

Finding the

French

Fleet





**N**early 450 years ago, in 1565, four French ships sank and were lost off Florida's Atlantic coast, defeated in the fight to stake a claim to the lush green land that would become the United States of America. Any of them, if found, would constitute the only 16th-century French vessel known anywhere in the New World.

**This summer,** scientists and archaeologists will set out to find the wrecks of the French fleet — and to tell stories kept hidden beneath the sea. In anticipation of the 450th anniversary (in 2015) of the founding of St. Augustine and the loss of the French Fleet, the Lighthouse Archaeological Maritime Program (LAMP), the research arm of the St. Augustine Lighthouse and Museum, hopes to locate the French fleet. In partnership with the Center for Historical Archaeology and the Institute of Maritime History, and supported by the National Oceanographic and Atmospheric Administration (NOAA) Office of Ocean Exploration and Research, LAMP Director Chuck Meide and the Center for Historical Archaeology's John de Bry will lead a month-long effort to find *La Trinité* and her sister ships, lost four and a half centuries earlier.

## Quest: To Turn Back Time

This August, scientists and archaeologists aboard the *Roper* search for the wrecks of the French fleet off Cape Canaveral. Among the modern debris of the United States space program, they'll sift the sand for hints of the treasure of *La Trinité* and her three sister ships.

All four were lost in a power struggle between Jean Ribault, commander of the French fleet, and Pedro Menéndez, the Spaniard who stemmed the tide of French colonization of Florida, seeming to call on the weather itself in his victory.

Using towfish sensors that interpret sound waves and magnetism to narrow their hunt, the *Roper* crew will zoom in on their targets with the help of scuba divers and focus closely with hand-held instrumentation. They are aided by their knowledge of what each of the ships carried as cargo, and by new clues located along the Canaveral National Seashore. The end of a centuries-long mystery is at hand. Any one of the four wrecks would offer a singular time capsule, offering insight into the ancient settlements and new stories about St. Augustine, just as the oldest U.S. city prepares to celebrate the 450th anniversary of its founding.



# A Piece of the Action

It is 501 years since Spanish explorer Juan Ponce de León set eyes on Florida. His 1513 arrival marked the first time in recorded history that a European visited the lush, warm peninsula. Some say the object of Ponce de León's quest was the mythical Fountain of Youth — if you drank from it, you would never grow old — but historians agree that his goal was conquering new lands for Spain.

The French, too, wanted a share in the riches of the new lands. François I (known by his subjects as “François au Grand Nez” — François of the Big Nose) financed explorations of the Americas

from Newfoundland to Brazil. In 1562, Catherine de Medici, Queen Mother of France — and the most powerful woman of her time in Europe — agreed to back an expedition to Florida for the purpose of establishing a colony. Catherine's hope was that, in offering a refuge to Protestant Huguenots, she would stem civil war at home. Besides, establishing a fort would assure the French a piece of the action — a cut of the resources and bounty — promised by the new continent.

At the hands of Spanish Catholic Pedro Menéndez, most of the French newcomers would come to a bloody end.

I would like to see the clause in Adam's testament that excludes me from sharing the world.

François I of France, reigned 1515 to 1547



Catherine de Medici, in power 1547 to 1589

# Ribault, a Sea Captain

In 1562, Jean Ribault led a contingent of ships across the Atlantic, skirting Spanish warships, and scouted the area that is now Jacksonville. He set a stone column along the River of May (now the St. John's River) to claim the land, and sailed north. At what is now Parris Island, South Carolina, he left thirty men to build a fort, Charlesfort, before returning to France. He planned to gather more Huguenot colonists and supplies, then return. But the bloody religious war prevented any colonization efforts. Queen Elizabeth, perhaps not wishing to antagonize her brother, King Felipe II of Spain, wouldn't support Charlesfort. Instead, she imprisoned Ribault in the Tower of London. Meanwhile, the settlers at the Charlesfort colony, lacking supplies and hard-pressed by poor relations with Native Americans, abandoned the Carolinas to sail back to Europe. On the way, the unfortunate group resorted to cannibalism.



Ribault's second, Laudonnière, was offered a second expedition in 1564. Along the River of May in present-day Jacksonville, he built a triangle-shaped fort, Fort Caroline, with assistance from the relatively friendly Timucuan people.



# Threats, Real and Imagined

In summer of 1565, Fort Caroline's food supply had dwindled. Their lone ship was a ramshackle thing, leaky and barely seaworthy. Hopes were raised briefly by the arrival of a foursome of English ships. Besides food and supplies, Laudonnière brokered a trade for a sturdy ship in which the settlers — now at the end of their rope — intended to return to France. On August 28, as the group readied to quit the fort and begin the voyage home, a shout went up: sails had appeared on the horizon!

Ribault, newly released from the Tower, was quick to steer a course away from its ravens. He returned to America at the head of a fleet of seven ships, laden with weapons, armor, supplies, livestock, 500 soldiers, and — most importantly — 500 settlers.

By the time Ribault anchored, the nemesis of the French colony — the Spaniard Pedro Menéndez de Avilés — arrived with his own fleet. Spanish King Felipe II had charged Menéndez not only with establishing a Spanish presence in Florida, but also with driving out the French heretics — the Protestant Huguenots — once and for all. Like Ribault, Menéndez commanded five ships and 500 soldiers, with an additional 300 men, including sailors.

Menéndez was sure he had God on his side. He certainly had the weather.



Felipe II,  
reigned 1566-1598

# Meeting of the Fleets

Voices boomed across the water as the two fleets identified themselves. That was the last of the (somewhat) civil exchanges.

Ribault's three smaller ships had been discharging their troops and cargos. Now the ships were light enough to skim across the sandbar at the mouth of the May. When Menéndez's fleet arrived, the four larger French ships were anchored offshore.

*La Perle* (Pearl) 80 tons, returned safely to France.

*La Levrière* (Greyhound) 70 tons, returned safely to France.

*L'Épaule de Mouton* (Lamb Shoulder), 60 tons, would be scuttled (sunk on purpose) after the fall of Fort Caroline, along with two other French vessels.

*La Trinité*, 32-gun flagship, a galeass (hybrid ship powered by both oars and sails), 150-160 tons. Wrecked.

*L'Émérillon* (Little Falcon), 29-gun vice-flagship, 150-160 tons, a roberge (cargo ship) probably powered chiefly by sails. Wrecked.

*La Truite* (Trout), roberge, 150-160 tons. Wrecked.

*L'Émérillon 2*, roberge, 120 tons. Wrecked.

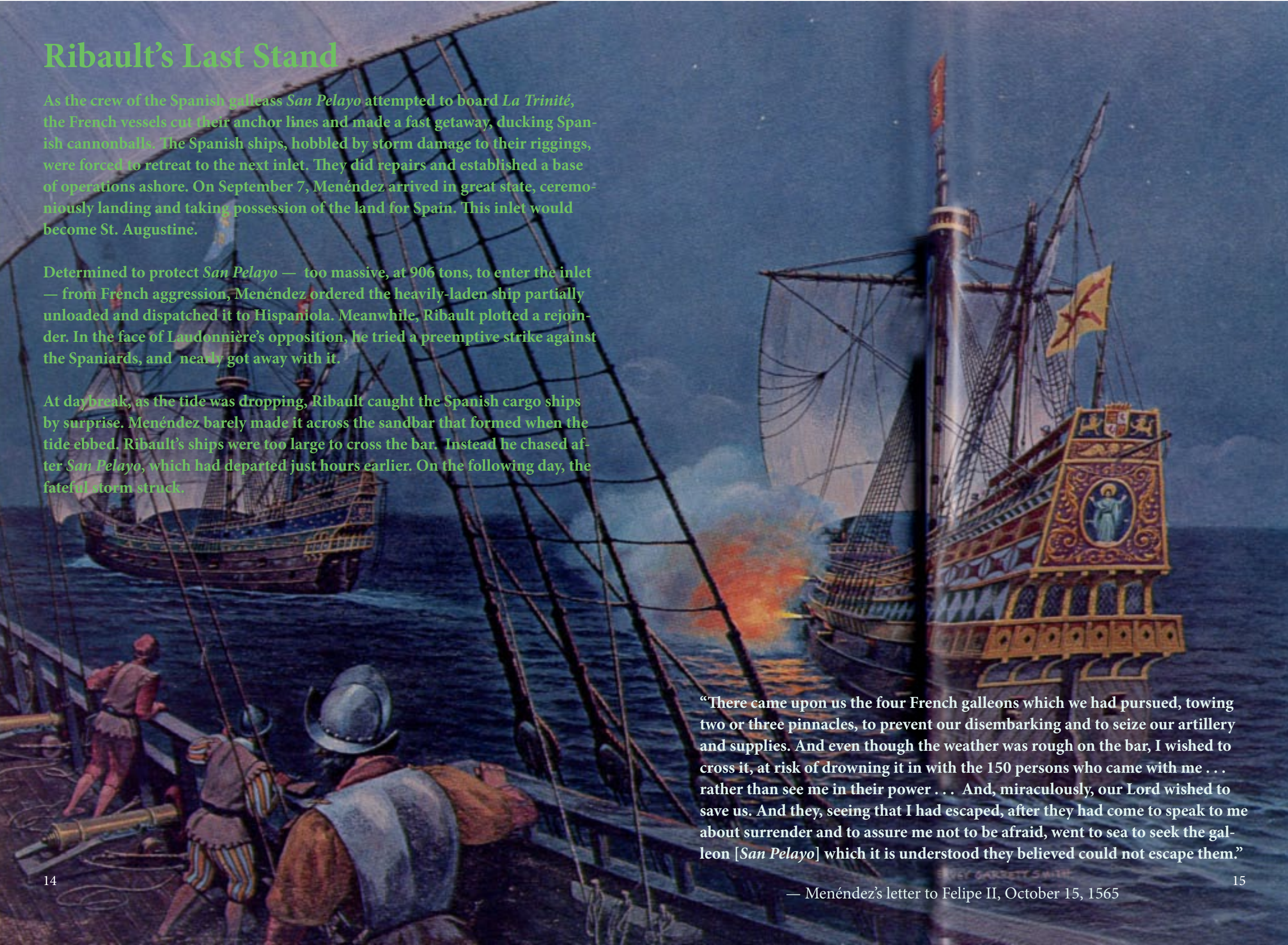


# Ribault's Last Stand

As the crew of the Spanish galleass *San Pelayo* attempted to board *La Trinité*, the French vessels cut their anchor lines and made a fast getaway, ducking Spanish cannonballs. The Spanish ships, hobbled by storm damage to their riggings, were forced to retreat to the next inlet. They did repairs and established a base of operations ashore. On September 7, Menéndez arrived in great state, ceremoniously landing and taking possession of the land for Spain. This inlet would become St. Augustine.


Determined to protect *San Pelayo* — too massive, at 906 tons, to enter the inlet — from French aggression, Menéndez ordered the heavily-laden ship partially unloaded and dispatched it to Hispaniola. Meanwhile, Ribault plotted a rejoinder. In the face of Laudonnière's opposition, he tried a preemptive strike against the Spaniards, and nearly got away with it.

At daybreak, as the tide was dropping, Ribault caught the Spanish cargo ships by surprise. Menéndez barely made it across the sandbar that formed when the tide ebbed. Ribault's ships were too large to cross the bar. Instead he chased after *San Pelayo*, which had departed just hours earlier. On the following day, the fateful storm struck.



“There came upon us the four French galleons which we had pursued, towing two or three pinnacles, to prevent our disembarking and to seize our artillery and supplies. And even though the weather was rough on the bar, I wished to cross it, at risk of drowning it in with the 150 persons who came with me . . . rather than see me in their power . . . And, miraculously, our Lord wished to save us. And they, seeing that I had escaped, after they had come to speak to me about surrender and to assure me not to be afraid, went to sea to seek the galleon [*San Pelayo*] which it is understood they believed could not escape them.”





God our Lord performed a miracle; for the weather being fair and clear, suddenly the sea rose up very high, and a strong and contrary wind came up ...

— Gonzalo Solid de Meras,  
Menéndez' biographer

## The Miracle Storm

Historians say it wasn't a true hurricane. Little matter, as powerful winds drove Ribault's fleet further south and, despite frantic attempts to claw their way to deeper waters, all were run aground and wrecked. Three of the ships — *La Truite* and both *L'Emerillons* — were smashed in the surf near Ponce Inlet. The flagship, *La Trinité*, was stranded intact on a sandbar five to ten leagues further south, in the direction of Cape Canaveral.

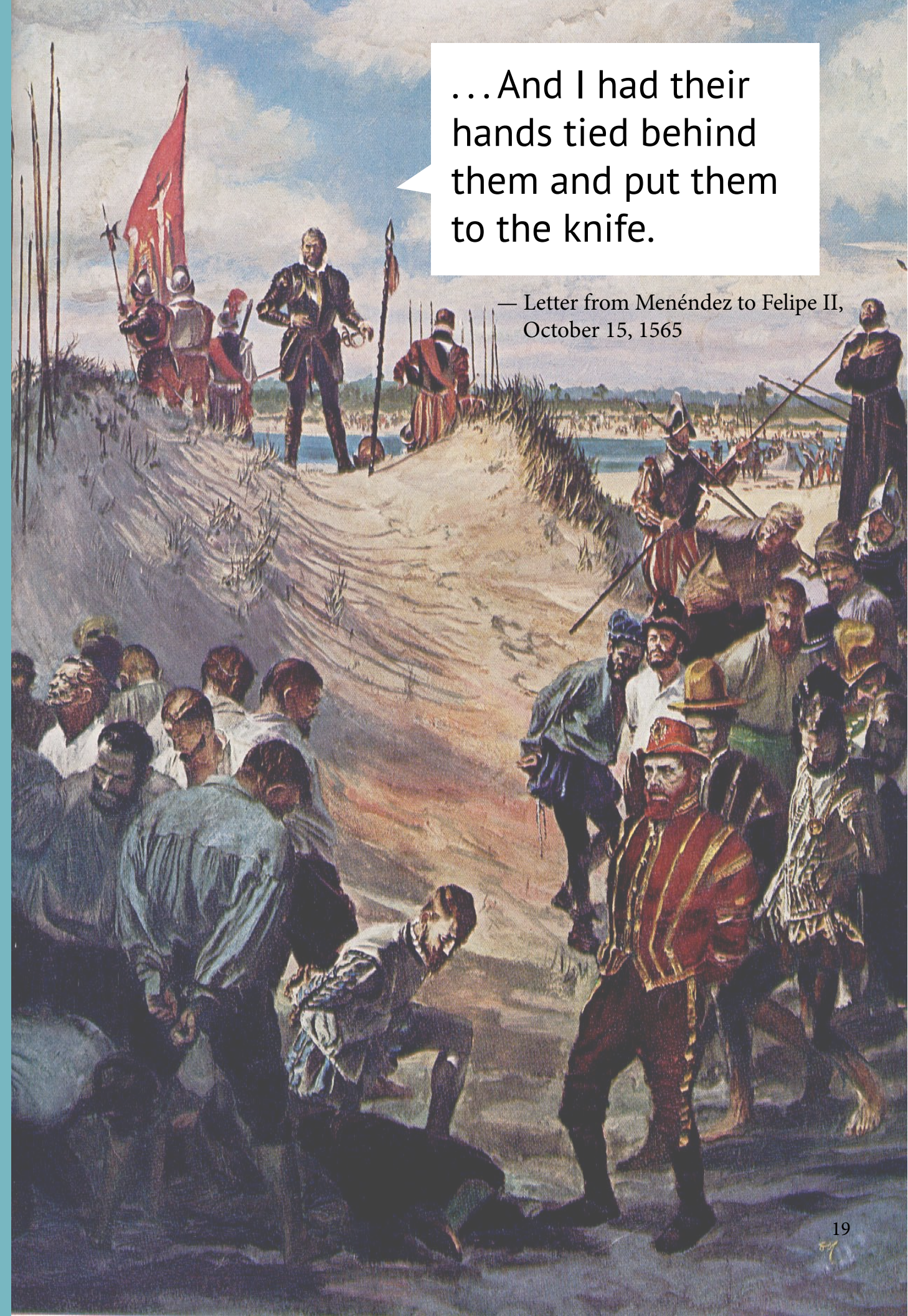
Menéndez mounted his response. Ignorant of the fate of the French ships, he knew that they wouldn't be able to sail back north in the still-raging storm. Along with most of his men (leaving a few behind to guard the nascent St. Augustine), he marched overland and took Fort Caroline.

Around 130 were killed outright, 45 to 60 more (including Laudonnière) escaped, and 50 women, children, and a few men were spared. The five remaining French ships repaired to the safety of the river mouth and considered their options. Perle and Levrière returned to France with survivors aboard.

What of the wrecked ships, their cargo, and their sailors? In two separate groups — one from *La Trinité* and the other from the three smaller ships — they trudged along the hostile shore and began the long march northward to their fort, not knowing what refuge it could afford them. There was none.

# At Matanzas Inlet

Menéndez met the first group September 29. Learning of the sack of Fort Caroline, they begged mercy but received little. Up to 200 were cut down in what would later be called Matanzas (Massacre) Inlet. On October 11, the second group (including Ribault) arrived. Those who didn't dash into the wilderness met a similar fate. Finally, on November 1, Menéndez invaded a French fortification built with six cannon from the wrecked *La Trinité*, taking more prisoners. The last of the French survivors who refused surrender disappeared from the gaze of history, though traces of their activities have shown up intermittently in the archaeological record, clues to the presence of fugitives in alligator habitat.



...And I had their hands tied behind them and put them to the knife.

— Letter from Menéndez to Felipe II, October 15, 1565

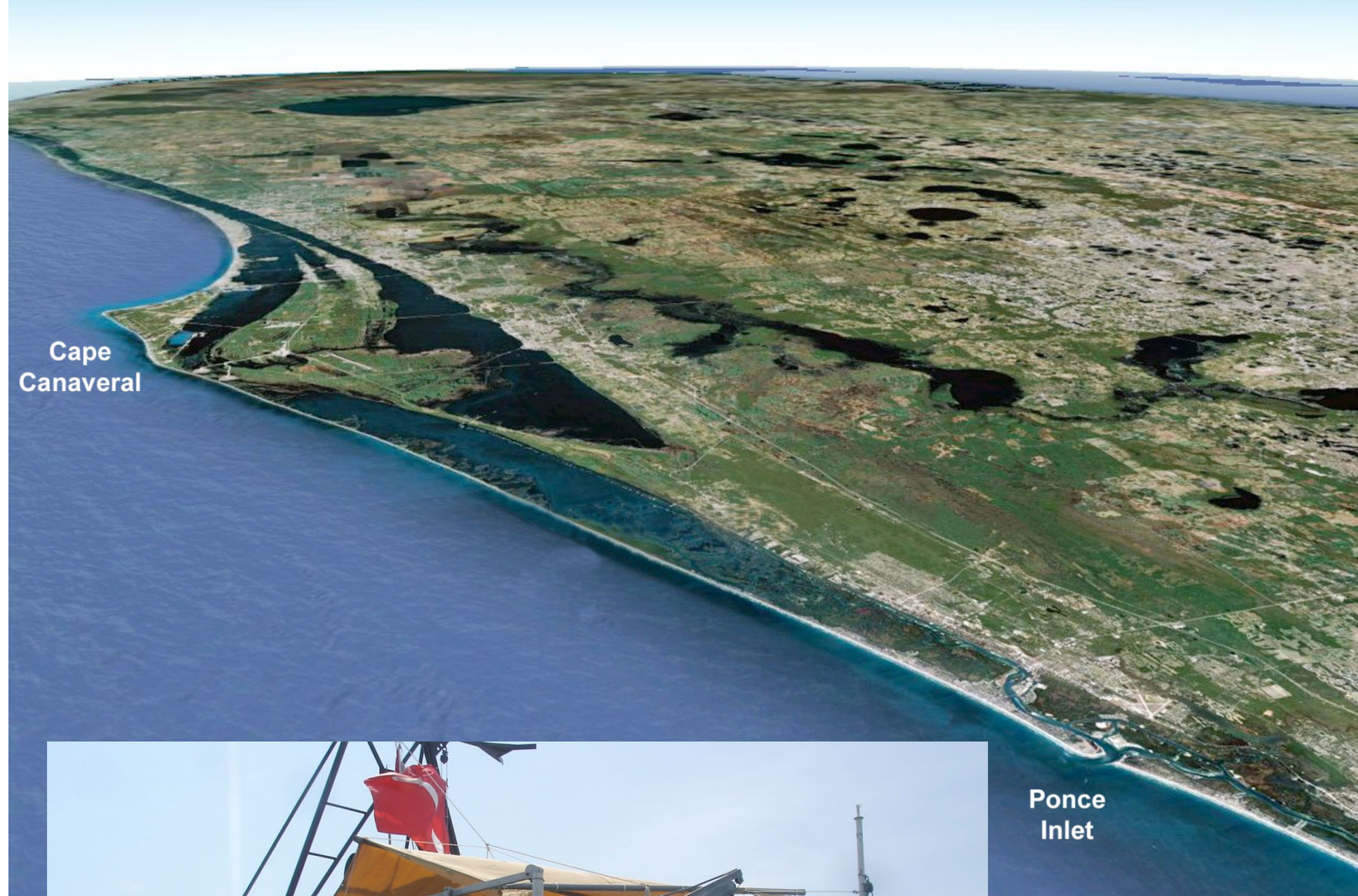
# A Well-Kept Secret

During the winter of 1970-1971 a group of Central Florida relic hunters discovered an archaeological site on the inland shore of a barrier island in what is now Canaveral National Seashore. Using metal detectors, the group explored this site and two others. They dug up a variety of objects of European origin, including large numbers of iron ship's spikes and jewelry altered by forges with methods that only Europeans used at this time, along with 16th century Spanish and French coins.

The group's record keeper, Douglas Armstrong, realized the significance of the artifacts. He speculated that they might be associated with Ribault's fleet. Almost 20 years after the sites were discovered, he informed the National Park Service, under whose jurisdiction they now fell, about the finds. In 1990 and 1995 the sites were systematically excavated by the National Park Service's Southeastern Archaeological Center (SEAC), which confirmed Armstrong's interpretation of the sites' origin. The most compelling evidence that these sites were occupied by Frenchmen — as opposed to the local Surruque or other Native Americans, who may have salvaged shipwrecked material — came from the ship's fasteners, which had been modified using knowledge and technology available only to European craftsmen.

In 1994, SEAC archaeologist David Brewer led a magnetometer survey on the beach, identifying 345 more possible clues. As a result, investigators believed there were as many as sixteen potential shipwreck sites, including one quite close to a survival camp.

And now...



● Jacksonville

“Three of the four ships wrecked somewhere in the vicinity of Ponce Inlet, each stranded and broken up by the heavy Surf. *La Trinité* was the exception. She was lost five to ten leagues to the south of the other wrecks. We also know that *La Trinité* grounded intact, trapped behind a sandbar instead of within the surf zone, and eventually sank there, offshore the makeshift fort hastily constructed by the final group of French survivors.”

— Douglas Armstrong, avocational archaeologist

● Palm Coast

● Daytona Beach

● Deltona

● Titusville

● Orlando

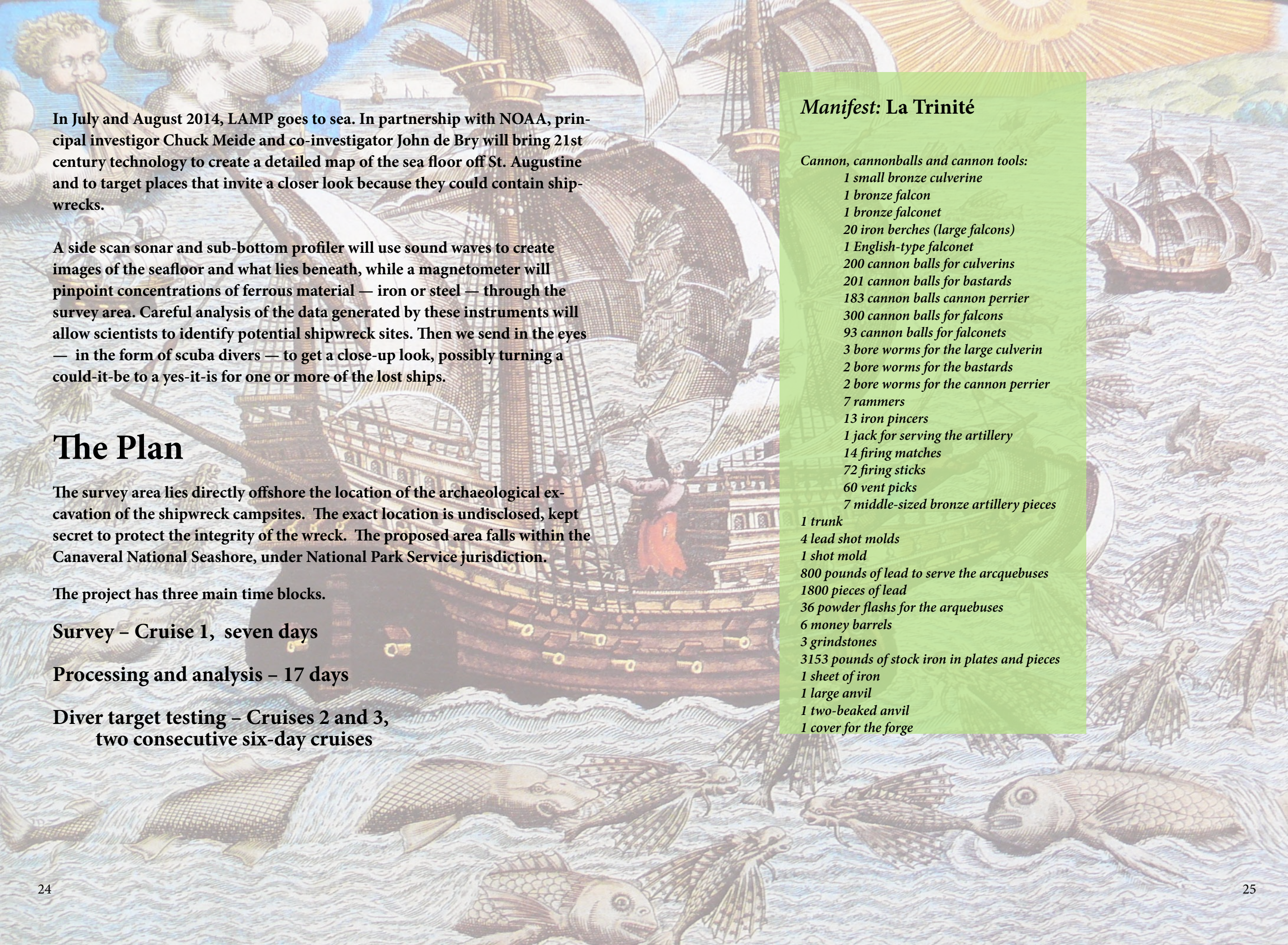
*Imagine surviving a shipwreck, pounding through storm waves onto the beach or waking there after a faint caused by a head wound. Along with other survivors, you might make a quick shelter then and there, only to move your camp to a better location as conditions improve. But you wouldn't go far: not only is the shipwreck a source of flotsam and jetsam that might be helpful to your survival, it's also a reminder of home in a threatening setting.*



## Message from Wreckage

The most important clue to the location of *La Trinité* is the complex of shipwreck survivor camps. Not surprisingly, there is often a correlation between the location of shipwreck survivor camps and the shipwreck sites.





In July and August 2014, LAMP goes to sea. In partnership with NOAA, principal investigator Chuck Meide and co-investigator John de Bry will bring 21st century technology to create a detailed map of the sea floor off St. Augustine and to target places that invite a closer look because they could contain shipwrecks.

A side scan sonar and sub-bottom profiler will use sound waves to create images of the seafloor and what lies beneath, while a magnetometer will pinpoint concentrations of ferrous material — iron or steel — through the survey area. Careful analysis of the data generated by these instruments will allow scientists to identify potential shipwreck sites. Then we send in the eyes — in the form of scuba divers — to get a close-up look, possibly turning a could-it-be to a yes-it-is for one or more of the lost ships.

## The Plan

The survey area lies directly offshore the location of the archaeological excavation of the shipwreck campsites. The exact location is undisclosed, kept secret to protect the integrity of the wreck. The proposed area falls within the Canaveral National Seashore, under National Park Service jurisdiction.

The project has three main time blocks.

**Survey – Cruise 1, seven days**

**Processing and analysis – 17 days**

**Diver target testing – Cruises 2 and 3,  
two consecutive six-day cruises**

## Manifest: La Trinité

### *Cannon, cannonballs and cannon tools:*

- 1 small bronze culverine*
- 1 bronze falcon*
- 1 bronze falconet*
- 20 iron berches (large falcons)*
- 1 English-type falconet*
- 200 cannon balls for culverins*
- 201 cannon balls for bastards*
- 183 cannon balls cannon perrier*
- 300 cannon balls for falcons*
- 93 cannon balls for falconets*
- 3 bore worms for the large culverin*
- 2 bore worms for the bastards*
- 2 bore worms for the cannon perrier*
- 7 rammers*
- 13 iron pincers*
- 1 jack for serving the artillery*
- 14 firing matches*
- 72 firing sticks*
- 60 vent picks*
- 7 middle-sized bronze artillery pieces*

- 1 trunk*
- 4 lead shot molds*
- 1 shot mold*
- 800 pounds of lead to serve the arquebuses*
- 1800 pieces of lead*
- 36 powder flashes for the arquebuses*
- 6 money barrels*
- 3 grindstones*
- 3153 pounds of stock iron in plates and pieces*
- 1 sheet of iron*
- 1 large anvil*
- 1 two-beaked anvil*
- 1 cover for the forge*

# 1. Survey:

The first block, over seven days, involves a remote sensing survey from aboard the *Roper*, the primary research vessel for the Institute of Maritime History.

The *Roper* is a 36-foot (11m) steel-hulled ex-trawler that has been converted into a diving and archaeological survey vessel. *Roper* may be assisted by *Empire Defender*, a shallow-drafting fiberglass boat 31 feet (9.45m) long.

*Roper* will be the platform for deploying towfish — in-water sensors for the side scan sonar and magnetometer. A differential global positioning system on the boat provides accurate positions. Investigators aboard *Roper* will also deploy a sub-bottom profiler which scans below the seabed.

These technologies, interfaced with computers, allow for the efficient acquisition of magnetic and acoustic data over a wide area that can be analyzed relatively quickly after this first fieldwork phase.

## Magnetometer:

This device, towed from the boat's stern, measures the intensity of Earth's magnetic field. The magnetometer looks for anomalies, local disturbances caused by one or more objects with magnetic qualities, usually iron or steel. *La Trinité* is known to contain at least several tons of iron.

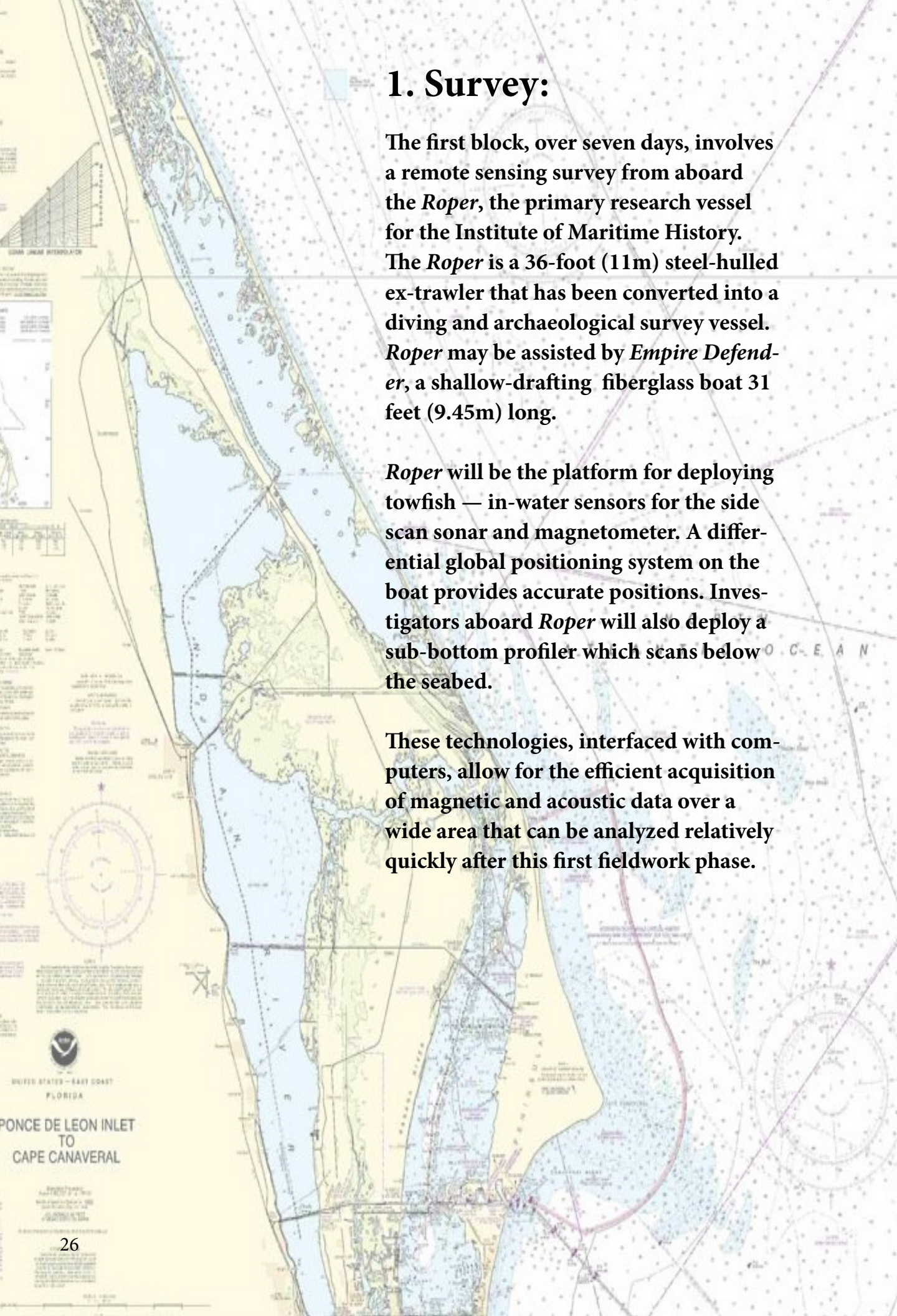
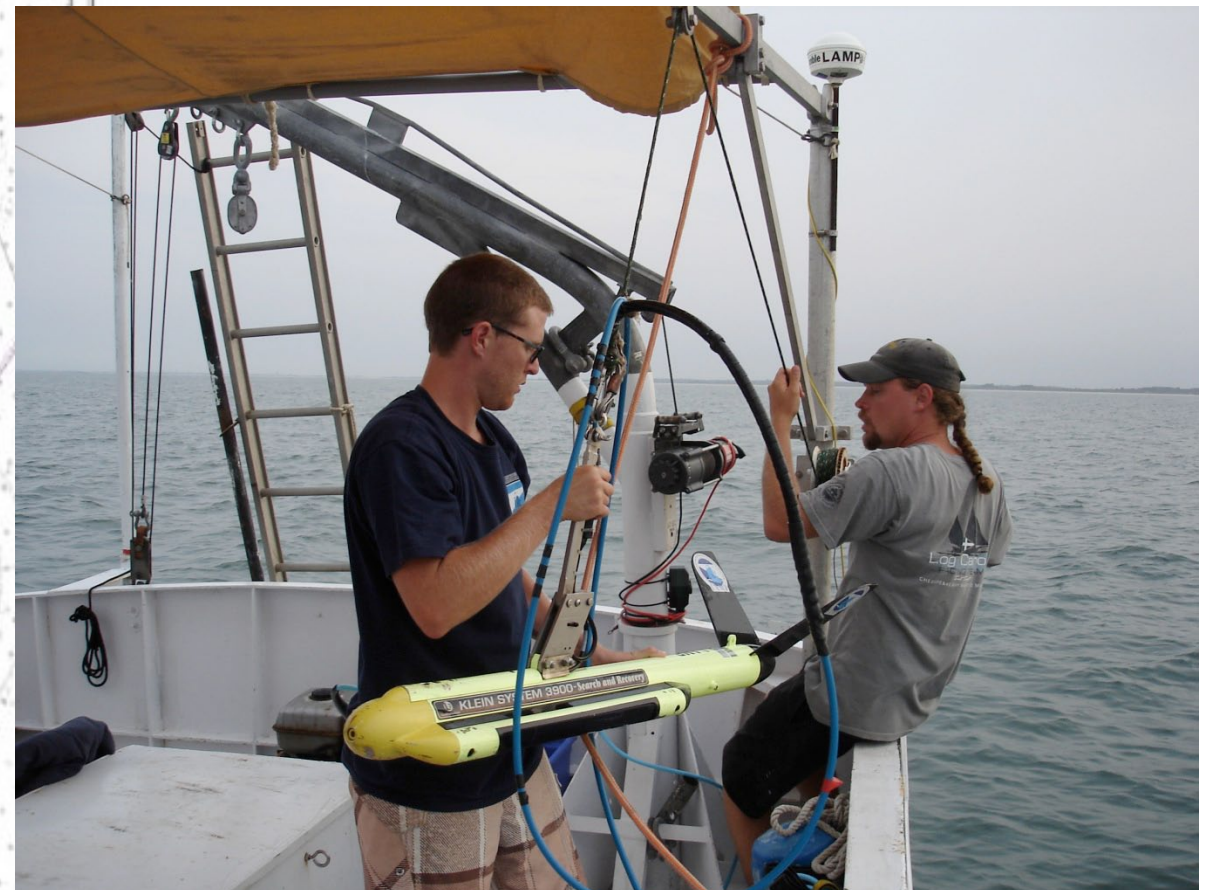
## Side Scan Sonar:

The boat-towed side scan sonar unit emits sound waves that reflect off the seafloor. The resulting data points are synthesized into a scrolling plan view of the seafloor that is superimposed on nautical charts to show researchers bottom conditions. Side scan sonar can expose interesting objects and provide a visual reference when researchers dive for a closer look.

## Sub-bottom profiler:

This can “see” beneath the seafloor by projecting a narrow acoustic beam of sound and analyzing its echo. Gathering data, *Roper* will “mow the lawn,” driving lanes parallel to shore, spaced 20 meters apart. The initial survey block will consist of 38 lanes for a total of 190 line miles (352 line km).

A shipwreck protruding above the seafloor can be seen with the side scan sonar; if it's buried, the only way to find it is with the “mag” or sub-bottom profiler.



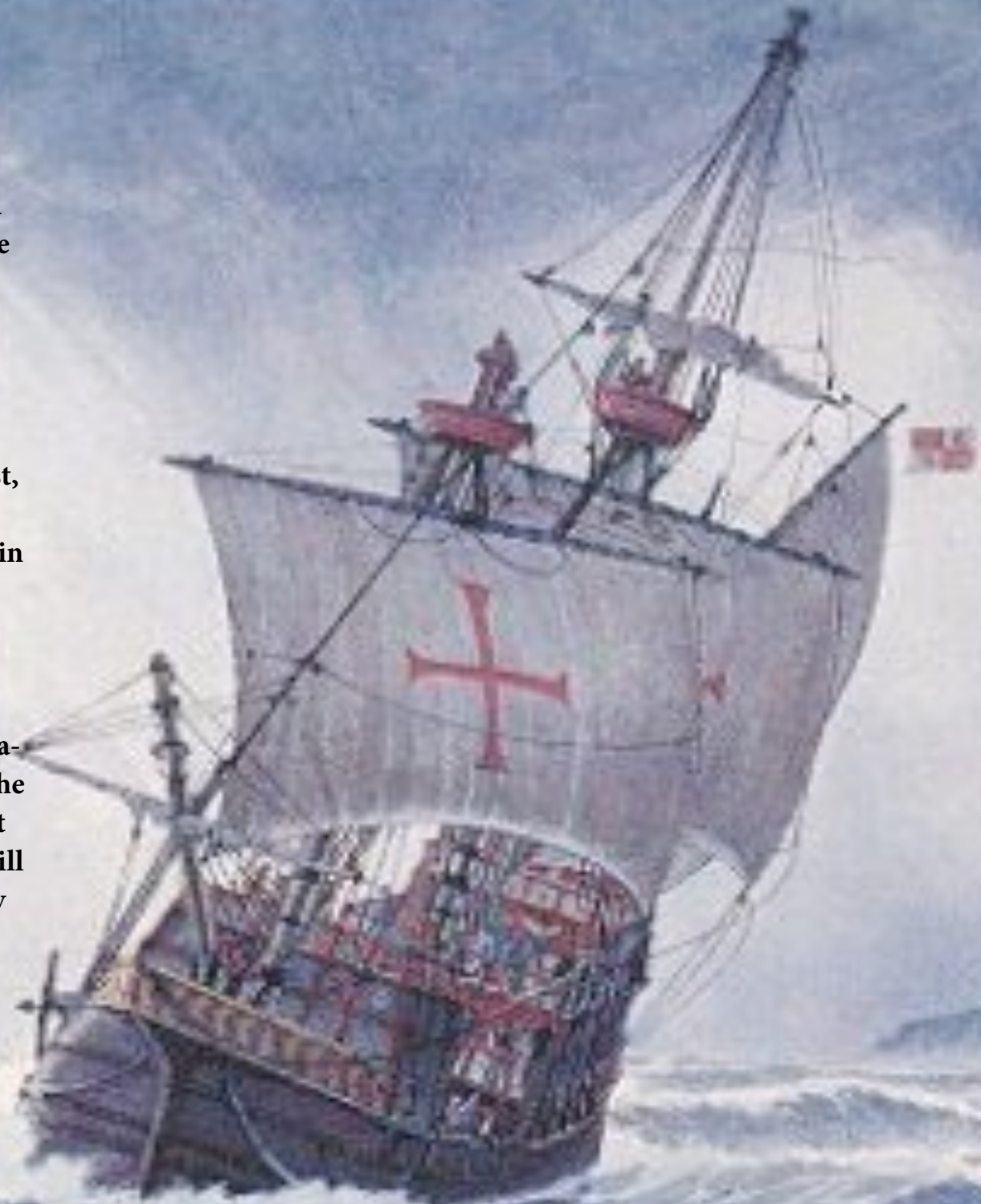
## 2. Processing and Analysis

The data gathered during the fieldwork portion will be processed and analyzed at LAMP's St. Augustine headquarters. This will result in a number of possible targets for further investigation.

## 3. Diver Target Testing

Over two six-day cruises, scuba divers will investigate underwater targets. First, they'll differentiate between ancient and modern debris. Near Kennedy Space Center, there is undoubtedly significant material related to the space program in the seabed.

If no older material is visible in the sonar imagery, divers may need to probe beneath the sediment to confirm the presence of wreckage. If divers discover significant remains from a buried wreck, they will conduct some limited excavation with the probe or a handheld dredge, in an attempt to better understand the nature, extent, nationality and date of the shipwreck. Artifacts may be brought up for photography, drawing, and x-ray imaging. After documentation, they will be returned to their original location on the shipwreck site and reburied. If any of these sites turn out to be one of the French ships, future plans might involve more extensive excavation and artifact recovery.



## What Will It Mean to Find the Wrecks?

“The story of the French fleet is inexorably tied to the founding of St. Augustine and thus the founding of our nation, and the archaeological potential of these shipwrecks cannot be overestimated. If found and investigated, these ships would arguably represent the most important shipwreck sites ever discovered in U.S. waters. They promise to dynamically broaden our understanding of early European colonization and the origins of our country as a maritime nation.”



**Chuck Meide, M.A.,  
principal investigator,  
Director of LAMP**



**John de Bry, Ph.D.,  
co-principal investigator,  
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pages 4-5 Painting by Henry Garrett Smith, from National Geographic,  
February 1966, Vol. 129, No. 2, pp. 206-7.

pages 14-15 Painting by Henry Garrett Smith, from National Geographic,  
February 1966, Vol. 129, No. 2, pp. 206-7.

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1966, Vol. 129, No. 2, pp. 212-3.

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