One and All

Teacher Resource

A one hour visit onboard the *One and All* provides an authentic learning environment for students to develop rich understandings about life onboard an early 19th century sailing ship.

Content

FRIENDS OF THE ONE & ALL SAILING SHIP

SOUTH AUSTRALIAN MARITIME MUSEUM

Australian Curriculum Links

Learning engagements enable students to develop knowledge, skills and understandings identified in the Australian Curriculum: HASS, Science, Geography and Mathematics.

HASS:

Historical skills	Historical knowledge & understandings
• Locate information related to inquiry questions in a range of sources • Identify points of view in the past and present • Use historical terms and concepts • Identify the origin and purpose of primary and secondary sources • Locate, compare, select and use information from a range of sources as evidence	• What do we know about the lives of people in Australia's colonial past and how do we know? • What were the changing features of the movements of people from 1750 to 1918? • How do new ideas and technological developments contribute to change?

Mathematics:

Number & Algebra	Measurement and Geometry	Statistics and Probability
Year 5	• Choose appropriate units of measurement for length, area, volume, capacity and mass • Use a grid reference system to describe locations. Describe routes using landmarks and directional language • Estimate, measure and compare angles using degrees.	
Year 6	• Investigate, with and without digital technologies, angles on a straight line, angles at a point and vertically opposite angles • Convert between common metric units of length, mass and capacity • Solve problems involving the comparison of lengths and areas using appropriate units • Select and apply efficient mental and written strategies and appropriate digital technologies to solve problems involving all four operations with whole numbers	• Interpret secondary data presented in digital media and elsewhere
Year 7	• Solve simple numerical problems using reasoning	• Identify and investigate issues involving numerical data collected from primary and secondary sources

Geography:

Year 4: Represent the location of places and their features by constructing large-scale maps that conform to cartographic conventions including scale, legend, title and north point, and describe their location using simple grid references, compass direction and distance.

Year 5: Represent the location and features of places and different types of geographical information by constructing large-scale and small-scale maps that conform to cartographic conventions, including border, source, scale, legend, title and north point, using spatial technologies as appropriate.

Year 6: Evaluate sources for their usefulness and represent data in different forms, for example, maps, plans, graphs, tables, sketches and diagrams.

Year 7: Apply geographical concepts to draw conclusions based on the analysis of the data and information collected.

Science:

Inquiry skills:

- Plan appropriate investigation methods to answer questions or solve problems
- Construct and use a range of representations, including tables and graphs, to represent and describe observations, patterns or relationships in data using digital technologies as appropriate
- Compare data with predictions and use as evidence in developing explanations
- Suggest improvements to the methods used to investigate a question or solve a problem
- Communicate ideas, explanations and processes in a variety of ways
- Collaboratively and individually plan and conduct a range of investigation types, including fieldwork and experiments, ensuring safety and ethical guidelines are followed

Science as a Human Endeavour:

- Science understanding influences the development of practices in areas of human activity such as industry, agriculture and marine and terrestrial resource management
- Scientific knowledge changes as new evidence becomes available, and some scientific discoveries have significantly changed people's understanding of the world
- People use understanding and skills from across the disciplines of science in their occupations
- Scientific knowledge changes as new evidence becomes available, and some scientific discoveries have significantly changed people's understanding of the world
- Advances in scientific understanding often rely on developments in technology and technological advances are often linked to scientific discoveries

General capabilities:

In the Australian Curriculum, the general capabilities encompass the knowledge, skills, behaviours and dispositions that, together with curriculum content in each learning area and the cross-curriculum priorities, will assist students to live and work successfully in the twenty-first century.

Literacy: Students develop literacy capability as they learn how to build historical knowledge and to explore, analyse, question, discuss and communicate historical information, concepts and ideas.
Students understand that language varies according to context and they develop their ability to use language flexibly.

Numeracy: Numeracy involves students in recognising and understanding the role of mathematics in the world and having the dispositions and capacities to use mathematical knowledge and skills purposefully.
Students learn to analyse numerical data to make meaning of the past, for example to understand cause and effect, and continuity and change.

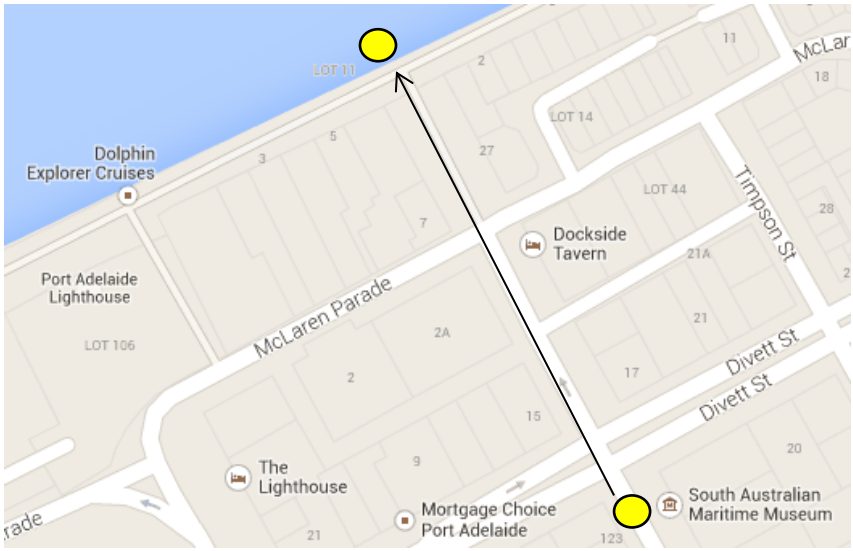
Critical and creative thinking: Students develop capability in critical and creative thinking as they learn to generate and evaluate knowledge, clarify concepts and ideas, seek possibilities, consider alternatives and solve problems.

Personal and social capability: The History curriculum enhances personal and social capability by providing opportunities for students to engage with understandings such as historical empathy, contestability, perspectives, cause and effect, and continuity and change.

Ethical behaviour: Ethical behaviour involves students in building a strong personal and socially oriented ethical outlook that helps them to manage context, conflict and uncertainty, and to develop an awareness of the influence that their values and behaviour have on others.

Logistics

- The One and All is berthed at McLaren's Wharf at the end of Lipson Street, Port Adelaide. It is a short walk from the South Australian Maritime Museum.



- The program is suitable for students in Years 4 – 9

- Program includes:

  1 hour onboard the One and All

  Time to explore the museum exhibits

  The opportunity to navigate from the top of the Port Adelaide lighthouse

  Cruise the Port River onboard the historic Archie Badenoch for an additional $2.50 per student

- Please divide your students into 3 equal groups before your session.

- Session times are: 10:00 to 11:00am 11:20am to 12:20pm 1:00 to 2:00pm

  Your allocated time will be shown on your itinerary.

- A bag storage area is located in the Rockpool area at the SA Maritime Museum.

Safety

The following guidelines are to ensure you get the most from your educational experience onboard the One and All.

Teacher / Supervising Adult Responsibilities

- The One and All education program is facilitated by volunteers. It is the teacher's responsibility to manage student behaviour on the vessel.
- Teachers are to accompany students on the vessel at all times.
- Please ensure one adult is available to supervise each group.
- Please be on time to ensure students have optimal time onboard the vessel.
- Students are to follow the directions of supervising adults and One and All volunteers.

Clothing

- Enclosed shoes must be worn.
- Access to the ship's deck is via a ladder, please wear suitable clothing.

Expectations for students

- Remind students that they are boarding a working vessel.
- When climbing ladders, always face the ladder and hold onto the hand rails.
- One person at a time on the ladders and stairs.
- Listen to the instructions of One and All volunteers and supervising adults.
- Stay with your group.
- Walk safely around the vessel and take care not to trip on the lines and ropes.
- Keep 2 feet on the deck at all times.

Program Overview

- **Helm**

Helming / Navigation

Overview:

- Exploring the helm area (eg. rudder and wheel)
- Navigation using a compass and binnacle
- Reading charts and maps

- **Saloon and Accommodation**

Food and Accommodation

Overview:

- Design of galley area
- Storage of food
- Preservation of food
- Types of food consumed on long voyages
- Cooking onboard a sailing ship
- Ship design (eg. doorways)
- Sleeping area and bathrooms

- **Bow and Mid Ship**

Rope, Lines & Sails

Overview:

- Exploring the bow area
- Learning about the sails and lines
- Line handling

- **The Wharf:**

(Conducted when an area of the vessel is unavailable)

Sketching and drawing the vessel

Knot tying and rope games

Pre and Post Visit Learning Engagements

Interesting facts about the *One and All*:

- It was built in 1985 and commissioned in April 1987.
- It is based on the original rig of an l850's brigantine.
- It can carry 39 people, made up of 12 crew and 27 passengers.
- It is a working vessel and has sailed all around the world.

Pre Visit:

- There are many different types of sailing vessels, including designs and mast configurations. Look at the sailing vessels in *Appendix A* (or find some of your own). Research one of the vessels that interests you. Work with a partner who has researched a different vessel and use a Venn Diagram to compare two of the vessels.

- Bells are used on ships to mark the time, used as a fog signal or audible alarm in poor weather, to raise the attention of the crew and to call the passengers and crew to formal services. A ship's bell is usually made of bronze, and often has the ship's name engraved or cast on it. The ship's cook traditionally has the job of shining the ship's bell. Identify the ways bells are used in our lives today.

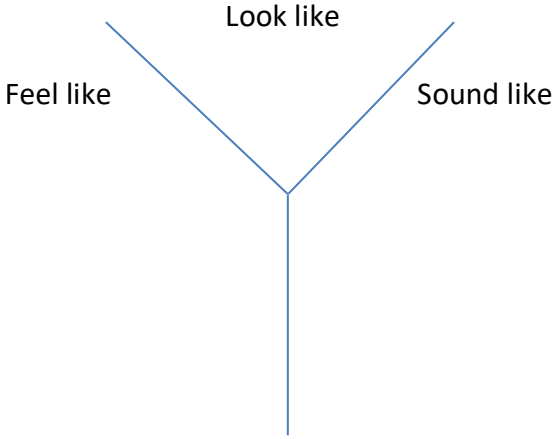
Post Visit:

Areas on a ship:

- Different words are used to describe the areas on a ship. Look at the photograph of the One and All in *Appendix B* and match the photographs to show the different areas and location of objects onboard.

Sleeping onboard:

- After seeing the accommodation area onboard the One and All, imagine spending a night sleeping in these quarters. Use a 'y chart' to record what it would be like on a windy night.



Eating onboard:

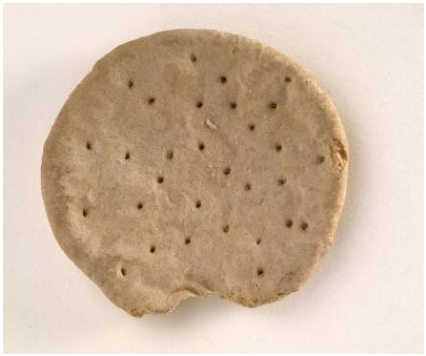
- Imagine you are onboard a real early 19th century sailing vessel and have been given a hamper containing the following food items. They are to last you for one week:

Imperial measurements	Metric measurements
1 pound of bread	
½ pint of oatmeal	
¼ pint of preserved cabbage	
¼ pint vinegar	
½ pound of preserved meat	
½ pound of salted pork	
½ pound of salted beef	
¼ pound of pickled fish	
1 ½ pounds of flour	
3 ounces of suet	
¼ pint of dried peas	
3 ounces sugar	
A little mustard	

1. Are there any foods you have never heard of before?
2. What are some of the meals you could make with this food?
3. How would you make this food last for a week?
4. Are all food groups included? Which are missing? Is this a balanced diet?
5. Think about ways food was treated and stored to stop it from rotting. How effective do you think these processes would have been?
6. How do you think this diet would affect your health and nutrition?

- Write a meal plan using the foods above to feed your family for a day.

- Hard tack was also known as ship's biscuit. It was a dry, tasteless biscuit that could last for a year and still be eaten. Follow the instructions below to make your own 'hard tack.'



Working Onboard:

Everyone on board a sailing ship is expected to do their share of work to keep the vessel running smoothly. In the late 18th century and early 19th century when Europeans explored the world, they searched for new lands to build their empires, gold, silver and spices and find new people, plants, animals and foods. People of these vessels all had different roles and jobs.

- Look at the list below and draw a line to match the people to their jobs:

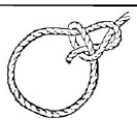
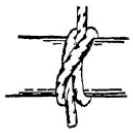
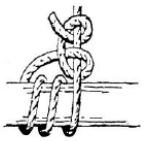
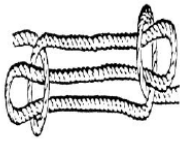
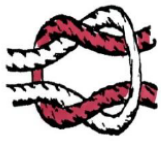
People	Job
Captain	Studied and collected animal and plant samples.
Cook	Helped people that were sick or injured.
Carpenter	Studied and collected plants during the voyage.
Scientist	Studied and drew charts and maps.
Surgeon	Rang the bell on board.
Gunner	Prepared food for the crew.
Botanist	Maintained the woodwork on the ship and its timber fittings
Artist	In charge of the ship and crew. Would give orders.
Cartographer	Drew the plants, animals and people that were seen.
Officer of the watch	A sailor responsible for a ship's cannons.

- Imagine the following jobs need to be completed on board. Complete the table below:

Task	Why does it need doing?	What will you use?
Keep the floor of the deck clean		
Make baggy wrinkles		
Provide light for your cabin (before electricity was used)		
Entertain other passengers		
Collect fresh rain water		
Secure loose items during a storm		
Clean your bedding and sleeping area		

- Use a Venn Diagram to show comparisons as to how jobs on board ships are different / the same on board a sailing vessel to a passenger liner today?

- As a sailor you need to know how to tie knots. Each type of knot has a different purpose. Some of the commonly used knots are below. Use rope and learn how to tie a knot of your choice. You will know that you have mastered the knot when you can teach another person how to tie the same knot.

			
Bowline	Carrick bend	Clove hitch	Figure of eight
			
Fisherman's bend	Fisherman's knot	Rolling hitch	Running knot
			
Sheepshank	Sheet bend	Square or reef knot	Two half hitches

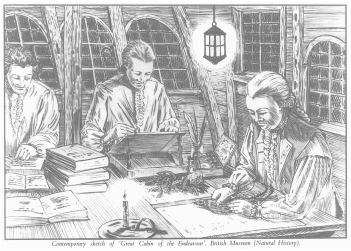
<u>Passing time onboard</u>:
There is always a lot of work to do on board a ship, but sailors also have spare time. They would pass the time sewing 'ditty bags' from pieces of canvas for their belongings, and create scrimshaw which involved carving the bones or teeth of whales and walruses.

Games became a popular way of passing time and some games were even invented to be played on board ships.

- Look at the games listed below. Have you heard of these before? See if you can find resources to play these games. Can you make up some other games that could have been played?

<u>Game</u>	<u>What do you know about this game</u>?
Dominoes	
Chess	
Playing Cards	
Deck Horses	
Shuffle Board	
Knuckle Bones	
Quoits	

<u>Navigation</u>:
Early navigators used the <u>time</u> and the <u>angle of the earth's tilt in relation to the sun</u> to work out their location on the Earth's surface.
Explorers used a chronometer to work out the longitude (time) and a sextant and tables to find the longitude (angle of the earth's tilt in relation to the sun).



- Look on a globe and identify lines of:

<u>Longitude</u> (east or west of the equator)
<u>Latitude</u> (north or south of the equator)

- Cartography is the drawing and studying of charts and maps. Successful navigators had excellent cartography skills. Look at the charts in *Appendix C.*

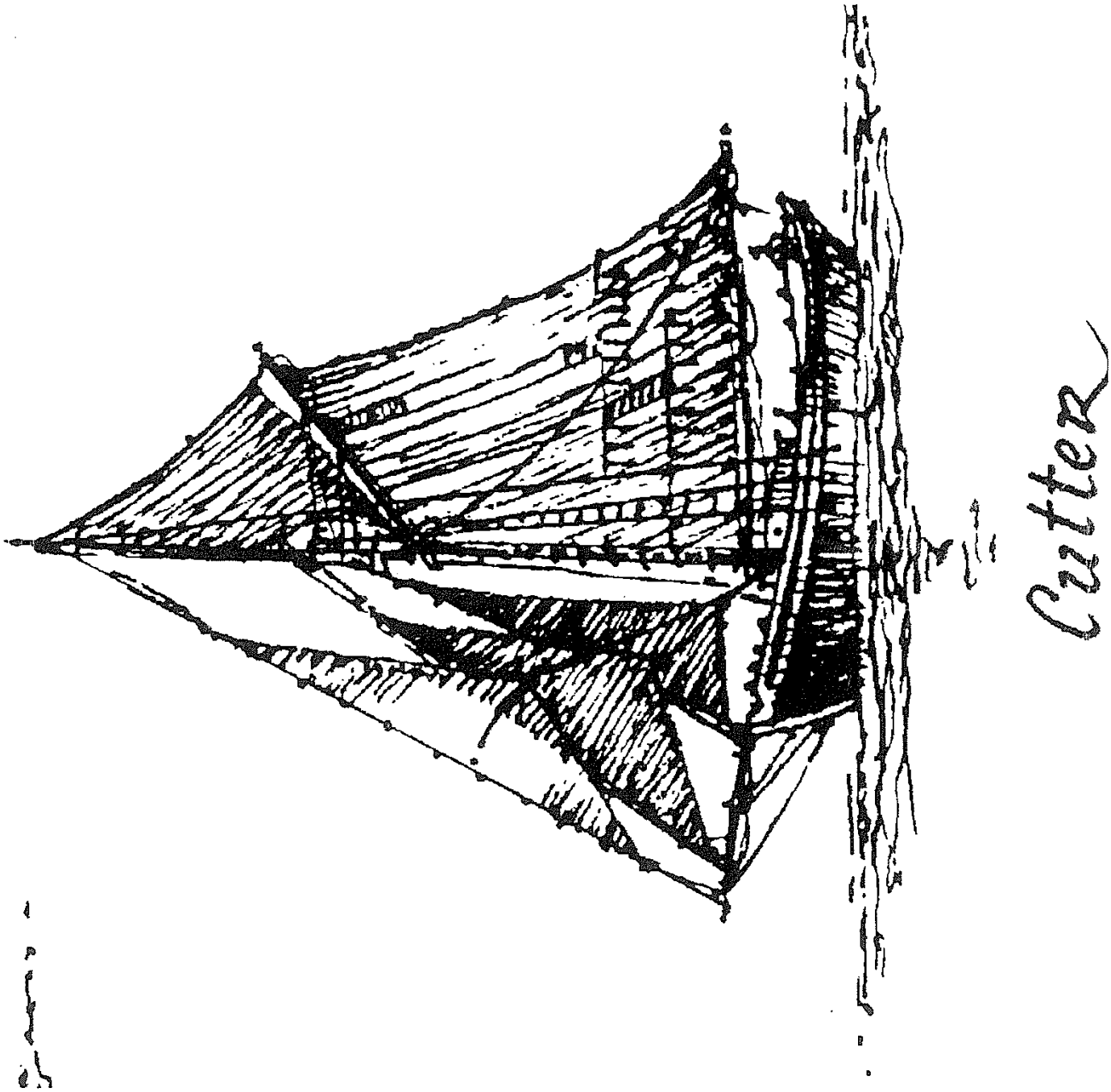
1. The first chart was drawn by Matthew Flinders when he navigated the South Australian coast in 1802. Respond to the following questions:
   Do you recognise some places that were named by Matthew Flinders?
   Why do you think he gave places certain names?
   Did the Aboriginal people name these places before Flinders?

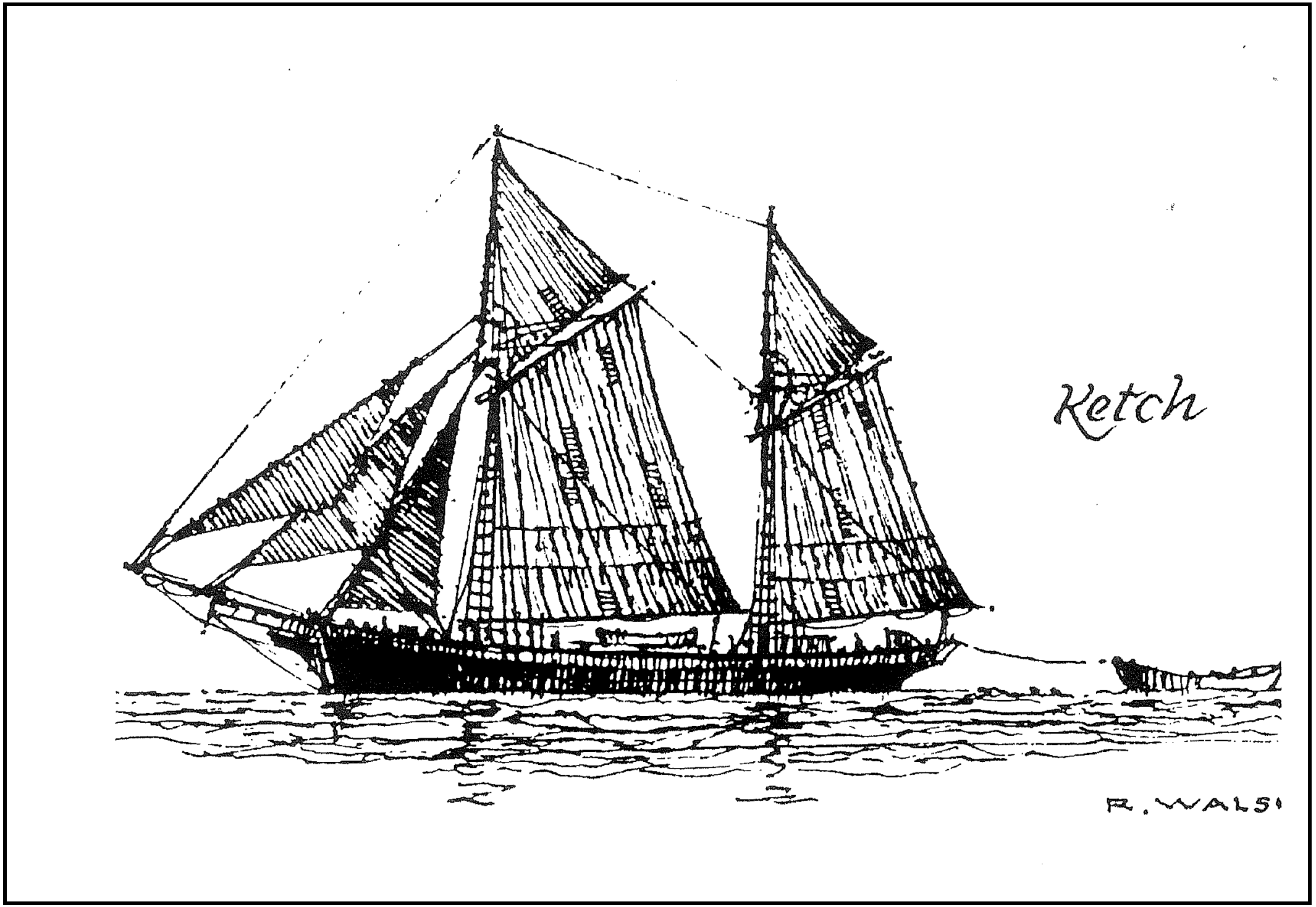
2. The second chart was drawn by William Light. It shows the Port River in 1836. Use Google maps to locate a current image of the area. Identify the changes that have occurred and discuss what has caused these changes.

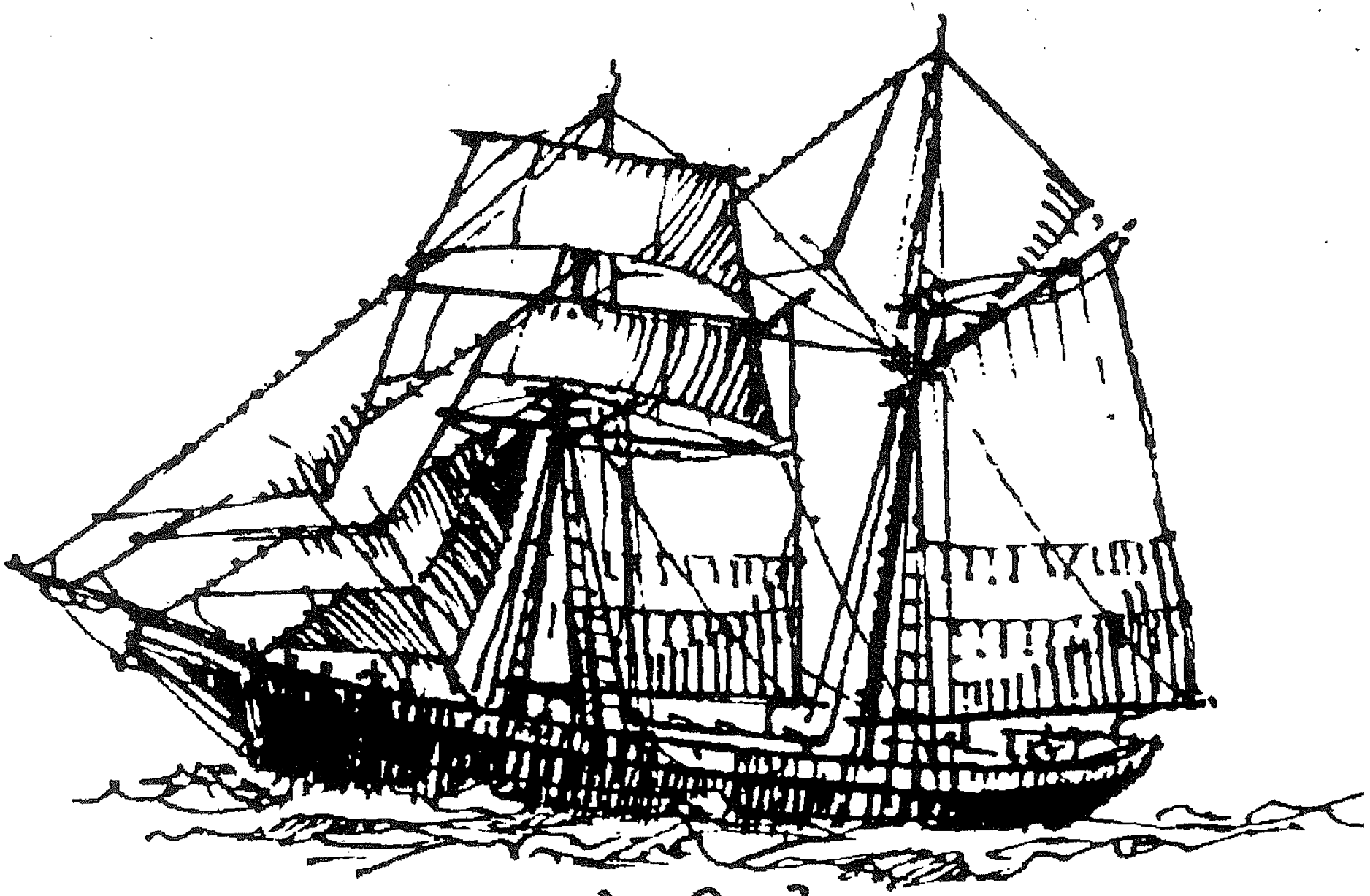
Glossary

- **Baggy wrinkles**: A soft covering for cables to reduce sail chafe. Making baggywrinkle from short pieces of yarn cut from old lines that have been taken out of service gives a softer wearing surface for the sail.
- **Bow**: The front of a ship / vessel.
- **Brigantine**: A small two-masted vessel rigged with square rigs on the foremast and fore-and-aft rigging on the mainmast.
- **Cartography:** The study and drawing of charts and maps.
- **Chart:** A map used to navigate by sea or in the air.
- **Galley**: The kitchen area on a ship.
- **Helm**: A wheel or handle used for making a boat go in the direction you want.
- **Lines**: A length of rope that is in use, such as holding up a sail or an anchor line.
- **Mess:** The eating / dining area on a ship.
- **Port**: The left hand side of a ship / vessel.
- **Provisions:** The supply of food or other necessities.
- **Rigging**: The ropes and chains used for supporting a ship's sails and masts
- **Starboard**: The right hand side of a ship / vessel.

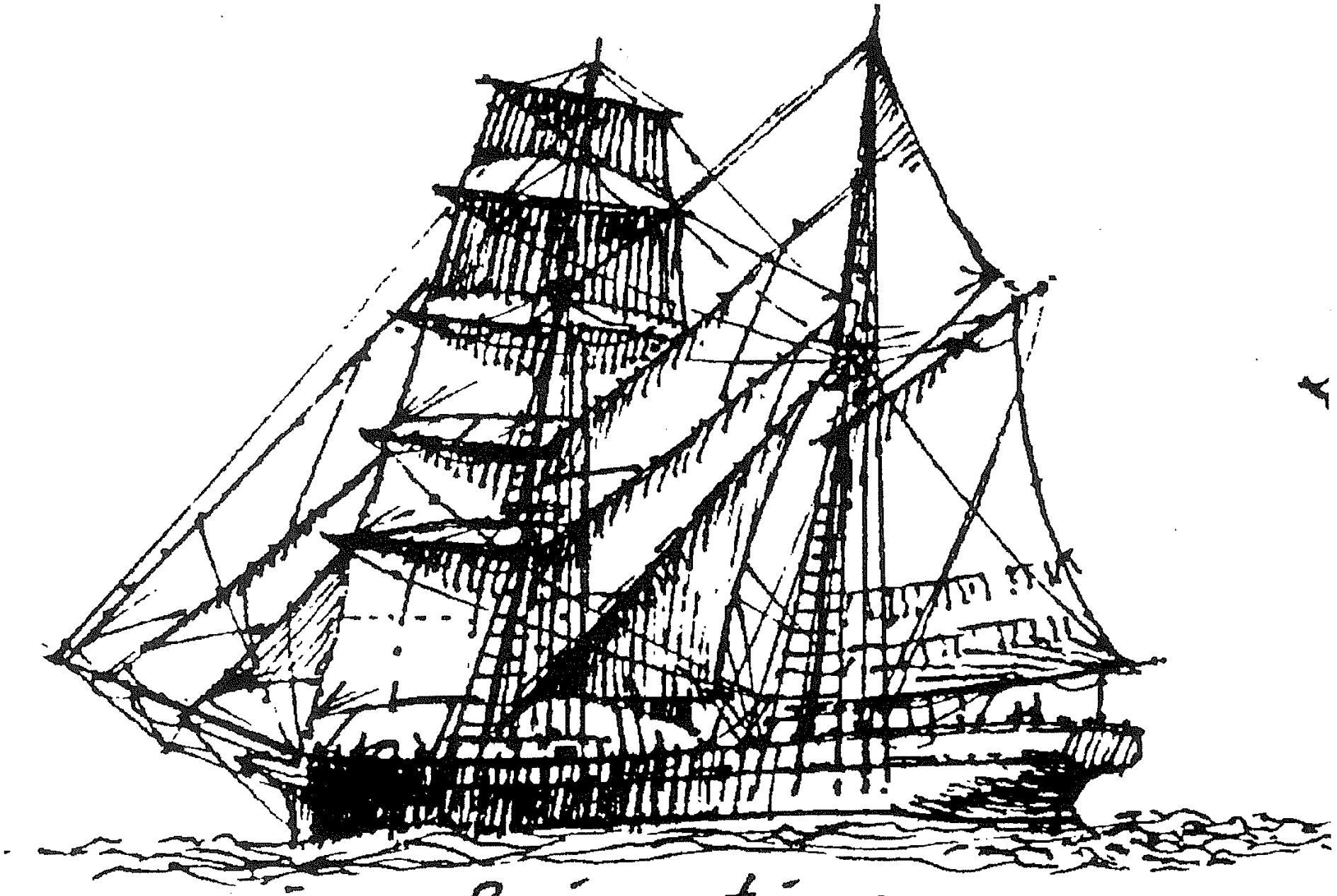
Appendix A



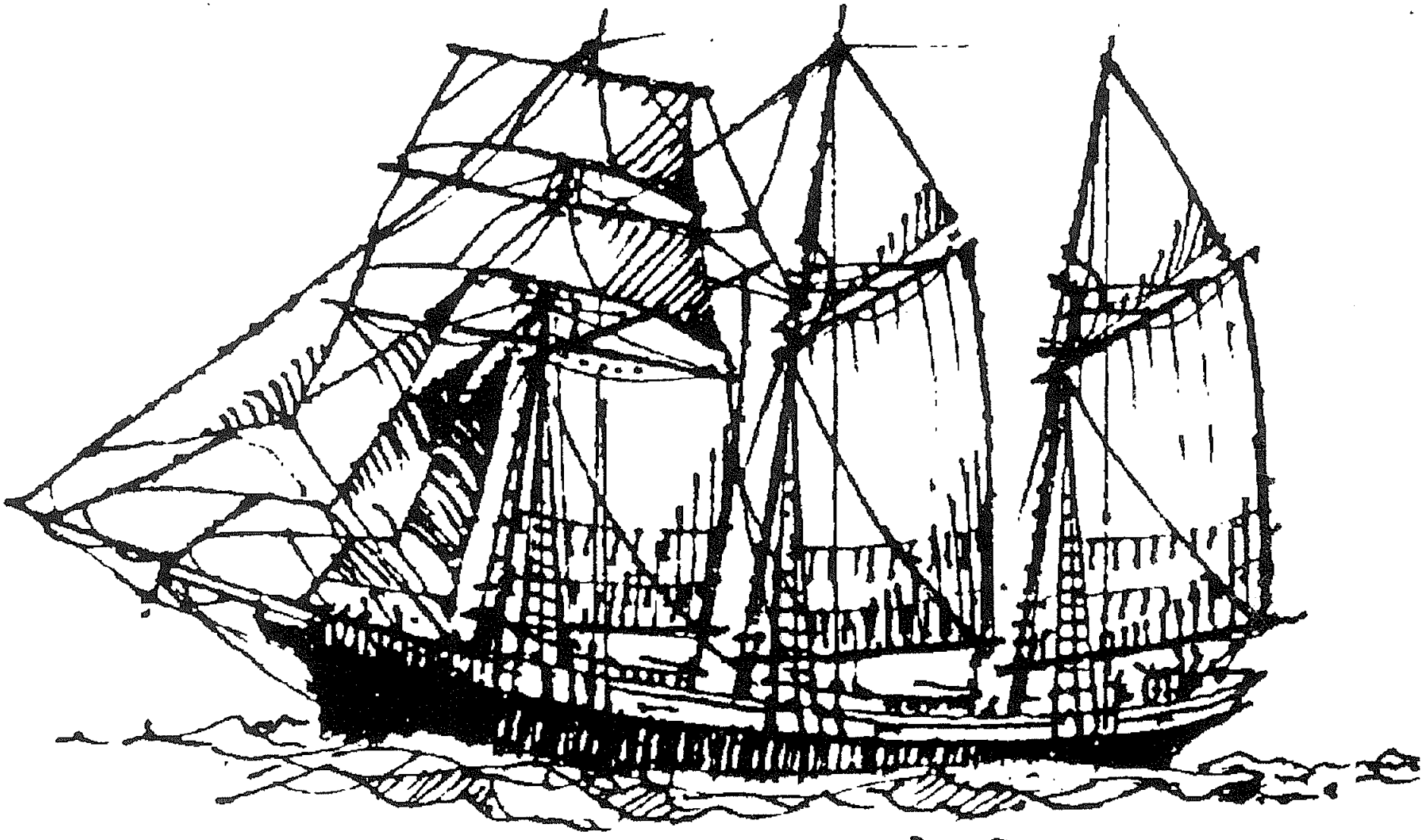

Ketch
R. WALSH



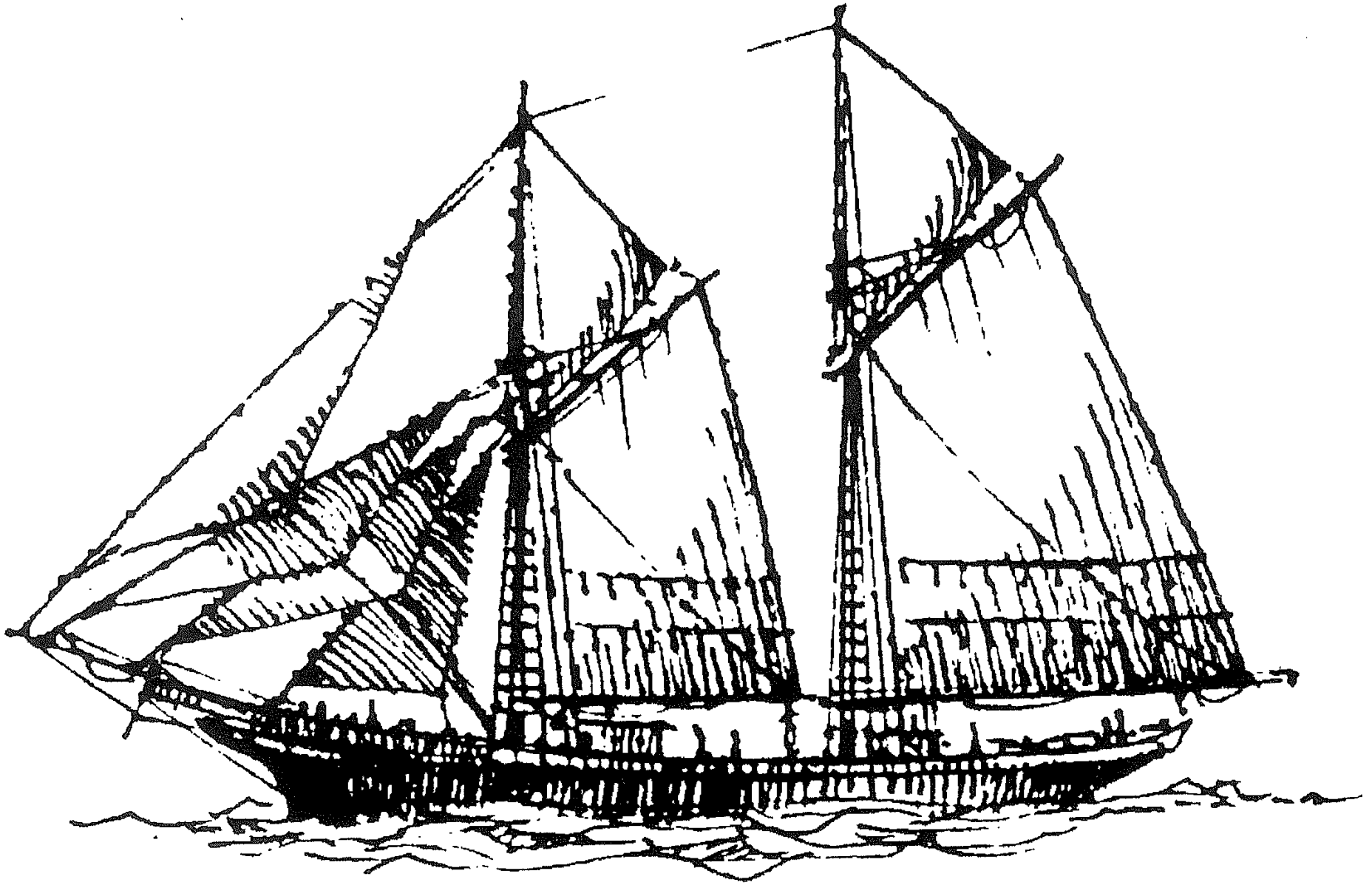
Topsail Schooner



Brigantine



3 Masted Topsail Schooner



Fore-and-Aft Schooner

Appendix B

Appendix C

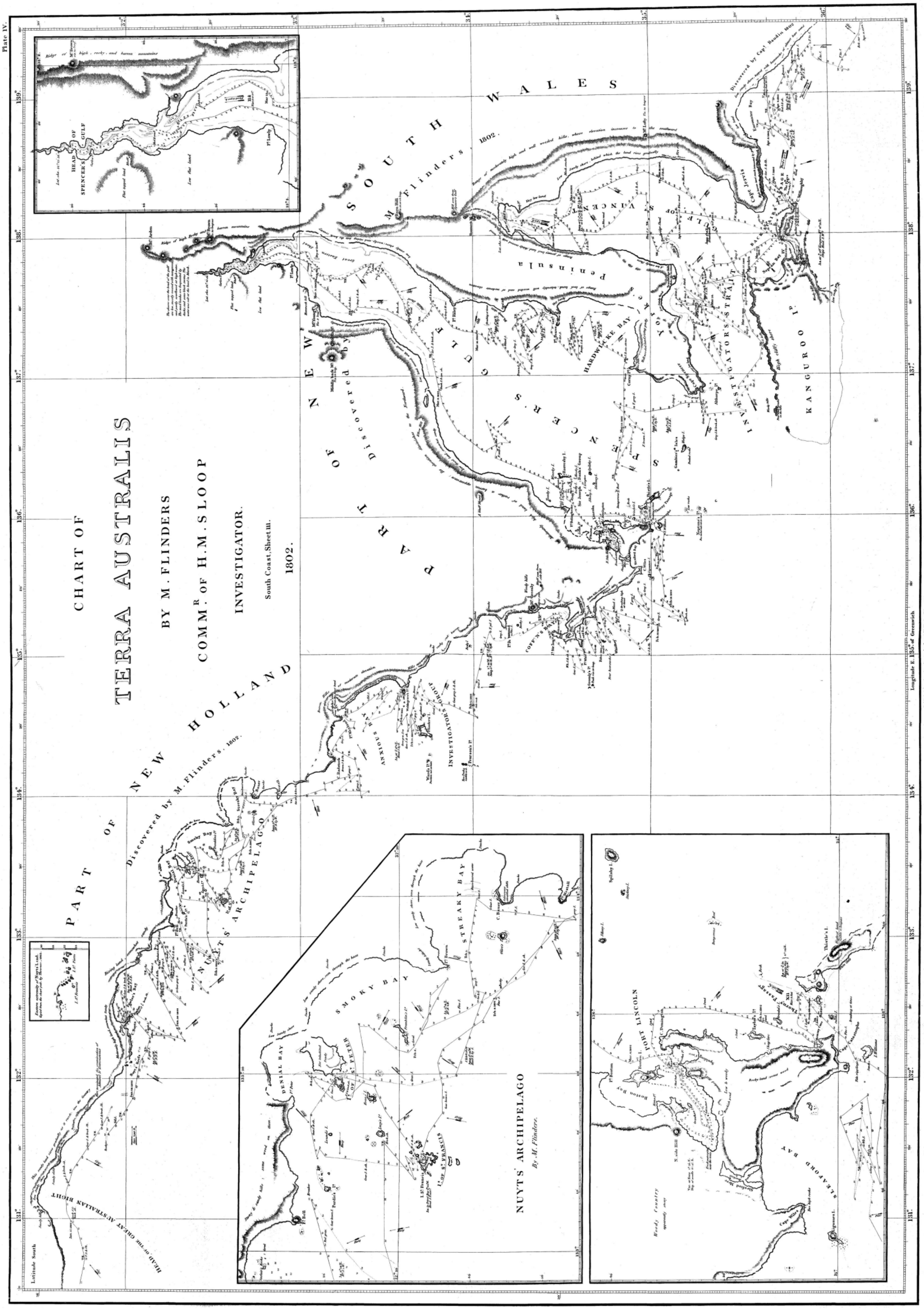
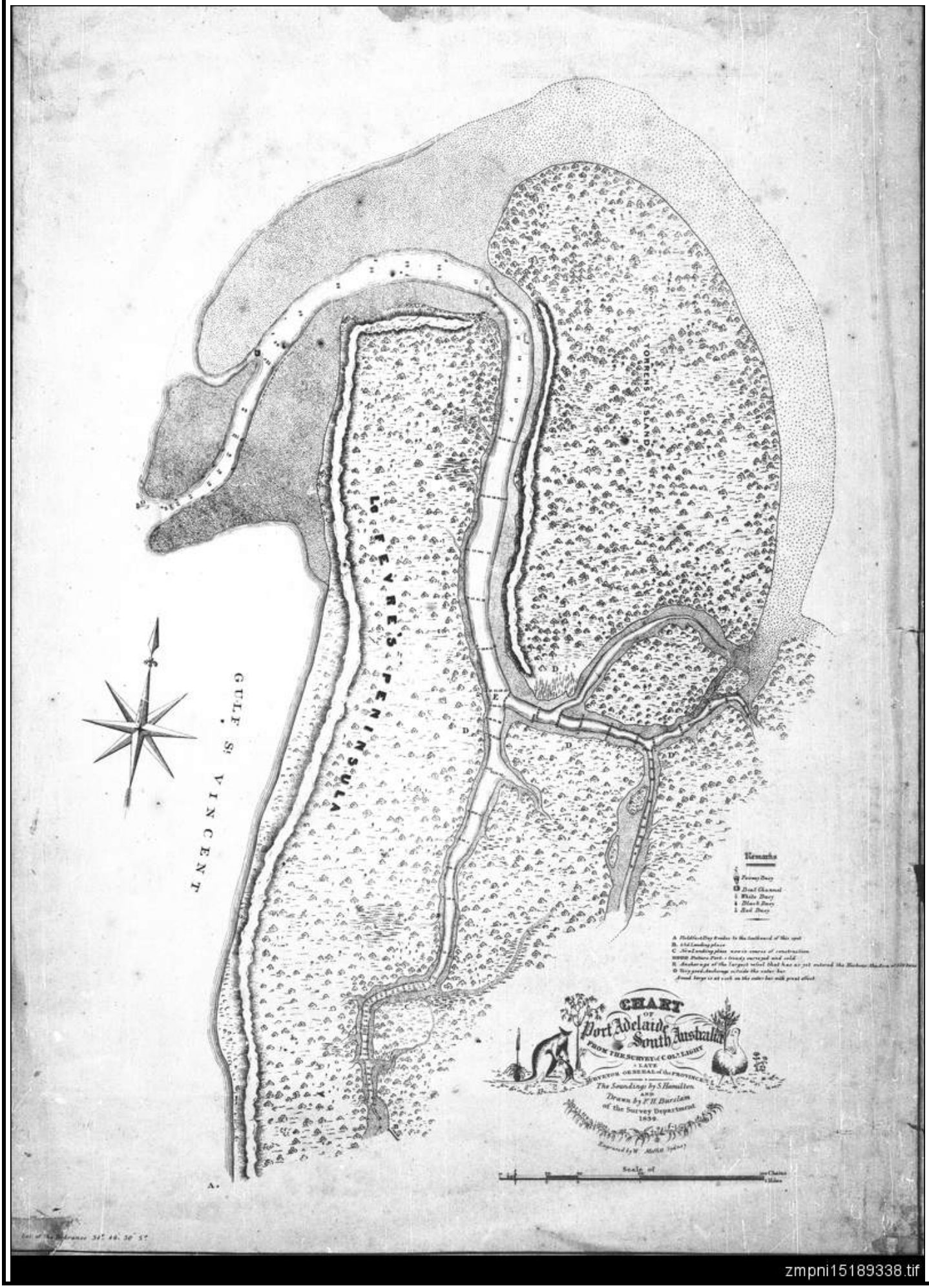


Plate IV.
CHART OF
TERRA AUSTRALIS
BY M. FLINDERS
COMMR. OF H.M. SLOOP
INVESTIGATOR.
South Coast, Sheet III.
1802.
PART OF NEW HOLLAND
Discovered by M. Flinders. 1802.
PART OF NEW SOUTH WALES
SPENCER'S GULF
INVESTIGATOR'S STRAIT
KANGUROO ID.
HARDWICKE BAY
Peninsula
NUYTS' ARCHIPELAGO
ANXIOUS BAY
HEAD OF SPENCER'S GULF
NUYTS' ARCHIPELAGO
By M. Flinders.
SMOKY BAY
STREAKY BAY
DENIAL BAY
PORT LINCOLN
SEAFORD BAY

Appendix D



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