories. Science, technology, culture, economics, politics, art, history – all of these can be found in maps. Today's maps are high tech: from GPS to street map views in real time. What stories can you tell about your community, town and county? With a partner, create a graphic novella about your community. Use stories, photos and advertisements from the pages of the *Tampa Bay Times* to help illustrate your story. Be sure to use specific examples from the *Times* to add authenticity to your work. Share your final project with your class.

See *Charting the Land of Flowers: 500 Years of Florida Maps,* an exhibition featuring 150 historic maps, at the Tampa Bay History Center, September 21, 2013 - February 16, 2014
tampabayhistorycenter.org

Scan for map images and classroom resources

The Father of Geography

Claudius Ptolemy

Claudius Ptolemy
(c. 85-165)

A Greek astronomer, mathematician and geographer, Ptolemy's ideas shaped mapmaking for more than 1,500 years.

The World According to Ptolemy

Mapping the Earth — Ptolemy was one of the first to believe the Earth was round, not flat, and he made maps with lines of latitude and meridians (longitude). He knew lines of latitude must be parallel, and meridians must "bend" to meet at the poles.

Every spot is unique — Ptolemy's lines of latitude and longitude gave every location its own unique coordinate on a map.

Limited world view — In Ptolemy's time, geographers knew of only three continents: Europe, Asia and Africa.

Prime meridian — Ptolemy drew his prime meridian at the Fortunate (Elysian) Islands. He read *The Odyssey* and shared Homer's belief that this was where the world ended.

He wasn't always correct — When we say, "The sun rises in the east and sets in the west," we are speaking Ptolemaic and presuming that the sun revolves around the Earth.

A Whole New World

Europeans were fascinated by stories of explorers navigating uncharted waters. Cartographer Martin Waldseemüller (c. 1470-1518) was no different. Having read about the travels of Christopher Columbus and Amerigo Vespucci, he produced 1,000 copies of a Ptolemy-style world map — the first to show a new, unknown continent. He named the continent "America" in honor of Vespucci because he was impressed with Vespucci's understanding that Columbus had found a new body of land. Columbus thought that he had landed in Asia — a belief he held until he died.
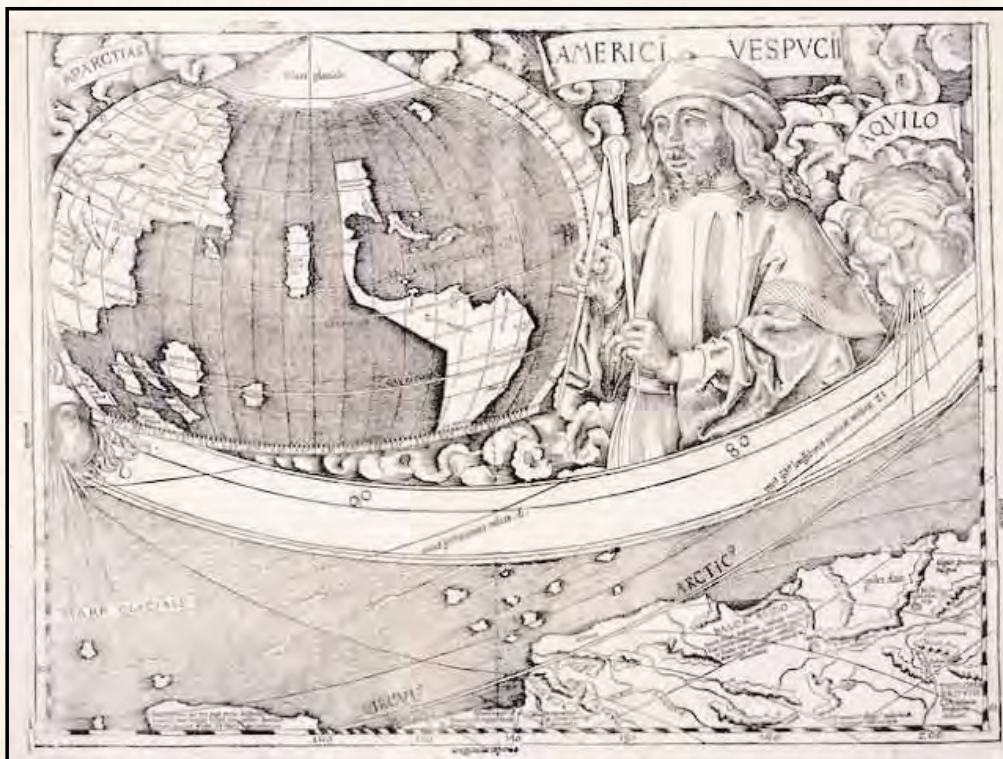
This is one of 12 sections of Waldseemüller's 1507 map, *Universalis cosmographia.*

VOCABULARY

Prime meridian – The line of 0 degrees longitude, the starting point for measuring distance both east and west around the Earth. Early cartographers promoted the importance of their own country or beliefs with their placement of the prime meridian.

16th Century: *The Age of Discovery*

"And thinking that this land was an island, they called it La Florida, because it was very pretty to behold with many and refreshing trees, and it was flat, and even: and also because they discovered it in the time of Flowery Easter (Pascua Florida), Juan Ponce wanted to agree in the name, with these two reasons."

– M. Antonio de Hererra y Tordesillas

Gerónimo de Chaves (1524-?), *La Florida from the Theatrum Orbis Terrarum of Abraham Ortelius,* Additamentum of 1584

La Florida

During the 16th century, European monarchs commissioned explorers and geographers to explore and map the New World. Nations racing to claim land and natural resources led to a power struggle that lasted for three centuries.

Abraham Ortelius, the Royal Geographer of Phillip II of Spain, published a world atlas called *Theatrum Orbis Terrarum* (*Theatre of the World*) that included the map of La Florida shown above. Ortelius commissioned cartographer Gerónimo de Chaves to produce the map. Chaves was from the Seville School of Navigation and had close ties to many Spanish explorers. He was particularly influenced by the expedition of Hernando de Soto.

With this map, Spain conveys its claim to La Florida.

- Chaves announces Spain's authority with the Latin words found in the cartouche. *Cum Privilegio* means "privilege granted proper authority."

- This is the first known printed map with the name La Florida applied to the entire Southeast.

- The prime meridian runs through Spain, demonstrating Chaves' perception that Spain is the leader of the world.

- St. Augustine, Spain's most important base in La Florida, is conspicuously absent from the map. Perhaps this was a security measure adopted by the King.

- The name of the St. John's River, which changed many times between the sixteenth and nineteenth centuries, gives readers a clue about the origins of a Florida map. On this map it is *Rio de Corrientes* ("river of currents").

- *C. de Cañareal* is prominent on the east coast. It was named by Spanish sailors who mistook tall reeds growing along the coast line for sugar cane *(cañareal)*.

Linking the past with the present

- Search the *Tampa Bay Times* archives for Jeff Klinkenberg's Dec. 28, 2012 article, "As 500th anniversary nears, cities vie for title of Ponce de Leon's landing spot". Read the article and jot down the main ideas. Use a modern map of Florida and the Chaves map to identify the possible locations for Ponce de Leon's landfall. Write a paragraph explaining why you think he landed in one spot over another. Use examples from the article to support your ideas.

- In the 16th century, navigators relied on prominent, easy-to-identify natural landmarks to find their way. Many mishaps along the eastern coast of Florida were avoided as sailors used the promontory C. Cañareal as a waypoint on their journey. Search for stories of mishaps at sea in the *Tampa Bay Times*. Make a modern safety list of dos and don'ts for boating in Florida waters. Illustrate some of the mishaps you found in the *Times* articles in cartoon form.

VOCABULARY

Cartouche – The decoration that frames the title and other information about a map.

Promontory – A high point of land projecting into a body of water.

Le Moyne's Memory Map

Artist Jacques Le Moyne journeyed to Fort Caroline, Florida, in 1564 with French colonists. His orders were to document the New World. And he did, until the Spanish attacked Fort Caroline and burned it to the ground. Le Moyne escaped, but it is doubtful that he was able to take his drawings with him. He returned to Europe, and scholars believe he recreated his drawings and maps from memory. After Le Moyne died, an engraver named Theodor de Bry purchased the drawings and published them in a book called *Grand Voyages*.

Think about it

If Le Moyne created this map from memory, and de Bry exaggerated the drawing, how accurate do you think the map is? What problems could result from inaccurate representations?

Why does the shape of Florida look so weird?

Le Moyne's map includes measurements for latitude, but not longitude. During this time period, cartographers were still considering ways to measure longitude. We do not know where de Bry got his ideas for the map. It is important to remember that de Bry relied on many different sources because he never actually touched American soil.

Explorer ships and fanciful fish

As more seafarers took to the oceans, the demand for maps increased. Cartographers reasoned that a map that was engaging as well as accurate — one that was embellished with a few ships and sea creatures — would be more popular and sell better. Most cartographers had never sailed on the seas so they used their imaginations, fueled by stories they heard, to create fanciful creatures.

Jacques Le Moyne de Morgues (1533-1587), *Floridae Americae Provinciae Recens et Exactissima Descriptio*. In Theodor de Bry, *Grands Voyages,* part II (Frankfurt, 1591)

Look closely:

- Find **Prom Canaveral.** "Prom" is short for "promontory." The place name Canaveral remains the same throughout history, highlighting the importance of a promontory to navigation.

- Find **F May,** up the coastline from Prom Canaveral. The "F" stands for *flumen* (river). The French named the river "May" because they discovered it on the first day of May. What is this river called today?

- Follow the path of **F May to the large lake.** The Latin words *lacus aquce dulces* mean "freshwater lake." This lake is found on many early maps, but its identity is a mystery.

- Find **Calos** on the map. This word identifies the powerful Calusa people. Their leader, named Carlos by the Spanish, had many interactions with European explorers. Look for similar hut symbols next to other American Indian names.

TIMELINE 16TH CENTURY

1513
Spaniard Juan Ponce de León arrives in, names and claims La Florida for Spain

1528
Spaniard Pánfilo de Narváez lands in Florida

1539
Spaniard Hernando de Soto lands in Florida

1562
Frenchman Jean Ribault lands in Florida

1564
Frenchman Rene Laudonnière establishes Fort Caroline near the St. Johns River

1565
Spaniard Pedro Menéndez de Avilés attacks Fort Caroline and defeats the French; Spain establishes St. Augustine

1565-1763
Florida's first Spanish period

YOUR TURN

Whose point of view is reflected on this map? How do you know?

Why do you think this map includes a lake we cannot identify today?

If Le Moyne came back to life today, what do you think he would say about the map de Bry published?

Tampa Arrives

In the 17th century, Europeans explored the interiors of New World lands and established settlements. Voyagers returning home on Spanish ships presented documents about their travels to their king, who kept them secret. The crown did not want the rest of Europe to know the details of Spanish conquests. Over time, pirates looted Spanish ships and leaked secrets to other European powers.

Antonio de Herrera y Tordesillas, the crown-appointed cosmographer, published a chronicle of Spanish explorations. This map (below) was included. It is the first printed map on which the name Tampa (b. de Tampa) appears.
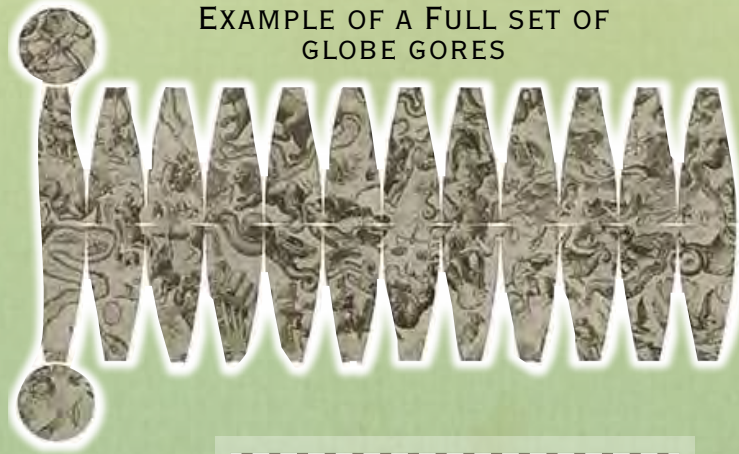

Antonio de Herrera y Tordesillas (1559-1625) *Description del Destricto del Audiencia de la Española* (Madrid, 1601)

Globes and Gores

Vincenzo Coronelli was a Franciscan monk who produced globes of many sizes. To do this, he created globe gores, hand-drawn or printed sheets of paper like the one shown at right, and glued them onto large spheres made of wood and papier-mâché. Coronelli included detailed illustrations of people, plants and animals so that his globes would be instructive and entertaining.

The Manner of Makinge Their Boates, by Theodor de Bry

17th Century:
Putting Down Roots

Vincenzo Coronelli (1650-1718), gore showing part of North America from his *Libro dei globi (Book of Globes)* (Venice, c.1693)

Example of a Full set of globe gores

Think about it

Coronelli was influenced by the work of Le Moyne and de Bry. Accurate or not, 100 years after de Bry's map was published, this map included similar images. What does this tell you about European perceptions of American Indian groups? What do you think of de Bry's *The Manner of Makinge Their Boates?*

Look Closely:

The map above is a partial section of a gore designed for a 42-inch globe. Note the following:

- The name *Florida* stretches across southeastern North America.
- The words *Tegesta Provincia* refer to Florida's Tequesta people.
- A misplaced *R May* connects to the mysterious *L May*.
- *Baia Tampa* denotes Tampa.
- Canada is located in close proximity to Florida.
- The Canary Islands, a French territory, are the prime meridian.
- The mouth of the Mississippi River is inaccurately located in the French colony of Louisiana. Some mystery remains as to whether this was a cartographer's error or whether the French king, Louis XIV, wanted to confuse anyone wishing to invade his colony.

18th Century:
International Conflict Comes to La Florida

Pierre Mortier (1661-1711), *Teatre de la Guerre en Amerique (The Theater of War in America)* (Amsterdam, 1703)

Timeline 17th Century

1607
British establish Jamestown in Virginia

1620
British establish Plymouth in Massachusetts

1668
Pirate Robert Searles loots St. Augustine

1672-1695
Spanish build Castillo de San Marcos in St. Augustine

1693
Spanish grant freedom to slaves who escape to Florida and convert to Catholicism

Exploring with the *Times*

Your turn

- It is your turn to be a reporter. First you need to read carefully and gather evidence.
- What evidence on the gore demonstrates the connection between Coronelli and Louis XIV?
- Coronelli was a wealthy man at the end of his life. What technology did he use to accumulate his wealth?
- Might Coronelli have had another reason for his numerous illustrations? What could these reasons be?

Visit the website of the Francois Mitterand Library in Paris to view the magnificent Coronelli globes at bonjourparis.com/story/bibliotheque-nationale-mitterand-library-coronelli.

Research Father Vincenzo Coronelli and find more information about him for the newspaper article you are writing. Be sure to use reliable sources for your research. You also will need to document your sources. Use articles from the *Tampa Bay Times* as models for writing a newspaper article.

The setting for this map is the War of Spanish Succession (1702-1714). This bloody conflict pitted the British, Dutch and Holy Roman Empires against the French and Spanish. No longer considered pirates, British and Dutch navies now legitimately targeted Spanish ships and claimed their cargo.

The map plots the annual route of the Spanish treasure fleet as it sailed by the east coast of Florida to the Caribbean. The map includes trails through the water with words of advice for navigation.

The painting in the corner of the map contains a splendid scene of gold or silver acquisition. Miners extract precious metal on the hill, the treasure chest stores the ingots, and the Dutch and Spanish galleons fight over the treasure.

Today, teams of researchers — scientists, technicians and archaeologists — survey and map miles of seabed looking for shipwreck sites. They use advanced robotic technology to uncover the remains of ships lost to hurricanes and conflicts of past centuries.

"Seaward ho! Hang the treasure! It's the glory of the sea that has turned my head."

— Robert Louis Stevenson,
Treasure Island

VOCABULARY

Chronicler – One who gives a historical account of events arranged in order of time.

Cosmographer – One who depicts or describes the world or universe as a whole system.

SCIENTIFIC EXPLORATION AND DISCOVERY

Thomas Jefferys (1710-1771). *Plan of the Town and Harbour of St. Augustin.* Plate 6 of William Roberts' *An Account of the First Discovery, and Natural History of Florida.* (London, 1763)

EXPLORING WITH THE *TIMES*

PRESERVING THE PAST
ALLIANCE FOR INTEGRATED SPATIAL TECHNOLOGIES (AIST), UNIVERSITY OF SOUTH FLORIDA

Today, many archaeological sites are threatened by natural and man-made disasters. AIST's high-tech mapping of important sites such as Fort Matanzas allows for their virtual preservation. Through web-based models (aist.usf.edu) and 3D prints of artifacts, students can explore these historic treasures up close.

Look for articles in the *Tampa Bay Times* that tell about a natural or man-made disaster that threatens an archaeological site. Write a fully developed paragraph about how the site is at risk and how AIST technology might preserve the heritage of the culture that is threatened.

VOCABULARY

Propagandist – a person involved in deliberately producing information, ideas or rumors to help or harm a person, group, movement, institution or nation.

Art & Nature

Like the Spanish before them, the English were intensely interested in learning about the plants and animals of their New World lands. Mark Catesby, a British naturalist and artist, spent 11 years exploring the fields, forests, swamps and shores of the Southeast. He spent another 20 years creating a two-volume book, *The Natural History of Carolina, Florida and the Bahama Islands,* with detailed illustrations of the wildlife he observed, painted and collected. Catesby's book was the first natural history of southeastern North America. It influenced later naturalists, including Carolus Linnaeus, William Bartram and John James Audubon.

This map is included in Catesby's book. It features a decorative cartouche in which the title is surrounded by shells and coral.

Mark Catesby (1683-1749), *A Map of Carolina, Florida and the Bahama Islands with the Adjacent Parts,* 2nd ed. (London, 1754)

British St. Augustine

Founded by the Spanish in 1565, St. Augustine is the oldest permanent European settlement in the United States. The map at left shows what the town looked like almost 200 years after it was established.

The Mapmaker

Thomas Jefferys was a British mapmaker. He worked with William Roberts, a writer and propagandist, who never visited Florida but was interested in promoting it. In 1763, when the Treaty of Paris was signed, ending Spain's 250-year ownership of Florida, Jefferys and Roberts produced a book that gave Britain a detailed look at its new land. The book featured Jefferys' maps, and was intended to promote settlement and investment. This map of St. Augustine is included in the book.

Look Closely

Can you find these landmarks on the map?

Stone quarry — Coquina, a stone made of shell and sand, was discovered on Anastasia Island in 1580. The Spanish used coquina to construct forts and other buildings in St. Augustine. Indians, Africans and prisoners mined the stone from this quarry.

Castillo de San Marcos — The Spanish built this fort between 1672 and 1695 to protect the city from British attacks. It is now a national monument.

Indian Town — In the 1580s, the Spanish set up missions across North Florida to convert Indians to Catholicism. The British destroyed all of the missions in the 1700s, prompting the Spanish to move the Indians close to St. Augustine for protection.

Fort Matanzas — The Spanish built this smaller fort in 1740 to protect the southern approach to St. Augustine. It is now a national monument.

St. Augustine Lighthouse — As the nation's oldest port, St. Augustine has seen ships from around the world come and go. What started as a wooden watchtower in the late 1500s was later replaced with Florida's first lighthouse in 1824. It is now called St. Augustine Lighthouse & Museum.
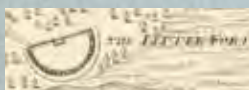
Fort Mose — In the late 1600s, the Spanish granted freedom to runaway slaves who escaped to Florida and became Catholic. In 1738, Florida's governor set up Fort Mose, the first legally sanctioned free black town in what is now the United States. The site is now a national landmark.
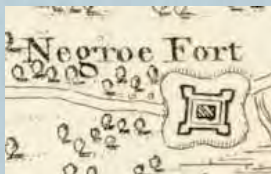
General Oglethorpe's Landing Place — British troops, led by Georgia governor James Oglethorpe, attacked St. Augustine in 1740, taking over Fort Mose. Free black militiamen, Spanish troops and Indian fighters counterattacked, forcing the British back to Georgia.

Benjamin Franklin and Timothy Folger, *A Chart of the Gulf Stream* (1786)
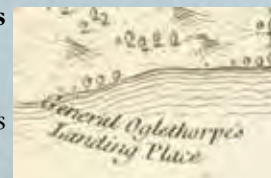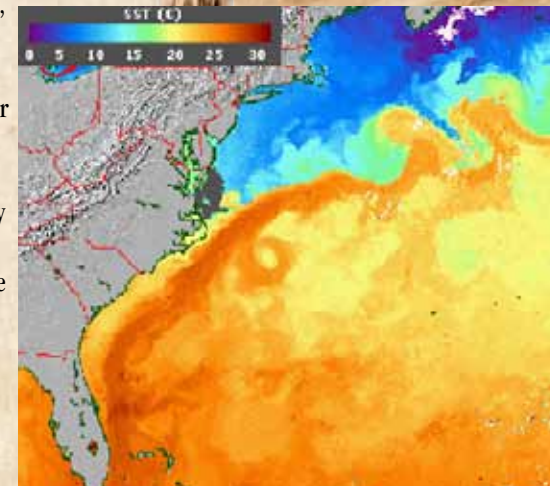
The Gulf Stream

The Gulf Stream is a strong current that starts in the Gulf of Mexico and flows into the Atlantic Ocean. The first mention of it can be traced to Juan Ponce de León's 1513 expedition to La Florida. His chief pilot, Anton de Alaminos, was awe-struck by a rush of water so powerful that it forced his ship backward. He wrote, "So great was the current that it was more powerful than the wind . . . the current was so strong it made the cables tremble." Alaminos was the first to understand how this current could affect future voyages to and from Spain.

More than 250 years later, Benjamin Franklin was the first to name and chart the Gulf Stream. While serving as U.S. deputy postmaster general, he was puzzled to find that British mail ships sailing westward to America took weeks longer than ships heading the other way. Franklin consulted Timothy Folger, a Nantucket whaling ship captain, who told him about the powerful current that many American seafarers knew about. With the help of Folger, Franklin plotted the course of the Gulf Stream and created a series of charts to help British mail ships travel more efficiently.

Compare this NASA satellite image to Franklin's 1786 map. The Gulf Stream is shown in orange.

Florida during the Civil War

Artistry and purpose are both seen in John Bachmann's 1861 *Birds Eye View of Florida.* Bachmann's beautifully hand-drawn map shows what would take many words to describe: the large state of Florida at the start of the Civil War, with miles of coastline and numerous lakes and rivers.

Bachmann, a noted lithographer, used his cartographic skills to provide a valuable tool for the military leaders. The map included has a subtle pro-Union bias. Unlike battle maps that covered a discrete area or a particular battle, Bachmann's Florida map gave a sense of the actual landscape of the war. His purpose was to show the progress and strength of the Union blockade.

Think about it.

Often artistic as well as accurate, bird's-eye view maps emphasize the landscape and horizon. Because airplanes and satellites did not exist at the time, some say John Bachmann created his bird's-eye view maps using his imagination. Do you think that is possible? What information could he have used to ensure his maps were accurate?

Maps for the Masses

Bachmann created a series of three-color chromolithograph maps to meet an increasing demand for easy-to-read, pictorial Civil War maps. Military leaders used these maps to gauge the location and distance of Florida's natural landmarks, towns, roads and forts. Non-military folks could quickly understand the strength and aggression of the Union army.

Florida's Cities

In this map, ships surround the most important cities of 1861: St. Augustine, Cape Canaveral, Tampa, Cedar Key and Pensacola. Union blockade ships are flying American flags, while Confederate blockade runners have no flags. There are even three Union-controlled forts — Fort Dallas (now Miami), Fort Henry and Fort Key West — all flying American flags.
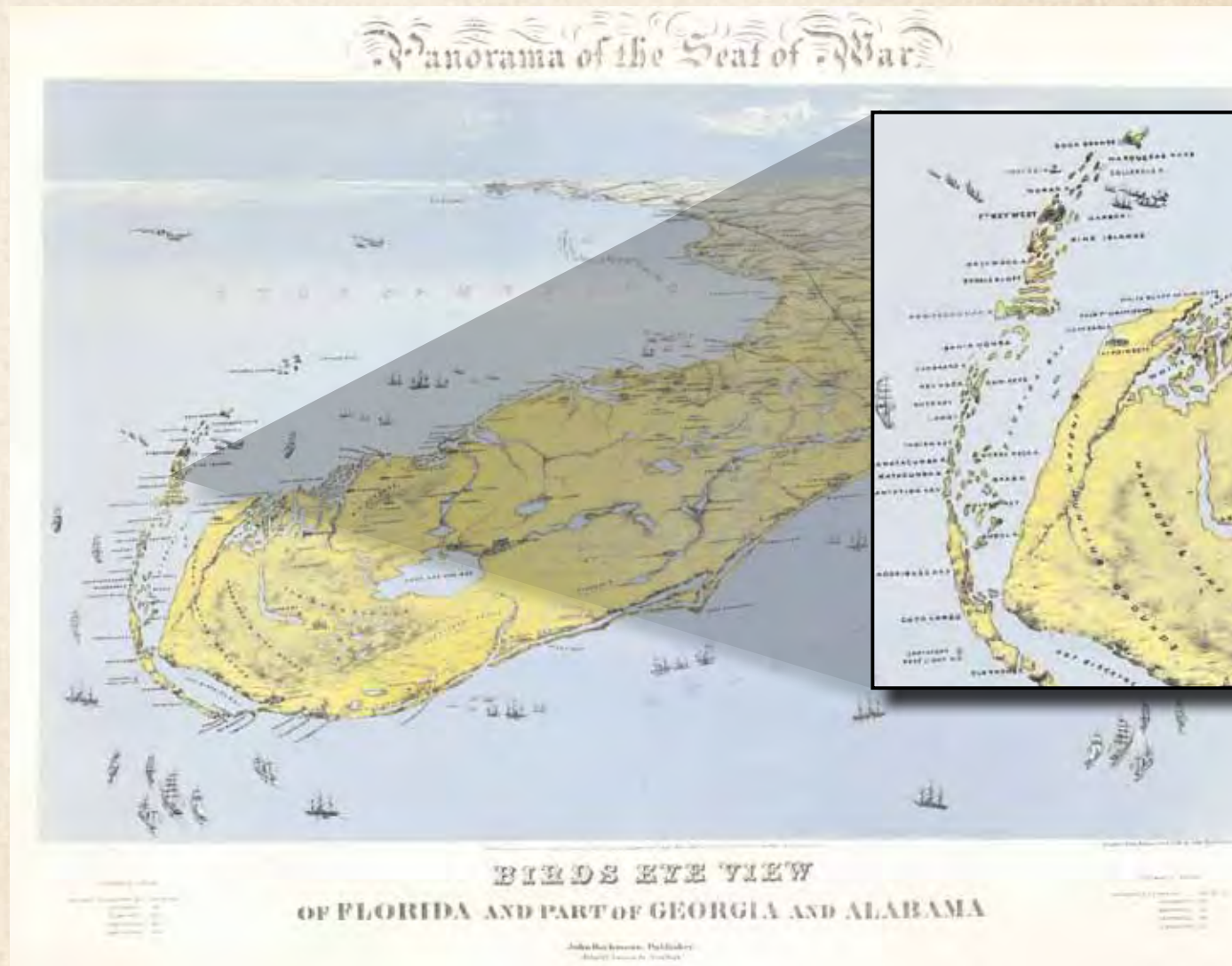
John Bachmann (1814-1896), *Panorama of the Seat of War, Birds Eye View of Florida and Part of Georgia and Alabama* (New York, 1861)

VOCABULARY

Bird's-eye views – Maps made from an aerial perspective. They have existed since classical times, but became very popular in the mid-19th century.

Chromolithograph – A picture printed in colors from a series of lithographic stones or plates.

Lithograph - A method of printing from a stone or metal plate treated with substances that either absorb or repel ink.

Henry B. Plant

Henry B. Plant (1819-1899), a man with drive and vision, would change the course of Florida's history. At the turn of the century, Florida was a hot, humid, yet enticing place. The population was just over a half million. The automobile was still in its infancy, and air conditioning would not be available until the 1920s. But Plant saw an opportunity to use his steamship lines and railroads to allow Florida's beauty to be enjoyed by all.

After the Civil War, many of the South's railroads were bankrupt or destroyed. Plant acquired these existing rail lines and laid new track, and Florida's seemingly impenetrable interior slowly began to open up. He built a transportation system that ran along the Atlantic coast, eventually including 14 railroad companies, steamship lines and hotels.

Friendly Competition Leads to a Beautiful Resort

In 1888, Henry Plant's friend and colleague Henry Flagler opened the beautiful Hotel Ponce de Leon in St. Augustine, Florida. This inspired Plant to build a spectacular 511-room Islamic Revival-style resort in Tampa at the end of his rail line. The lavish Tampa Bay Hotel was only open from 1891 to 1930, but it housed thousands of guests and celebrities during that time, including Teddy Roosevelt and Babe Ruth. The former hotel is now a part of the University of Tampa campus, where college students enjoy the beautiful building and grounds.

The map

This map was published by the Mathews-Northrup Co. in 1898, near the time of Henry Plant's death. Upper-class, wealthy travelers were likely to consult it when making travel plans. It shows Plant's railroad lines, seven of his eight Florida hotels and the busy steamship lines going to Alabama, Cuba, Jamaica and Central America.

Mathews-Northrup Co., *Map of the Plant System of Railway, Steamer and Steamship Lines and Connections* (1898)


Henry B. Plant Museum at the University of Tampa

Exploring with the Times
Top secret

Spanish kings wanted to keep the details of their land holdings in the New World from other countries. They placed high value on the information. So high was the value that private buccaneers plundered Spanish ships, seized logs and maps with information and sold the information to other countries. Henry Plant and Henry Flagler also kept secrets in order to get ahead of the competition. With your classmates, brainstorm about the kind of information that is highly valued today. (Hint: identities, government secrets, business secrets). Next, find an article in the *Tampa Bay Times* about stolen information today. Identify the thesis statement in the article and make a bulleted summary of the article. What do you think should happen to people who steal information? Write a blog post that expresses your opinion. Use information from the newspaper article to support your ideas.
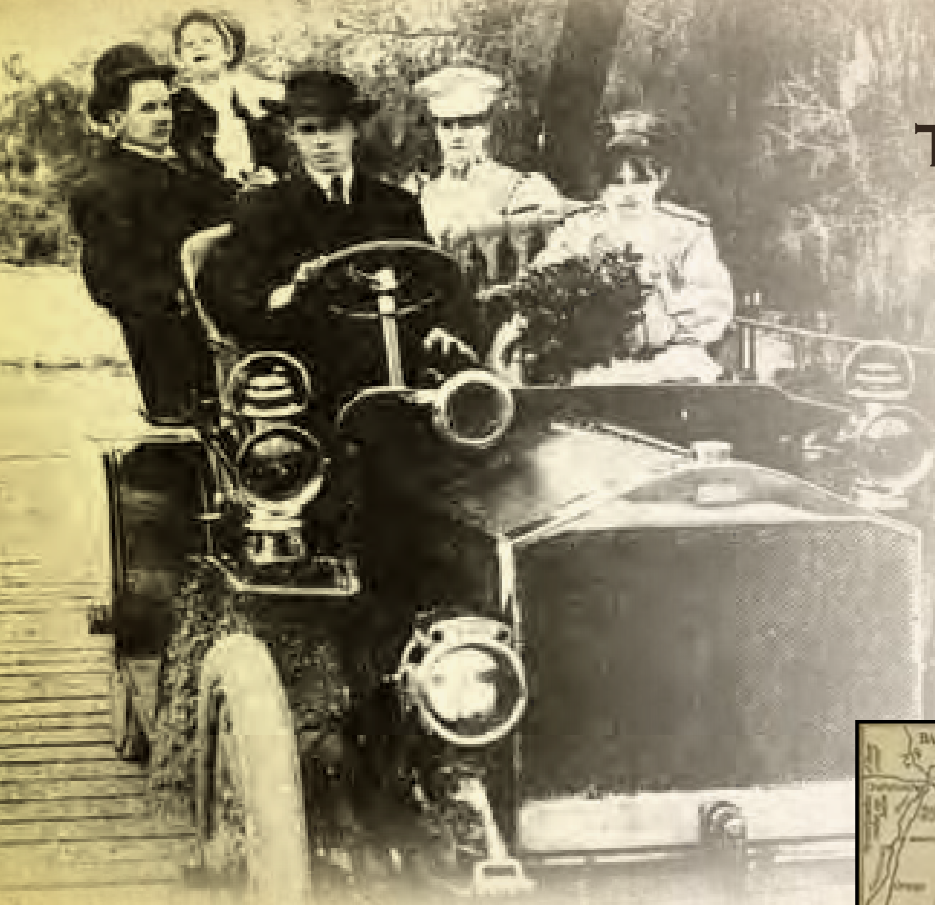
20th Century:
The Birth and Growth of
Modern Florida

"How do you think the country would take a proposal to build a great highway from Indianapolis to Miami, Florida?"

–Carl Graham Fisher, entrepreneur and developer of the Dixie Highway and Miami Beach, 1914

On the Road

In the early 20th century, Florida was changing, and the American Automobile Association's road map was evidence of that change. In the past, Florida's visitors had been wealthy resort guests. But by 1917 there were more middle-class visitors who wanted to experience Florida's tropical beauty.

Many new visitors came by car, as automobiles were becoming a more common form of transportation. The very first reliable American automobile was made by Oldsmobile (namesake of the Florida city of Oldsmar) in 1901, quickly followed by Henry Ford's Model T in 1903. By 1915, there were 2 million cars in America. Printed maps, such as AAA's Florida road map, were a necessity!

Roads and Florida's Economy

The automobile brought freedom, allowing people to travel more easily from farm to town to city. The American economy produced travel-related services such as roadside restaurants, gas stations and motels. The United States was entering World War I, and the Florida land boom had not yet begun. Tourists, the rich and even the not-so-rich, came to Florida to bask in its warm weather, play on its sandy beaches and enjoy the health benefits of its sunny climate.
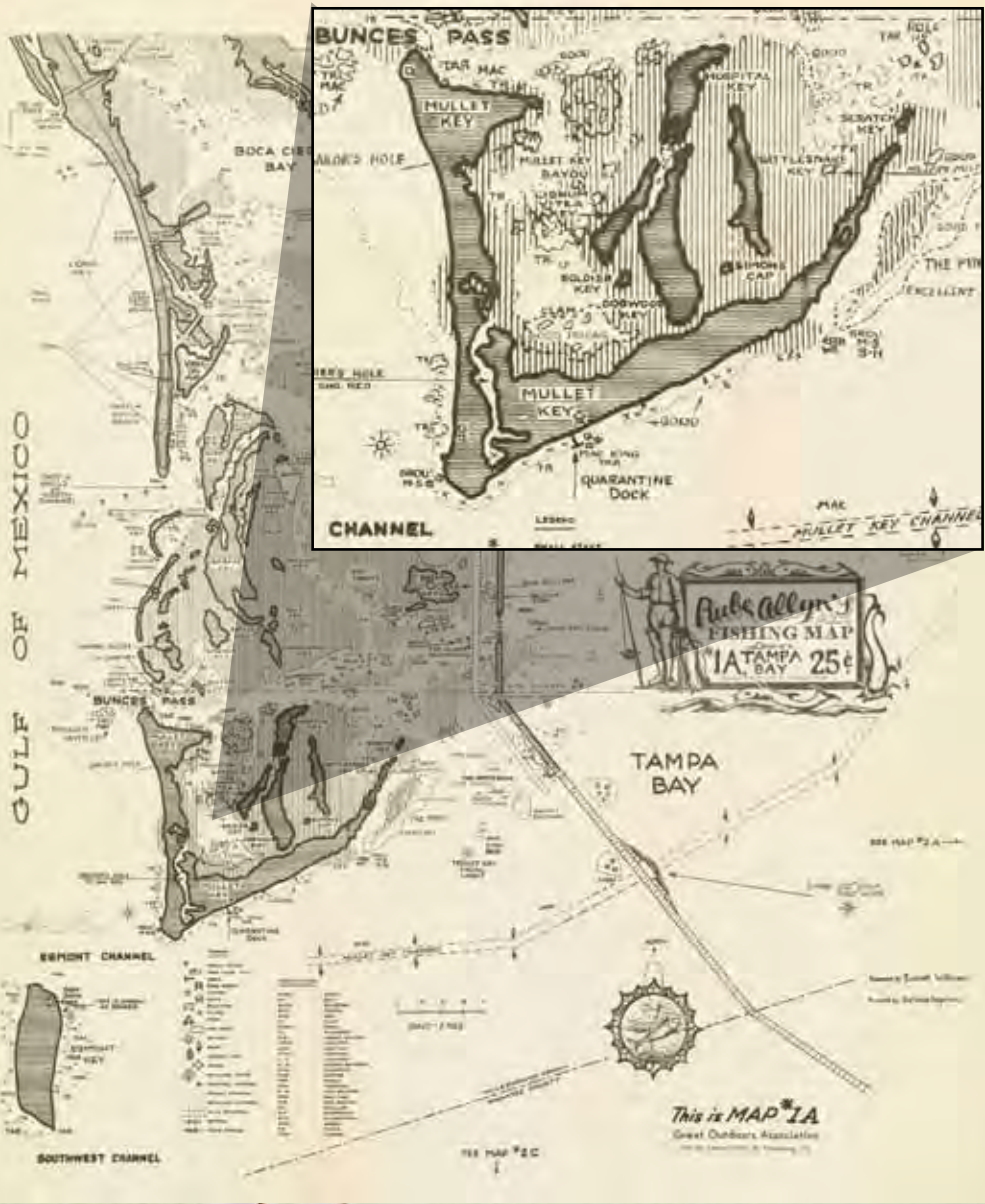
Florida in 1917

Looking closely at this nearly 100-year-old road map reveals some interesting stories about Florida's past. You can compare the relative sizes of cities and towns by looking at the size of their names on the map. The map legend notes that some roads were considered "improved" but some were "very poor." Although the national road numbering system had not yet begun, the more traveled routes can be seen. Can you guess which road in south Florida is labeled "To be constructed/Under construction"? Hint: You may see alligators if you travel on it.

Tampa Bay-Area Bridges

If you lived in Tampa in 1917, how would you get to St. Petersburg or Clearwater? The four major area bridges were not even on the drawing board. Can you identify where these bridges would be built: Gandy Bridge (1924), Courtney Campbell Causeway (1934), Sunshine Skyway Bridge (original 1954) and Howard Frankland Bridge (1960)?

American Automobile Association, *AAA Road Map of Florida* (1917)

Great Outdoors Association, *Rube Allyn's Authentic Fishing Map, #1A, Lower Tampa Bay* (St. Petersburg, 1960)

Rube Allyn's fishing map

Rube Allyn's Authentic Fishing Map of Lower Tampa Bay was a great help to fisherman in 1960. For just 25 cents, Allyn shared his best fishing holes and danger spots!

Allyn's map has the customary map elements. There is a decorative compass rose with its fishing line pointing north, a scale and an attractive cartouche with a fisherman, pole and playful fish.

Like a pirate's treasure map, this map helped create amazing "fish tales." It informed anglers of just the right spot to catch certain fish and identified "good, very good and excellent" fishing locations. Many different fish are listed, as well as fishing camps, bird roosts, beacons and buoys. The serious angler would pay close attention to the channel markers, grasses and shallow flats.

The map also shows larger waterways, such as Egmont Channel and Boca Ciega Bay, and important structures such as the single-lane Sunshine Skyway Bridge and the famous Don CeSar Hotel.

Timeline
20th Century

1914-1918
World War I

1920-1926
Florida's land boom

1929-1939
Great Depression

1939-1945
World War II

1947
Everglades National Park established

1969
First human being lands on the moon aboard Apollo 11

1971
Walt Disney World opens

1993
U.S. launches the last Navstar satellite into orbit, completing a network of 24 satellites known as the global positioning system (GPS)

Exploring with the Times

Thematic Maps

Rube Allyn's fishing map is a good example of a thematic map. Thematic maps often start with a base navigational map and might include natural features and reference points such as rivers, cities and highways. Information related to them is layered on top. There are endless varieties of thematic maps. If you can dream it, you can map it. What kind of map would you create to show people your interests?

Throughout the week, read through the pages of the *Tampa Bay Times*. Using news articles, events, special sections, advertisements, photos and editorials, make a list of some of the items and events that appeal to you. Create a thematic map representing one of your favorite aspects of the Tampa Bay area. Write a short essay to explain your map and mapping process.

The mapmaker

Rube Allyn loved the outdoors and for years wrote a column for the *St. Petersburg Times.* He had a sarcastic, but passionate, tone as he informed his readers about fishing tips and conservation causes, such as protecting alligators, proper fishing nets and the depletion of saltwater fish. After he left his job at the *Times,* he began publishing maps and books such as *Dictionary of Fishes.*

Rube Allyn (courtesy of Jan Allyn)

Jan Allyn, Rube's granddaughter, remembers him as "a gregarious, people-loving, outdoorsman – not really a cartographer, nor a conservationist, but a man who loved people, loved fishing and loved Florida."

Investigation and research

Visit Florida Sportsman and Florida Wildlife on the Internet to see what Rube Allyn types are doing today and how they use new technology to chart and map the way. Search "Rube Allyn" in the *Tampa Bay Times* archives and read about activity on the reef named for him. Can you find the reef on the map?

21st Century:
New Perspectives on Mapping

MAPPING THE PAST
Rebecca O'Sullivan, archaeologist

Rebecca O'Sullivan, an archaeologist with the Florida Public Archaeology Network, makes and uses maps to learn about life in the past. She and other archaeologists do this by finding, excavating and studying material remains: the things made, used and left behind by people.

Maps are one of the most important tools of archaeology. From simple hand-drawn maps to complex computer-generated ones with layers of data points, maps are filled with important information. They pinpoint the locations of artifacts, show changes in the landscape, and record significant water sources and other features near a site. Archaeologists also use laser and sonar technology to chart areas — on land and underwater — that are hard to see with the naked eye.

Maps:

Top: Modern aerial photo of Tampa's Hyde Park neighborhood overlaid with historic map showing old Spanishtown Creek.

Bottom: Map showing concentrations of prehistoric artifacts found in Driftwood prehistoric site in St. Petersburg neighborhood.

MAPPING A HABITAT
Dr. Penny Hall, research scientist

Dr. Penny Hall, a scientist with the Florida Fish and Wildlife Research Institute, works with the Everglades Restoration Project. She and other researchers use GIS (geographic information system) technology to map the location and density of sea grass beds, and to collect and analyze specimens.

Sea grass beds are good indicators of water quality. These "nurseries" provide food and shelter for fish, invertebrates, and endangered mammals and turtles. For more than 60 years, fresh water was diverted from the Everglades, endangering the plants and animals living there. The Restoration Project team is working to return a healthy flow of water to the Everglades to restore this beneficial habitat.
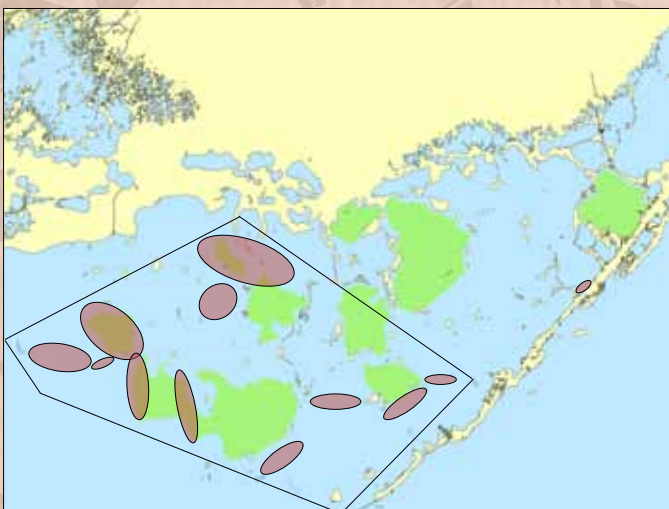
Above: Dr. Hall collecting specimens.

Left: Map showing sea grass beds along the Florida Keys.

MAPPING VIRTUAL ENVIRONMENTS
Andrew Tosh, game and simulation developer

Andrew Tosh, founder of Orlando-based GameSim Technologies, maps virtual environments. His company creates software for military simulators and computer games by taking geographic data from satellites and aircraft and turning it into 3-D virtual representations. This process involves GIS analysts, software engineers and artists.

Military simulators look and feel similar to commercial video games such as Call of Duty. Because they are used to train soldiers, the virtual environments must accurately represent real-world locations. For the gaming industry, designers use terrain editing tools to change the environment to achieve a particular look or gaming situation. For example, they might add a bridge to allow a jump onto the finish line of a car racing game.

Above: Map data used to create 3-D graphics.

Left: Screenshot from a train simulation game.

Mapping the brain

Dr. Ryan D. Murtagh, neuroradiologist and professor

Dr. Ryan Murtagh works for the Radiology Department at the University of South Florida's College of Medicine. He is a neuroradiologist — a doctor who helps treat patients with disorders in the brain, head, neck and spine.

Doctors can map white matter tracts in the brain using new technology called diffusion magnetic resonance imaging (DMRI). White matter tracts, which are the internal wiring of the brain, relay signals that enable the body to carry out action. Recent advances in neuroradiology give doctors an unprecedented view of the central nervous system on a microscopic level. By looking at the pathways of the brain, doctors are able to see early damage from trauma, tumors and neurodegenerative disorders.
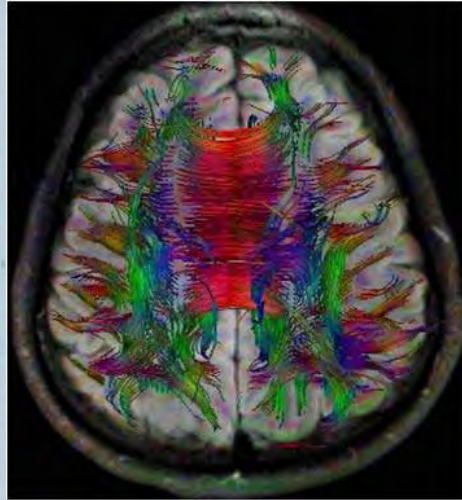
MRI image showing white matter tracts in the brain. Photo credit: Ryan D. Murtagh, M.D., MBA and F. Reed Murtagh, M.D.
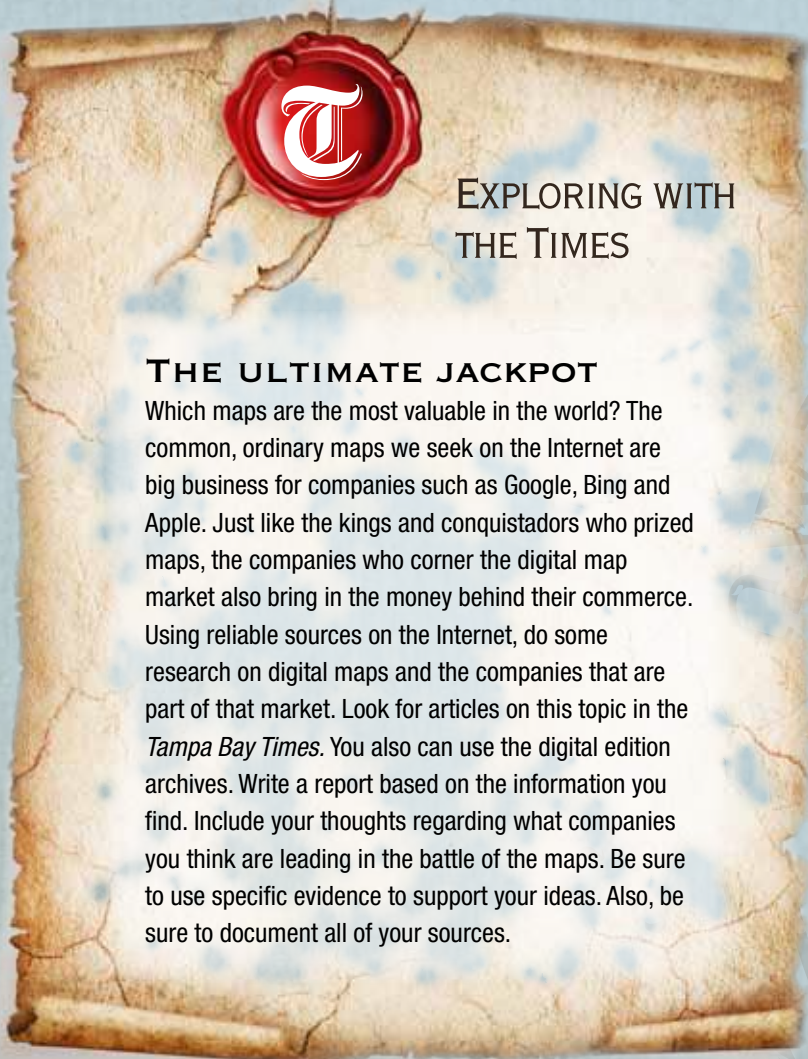
Exploring with the Times

The ultimate jackpot

Which maps are the most valuable in the world? The common, ordinary maps we seek on the Internet are big business for companies such as Google, Bing and Apple. Just like the kings and conquistadors who prized maps, the companies who corner the digital map market also bring in the money behind their commerce. Using reliable sources on the Internet, do some research on digital maps and the companies that are part of that market. Look for articles on this topic in the *Tampa Bay Times.* You also can use the digital edition archives. Write a report based on the information you find. Include your thoughts regarding what companies you think are leading in the battle of the maps. Be sure to use specific evidence to support your ideas. Also, be sure to document all of your sources.

Astronaut Stott in Space. Photo credit: NASA and Nicole Stott

Mapping from space

Nicole Stott, astronaut

Nicole Stott has spent more than 100 days in space during two NASA expeditions. A graduate of Clearwater High School and the University of Central Florida, she became an astronaut in 2000.

Similar to those of the early explorers who sailed uncharted waters, NASA's mission is to explore, discover and understand our world from the unique vantage point of space. Early cartographers created maps of unknown lands based on their own limited vantage point and without the benefit of modern technology. Today, astronauts and satellites can show us what the world looks like — in real time, and in totality — by photographing it from space.

Tampa Bay coastline, 2009. Photo credit: NASA and Nicole Stott

Mission

The Tampa Bay History Center is a dynamic and entertaining learning resource that inspires a sense of place and pride for diverse audiences through interactive educational programs and engaging exhibitions.

Background

Established in 1989 as a not-for-profit educational institution, the History Center collects and preserves the historical materials and stories of the Tampa Bay region and presents these treasures in exhibitions, programs and publications. Visitors can explore three floors of exhibits covering 12,000 years of Florida history. One of Tampa's premier cultural venues, the History Center's hands-on, family-friendly activities and cutting-edge interactive exhibits provide a unique educational experience for all ages. For more information, go to tampabayhistorycenter.org.

Exploring the land of flowers

Exploring with the Times

- There are a lot of interesting things on the maps in this exhibit. What items did you find the most interesting in this publication? Create a full-page advertisement for the *Tampa Bay Times* for this exhibit. The purpose of your advertisement is to persuade people to come see the exhibit. Use the ads in the *Times* as models.
- Read "Florida Fusion is the real story of the past 50 years" by Gary Mormino, *Tampa Bay Times,* May 11, 2013. Work with a partner to draw and label Florida Fusion in the 16th century. Use Herrera's map as a guideline.

IN THE KNOW. IN THE TIMES.

Tampa Bay Times NIE
newspaper in education
tampabay.com/nie

The Tampa Bay Times Newspaper in Education (NIE) program is a cooperative effort between schools and the Times Publishing Company to promote the use of newspapers in print and electronic form as educational resources. Since the mid-1970s, NIE has provided schools with class sets of the newspaper, plus our award-winning original curriculum, at no cost to teachers or schools.

With ever-shrinking school budgets, the *Tampa Bay Times* and our curriculum supplements have become an invaluable tool to teachers. In the Tampa Bay area each year, more than 5 million newspapers and electronic licenses are provided to teachers and students free of charge thanks to our generous individual, corporate and foundation sponsors.

NIE provides supplemental materials and educator workshops free of charge. Our teaching materials cover a variety of subjects and are consistent with Florida's Next Generation Sunshine State Standards and Common Core Standards. The *Times* and our NIE curriculum are rich educational resources, offering teachers an up-to-the-minute, living text and source for countless projects in virtually every content area.

For more information about NIE, visit tampabay.com/nie. Follow us on Twitter at Twitter.com/TBTimesNIE, and check out the NIE Blogging Zone at tampabay.com/blogs/niezone.

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Credits

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This publication and its activities incorporate the following Next Generation Sunshine State Standards: **Social Studies:** SS.6.G.1.1; SS.6.G.1.2; SS.6.G.1.4; SS.6.G.2.1; SS.6.E.1.1; SS.7.G.2.1; SS.7.G.2.3; SS.7.G.4.1; SS.7.G.6.1; SS.8.A.1.2; SS.8.A.1.3; SS.8.A.1.5; SS.8.A.1.4; SS.8.A.1.7; SS.8.A.2.5; SS.8.A.2.5; SS.8.A.4.17; SS.8.A.4.18; SS.8.A.4.3; SS.8.A.4.4; SS.8.A.4.5; SS.8.A.4.6; SS.8.G.1.1; SS.8.G.1.2; SS.8.G.2.3; SS.8.G.4.3; SS.8.G.4.5; SS.8.G.6.1; SS.8.G.6.2; SS.912.A.1.4; SS.912.A.1.5; SS.912.A.1.7; SS.912.G.1.4; SS.912.G.2.4 **Language Arts:** LA.6.1.5.1; LA.6.1.6.1-9; LA.6.1.7.1-5; LA.6.2.2.1-4; LA.6.3.1.1-3; LA.6.3.2.1-3; LA.6.3.3.1-3; LA.6.3.4.1-4; LA.6.3.5.3; LA.6.4.2.1-5; LA.6.4.3.1-2; LA.6.5.1.1; LA.6.5.2.1-2; LA.6.6.1.1; LA.6.6.2.1-4; LA.7.1.5.1; LA.7.1.6.1-9; LA.7.1.7.1-5; LA.7.2.2.1-4; LA.7.3.1.1-3; LA.7.3.2.1-3; LA.7.3.3.1-3; LA.7.3.4.1-4; LA.7.3.5.3; LA.7.4.2.1-5; LA.7.4.3.1-2; LA.7.5.1.1; LA.7.5.2.1-2; LA.7.6.1.1; LA.7.6.2.1-4; LA.8.1.5.1; LA.8.1.6.1-9; LA.8.1.7.1-5; LA.8.2.2.1-4; LA.8.3.1.1-3; LA.8.3.2.1-3; LA.8.3.3.1-3; LA.8.3.4.1-4; LA.8.3.5.3; LA.8.4.2.1-5; LA.8.4.3.1-2; LA.8.5.1.1; LA.8.5.2.1-2; LA.8.6.1.1; LA.8.6.2.1-4; LA.912.1.5.1; LA.912.1.6.1-9; LA.912.1.7.1-5; LA.912.2.2.1-4; LA.912.3.1.1-3; LA.912.3.2.1-3; LA.912.3.3.1-3; LA.912.3.4.1-4; LA.912.3.5.3; LA.912.4.2.1-5; LA.912.4.3.1-2;

LA.912.5.1.1; LA.912.5.2.1-2; LA.912.6.1.1; LA.912.6.2.1-4 **Visual Arts:** VA.68.C.1.2; VA.68.C.2.2; VA.68.C.2.3; VA.68.S.1.3; VA.68.O.2.2; VA.68.O.2.3; VA.68.H.1.1; VA.68.H.1.3; VA.68.H.2.2; VA.912.C.1.2; VA.912.C.2.2; VA.912.C.2.3; VA.912.S.1.3; VA.912.O.2.2; VA.912.O.2.3; VA.912.H.1.1; VA.912.H.1.3; VA.912.H.2.2

Reading this supplement and completing the newspaper activities in this publication can be applied to the following Common Core Standards: **Reading/Informational Text:** RI.6.1-3; RI.6.6; RI.6.7; RI.7.1-3; RI.7.6; RI.7.7; RI.8.1-3; RI.8.6; RI.8.7; RI.9-10.1-3; RI.9-10.6; RI.11-12.1-3; RI.11-12.6; RI.11-12.7 Writing: W.6.2-10; W.7.2-10; W.8.2-10; W.9-10.2-10; W.11-12.2-10 **Speaking & Listening:** SL.6.1-6; SL.7.1-6; SL.8.1-6; SL.9-10.1-6; SL.11-12.1-6 **Language:** L.6.1-5; L.7.1-5; L.8.1-5; L.9-10.1-5; L.11-12.1-5 **Reading History:** RH.6-8.1-9; RH.9-10.1-9; RH.11-12.1-9 **Writing History:** WHST.6-8.2; WHST.6-8.4; WHST.6-8.5; WHST.6-8.6; WHST.6-8.7; WHST.6-8.8; WHST.6-8.9; WHST.6-8.10; WHST.9-10.2; WHST.9-10.4; WHST.9-10.5; WHST.9-10.6; WHST.9-10.7; WHST.9-10.8; WHST.9-10.9; WHST.9-10.10; WHST.11-12.2; WHST.11-12.4; WHST.11-12.5; WHST.11-12.6; WHST.11-12.7; WHST.11-12.8; WHST.11-12.9; WHST.11-12.10