

National Marine Sanctuaries Shipwrecks

A Classroom Activity for Ocean Gazing Episode 20: The final frontier

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Credits: Channel Islands National Marine Sanctuary, NOAA National Marine Sanctuaries

Grade Level: 9-12

Lesson Time: 1- 3 hrs. (depends on number of sanctuaries and shipwrecks explored)

Materials Required

Sanctuary charts (5 if exploring all sanctuaries):

- ✓ [Olympic Coast National Marine Sanctuary](#)
- ✓ [Gulf of the Farallones National Marine Sanctuary](#)
- ✓ [Cordell Bank National Marine Sanctuary](#)
- ✓ [Monterey Bay National Marine Sanctuary](#)
- ✓ [Channel Islands National Marine Sanctuary](#)

Summary

Explore shipwrecks from four National Marine Sanctuaries on the West Coast of the U.S.

Objectives

- ✓ Report on the historical background of shipwrecks within a sanctuary
- ✓ Practice using latitude and longitude by plotting shipwreck locations on a map.
- ✓ Assess the environmental factors

- contributing to shipwreck locations
- ✓ Discuss ocean navigation in a historical and modern context

Vocabulary

Radar, Seamount

Introduction

The Bridge wishes to acknowledge the significant efforts of folks from the Channel Islands National Marine Sanctuary and other West Coast sanctuaries to bring you this special feature highlighting our National Marine Sanctuary System. The extraordinary Shipwreck Database and associated activities were conceived and created by them specifically for this Data Tip. Images courtesy of the U.S. National Marine Sanctuaries.

Since the dawn of history, humans have found ways to traverse lakes, rivers and oceans to conquer territory, conduct trade and commerce, and exchange languages, ideas and technologies. Throughout history, boats and ships have literally been vessels of culture and applied science. In the unpredictable conditions of the ocean, many of these vessels have been blown off course, collided with rocks or simply vanished beneath the waves. Each of these



represents a time capsule, every vessel a miniature version of the society that launched it. Each vessel reflects construction techniques of the day, materials that were available to shipbuilders and the ideas about engineering as it was practiced in that time. Aboard every vessel lived a tiny society mirroring the social order of its nation or culture - officers and aristocrats, sailors and servants. With these small societies were the everyday objects of life - combs, cooking pots, clothing and currency. Deep within the vessel were its cargoes - earthenware vessels filled with olive oil, gold from distant mines or industrial products from one country's factories - en route to being bartered or sold.

Shipwrecks also represent human stories of the highest imaginable drama. Great acts of courage, senseless tragedy, human nature at its best and worst all emerge from historical accounts and the stories that survive a broken ship. The heroism of a captain, the greed of a stingy shipowner, the stupidity of a watchman all find their ways into the written and verbal accounts of shipwrecks. Shipwrecks are remembered in the towns of lost mariners and in the towns where survivors received care. Shipwreck artifacts adorn local museums, treasured objects that symbolize a community's place in history. Families recount their roles in a rescue for generations. The timeline of many coastal communities is punctuated by the dates of shipwrecks nearby. Over time, the shipwrecks become everyone's history, just as the sea belongs to all.

Nothing stirs the imagination like finding part of a shipwreck. A rusty metal fitting on a lonely stretch of beach can haunt us with many unknowns. What was this ship? Who survived the tragedy and who was lost? Where was it from and where was it going?

What was it carrying? And more intriguing: what caused its sad end?

[Studying shipwrecks](#) is important work for archeologists, historians, and all kinds of people who live near the coast. Scholars use shipwrecks to understand the past. People in coastal communities see shipwrecks as important historical events in their area. People whose job it is to protect marine sanctuaries see shipwrecks as important lessons in how currents, weather, technology and human error can combine in ways that can damage the environment.

Shipwrecks remind us that the ocean is, after all, a wild and unpredictable place. Here forces that we cannot measure combine and can easily overpower anything that humans can build. Until this century, existing [charts](#) were incomplete and sometimes misleading. Before lighthouses, buoys and other navigational aids were developed in the 1850s, sailors relied on the stars and the sun for [navigation](#). Advances in communication, systems of powering vessels, navigation aids, [radar](#), tug assists, helicopter rescue and many other modern technologies have greatly reduced the risks of a shipwreck, but human error still remains a critical factor in maritime accidents. Today, most ships carry enough oil for fuel to cause major damage to wildlife and coastal habitats. Many ships carry other containers of hazardous cargoes so toxic that they could foul coastal ecosystems for decades. To protect the marine environment, we must understand the causes of shipwrecks and how to avoid them.

The next time you find a piece of rusting iron on a remote beach, consider its meaning. What stories could it tell? And what warnings does it sound?

Data Activity

This exercise uses a [West Coast Shipwreck Database](#) containing 120 shipwrecks, representing 30 shipwrecks per sanctuary region. This database does not reflect every shipwreck in each of the sanctuaries, but provides a historic sampling. Divide your class into four groups and assign each group a different sanctuary (Gulf of the Farallones and Cordell Bank National Marine Sanctuaries will be grouped together). In the first part of this exercise your students become shipwreck detectives, and they will use latitude and longitude to plot the location of each shipwreck in their assigned sanctuaries. In the second part of this exercise your students become shipwreck historians, and they will answer questions about the shipwrecks in their assigned sanctuaries. Click on the sanctuaries listed below to continue.

- ✓ [Olympic Coast National Marine Sanctuary](#)
- ✓ [Gulf of the Farallones and Cordell Bank National Marine Sanctuaries](#)
- ✓ [Monterey Bay National Marine Sanctuary](#)
- ✓ [Channel Islands National Marine Sanctuary](#)

General Shipwreck Questions (for those who are enthusiastic enough to study all four databases)

1. Name at least six geographic locations that were named for ships that wrecked at the sites.
2. Name the four shipwrecks that carried cargoes for America's railway expansion.
3. Two shipwrecks are sister-ships and were lost in different sanctuaries; can you name the ships?
4. During the late 19th century what government agency was responsible for providing assists to shipwreck victims in the OCNMS and GFNMS?

5. Name two vessels built to carry liquid cargoes that shipwrecked in two different sanctuaries. Had their tanks been loaded, potential impacts on the marine environment would have been disastrous.

Check your answers with our answers.

Answers

1. Name at least six geographic locations that were named for ships that wrecked at the sites.

Answer: Tennessee Cove (*Tennessee*), Pigeon Point (*Carrier Pigeon*), Harlech Castle Rock (*Harlech Castle*), Ventura Rock (*Ventura*), and Franklin Point (*Sir John Franklin*) in MBNMS; Noonday Rock (*Noonday*) in the GFNMS; and, Umatilla Reef (*Umatilla*) in OCNMS

2. Name the four shipwrecks that carried cargoes for America's railway expansion.

Answer: *G. W. Prescott* (CINMS), *Louis* (GFNMS), *Samoa* (GFNMS), and *Emily Farnum* (OCNMS)

3. Two shipwrecks are sister-ships and were lost in different sanctuaries; can you name the ships?

Answer: *Goldenhorn* (CINMS) and *Matterhorn* (OCNMS)

4. During the late 19th century what government agency was responsible for providing assists to shipwreck victims in the OCNMS and GFNMS?

Answer: U.S. Life-Saving Service

5. Name two vessels built to carry liquid cargoes that shipwrecked in two different sanctuaries. Had their tanks

been loaded, potential impacts on the marine environment would have been disastrous.

Answer: *Pectan* (CINMS) and *Frank H. Buck* (MBNMS)

Related Resources

[Maritime heritage](#), [Archeology](#),
[Conservation](#)

References

“Historic Shipwrecks in the Gulf of Mexico.”
US Bureau of Ocean Energy Management.
<http://www.boem.gov/Environmental-Stewardship/Archeology/Shipwrecks.aspx>

Charting and Geodesy. National Oceanic
and Atmospheric Administration.
<http://www.noaa.gov/charts.html>

“The Art of Navigation.” ABC Australia.
<http://www.abc.net.au/navigators/navigation/history.htm>

Radar. Wikipedia.
<http://en.wikipedia.org/wiki/Radar>

West Coast Shipwreck Database. NOAA
National Marine Sanctuaries.
<http://channelislands.noaa.gov/shipwreck/cinms1.html>

Sources

The related podcast episode for this activity can be found by going to the podcast section of www.oceangazing.org