

LESSON PLAN:

Seneca Lake Shipwreck Explorers

OVERVIEW:

Students will examine research from the Seneca Lake Archaeological & Bathymetric Survey to understand the historical Erie Canal artifacts discovered and the processes of maritime archeology.

Grade Level: 7-8

Class Periods: Two to three 45-minute lessons

ESSENTIAL QUESTIONS:

- Why is it important to study and preserve shipwrecks?
- What tools and methods do underwater archeologists use to study shipwrecks?
- How do underwater archeologists use historical sources to find and identify shipwrecks?

OBJECTIVES:

- Students will discuss the importance of studying and preserving shipwrecks.
- Students will identify tools and methods used by underwater archeologists in their investigations.
- Students will understand how underwater archeologists use historical sources to identify shipwrecks.

MATERIALS NEEDED:

- Computer with internet
- Copies of reading materials, images, and worksheets

LESSON PLAN ACTIVITIES:

- **Activity 1:** Introduction to Underwater Archeology
- **Activity 2:** Underwater Archeology Processes and Technology
- **Activity 3:** Discovering Shipwrecks
- **Activity 4:** Analyze a Shipwreck & Primary Sources
- **Activity 5:** Who Preserves Shipwrecks?

NEW YORK STATE EDUCATION STANDARDS:

SOCIAL STUDIES PRACTICES & STANDARDS • Gathering, Interpreting and Using Evidence • Comparison and Contextualization • Geographic Reasoning • Civic Participation	7.6c Westward expansion provided opportunities for some groups while harming others. • Students will examine the Erie Canal as a gateway to westward expansion that resulted in economic growth for New York State, economic opportunities for Irish immigrants working on its construction, and its use by religious groups, such as the Mormons, to move westward.
SCIENCE STANDARDS: • MS. Engineering Design	MS-ETS1-1. Define the criteria and constraints of a design problem with sufficient precision to ensure a successful solution, taking into account relevant scientific principles and potential impacts on people and the natural environment that may limit possible solutions.
ENGLISH LANGUAGE ARTS STANDARDS: • Reading Standards for Literacy in History/ Social Studies	RH1: Cite specific textual evidence to support analysis of primary and secondary sources. RH4: Determine the meaning of words and phrases as they are used in a text, including content-specific vocabulary related to history/ social studies.
• Reading Standards for Literacy in Science and Technical Subjects	RST1: Cite specific evidence to support analysis of scientific and technical texts, charts, graphs, diagrams, etc. Understand and follow a detailed set of directions.

Teacher Procedure & Answer Keys

► ACTIVITY 1: Introduction to Underwater Archeology

Using information from the Seneca Lake Survey project, students will explore the reasons why underwater archeology is important.

INFORMATION AND INSTRUCTIONS

From 2018-2022, researchers organized the Seneca Lake Archaeological & Bathymetric Survey to look for shipwrecks at the bottom of Seneca Lake in New York's Finger Lakes region. Investigations revealed a collection of largely intact canal boats from the early 1800s that remain in remarkably good condition. The goal of the survey is to produce an inventory of shipwrecks and other submerged cultural resources that can be studied and managed for future generations.

The Seneca Lake Archaeological & Bathymetric Survey project sheds light on the legacy of canal boats that transited Seneca Lake during the 19th century. The collection of intact 1800s wooden canal boats include the only known archeological example of a packet boat and reflects the importance of past maritime activity on the economy of the Finger Lakes region. During this period, Seneca Lake was an important part of the region's waterway transportation system, linking surrounding communities and markets to the Erie Canal via the Cayuga-Seneca Canal, a connection which still exists today.

The shipwrecks tell us more about New York's maritime history and shed light on the tragedies that caused the boats to sink. The discoveries provide a window into the lives of families who made their living owning and operating the vessels. The shipwrecks also are a reminder of the loss of boats, cargo, animals, and even human life that resulted from each sinking. Careful investigation of these and other underwater archeological sites provide insights into history which are unavailable from any other source.



A remote operated vehicle captured this image of a packet boat at the bottom of Seneca Lake. It is the first packet boat ever located and archaeologically examined. Packet boats were passenger vessels which traveled on advertised routes and schedules up to the 1850s.

Courtesy: Tim Caza & Dennis Gerber and the Seneca Lake Survey Project

SECTION 1: TEACHER PROCEDURE & ANSWER KEYS

1. Show students images of shipwrecks to pique their interests. The National Oceanic and Atmospheric Administration Ocean (NOAA) Ocean Exploration website (<https://oceanexplorer.noaa.gov/welcome.html>) has images and videos of many shipwrecks, including well known examples like the RMS Titanic (<https://oceanexplorer.noaa.gov/titanic/>).
 2. Ask students to discuss how they think we gather information about shipwrecks at the bottom of oceans, seas, and lakes as an introduction to underwater archeology.
 3. Display definitions of **archeology** and **underwater or maritime archeology** after viewing shipwreck images.
 - **Archeology** is the study of human history and prehistory through the excavation of sites and the analysis of artifacts and other physical remains.
 - **Underwater or maritime archeology** is a discipline within archeology that documents and recovers information from submerged artifacts and underwater sites for the interpretation of past human cultures.
 4. Have students answer the questions on **Worksheet 1: Why Study Shipwrecks**.
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► **KEY > WORKSHEET 1: Why Study Shipwrecks?**

1. **Why would we want to study shipwrecks?**
 - *Learn about the past*
 - *Discover how boats were made*
 - *Understand why the boat sank*
 - *Find artifacts from the past that don't exist elsewhere*
 - *Share stories of the people who made their living on boats*
 - *Learn about marine ecosystems*
2. **What might researchers hope to find?**
 - *Boats and other types of water vessels*
 - *Cargo being carried on boats*
 - *Marine life and habitats*
 - *Underwater geological features*

SECTION 1: TEACHER PROCEDURE & ANSWER KEYS

► ACTIVITY 2: Underwater Archeology Processes and Technology

Students will explore the technology used in underwater archeology and compare different forms of equipment used.

INFORMATION AND INSTRUCTIONS

SCUBA divers, remote operated vehicles, side-scan sonar, and multibeam sonar (MBES) are valuable tools which allow the Seneca Lake survey team to identify potential targets on the lake bottom for further investigation.

1. Have students read **Worksheet 2, Part 1: SCUBA Diving and Remote Operated Vehicles** and answer the corresponding question individually or as part of a group discussion.
2. Have students watch the video "What is sonar?" <https://oceanservice.noaa.gov/facts/sonar.html> and/or read articles about side-scan sonar and multibeam sonar from NOAA Ocean Explorers.
<https://oceanexplorer.noaa.gov/technology/sonar/side-scan.html>
<https://oceanexplorer.noaa.gov/technology/sonar/multibeam.html>

Lead a class discussion about side-scan sonar and multibeam sonar. At the conclusion of the discussion, have students complete **Worksheet 2, Part 2: Side-Scan Sonar vs. Multibeam Sonar** comparing the sonar technologies either as a class discussion or individually.

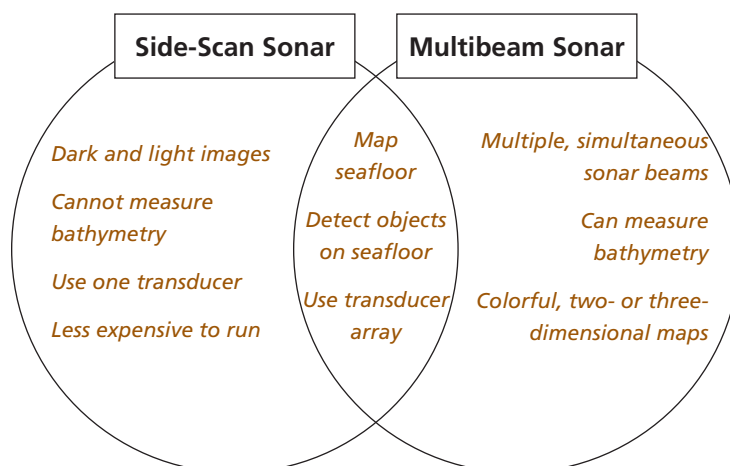
► KEY > WORKSHEET 2: Underwater Archeology Processes and Technology

PART 1: SCUBA Diving and Remote Operated Vehicles

What are two advantages of using remote operated vehicles (ROVs) in underwater survey projects?

- *Can explore depths up to 700 feet below water surface*
- *Can spend more time underwater than a diver*

PART 2: Side-Scan Sonar vs. Multibeam Sonar



SECTION 1: TEACHER PROCEDURE & ANSWER KEYS

► ACTIVITY 3: Discovering Shipwrecks

Using primary sources, students will analyze the methods used by underwater archeologists to discover the location of shipwrecks.

INFORMATION AND INSTRUCTIONS

Maritime archeologists use various sources to find clues about the locations of potential shipwrecks, including historical accounts like this newspaper article printed in the *Geneva Gazette* on November 19, 1869. The Seneca Lake Survey team used this newspaper article to investigate the location of the first targeted shipwreck they discovered in 2018.

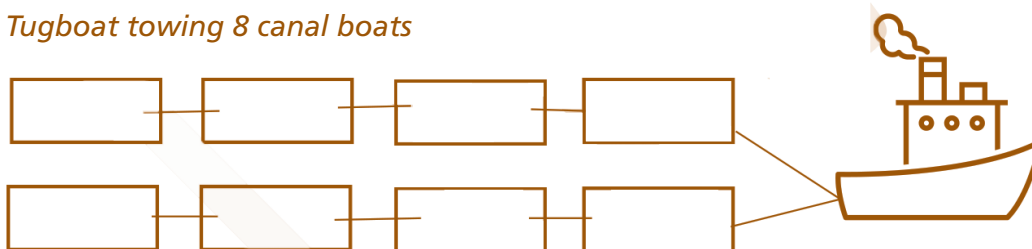
1. Have students read the newspaper article from the *Geneva Gazette* on November 19, 1869 as a class, then answer questions and track the location of the sunken ship on **Worksheet 3: Discovering Shipwrecks**.
 - a. Newspaper article source: *Geneva Gazette*, November 19, 1869 <https://news.google.com/newspapers?nid=rZ6lE9DvW78C&dat=18691119&printsec=frontpage&hl=en>
 - b. Seneca Lake Map Source: <https://www.canals.ny.gov/navinfo/charts/14786cs1.png>

► KEY > WORKSHEET 3: Discovering Shipwrecks

"The tug A.L. Griffin, Capt. J. Small, which left Coal Point on Tuesday evening last with a tow of eight boats..."

Make a sketch of what this scene looked like.

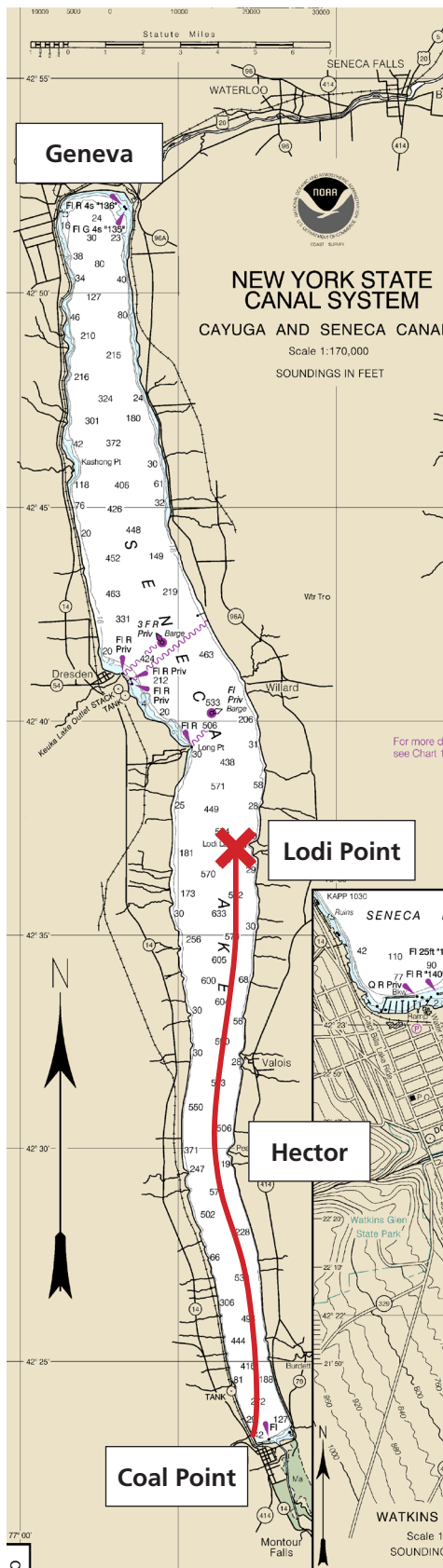
- *Tugboat towing 8 canal boats*



According to the newspaper article, what was the name of the boat that sank?
What type of cargo was it carrying?

- *Frank Bowley*
- *Black coal*

SECTION 1: TEACHER PROCEDURE & ANSWER KEYS



The boats left Coal Point traveling along the east coast of Seneca Lake before making harbor at Lodi. On the map, draw a line showing the route and mark an X where you believe the sunken boat would most likely be found based on the newspaper article.

Seneca Lake Nautical Chart

Courtesy: National Oceanic and Atmospheric Administration, National Ocean Service, Office of Coast Survey

SECTION 1: TEACHER PROCEDURE & ANSWER KEYS

► ACTIVITY 4: Analyze a Shipwreck & Primary Sources

Students will examine sources to analyze the findings of the Seneca Lake Survey team. Using primary sources, students will discover what life on an 1800s canal boat was like.

INFORMATION AND INSTRUCTIONS

Researchers use multiple sources to analyze their findings. Sonar images, historical documents, newspaper articles, and journal accounts help piece together the story of what happened long ago.

1. Have students analyze images and answer the corresponding question on **Worksheet 4, Part 1: Analyze a Shipwreck**.

Links to images included below to display on classroom screen, if desired.

https://www.eriecanal.org/boats/canalboat_sizes-1899.jpg

http://www.eriecanal.org/boats/canal_barge-1904-1.jpg

2. Have students read the selected entries from Captain Theodore Bartley's journal on **Worksheet 4, Part 2: Captain Theodore Bartley's Journal** and answer the questions about life on an Erie Canal boat.
3. After reading the first journal entry, display the map of New York State and have students identify the cities of Troy, Oswego, and Buffalo. Compare methods of travel available in the 1800s to today. How long would it take to travel from Troy to Oswego and Buffalo today?

General Map of New York, United States.

Courtesy: Nations Online Project

Image Source: https://www.nationsonline.org/oneworld/map/USA/new_york_map.htm



4. Class Discussion Question: Based on the journal entries, how would you describe Captain Bartley's personality? What do you think he was like?

SECTION 1: TEACHER PROCEDURE & ANSWER KEYS

► KEY > WORKSHEET 4: Analyze a Shipwreck**PART 1: ANALYZE A SHIPWRECK**

Claim:

- *Target 12 is an Enlarged Erie-class Canal Boat*

Evidence:

- *The shipwreck is 100 feet in length which is closest to the Enlarged Erie-class Canal Boat size of 98-feet long*

PART 2: CAPTAIN THEODORE BARTLEY'S JOURNAL

1. What city did the boat leave from? What two cities were mentioned as possible destinations?
 - *Troy, NY*
 - *Buffalo and Oswego, NY*
2. According to these journal entries, what were two challenges Captain Bartley faced during this journey?
 - *Collided with another boat*
 - *Sick horse*
 - *Weather*
3. Captain Bartley notes he arrived in Buffalo on September 17, 1861. How long did his journey from Troy to Buffalo take?
 - *10 days*
4. What product does Captain Bartley mention they are planning to bring back to New York City from Buffalo?
 - *Wheat/grain*
5. Based on Captain Bartley's journal entries, how would you describe what life was like on one of the Erie Canal boats in the 1800s?
 - *Open to student interpretations. Students may note how early Captain Bartley wakes up, slow pace of travel compared to today, changes in weather, sick horse, collision with boat, telegraph for communication*

SECTION 1: **TEACHER PROCEDURE & ANSWER KEYS**

► ACTIVITY 5: Who Preserves Shipwrecks?

Students will use reading material to learn about who owns discovered shipwrecks and the reasons why they are important.

INFORMATION AND INSTRUCTIONS

Over the past 50 years, New York State, the United States federal government, and United Nations have all made efforts to define “underwater cultural heritage” and develop a protective legal method for managing discovered shipwrecks. The Seneca Lake Archaeological & Bathymetric Survey Project operates under a New York State Museum Section 233 permit #4319 and is a good example of a project operating under United States federal and New York state law.

1. Have students read the article “Preserving a Submerged Legacy” from the National Park Service <https://www.nps.gov/archeology/sites/subcul.htm>

According to the article, “Preserving a Submerged Legacy,” under the United States Abandoned Shipwreck Act of 1987, the “50 States, the District of Columbia, and the U.S. territories own and manage abandoned shipwrecks and other submerged cultural resources in their waters.”

2. Display the following text from New York State Education Law, Section 233, 1958. Lead a class discussion answering the questions related to the text provided on **WORKSHEET 4: Who Preserves Shipwrecks?**

New York State manages its archeological collections under New York State Education Law, Section 233 which states “no person shall investigate, excavate, remove, injure, appropriate, or destroy any object of archaeological, historical, cultural, social, scientific or paleontological interest, situated on, in or under lands owned by the state of New York, without the written permission of the commissioner of education.”

► KEY > WORKSHEET 5: Who Preserves Shipwrecks?

1. **Who owns and manages shipwrecks discovered as part of the Seneca Lake Archaeological & Bathymetric Survey?**
 - *New York State*
2. **Who is allowed to investigate or take objects from an archeological site without written permission, according to New York State law?**
 - *No one*
3. **Write a short essay to answer this question: Why do you think it is important to discover and preserve shipwrecks like the ones located by the Seneca Lake Survey team?**
 - *Learn more about the past and human history, prevent looting of shipwrecks, monitor deterioration, study marine organisms and natural processes*



SECTION 1: TEACHER PROCEDURE & ANSWER KEYS

SOURCES**PUBLICATIONS:**

Cohn, Art, Principal Investigator and Dr. Tom Manley, Chief Scientist. Seneca Lake Archaeological & Bathymetric Survey, 2019 Final Report. Published June 2020. https://americancanalsociety.org/wp-content/uploads/2020/12/Seneca_Lake_Survey_2019_ONLINE_VERSION.pdf

Bellico, Russell P., editor. *Life on a Canal Boat: the Journals of Theodore D. Bartley, 1861-1889*. Purple Mountain Press (Fleischmann, NY) and The Lake Champlain Maritime Museum (Vergennes, VT), 2004.

WEBSITES

https://www.eriecanal.org/boats/canalboat_sizes-1899.jpg

http://www.eriecanal.org/boats/canal_barge-1904-1.jpg

<https://marineprotectedareas.noaa.gov/toolkit/underwater-archaeology.html>

https://www.nationsonline.org/oneworld/map/USA/new_york_map.htm

<https://news.google.com/newspapers?nid=rZ6IE9DvW78C&dat=18691119&printsec=frontpage&hl=en>

<https://www.nps.gov/archeology/sites/subcul.htm>

<https://oceanservice.noaa.gov/facts/sonar.html>

<https://oceanexplorer.noaa.gov/technology/sonar/multibeam.html>

<https://oceanexplorer.noaa.gov/technology/sonar/side-scan.html>

Student Worksheets



NAME _____

► WORKSHEET 1: Why Study Shipwrecks?

1. Why would we want to study shipwrecks?

2. What might researchers hope to find?



A remote operated vehicle captured this image of a packet boat at the bottom of Seneca Lake. It is the first packet boat ever located and archaeologically examined. Packet boats were passenger vessels which traveled on advertised routes and schedules up to the 1850s.

Courtesy: Tim Caza & Dennis Gerber and the Seneca Lake Survey Project

NAME _____

► **WORKSHEET 2:**

Introduction To Underwater Archeology

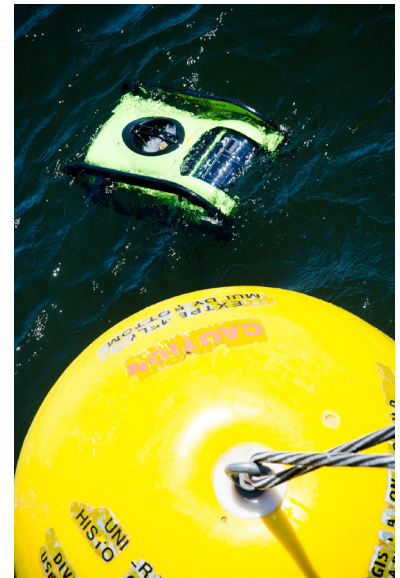
PART 1: SCUBA DIVING AND REMOTE OPERATED VEHICLES

The technology of surveying for shipwrecks has improved over the past 70 years. The invention of self-contained underwater breathing apparatus (SCUBA) equipment made shipwrecks accessible down to a depth of 130 feet of water where experienced divers can investigate survey targets. When working in waters deeper than 130 feet, advanced remote operated vehicles (ROVs) can examine deep water targets up to 700 feet below water and spend more time at a depth than a diver could. ROVs can explore and record underwater sites for hours, while the survey team monitors what the camera sees in real time from aboard the ship. Most of the bottom of Seneca Lake is more than 130 feet deep, and many shipwrecks were verified with small, easy-to-deploy, lightweight ROVs which provide data used to create drawings, photographs, and site descriptions of the targets.



Diver documenting a shipwreck

Courtesy: NOAA



ROV Eva

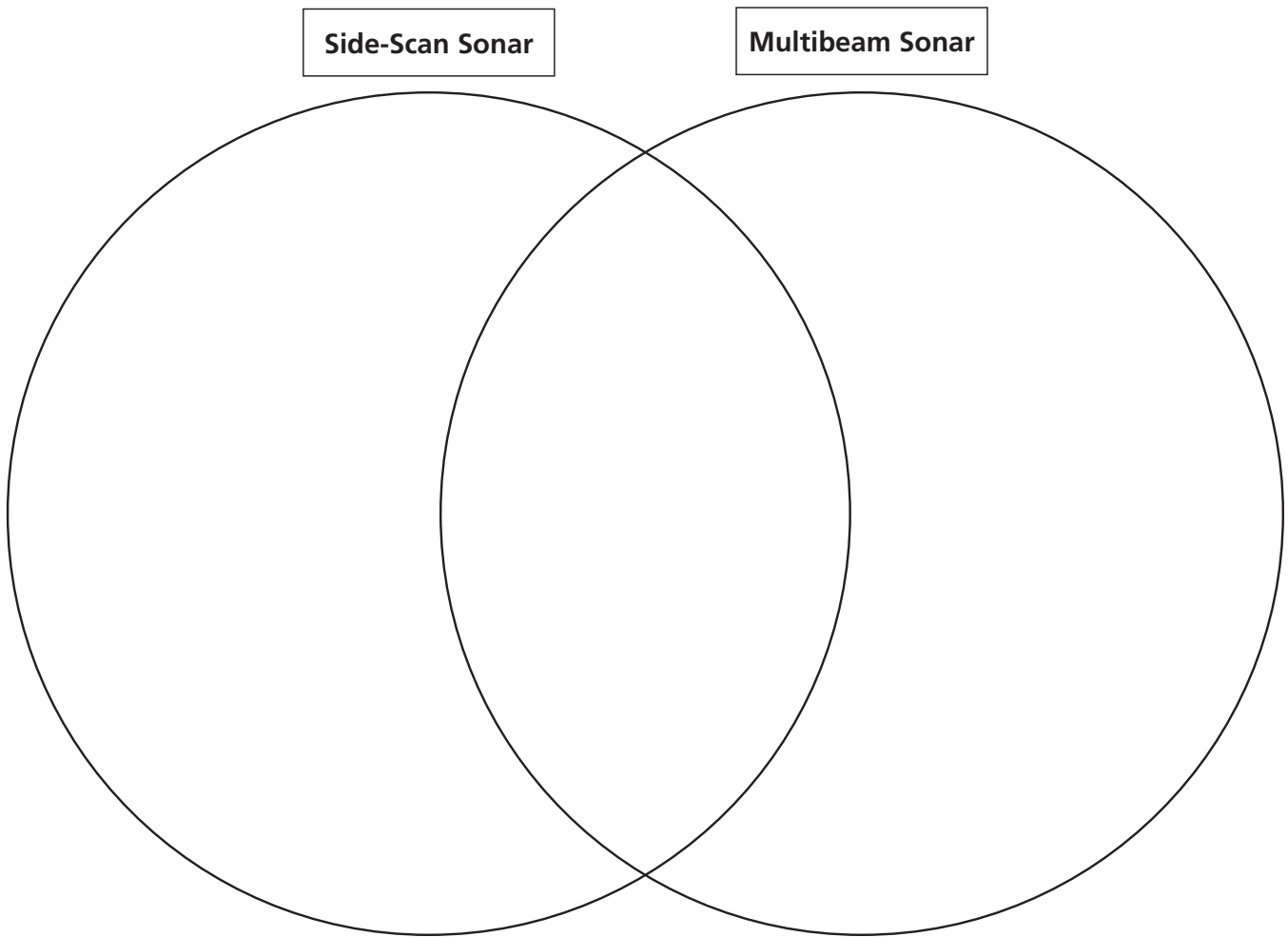
Courtesy: The Seneca Lake Survey Project

1. What are two advantages of using remote operated vehicles (ROVs) in underwater survey projects?

► **WORKSHEET 2: INTRODUCTION TO UNDERWATER ARCHEOLOGY**

PART 2: SIDE-SCAN SONAR VS. MULTIBEAM SONAR

2. Use the Venn diagram to compare and contrast side-scan sonar and multibeam sonar.
What characteristics do they share?



NAME _____

► WORKSHEET 3: Discovering Shipwrecks

Geneva Gazette, November 19, 1869

Canal Boat Sunk—The tug A.L. Griffin, Capt. J. Small, which left Coal Point on Tuesday evening last with a tow of eight boats, encountered a terrific south-east gale (before she reached Peach Orchard. Captain Small hugged the east shore, and under protection of the high banks would have got along without difficulty had the wind remained in the same quarter; but it chopped round to due south and blew with increased violence. He essayed (tried) to make harbor at North Hector but was thwarted. He then put for Lodi; but in rounding the point, one of the "hawser" (towed) boats shipped two or three heavy seas and sunk, going down in about 125 feet of water. The lines fastening her to the boats by her side and rear were cut as she went down, and connection promptly secured with the other boats to the tug, which Capt. Small succeeded in making harbor without other losses, though the peril was imminent. He remained at Lodi until Thursday morning, the gale continuing unabated until that hour, and then came to Geneva.

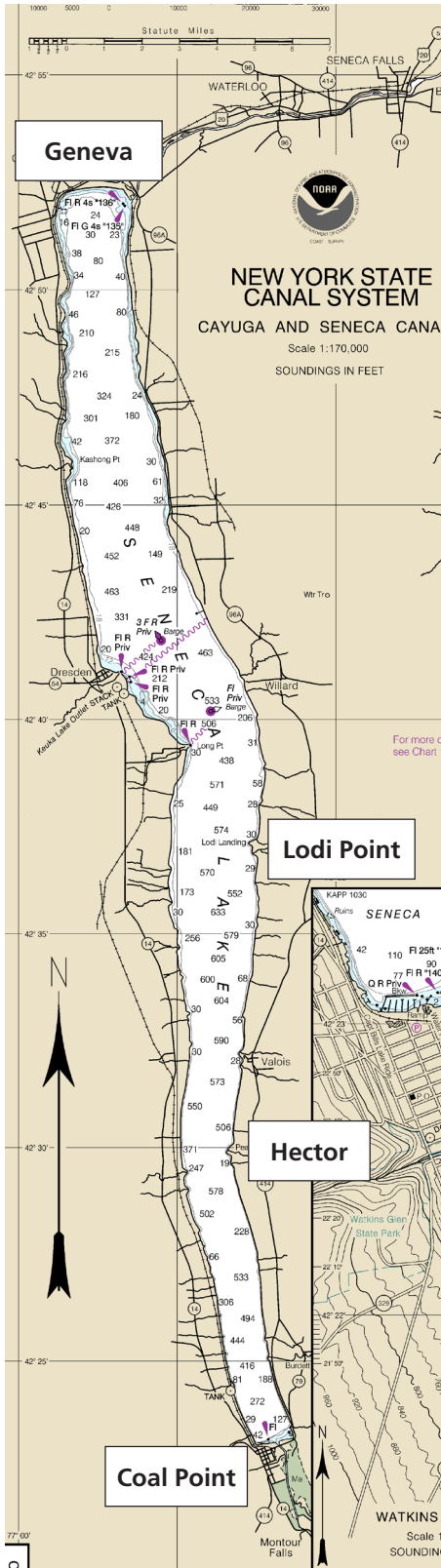
The sunken boat was a large open scow- the "Frank Bowley" of New Bridge owned by two brothers named McKeever of Syracuse. One of them, P.H. McKeever, was master. She was built in 1865, and the owners paid \$2,000 for her last spring. Her furniture cost \$300. Nothing was saved, and there was not a dollar insurance on boat, furniture, or cargo. She had on 220 tons of bituminous (black) coal from the Morris Run Company's depot. It was her first trip of the season on Seneca Lake, and has proved her last.

CANAL BOAT SUNK. —The tug A. L. Griffin, Capt. J. Small, which left Coal Point on Tuesday evening last with a tow of eight boats, encountered a terrific south-east gale ere she reached Peach Orchard. Captain Small hugged the east shore, and under protection of the high banks would have got along without difficulty had the wind remained in the same quarter; but it chopped round to due south and blew with increased violence. He essayed to make harbor at North Hector, but was thwarted. He then put for Lodi; but in rounding the point, one of the "hawser" boats shipped two or three heavy seas and sunk, going down in about 125 feet of water. The lines fastening her to the boats by her side and rear were cut as she went down, and connection promptly secured with the other boats to the tug, with which Capt. Small succeeded in making harbor without other losses, though the peril was imminent. He remained at Lodi until Thursday morning, the gale continuing unabated until that hour, and then came to Geneva.

The sunken boat was a large open scow —the "Frank Bowley" of New Bridge, owned by two brothers named McKeever of Syracuse. One of them, P. H. McKeever, was master. She was built in 1865, and the owners paid \$2,000 for her last spring. Her furniture cost \$300. Nothing was saved, and there was not a dollar insurance on boat, furniture or cargo. She had on 220 tons of bituminous coal from the Morris Run Company's depot. It was her first trip of the season on Seneca Lake, and has proved her last.

1. "The tug A.L. Griffin, Capt. J. Small, which left Coal Point on Tuesday evening last with a tow of eight boats." Make a sketch of what this scene looked like.

► **WORKSHEET 3: DISCOVERING SHIPWRECKS**



2. According to the newspaper article, what was the name of the boat that sank? What type of cargo was it carrying?

3. The boats left Coal Point traveling along the east coast of Seneca Lake before making harbor at Lodi. On the map, draw a line showing the route and mark an X where you believe the sunken boat would most likely be found based on the newspaper article.

NAME _____

► **WORKSHEET 4:**

Analyze a Shipwreck & Primary Sources

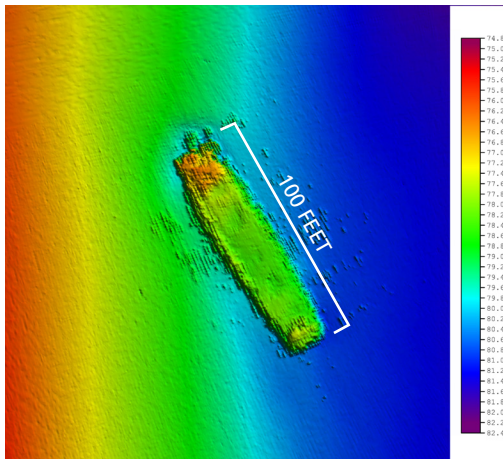
PART 1: ANALYZE A SHIPWRECK

It's your turn to think like a marine archeologist and analyze images of a shipwreck found in Seneca Lake to discover information about it. Below are sonar and multibeam sonar (MBES) images of the shipwreck identified as Target 12 in the 2019 Seneca Lake Archaeological & Bathymetric Survey, as well as diagrams of canal boats used in the 1800s.

1. Use the sonar images and the drawings depicting the sizes of typical Erie Canal boats used on Seneca Lake during the 1800s to determine what type of Erie Canal boat is Target 12.

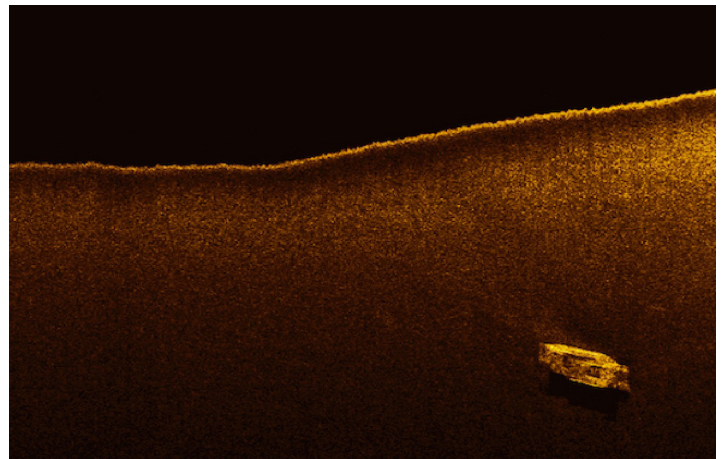
Claim: _____

Evidence: _____



Multibeam sonar image of Target 12

Courtesy: The Seneca Lake Survey Project



Sonar Image of Target 12

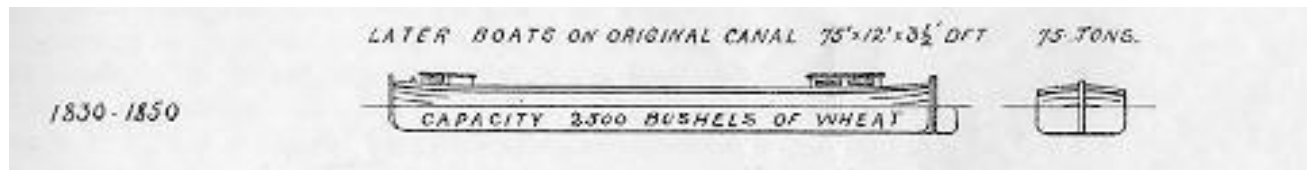
Courtesy: Tim Caza & Dennis Gerber and the Seneca Lake Survey Project

► WORKSHEET 4: ANALYZE A SHIPWRECK & PRIMARY SOURCES

TYPES OF HISTORIC CANAL BOATS

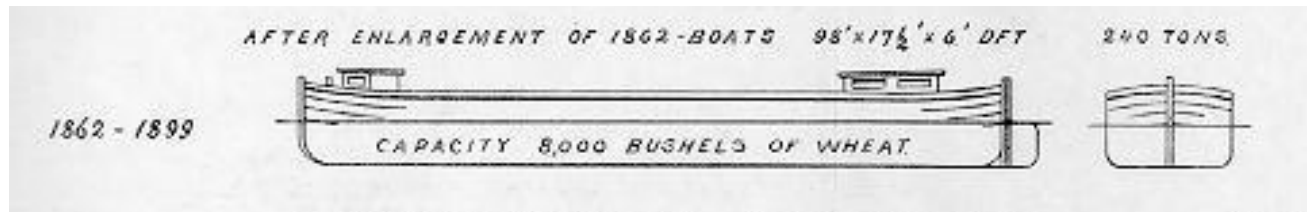
Original Erie-class Canal Boat (up to about 1850)

Size: 75 feet long x 12 feet wide x 3 ½ feet deep



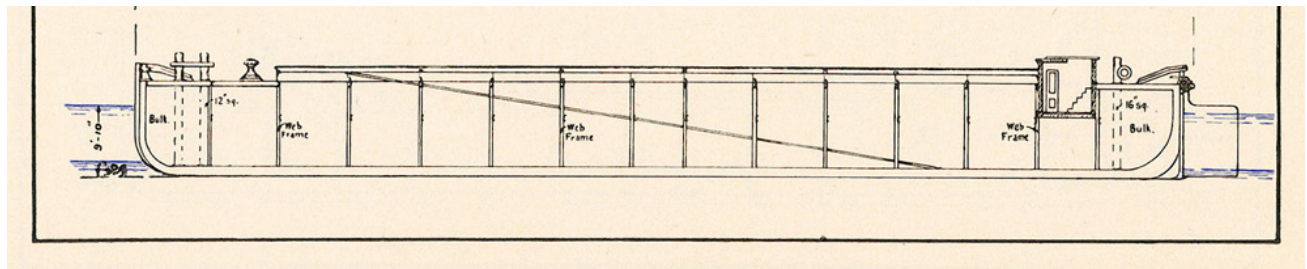
Enlarged Erie-class Canal Boat (up to about 1899)

Size: 98 feet long x 17 ½ feet wide x 6 feet deep



Erie Canal Barge (after 1900)

Size: 150 feet long x 25 feet wide x 10 feet deep



► **WORKSHEET 4: ANALYZE A SHIPWRECK & PRIMARY SOURCES**

PART 2: CAPTAIN THEODORE BARTLEY'S JOURNAL

Theodore Bartley was a Captain on a canal sloop, the Mary Eva, which he operated from spring 1861 until the end of 1889. The boat was designed as a sailing canal boat. When on a larger body of water like Seneca Lake or Lake Champlain, a sailing rig would be raised so that the boat could sail across the lake. When on the canal, the sailing rig was taken down and the boat was towed by horses or mules.

Captain Bartley kept a journal which documented his travels and experiences running his shipping business. From his writings we know he spent most of his time bringing lumber from the Canadian border to New York City and returning north with Pennsylvania coal. He also hauled other products such as iron ore, railroad iron, sugar, salt, hay, and cedar posts through the Erie, Owego, and Canadian Canals.

Read the excerpts from Captain Theodore Bartley's journal and use the information to answer the following questions:

Sat[urday] Sept. 7, 1861

"Left Troy 3 o'clock [this] morning and started on the Erie Canal for Buffalo or Oswego. Got through the 16 locks about 7 A.M. Passed through Cohoes, Muller's Dry Dock, town [of] Rexford [F]latts, 5 miles or nearly west of Schenectady N.Y.- and little before dusk through Schenectady. Run on about 5 miles beyond where we tied up for the night. The Weather today has been pleasant-quite cool with fresh bree[z]e. Today we have passed through some very fine looking farming country through the valley of the Mohawk. Eve cold, slept very little last night."

1. What city did the boat leave from? What two cities were mentioned as possible destinations?

Mond[ay] Sept. 9, 1861

"Signs of rain today but only sprinkled a very little- got to [L]ittle Falls about 11 A.M. Ran into a boat or we ran together-injured her. Henry [Chubb] offered to pay him \$5.00, but he thought he could collect more. Went to law before a justice but finding we were coming out best withdrew the suit and paid costs. Went on from here—put up 4 miles east of Utica- evenings about cool enough for frost."

Sat[urday], Sept. 14 & Sund[ay] Sept. 15 (Note in margin: "Towed about 30 miles horse sick")

"Got started 4 A.M.- arrived at Rochester about noon. Got away from there about 2 P.M. Tied up at night about 14 miles from Rochester. Towed through Fairport, Bushnell Basin, Brighton & one small town not known. The weather this A.M. was very fine-cloudy P.M. and rained a very little. We are now 73 miles from Buffalo. Got to Medina 49 miles from Buffalo-horse sick at night."

2. According to these journal entries, what were two challenges Captain Bartley faced during this journey?

► **WORKSHEET 4: ANALYZE A SHIPWRECK & PRIMARY SOURCES**

Tues[day] Sept. 17, 1861 (Note in margin: "Buffalo")

"Morning about 3:30 started for Buffalo- had rain most of the morning after daylight. Got to Black Rock about breakfast time-then the towing went pretty easy till we got in with a wall between-this towed hard on account of our current. Got to Buffalo between 10 & 11. Telegraphed to Cinda [Felton] & got two letters from the office first thing. Saw the *Big Hubbard* the *Cader* & one or 2 other boats I was acquainted with- weather wet & rainy most of the time all day."

- 3. Captain Bartley notes he arrived in Buffalo on September 17, 1861. How long did his journey from Troy to Buffalo take?**

Wednes[day] Sept. 18, 1861

"Weather cloudy early but a clear beautiful day and quite warm today- we are offered 18cts (cents) for wheat to New York. I have heard nothing yet from my telegraph message. Have run around town some but not much except to post & telegraph office & depot. Large quantities of grain on hand here now and a good many more arrivals every day."

- 4. What product does Captain Bartley mention they are planning to bring back to New York City from Buffalo?**

- 5. Based on Captain Bartley's journal entries, how would you describe what life was like on one of the Erie Canal boats in the 1800s?**



NAME _____

► WORKSHEET 5: Who Preserves Shipwrecks?

Read the article "Preserving a Submerged Legacy" from the National Park Service

<https://www.nps.gov/archeology/sites/subcul.htm>

According to the article, "Preserving a Submerged Legacy," under the United States Abandoned Shipwreck Act of 1987 the "50 States, the District of Columbia, and the U.S. territories own and manage abandoned shipwrecks and other submerged cultural resources in their waters."

New York State Education Law, Section 233, 1958 states:

New York State manages its archeological collections under New York State Education Law, Section 233 which states "no person shall investigate, excavate, remove, injure, appropriate, or destroy any object of archaeological, historical, cultural, social, scientific or paleontological interest, situated on, in or under lands owned by the state of New York, without the written permission of the commissioner of education."

1. Who owns and manages shipwrecks discovered as part of the Seneca Lake Archaeological & Bathymetric Survey?

2. Who is allowed to investigate or take objects from an archeological site without written permission, according to New York State law?

3. Write a short essay to answer this question: Why do you think it is important to discover and preserve shipwrecks like the ones located by the Seneca Lake Survey team?
